Application for designation as a technological university



About this document

This document forms part of the AIT – LIT Consortium's application for designation as a technological university.

Chapter 1: The context for the new TU introduces AIT and LIT and the rationale behind the AIT – LIT Consortium; it describes its progress towards designation, sets out its vision, mission and values, outlines its proposed governance structures for the new TU, and presents the socioeconomic impact of the TU.

Chapter 2: An overview of the new TU outlines core details about the proposed new TU, including its approach to teaching and learning, research, and apprenticeship and skills education; it also deals with the quality processes and the commitment to engagement and internationalisation. **Chapter 3:** The support infrastructure for the new TU describes the key technology, professional services, student supports and strategies that will be put in place, as well as a brief overview of the campuses.

Chapter 4: Meeting the criteria for designation describes how the criteria will be met for designation as set out in the Technological Universities Act 2018.

Chapter 5: The Financial viability of the AIT – LIT Consortium outlines its financial viability into the future.

Application for designation as a technological university

AIT-LIT Consortium

Foreword

It gives us great pleasure to endorse this application for technological university designation on behalf of the AIT – LIT Consortium. This application is the culmination of several years' work, years where our strategic trajectories increasingly converged to the point of our governing bodies formally endorsing the formation of the AIT – LIT Consortium in October of last year.

On appointment we would become Ireland's first cross-regional university and lead transformational change across our adjacent regions, linked by the River Shannon. As a TU, we will be orientated towards knowledge-creation, ensuring growth in education provision and enhanced research opportunities, as well as dynamic community and industry engagement.

Our journey to this point has uncovered a strong set of shared values among our students and

staff, a student-centred ethos, a commitment to providing access to an excellent standard of higher education to all who would benefit from it, and a clear commitment to balanced regional development. It is this commonality of commitment, alongside our academic complementarity and regional orientation, that underpins our desire and ambition to create an impactful, contemporary technological university to serve communities across Ireland's Midlands and Mid-West and beyond. Through this process, we have uncovered significant latent capacity in our respective institutions which bodes well for the future of our new TU. In particular, the €7 million in state funding received to date has enabled us to significantly grow our postgraduate research capacity and provide further upskilling opportunities to staff in line with the TU eligibility criteria. We are pleased to say that we have now met and surpassed these substantive TU metrics, including more than doubling our research active student population in a single year.

This process has been met with much positivity and buy-in from staff across all functions and levels of our respective institutes. Their ownership of this transformational process and engagement with one another has proved extremely productive and has served as a backdrop to the development of very strong governance and operational teams for the AIT – LIT Consortium.

Indeed, this shared understanding, common purpose and ability to work together has already borne fruit in the form of RUN-EU, a network of like-minded and regionally focused HEIs committed to societal transformation across Europe. The AIT – LIT Consortium was instrumental in the formation of this alliance formally launched on the 1st of November this year.

Ultimately, this document is an expression of a shared commitment and clear capability on the part of ideal partners. It is informed by the views of our staff and students, and is the culmination of the work of approximately 200 people across all functions in both institutions who took part in working groups and other structures, despite the backdrop of uncertainty and challenges arising from the ongoing pandemic.

We commend this application, and we look forward to a bright future as a TU for Ireland's Midlands and Mid-West regions.

Professor Ciarán Ó Catháin President, Athlone Institute of Technology

Professor Vincent Cunnane President, Limerick Institute of Technology

2



Professor Ciarán Ó Catháin President, AIT



Professor Vincent Cunnane President, LIT

Foreword

This application is a defining moment for our two institutions and the communities we serve in the Midlands and Mid-West. It is a blueprint for a technological university in a region, up to now, underserved by the third-level education sector.

It is worthy of note that this application from the AIT - LIT Consortium to build a new technological university came about by neither accident nor chance. It is in fact built on the vision of leaders in two successful institutes who foresee a new landscape in education and are prepared to take on the challenges to deliver a new university model for our communities and regions. This is underpinned by compelling and durable personal and professional relationships across many aspects of the two institutions, and a geographical contiguity through adjacent regions which will form an unambiguous area that will be served by the new TU.

This application points to a strong future serving a region that stretches along the River Shannon, making this area even more attractive to Indigenous SMEs and foreign direct investment, by linking knowledge, research, education and innovation. It carries within its pages the collaborative effort of more than 200 people from 20 working groups, joint project groups and joint steering groups across AIT and LIT who gave of their time and experience. It is informed by staff and student surveys, a socioeconomic plan and the academic commonality and comradeship of two of Ireland's most respected institutes of technology. It is supported by internal and external stakeholders that understand the positive socioeconomic impact TU hubs and outreach campuses can have on their counties and towns.

Our two institutes have long-established compatible profiles, with aligned strategies, missions, visions and values, and a strong student-centred ethos of inclusivity and support. The sharing of knowledge over the past year has further strengthened this relationship. AIT and LIT have reputations for working in tandem with local industry and business leaders, providing work-ready students in an ever changing and developing economy. Their flexibility and agility allows them to move quickly to provide research and educational support to companies in their regions. Both institutes are important elements of the social fabric of their respective communities and these shared commonalities can but influence a greater proportion of this island through the formation of a new technological university.

We have also seen that the strength of the AIT – LIT Consortium and its commitment to regional balance goes beyond what might be considered its geographical borders. The regionalisation of university education and research is a compelling ambition that can be uniquely achieved in this novel initiative. The institute's joint participation in the recently awarded Regional University Network European University (RUN-EU), supported by the European Commission, enables the consortium to have significant impact at a regional, national and international level.

In commending this application, we will be forever indebted to all those who worked so hard over many difficult months to contribute to and craft this application which could pave the way for a new and exciting chapter in Irish education.

This application has been thoroughly examined in all its facets and carries with it the endorsement of staff, students, trade unions and other stakeholders, and we believe it reaches all of the prerequisites set out in the Technological Universities Act 2018.

We, the Governing Body of AIT and the Governing Body of LIT, recommend it to you for approval.

Liam Rattigan Chair of the Governing Body, AIT

Tony Brazil Chair of the Governing Body, LIT



Liam Rattigan Chair of the Governing Body, AIT



Tony Brazil Chair of the Governing Body, LIT



"Building on comprehensive personal and professional relationships across many aspects of the two institutions, the consortium's ambitions are foregrounded in the strategic case for a regional technological university." Staff Survey

6 AIT-LIT Consortium



Table of Contents

The context for the new TU

1.1 About AIT and LIT	16
Athlone Institute of Technology (AIT)	16
Limerick Institute of Technology (LIT)	17
1.2 The strategic case for the AIT – LIT Consortium	19
1.3 Introducing the AIT – LIT Consortium	22
The commitment of the AIT – LIT Consortium to its regions	24
International context for the new TU	27
TU designation: a natural evolution	28
Foundational attributes	28
1.4 The process for designation as a technological university	32
Progress towards a technological university	32
Project governance	34
Planning and work packages	34
A submission-ready application	37
1.5 The proposed vision, mission and values of the new TU	39
TU vision	39
TU mission	39
Our values	41
1.6 Equality, diversity and inclusivity in the new TU	43
1.7 Governance of the new TU	44
Governing Body	44
Academic Council	44
Quality assurance and enhancement	44
Organisational structure	46
1.8 Socioeconomic impact of the TU	48
Economic impact	48
Social impact	49

Overview of the new TU Characteristics of the new TU 2.1 The new TU: collaborative and engaged Centrality of the student 2.2 Apprenticeship and skills education in the new TU Growth in demand for apprenticeship skills Excellence in apprenticeship education Progression and transfer for apprenticeship students 2.3 The approach to teaching and learning in the new TL The educational philosophy of the new TU Pedagogy and assessment Curriculum framework design Flexible learning pathways and lifelong learning Programme provision planning 2.4 The approach to research in the new TU **Research environment** Enterprise and innovation Research performance: impact and excellence Building sustainable research capacity Researcher ecosystem Internationalisation of research 2.5 Internationalisation International context Internationalisation framework 2.6 Quality strategy and processes in the new TU Statutory quality framework for higher education Quality assurance principles Processes of quality assurance and enhancement Quality assurance policies and procedures



3.1 Student development at the new TU		
The value of the student experience		
Student administration		
Student welfare services		
Sports, clubs, and societies		

8

	56
	58
	58
	64
	64
	66
	67
J	68
	68
	71
	72
	74
	76
	77
	77
	81
	81
	89
	92
	93
	97
	97
	97
	101
	101
	101
	103
	103

110
110
110
111
111

Student Unions	113
Ensuring access for all students	113
Giving first-year students a sense of belonging	113
3.2 The new TU's people strategy	114
The university of choice for staff	114
Investing in our people	114
Ensuring HR excellence and innovation	115
3.3 Professional services in the new TU	116
Teaching and learning support	116
Technology supported learning	116
Library services	117
Information communication and technology services	119
3.4 The new TU: a digital campus	120
Overview of the TU digital campus ecosystem	120
The New TU – a digital-first organisation	121
3.5 The new TU's campuses	125
AIT current campus profile	125
LIT current campus profile	125
Campus development plans	130
Campus development and the National Planning Framework	132
Climate-related objectives	133

Meeting the criteria of the Technological Universities Act 2018

4.1 Student profile criteria	138
4.2 Staff profile criteria	139
4.3 Research activity criteria	140
4.4 Engagement criteria	141
4.5 Governance criteria	142
4.6 International criteria	143

The financial viability of the AIT-LIT Consortium

5.1 Projected income and expenditure of the new TU	148
5.2 Student numbers in the new TU	149
5.3 Staff numbers in the new TU	151
5.4 Consolidated financial summary	152
5.5 Campus development budget	155
5.6 Assumptions relating to financial projections	158



4

5

List of figures

Figure 1.1	Overview of AIT – LIT technological university	23
Figure 1.2	Higher education participation rates by county	25
Figure 1.3	AIT – LIT feeder school data	25
Figure 1.4	Technological university regions	26
Figure 1.5	RUN Network partners	29
Figure 1.6	TU readiness as of Q2 2019	33
Figure 1.7	Progress towards a technological university	35
Figure 1.8	Project governance structure	36
Figure 1.9	Working group reporting structures	37
Figure 1.10	Technological university readiness level: submission ready	38
Figure 1.11	Functions of the organisation	47
Figure 2.1	Overview of TU engagement strategy	59
Figure 2.2	Summary of the new TU's networking approach	60
Figure 2.3	Six pillars supporting excellence in learning and teaching	69
Figure 2.4	TU graduate attributes	70
Figure 2.5	Elements required for TU curriculum design	73
Figure 2.6	AIT – LIT Consortium's symbiotic relationship with industry	73
Figure 2.7	Key areas of focus for curriculum design	75
Figure 2.8	Research environment of the new TU	79
Figure 2.9	Research infrastructure of the new TU	80
Figure 2.10	Enterprise Ireland research gateways	81
Figure 2.11	Overall research performance (AIT – LIT grouping)	86
Figure 2.12	TU publications by subject area (AIT – LIT grouping)	87
Figure 2.13	Top four research subject areas of TU publications (AIT – LIT grouping)	88
Figure 2.14	Collaboration in publication authorship (2015–19)	88
Figure 2.15	TU collaboration in Ireland	90
Figure 2.16	TU collaboration in Europe	91
Figure 2.17	TU collaboration in the rest of the world	92
Figure 2.18	Research expenditure in AIT – LIT Consortium and other IoTs	94
Figure 2.19	AIT – LIT research enrolment	94
Figure 2.20	Model of sustainable research culture	95
Figure 2.21	The new TU's internationalisation framework	98
Figure 2.22	THEQF: principles of quality assurance and enhancement	102
Figure 2.23	Overview of QAE system	104
Figure 3.1	Aerial view of Athlone campus	127
Figure 3.2	View of sports facilities at Thurles campus	127
Figure 3.3	View of sports facilities at Moylish campus	128
Figure 3.4	Aerial view of LIT Moylish campus	128
Figure 5.1	Student numbers by ISCED code	150

List of tables

Table 1.1	Timeline for TU designation
Table 1.2	Academic Steering Group
Table 1.3	Estimates of economic impact
Table 2.1	Craft-based apprenticeships
Table 2.2	New generation apprenticeships
Table 2.3	Number of programmes offered across a range of
Table 2.4	Four-stage process for the development of the QA
Table 3.1	Staged integration of ICT systems in the new TU
Table 3.2	A digital infrastructure blueprint for a digital campu
Table 3.3	Examples of software applications to support teac
Table 3.4	Athlone campus: estate details, existing and project
Table 3.5	LIT campuses: current estate details
Table 3.6	LIT building projects under way
Table 3.7	Athlone campus development plans
Table 3.8	Limerick campus development plans
Table 3.9	Tipperary campus development plans
Table 5.1	TU projected income and expenditure 2019/20 to 2
Table 5.2	TU forecasted student numbers, 2019/20 to 2024/
Table 5.3	Areas of focus and their expected consequences
Table 5.4	Staff numbers for the new TU, 2019/20 – 2024/25
Table 5.5	TU Consolidated financial summary, 2019/20-2024
Table 5.6	Non higher education funded projects
Table 5.7	Purpose built on campus student accommodation
Table 5.8	Estimated State contribution towards cost of TU de
Table 5.9	TU campus development projects - HE funded
Table 5.10	Purpose built student accommodation projects, fig

	34
	45
	49
	65
	65
mechanisms (Source: SRS Returns March 2020 AIT & LIT)	76
E system	105
	119
s supporting students	122
hing, learning, and assessments	124
ted	126
	129
	129
	130
	131
	132
2024/25, figures in €000's	148
/25	149
	150
	151
4/25, figures in €000's	152
	153
	153
evelopment projects, figure in €000s	154
	156
ures in millions	157

The context for the new TU

This chapter sets out to introduce the AIT – LIT Consortium, to trace the evolution and development of the consortium and to present the rationale for the new technological university.

1.1 Introducing the AIT – LIT Consortium

- How the two institutions, Athlone Institute of Technology (AIT) and Limerick Institute of Technology (LIT), have come together to seek designation as a technological university.
- The commitment of the two institutions to their regions and how the new TU will strengthen this.
- The international context for the new TU, including a brief description of the work the two institutions have already done in this area.
- How designation as a TU is a natural evolution for AIT and LIT.
- The foundational attributes that will frame the new TU's ethos and culture.

1.2 An overview of the process for TU designation

- The progression through the stages of the process.
- Governance structures of the process.
- Detailed breakdown of work packages relating to TU development.
- Arrival at a submission-ready application.

1.3 The proposed vision, mission, and values of the new TU

1.4 Equality, diversity, and inclusion

Setting out how the new TU proposes to be proactive in promoting equality, diversity and inclusion.

1.5 Governance of the new TU

Setting out the new TU's organisational structures, including the Governing Body and the Academic Council, as well as its commitment to quality assurance and enhancement.

1.1 About AIT and LIT

Athlone Institute of Technology

AIT was established in 1970 as Athlone Regional Technical College (RTC) amid an educational reform with the goal of providing technician-level courses at both certificate and diploma level. The institute quickly outgrew the limitations of this RTC designation, which prompted a change in nomenclature and a shift in public perception towards the value of an applied, industry-focused education. AIT became an autonomous institution in 1993 and later, in 1998, was officially redesignated Athlone Institute of Technology. Over the course of its 50-year history, AIT has established itself as a centre of academic excellence with an applied, industry-focused offering, world-class research and development capabilities, and stateof-the-art facilities. Located in the heart of the Irish Midlands, AIT is home to 6,000 undergraduate and postgraduate students from 84 nations around the world. AIT has a well established international profile.

The institute's student-centred ethos is a cornerstone of its success and its students, according to StudentSurvey.ie, are the most satisfied with their college experience in Ireland. AIT has held the top spot for six consecutive years and also enjoys the highest student response rate nationally – 69% versus 29% national average. AIT was the first institute of technology and third HEI to receive College of Sanctuary designation.

The exceptional student experience offered by AIT, in tandem with its focus on experiential learning, strong industry ties and innovative research activities, are among the reasons it was named Ireland's Institute of Technology of the Year for 2020. This is the second time in just three years that AIT has won the prestigious accolade, having previously held this title in 2018.

As the sole higher education provider servicing the Midlands, AIT already plays an integral role in educating and upskilling the local workforce in key areas of technological advancement. The third-level institute offers 200+ industry-focused programmes on a full-time, part-time, blended, and online basis which range from higher certificate right through to PhD. AIT's offerings are distributed across six primary areas – science, health, business, hospitality, engineering, and informatics. The institute also has agreements with a wide range of professional bodies, which benefit students.

In 2018, AIT established an additional faculty dedicated to Lifelong learning to meet increased demand from learners looking to upskill, change career or return to employment. Lifelong learning is crucial to being job-fit in the modern workforce. The institute's emphasis on applied, industry-focused education translates to an impressive graduate employability rate: 94% of its students are employed within six months of graduating. Of that figure, a large majority are employed in Athlone and the surrounding Midlands, thanks to an abundance of multinational and indigenous employers.

AIT has a strong regionally focused outreach agenda and has delivered part-time programmes in Galway, Dublin, Cavan, Castlebar, Longford, Tullamore, Mullingar, Waterford, and Ballinasloe over the past 10 years and more recently has developed partnerships with remote working and innovation centres to deliver the AIT Learning Gate concept that facilitates increasing access to AIT courses at remote centres.

AIT is home to world-leading academics who are at the forefront of exciting research in areas like smart drug delivery, antimicrobial resistance, virtual reality, and cybersecurity. Home to three strategic research institutes and two Enterprise Ireland technology gateways, AIT conducts high TRL research of international importance. It is partnered with five leading Science Foundation Ireland research centres - CONFIRM, SSPC, ADAPT, CÚRAM and AMBER – which help it contribute to fundamental knowledge generation. It also offers contract services and houses a business incubator which provides business development support for knowledge-based start-ups. The institute is currently rated 2nd nationally for most Enterprise Ireland Innovation Vouchers valued at €2,135,000.

AIT has a well-developed international market and is to the forefront of international partnerships within the technological higher education sector. AIT has partnerships with universities across Europe, Asia and the Americas and encourages AIT students to study abroad for a semester or full year. Inward mobility also continues to increase year-onyear with international students now comprising 15% of AIT's full-time student population.

Since 2008, AIT has invested €130+ million in the development and modernisation of its campus. The institute will soon break ground on a €25 million STEM building which will create capacity for up to 1000 additional students and 70 staff. Currently, 55% of AIT's student body is made up of students studying STEM.

Limerick Institute of Technology

Limerick Institute of Technology, located in counties Limerick, Tipperary and Clare, operates under the Institutes of Technology Acts 1992 to 2006. The Institute traces its origins back to the 1852 foundation of the School of Ornamental Art on Leamy Street, subsequently re-opened in 1855 on Cecil Street under the auspices of the Limerick Athenaeum. This evolved over time to what is now one of the leading art and design schools in Europe which is fully engaged with traditional art and design, visual culture, creative technologies, film, media, and teacher education.



"The Technological Universities Act (2018) presented AIT and LIT with an opportunity to revisit their mission so as to increase impact, improve engagement, enhance teaching and learning and to boost capacity, capabilities and profile through the creation of a new entity – a technological university for the Midlands and Mid-West of Ireland."

Staff Survey

An international quality review of LIT in 2010 described LIT as a mature higher education institution with excellent quality assurance. The institute has over 7,000 students (over 5,500 full-time) and provides a wide range of programmes spanning the areas of applied science, engineering and technology, art and design, business and services, humanities, built environment and rural development.

As with AIT, the Regional Technical Colleges Act (1993) broadened the institute's scope and allowed structures to be set up to formalise research and development. This Act also increased LIT's autonomy. LIT has been awarding master's degrees since 1997 and doctorate degrees since 2002.

LIT is a regionally-focused higher education institute with a national and international outlook. It empowers its diverse student body by providing a quality higher education experience, enabling economic, social and cultural development.

LIT is strategically located in the core North Munster area of the Mid-West region, centred on Limerick. The region is a major economic development hub, making LIT a primary driver in the balanced regional development. Since 2011, LIT has incorporated new campuses in County Tipperary (Thurles and Clonmel) into its provision across a wider region in North Munster. Its provision in County Clare is supported by the campus in Ennis.

Research, development and innovation (RDI) has been a key strength of LIT over the last decade. There is a need for both basic and applied research as while new products and services emerge from basic research, LIT's engagement with industry and business means that most of the research activities are applied and near to market. While LIT is not a research-led institute, its research informs teaching. Research-informed teaching is critical to ensure that graduates are not only work-ready but are armed with state-of-the-art knowledge and skills when they enter the workplace. A further priority of LIT's RDI activities is to deliver impact, value and innovative solutions for all stakeholders, for the economy and for society. LIT is aligned with the CONFIRM, Lero and PMTC SFI research centres, and the Enterprise Ireland technology gateway network. At the heart of LIT's RDI strategy is the ambition to be a strategic knowledge generator and technology transfer partner of choice for companies and organisations facing the challenges of achieving sustainable competitive advantage, making meaningful differences to the communities it serves and contributing to national and international sustainability. RDI has been a partner or coordinator on 48 European Commission-funded projects since 2014. The focus is on innovative, applied research, in partnership with start-up, indigenous and international organisations, and builds on existing and emerging areas of expertise within LIT. It has a particular expertise in the fields of biotechnology, Industry 4.0 and sustainability.

LIT has a strong international focus. Links have been established with other higher education institutions in the US, Canada, EU, China, Brazil, Oman and Malaysia. The institute acknowledges the support of the European community through Horizon 2020 and ERASMUS + programmes. Learner and staff exchanges have taken place and such exchanges will continue to be a feature of programme provision.

LIT has a distinctive educational philosophy of active learning that prepares its graduates well for the work environment by combing theory with practice. There is an emphasis in access to education through the provision of flexible learning and access programmes, including targeted interventions aimed at disadvantaged groups in society and those seeking retraining and upskilling, thus contributing directly to the promotion of social inclusion.

The LIT Strategic Plan 2018-2022 and the HEA Mission-Based Performance Compact 2018-2022 are key parallel drivers that are shaping LIT's educational development and activities, underpinned by its core values of excellence, innovation, equity, support, and accessibility.

The Technological Universities Act (2018) presented AIT and LIT with an opportunity to revisit their mission so as to increase impact, improve engagement, enhance teaching and learning and to boost capacity, capabilities and profile through the creation of a new entity – a technological university for the Midlands and Mid-West of Ireland.

1.2

The strategic case for the AIT – LIT Consortium

Building on comprehensive personal and professional relationships across many aspects of the two institutions, the consortium's ambitions are foregrounded in the strategic case for a regional technological university. Commensurate with expert guidance on the criteria for a successful merger, the consortium decision to seek designation is affirmed by:

- <u>Geographical contiguity, with</u> <u>adjacent regions, summated to form</u> <u>an unambiguous area that will be</u> <u>served by the new TU,</u>
- Having compatible institutional profiles, with aligned strategies, mission, vision and values and student-centred ethos,
- <u>Academic commonality and</u> <u>complementarity as defined by a</u> <u>technological institute agenda,</u>

- Mutual level/capacity/scale fostering an equal partnership that is bigger than the sum of its parts,
- Significant support from internal and external stakeholders,
- Well established and demonstrated institution and leadership synergies,
- <u>A track record of collaboration</u> and engagement.

Strategic fit, existing relationships, joint research, and joint membership of the EU Regional University Network (RUN-EU) were also significant drivers in the formation of the AIT – LIT Consortium.



"This is a wonderful step forward and I'm very excited to be working in an institute on the verge of becoming Ireland's next technological university. The people of the Midlands and Mid-West Regions will benefit greatly."

Staff Survey



Figure 1.1 Overview of AIT-LIT technological university

1.3

Introducing the AIT–LIT Consortium

The 2011 National Strategy for Higher Education to 2030¹ established a vision of a robust, modern tertiary education system for Ireland in line with the aims of the European Higher Education Area (EHEA). The Irish government gave further direction to this vision with the enactment of the Technological Universities Act 2018,² which set out the process and criteria by which institutes of technology could apply for designation as a technological university. Athlone Institute of Technology (AIT) and Limerick Institute of Technology (LIT) responded to the Technological Universities Act through a series of initial exploratory discussions and meetings in early 2019. These led to the formal establishment of the AIT – LIT Consortium by a resolution of both governing bodies in October 2019, with a view to preparing an application for designation as a technological university.

Over the past decade AIT and LIT have independently pursued a strategy of developing technological university capacities. The most recent institutional strategic plans³⁴, although independently developed, aligned on the core thematic agendas of:

- Equality, diversity, and inclusion
- Relevant, contemporary, and high-quality provision

- Research capacity building
- Strategic engagement
- Student experience

The merger of the two well-established and prestigious institutes of technology provides a firm foundation for the development of a new and impactful technological university. Such a merger is the established route to the formation of a technological university. The Irish government has committed significant initial funding to support implementation of the Technological Universities. The AIT – LIT Consortium was recently awarded €5 million from the dedicated HEA Innovation and Transformation Fund (2020) and €2 million in HE landscape funding (2019) to progress this technological university application.

Modelled on current data, the new technological university will be of significant scale with over 14,000 people (13,749 students in 2019/20), and (1276 staff in 2019/2020) across its six campuses (as outlined in **Figure 1.1**). The AIT – LIT Consortium provides a wider portfolio of programmes in areas like science, engineering, health, business, hospitality, social



1	Total number of students:	13,749
	Apprenticeship:	795
	Undergraduate:	12,017 (25% Part-t
	Post Graduate Taught	619 (65% Part-tim
	Post Graduate Research:	318
2	Total number of staff:	1,276



time) ne)

^{1.} Department of Education and Skills (2011). National Strategy for Higher Education to 2030: Report of the Strategy Group.

^{2.} Available at: http://www.irishstatutebook.ie/eli/2018/act/3/enacted/en/html

^{3.} https://lit.ie/admin/LIT/media/LIT/Quality/Quality/20Handbook%202019_2020/Volume%20(3)%20 Institutional%20Strategies/(1)-LIT-Strategic-Plan-2018-2022-(Approved-GB-10-04-18).pdf

^{4.} https://www.ait.ie/uploads/downloads/Strategic_Plan_2019_%28small%29.pdf

sciences, informatics, teacher education, and art and design. The combined research capacity includes research areas of strength in microbiology, toxicology, bioanalysis, biotechnology, sensor technology, manufacturing technology, ICT, sustainable energy, and mechanical and polymer engineering.

The creation of a new technological university in Ireland's Midlands/Mid-West regions will have very significant educational, social, civic, geographical, and economic value impact. The strength of the AIT – LIT Consortium and its commitment to regional balance is affirmed by its participation in the recently awarded Regional University Network – European University (RUN-EU),⁵ which is supported by the European Commission and enables the consortium to have influence and impact at regional, national and international levels.

Building on this success and on increased capacity, the AIT – LIT Consortium now seeks national designation as a technological university. The strategic plans of AIT and LIT identify the priority actions necessary to support the institutes in meeting the criteria for technological university designation as set out in the Technological Universities Act. These include:

- Increasing access and diversifying the student population.
- Delivering digital capacity plans to enhance the student experience.
- Enhancing teaching and learning of technical and professional skills that reflect the needs of industry and ensure student success.
- Enhancing stakeholder engagement and increasing our impact in our regions.
- Increasing RDI capacity in areas that have a clear economic and social impact.
- Excellence in all areas of operation and governance.

The AIT – LIT Consortium will continue to develop the vision of the new TU beyond the submission of this application. Three ongoing independent studies have been commissioned to support the development of the new TU vision and identity:

 A socioeconomic study has identified the needs, added value and impact potential of the new TU. This report is available to support this application.

- A market research study has been undertaken to inform the branding and profiling of the new TU. The market research study, when completed, will inform decisions on naming and branding.
- A governance and structures study will identify a range of strategic options for the governance, structures and functions of the new TU. Final decisions based on this report will need to await the appointment of the new governing body and the TU president.

An extensive all staff online survey conducted in June 2020 provided a mechanism for gauging staff attitudes to the formation of the new TU and a parallel study was also conducted with the student body of both institutes to better understand the student perspective on the TU proposition.

The commitment of the AIT – LIT Consortium to its regions

The AIT – LIT Consortium is unique in its geographical reach and regional structure, bordering almost half of Ireland's 26 counties. It will transform the availability and accessibility of university provision in its regions, particularly across counties that have up to now had low university participation rates (see **Figure 1.2** Source: CSO – Census 2016).

The importance of supporting regional communities with regional public service provision including the delivery of third-level education that is localised, focused and accessible to the communities it serves has been amplified during the preparation of this application. The AIT – LIT Consortium already plays a significant role in addressing the educational deprivation that spans the geographical spread of the new technological university; **Figure 1.3** presents the feeder school data that is the current catchment area of AIT and LIT.

The new TU will provide access to a universitylevel education in the region it serves, as it is not served by any other proposed or established consortium (Please see **Figure 1.4**).

The AIT – LIT Consortium can leverage many years of working diligently to build relationships with social and industry partners across the Midlands and Mid-

Figure 1.2 Higher education participation rates by county







Chapter

1: The context for the new TU





^{5.} See: www.run-eu.eu



West of Ireland. The new TU will be the first crossregional university in Ireland and will ensure growth in education provision and enhanced research opportunities, as well as dynamic community and industry engagement across the region.

Through its support for industry and communities, the new TU will make its regions more attractive for indigenous SMEs and FDI investment by linking to opportunities in knowledge creation and innovation. This in turn will contribute to the development of viable and vibrant communities that can offer an economically and socially desirable regional counterbalance to

the development of Dublin. With its urban hubs and regional campuses, the new TU can provide a key strategic corridor between rural communities, towns and cities. Such objectives are in line with Project Ireland 2040⁶, the government's long-term strategy to make Ireland a better country for all its people. The TU presents an opportunity to enhance, accelerate and amplify our ambition to contribute to the sustainable development of the region it serves and contribute to achievement of United Nations Sustainable Development Goals (SDGs), which will be reflected through our teaching, research, development, innovation and engagement activities.

International context for the new TU

The AIT – LIT Consortium is actively committed to facilitating the inward and outward flow of students and staff between international partner institutes and welcomes the academic and cultural enrichment with that brings. Currently, international students in Ireland and abroad comprise 10 per cent of the full-time student population, while international researchers make up 15 per cent of the research community. AIT - LIT also attracts a significant number of students who are resident or domiciled in Ireland and continue to hold non-Irish passports - these include guest workers, immigrants, refugees, and asylum seekers.

As founding members of the Regional University Network (https://run-eu.eu), the AIT - LIT Consortium has contributed to an established network of like-minded HEIs who are committed to societal transformation in the regions and to addressing regional and global challenges in a sustainable way. The alliance members have a regional, as opposed to an urban, focus and also have a proven track record in the delivery of future and advanced skills activities in teaching, learning, research and engagement relevant to societal challenges including future industry, sustainable development, environment and climate change, ageing population and social inclusion.

The alliance members believe this project will make a huge difference to their regions and to Europe by focussing on the translation of the labour market and societal demands to education and research outputs, with measurable downstream societal benefits. RUN-EU members have a history of strong engagement with all regional stakeholders, public and private, and are knowledge experts in regional development. The RUN-EU strategic plan places "learning, studying and doing research" at the centre of the RUN-EU alliance activities.

The participating HEIs represent a broad range of different types of higher education institutions, sharing a common background in successful collaboration with industry and regional stakeholders in applied education and research projects, inducing societal impact and transformation.

The HEIs (in corresponding countries and their associated regions) which compose RUN-EU include Polytechnic of Leiria, Portugal (Centre Region); Polytechnic of Cavado and Ave, Portugal (Northern Region); Athlone Institute of Technology, Ireland (Midlands Region); Limerick Institute of Technology, Ireland (Mid-West Region); NHL Stenden, The Netherlands (Friesland Province); HAMK University, Finland (Southern Region); Széchenyi István University, Hungary (Győr-Moson-Sopron County); and FH Vorarlberg, Austria (Vorarlberg Region). Figure 1.5 lists the partners in the network.

The new TU will build on the significant success of its constituent institutes in China. Initially, China will be the largest non-EU market for outward and inward mobility, with over 2,000 students studying with partner universities in China on programmes approved by the Chinese Ministry of Education, including mechanical engineering, civil engineering, accounting, design, pharmaceutical science and software engineering.

Inward mobility continues to increase year on year with over 250 students from China and a similar number of international students from other countries attending programmes within the AIT - LIT Consortium. The presence of international students has been very positive on campus and has helped produce a generation of internationally minded, socially conscious, agile graduates with a deep and profound respect for other cultures.

Student experience

AIT-LIT Consortium is home to over 14,000 students across vibrant campuses in Athlone, Limerick, Thurles, Clonmel and Ennis, all of which offer lively and enjoyable student experiences. Students of AIT and LIT enjoy a fun and rewarding college journey. Each of our campuses is a community of learners, where students get to know classmates and lecturers in a relaxed and positive environment. The performance of AIT and LIT in the annual Irish Survey of Student Engagement (www.studentsurvey.ie) is testament to their student-centred approach to teaching and learning, which will be the foundation of engagement in AIT-LIT TU. Students are supported by an extensive

^{6.} See: https://www.gov.ie/en/campaigns/09022006-project-ireland-2040/

range of services designed to help them reach their full potential and enjoy the college experience in a safe, relaxed and supportive environment.

Students engage in active learning – combining practice with theory in an experiential model of learning that equips them with the essential skills they need for their chosen careers. Graduating as self-starter life-long learners with professionally focused degrees, AIT-LIT graduates are job-ready and in high demand (employability Stats).

The cost of student living in Athlone, in Limerick and in the regional campus towns is significantly lower than many other university cities, with student accommodation located within easy walking distance of our campuses. The lower student living costs reduce financial pressure and attract students from a wider socio-economic profile.

TU designation: a natural evolution

Achieving full designated awarding powers as a new technological university is a natural evolution for the AIT – LIT Consortium. Between them, AIT and LIT have been awarded *The Sunday Times* Institute of Technology of the Year on four occasions (AIT in 2018 and 2020; LIT in 2008 and 2013). The new technological university will continue to provide students with quality education and build on their areas of strength.

The AIT – LIT Consortium aspires to be recognised for research impact in its hinterland, disseminated through educational and public engagement. AIT, which was the first institute of technology to join the prestigious AMBER SFI research centre, is currently a member of five SFI research centres - CONFIRM, AMBER, CÚRAM, ADAPT and SSPC, and has been acknowledged in the U-Multirank's Top 25 Performing Universities in the World for Interdisciplinary Research for two consecutive years. LIT was the first institute to coordinate an EU research programme within the Specific KBBE Programme "Cooperation": Food, Agriculture and Biotechnology, within the FP7 programme. AIT and LIT have won significant EU research funding through Horizon 2020, INTERREG, Erasmus and other programmes on multiple occasions, including projects where they have been coordinators or lead partners. Specifically, AIT and LIT are currently leading a Horizon 2020 pan European-Chinese collaboration aimed at reducing the burden of plastic

"Students engage in active learning – combining practice with theory in an experiential model of learning that equips them with the essential skills they need for their chosen careers. Graduating as selfstarter life-long learners with professionally focused degrees, AIT-LIT graduates are job-ready and in high demand (employability Stats)."

Staff Survey

waste in the environment globally. Only two projects were selected for funding across Europe for the plastics bio-degradation EU-China call in 2019, BiolCep was one of them. This success is reflective of the talent and focus of Ireland's research and innovation community.

AIT and LIT have a long history of effective regional engagement and the new TU will continue that commitment to the regions it serves. Connected to industry, the start-up community, and professional stakeholders to ensure contemporary and relevant programmes of study, the TU will also facilitate knowledge creation and transfer activities which will enhance regional competitiveness.

Foundational attributes

The commitment of the AIT – LIT Consortium to excellence in education, research, operations, and governance is at the core of this application for technological university designation. In its ethos and culture, the new TU will build on the best practices, policies, and procedures that are already in place in AIT and LIT. The new TU will:





- Deliver a supportive people-orientated learning environment and student-centred educational experience where students and staff can benefit from opportunities for development, with a shared set of common aims and clear lines of communication.
- Maintain the high academic standards of its founding institutes and will continually enhance the quality of its teaching, learning, research.
- Maintain the high standards of its founding institutes in professional, management, support and technical services.
- Value the creativity and professionalism of its staff, who will make a vital contribution to the students' experience to the development of academic disciplines and to engagement with teaching and research.
- Listen and respond to the voice of students as an essential and vital quality assurance activity.

- (As a designated awarding body) be committed to a continuous improvement process that will ensure excellence in educational provision and associated services.
- Build robust systems, data and operational protocols that support and protect students.
- Take an integrated, collaborative approach that listens to the voices of all stakeholders and that upholds principles of equality, diversity, and inclusion.
- Optimise the use of digital technologies and the extended campus in the delivery of learning.

"AIT and LIT have a long history of effective regional engagement and the new TU will continue that commitment to the regions it serves.

<u>Connected to industry, the start-</u> up community, and professional stakeholders to ensure contemporary and relevant programmes of study, the TU will also facilitate knowledge creation and transfer activities which will enhance regional competitiveness."



Socio-Economic Study





Figure 1.6

TU readiness as of Q2 2019



Key Indicators

TU Metrics

K1 - TU - Metric - Learner Profile (30%) K2-TU - Metric - Learner Profile (4%) K3 - TU - Metric - Staff Profile (90%) K4 - TU - Metric - Staff Profile (45%) K5 - Strategic Research Plan K6 - HR Plan - People Strategy K7 - Areas of Strength - Research

Governance and Management

K12 - Governance Structures K13- Management Structures K14 - Campuses and Region K15 - Stakeholder Support

Academic

K8 - Academic Positions / Portfolio K9-Partnerships and Collaborations K10 - Research Provision K11 - Internationalisation Activity



Operational

K18 - Academic Process Integration K19 - Research Structures

1.4

The process for designation as a technological university

Following the enactment of the Technological Universities Act 2018, AIT and LIT independently commissioned Professor Simon Marginson of Oxford University to map out each institute's strategic options to achieve TU designation. The key indicators and methodology to establish technology university readiness were established. A focused work plan and priority targets for TU development were defined. Figure 1.6 shows the level of readiness of each of the key indicators (on a scale from 1 to 9), at Q2, 2019.

A strategic synergy review of AIT and LIT confirmed a solid basis for AIT – LIT to progress as a TU. In March 2019, the consortium made a submission to the HEA in line with the HEA's Landscape document⁷ setting out the timeline for progress in the application for TU designation, as shown in Table 1.1.

Progress towards a technological university

The AIT - LIT Consortium took an inclusive approach to the development of the technological university project. Co-directed by the former vice presidents of academic affairs and registrar from AIT and LIT, the project devised an inclusive methodology to involve staff and students and clear timeline to the November 2020 submission date. All aspects of the project were

approached collaboratively and participation was actively encouraged. Staff and students were engaged in working groups from the inception of the project and played a pivotal role in the significant progress that has been made to date. Over 200 people across 20 working groups and project activities engaged in developing, managing, and delivering the outputs that were agreed across the 30 work packages. Working groups were co-chaired by functional leads from both AIT and LIT and were given autonomy to develop their team in response to the agreed work programme. This ensured ownership of an approach that focused on the creation of a new TU and not merely the merging of existing institutes. Staff and students also engaged in activities ancillary to the work of the working groups in support of TU deliverables. Engagement with students and staff throughout the project to date has sought to be positive, collaborative, collegiate, and ambitious. The success of this approach and level of engagement bodes well for the culture of the new technological university.

The AIT - LIT Consortium has made significant progress in its TU preparations since its formation early in 2019 and is now at the stage of presenting its formal application for TU designation. The AIT-LIT Consortium is committed to developing a new technological university that will deliver against key system performance objectives and high level targets (HLTs) while embracing the challenges captured in



Governance

Operational

Academic

K17- Financial Management and Integration

The context for the new

^{7.} See: https://hea.ie/assets/uploads/2017/04/Towards-a-Higher-Education-Landscape.pdf

Table 1.1 Timeline for TU designation		
Date	Action	
Q4 2019	Formal decision to merge and seek designation as a TU	
Q1 2020	Establish joint governing body and project team	
Q2 2020	Establish inter-institutional working groups	
Q3 2020	Address any shortfalls in relevant criteria	
Q4 2020	Develop and submit application for TU designation	

Figure 1.7 Progress towards a technological university



the TURN Report. The consortium has built on strong, positive leadership relationships between AIT and LIT to ensure strong collaboration between the staff and students of both institutions and is progressing with significant organisational transformation.

The AIT – LIT Consortium has met or exceeded the progress targets set out in the original Landscape submission, despite the difficulties caused by COVID-19, and is now on track to deliver the new technological university by 1 September 2021.

Figure 1.7 shows the stages of progress on a timeline.

Project governance

The AIT - LIT Consortium has put in place a comprehensive governance structure (Figure 18) to ensure inclusion, robust governance and progress towards the goal of TU designation. This has included establishment of the following elements:

- · A project team with an independent external facilitator and a TU project director in each institution
- A Joint Governing Body TU Steering Group (JGB)
- A Joint Management Steering Group (JMSG), which meets weekly
- An Academic Steering Group (ASG)

- A Professional Services Steering Group (PSSG)
- A TUI–Management IR Forum
- A Professional Services Management IR Forum
- · 20 working groups across 30 work packages, reporting to ASG, PSSG or the project team
- · Working groups reporting directly to the TU project team include Students' Union, Equality Diversity and Inclusion, GDPR, ORCID Project (Libraries), Marketing and Communications, and Heads of Department

As an embedded part of the TU project activities, two IR forums (consisting of academic and professional management support staff in both institutes) are working towards agreeing IR matters relevant to the creation of the new TU. Position papers have been shared between trade unions and management, and regular meetings are progressing the defined agendas.

Planning and work packages

Planning in the initial project phase focused on the submission readiness of TU development. Work packages were identified to address the critical areas of TU development and working groups were assigned work packages that specified the phased deliverables. A 'bottom-up' approach engaged staff and students in developing the concept and activities critical to



Figure 1.9 Working group reporting structures

Academic Steering Group		Profe	Professional Services Steering Group		
WG	Title	WG	Title		
1	Mission/Vision	9	Student Development		
2	Teaching & Learning	10	Computer Services		
3	Research	11	Human Resources		
4	Engagement	12	Extended Campus		
5	Apprenticeship	13	Finance		
6	Quality				
7	International				
8	Digital Campus T, L&A				

the establishment of the new TU. Working groups were given full authority to encourage working group participation. Academics, professional, management, support, and technical staff designed, developed and drove the work of the working groups in line with the overall project objectives and acted in a range of capacities, including leading many of the working groups. The excellence of these staff members cannot be overstated. The reporting structures of the working groups are illustrated in **Figure 1.9**.

Staff engaged heavily in the development of all aspects of this TU application from across the AIT – LIT Consortium; circa 15% of all staff were directly involved in the working groups.

Joint TU Project Team

WG	Title	
14	MarComms	
15	EDI	
16	Student Union	
17	HOD's	
18	TU Metrics	
19	ORCID	
20	GDPR	

Submission-ready application

Since making its response to the HEA's Landscape document in September 2019, the AIT–LIT Consortium has made significant progress on each of the eligibility criteria set out in section 28 of the Technological Universities Act (2018) and is now in a position to submit its application for designation as a technological university.

Figure 1.10 shows the level of readiness of each of the key indicators (on a scale from 1 to 9), at the end of Q3, 2020 – this shows the application as submission ready.

Figure 1.10 Technological university readiness level: submission ready



Key Indicators

TU Metrics

KI 1 - TU - Metric - Learner Profile (30%) KI 2- TU - Metric - Learner Profile (4%) KI 3 - TU - Metric - Staff Profile (90%) KI 4 - TU - Metric - Staff Profile (45%) KI 5 - Strategic Research Plan KI 6 - HR Plan - People Strategy

KI7 - Areas of Strength - Research

Academic

KI 8 - Academic Positions / Portfolio KI 9- Partnerships and Collaborations KI 10 - Research Provision

KI 11 - Internationalisation Activity

Governance and Management

KI 12 - Governance Structures KI 13- Management Structures KI 14 - Campuses and Region KI 15 - Stakeholder Support

Operational

KI 16 - IT Integration KI 17- Financial Management and Integration KI 18 - Academic Process Integration KI 19 - Research Structures

1.5

The proposed vision, mission, and values of the new TU

The challenge as a technological university is to conceive a future that develops, embraces and utilises new technologies and scientific understandings in a manner that enhances the way we live, learn, and work. In meeting this challenge, we will continue to develop as a leader in applied knowledge creation and exchange – a leader capable of conceiving, designing, implementing and operating futures yet to be realised.

Consistent with a collegiate and collaborate approach, the honing of the new mission for a technological university will remain an iterative, organic and generative process. AIT – LIT is intentional in its formal processes for defining a logical vision for the new TU, a vision that is impactful and adds value for the region and its people.

A philosophy of being people centric is paramount to the application for designation. Being people centric is inclusive of staff and student-focused initiatives and provides support for success in a strategic way. The best universities share the distinction of being spaces of unfettered thought, exploration and creativity. The approach to developing the vision, mission, and values was to comprehensively engage staff and students in framing the future of the TU. Working groups were charged with developing a position on mission, vision, and values for the new TU. In addition, a detailed survey was promoted and circulated to all staff from the 3rd - 26th June 2020 and to all students from 8th of June - 12th of July 2020 to support the development of the TU's emerging identity. There were 657 staff responses and 936 student responses to the surveys. The results were analysed, aggregated, and cross-referenced to detail a comprehensive, representative and inclusive view of the TU mission, vision, and values.

Arising from this community wide "conversation", the following statements capture the essence of the consensus on the three domains of vision, mission and values.

TU vision

The TU vision is to be a catalyst for positive change and innovation across regions. It will prepare students for future ways of living, learning and working, while building new partnerships that strengthen innovation, and create new and exciting opportunities for communities. The TU goal is to become an accessible, progressive and impactful technological university – a higher education institute that reflects the educational demands and economic needs of the regions and the communities served.

TU mission

The TU aspires to be a contemporary and engaged technological university distinguished by outstanding learner experience, international focus and impactful and applied research. The TU will lead continued social and economic growth for the benefit of the communities it serves. The TU will strive to be a leading provider of higher education that is student-centred, researchinformed, industry-relevant, and accessible to all.

The AIT – LIT technological university will:

- Provide student-centred, career-focused education, technical and professional skills, and applied research programmes for the diverse cohort of learners within a professional and supportive environment,
- Provide digital platforms and supports for students and staff that ensure access, engagement and success in higher education, teaching, learning and research,
- Provide excellent professional, management, support and technical services for all stakeholders,
- Create a welcoming and supportive community for students and staff that is stimulating, inclusive and diverse,
- Contribute socially, culturally, environmentally and economically to society, on a regional and national basis,
- Be recognised nationally and internationally for excellence and innovation.

The new TU will be characterised as a regionally focused higher education institution with a national and international outlook. It will empower the diverse student body by providing a quality higher education experience, enabling economic, social and cultural development. The impact of this pipeline of highquality graduates will support sustainable development of the wider region in a virtuous cycle; therefore, the mission of AIT – LIT is to create an educational environment that nurtures curiosity and creativity, allowing students to grow and to realise their goals, and to contribute socially, culturally and economically on a regional, national and international basis.



Our values

The vision and mission of the new TU will be supported by the following shared values:

- Excellence and quality: we will strive to continuously improve all our activities to ensure ongoing excellence and quality we will do this through a focused range of curricula and related supports that are academically rigorous, research-driven and practise-based.
- Professionalism: we will be professional and respectful in all our interactions with students, staff members and other stakeholders; we will continuously refine our professional practice to take account of relevant research and scholarship.
- Innovation: we will encourage innovation, new ideas and creativity in an environment that encourages expression, exploration and development.
- Partnership: we will work as partners in teams to innovate and create new and exciting opportunities for our communities; we will do so with colleagues, with industry partners and with other HEIs in Ireland and abroad.
- Supportiveness: we will provide a supportive and protective environment for students, staff members and other stakeholders that empowers them to achieve their full potential.

- Equity and inclusiveness: we will value and promote inclusiveness, equity of opportunity and respect for all students and staff, especially those from under-represented groups, such as ethnic minorities and persons with disabilities.
- we will be open, transparent and accountable, and we will display integrity in all our dealings with staff, students and other stakeholders.
 - · Accessibility: we will make our programmes accessible across different platforms (online, blended, face to face), to people in different locations, at a range of levels (from foundation to PhD level), and always in as clear, user-friendly and uncomplicated a manner as possible.
 - Agility: we will be agile in our ability to anticipate, understand and respond rapidly to the emerging needs of the communities that we serve, including students, industry, enterprise and wider society.

"The new TU will be a community that focuses on the health and wellbeing of its community of staff and students.

Student Survey

It will facilitate a sense of involvement with the wider community (regional, national and international), and it will embrace and create a culture that promotes EDI and take actions to actively develop an inclusive culture."

Staff Survey

1.6 Equality, diversity and inclusivity in the new TU

The Technological Universities Act 2018 requires "the attainment of gender balance and equality of opportunity to be promoted among the students and staff of the technological university". It also obliges the technological university to "respect the diversity of values, beliefs and traditions in Irish society" in the performance of its functions. The AIT – LIT Consortium makes a commitment that the new TU will be proactive in promoting equality, diversity and inclusion in the spirit of the Act.

The new TU will be a community that focuses on the health and wellbeing of its community of staff and students. It will facilitate a sense of involvement with the wider community (regional, national and international), and it will embrace and create a culture that promotes EDI and take actions to actively develop an inclusive culture. The new TU will:

- Provide leadership in promoting and advancing equality, diversity and inclusivity.
- Build an environment where all members of the TU are respected equally and where everybody's cultural identity and sense of belonging are nurtured.
- Ensure that education and service planning and provision embrace the needs of all students and staff and are delivered in an environment that is inclusive and accessible to all.
- Support all members of the TU so that they understand, respect and celebrate diversity, and feel comfortable with difference.

- Support students and staff so that they enjoy their education and work in an environment free from bias, stereotyping and discrimination.
- Empower students and staff to stand up for themselves and others in challenging circumstances and in doing so, foster civic and social responsibility.
- Ensure the safety and wellbeing of all students and staff.

The new TU will develop an Action Plan for Equality, Diversity and Inclusion based on the existing gender equality action plans that AIT and LIT submitted as part of their submissions for the Athena SWAN Bronze Award. Both institutes applied for a Bronze Award. LIT achieved the award in March 2020 and AIT is expected to achieve the award by March 2021.

1.7 Governance of the new TU

Governing Body

The new TU's Governing Body will be its decisionmaking authority. It will be constituted in line with the provisions of section 12 of the Technological Universities Act 2018. The JGB will continue to oversee the emergence of the unitary institution from designation day such that all requirements are in place for a seamless transition to a unitary institution on the appointed day.

Academic Council

Section 16 of the Technological University Act (2018) requires the new TU to establish an Academic Council and sets minimum requirements for its regulations and functions. Approval of these regulations and functions will rest with Governing Body.

Membership of Academic Council will be in line with that outlined in the Technological Universities Act 2018. For the foundation period of not more than one year, the Academic Steering Group will be designated as Academic Council of the new TU on Appointed Day, pending the election of a TU Academic Council.

Membership of the Academic Steering Group until Appointed Day is outlined in **Table 1.2**. The president of the new TU will replace the external chairperson on the Appointed Day. The Academic Steering Group's committee structure will initially consist of the following sub-committees on the Appointed Day.

- Quality Management: Assurance Enhancement and Integration
- Teaching, Learning and Assessment
- Postgraduate Research Studies
- Apprenticeship and Flexible Learning
- Student Experience: Engagement and Success
- Programme Provision
- Recruitment, Admissions and Retention

A single unitary quality assurance framework will be in place on the Appointed Day. Work on the development of such a fully integrated unitary framework is proposed to be carried out by the Quality Working Group of the Academic Steering Group.

Quality assurance and enhancement

The new TU will, as a designated awarding body for awards from NFQ Level 6 to Level 10, have selfdirection, autonomy and ownership of the quality assurance and enhancement of all its activities and their supporting services. It will align with and support the achievement of the vision, mission, values, and strategic drivers of the organisation. It will provide flexibility and responsiveness in practise and embrace the spirit of the technological university ethos of being a regional leader, nationally impactful and globally relevant.
 Table 1.2
 Academic Steering Group

Representatives

External Chairperson

Presidents (ex officio)

AIT – LIT TU Project Directors

Institute Registrars

Deans of Faculty

Staff Union Representatives

Heads of Department

AIT Academic Council Elected Representatives

LIT Academic Council Elected Representatives

Student Representatives (2 per institute)

Total

Number 2 2 2 6

The new TU will take due account of the *Statutory Quality Assurance Guidelines*⁸ developed by Quality and Qualifications Ireland (QQI) for designated awarding bodies, including the development of policies, procedures, and guidelines. It will also ensure compliance with European standards for quality assurance and will take account of obligations set out in relevant legislation. As a designated autonomous awarding body, the new TU will adopt a consolidated quality framework that builds on the existing robust guality principles and processes of the AIT and LIT.

The new TU will be cognisant the twin purposes of accountability and enhancement are at the core of all quality assurance activities, and taken together, these will be fundamental in creating trust and public confidence in the new TU's performance. An important strategic priority will be measurement of the effectiveness of the Quality Assurance and Enhancement (QAE) system through self-evaluation and evidence-based development. The new TU will continuously evaluate the effectiveness of its institutionwide quality assurance system for the purposes of establishing, ascertaining, maintaining, and improving the quality of its education, training, research, and related services. This will ensure public confidence in the quality of provision and will demonstrate accountability.

The QAE system will be based on commitment to the following eight overarching principles covering:

- 1. Academic excellence and student-centred values
- 2. Institutional autonomy and academic freedom
- **3.** Fostering a quality culture
- 4. Informed practice and stakeholder engagement
- 5. Proportional implementation
- 6. Comprehensive, transparent, and publicly accountable procedures
- 7. Evidence-based decision making
- 8. Consistency with policy and international effective practice.

These are described in more detail in Chapter 2.

The new TU will foster and promote a quality culture where quality is embedded in all its activities, and this will be coupled with its commitment to quality assurance and accountability and to quality enhancement and continuous improvement.

Organisational structure

It is as yet somewhat premature to be in any way prescriptive on the optimal organisational structure for the new TU. This will ultimately be a decision for the new TU to make. There is a high level of consensus among the staff and stakeholders of the consortium regarding the foundational principles upon which this organisational structure might be based. These include effective decision making, the centrality of the academic voice in devolved departmental decision making, responsiveness to change, opportunity and crises; transparent decision making, and open communication flows.

Figure 1.11 outlines the conceptual approach to the organisational structure. This approach is flexible enough to ensure the comprehensive inclusion of all functions and areas, while supporting connectivity and connectedness of the organisational ecosystem.

The identification of functions will support developing the detail of a robust governance and organisation structure. In parallel, a preliminary study of international best practice in the governance and management of higher education institutions has been commissioned to inform decisions relating to how to best organise the structure and functions of the TU. This study takes full cognisance of the multi-campus and crossregional characteristics of the AIT – LIT Consortium. Organisational structure developed in consultation and engagement with staff representatives. Figure 1.11 Functions of the organisation



1.8 Socioeconomic impact of the TU

Economic impact

The high-level macro-economic impact of the new TU was estimated using the concept of the expenditure multiplier which measures the effect of expenditure by HEIs on economic output. This quantifies the economic impact of a euro spent by AIT - LIT on both output and employment at the national level; however, this is only a partial estimate of the full economic and social impact of the HEI as it does not capture the human capital, R&D (research and development) and entrepreneurial impacts generated. It also does not measure the broader non-economic impact of the HEI on social policy objectives such as greater inclusion, equality of access and public wellbeing. Other impacts, such as skill enhancement, which have significant downstream economic and social benefits, are more difficult to measure.

Type 1 multipliers (direct and indirect impact) were measured in a 2015 study as higher in universities (1.27) than in institutes of technology (1.1). Of greater interest are the Type 2 multipliers showing that spending by institutes of technology has a strong impact on their local economies via household expenditure. The Type 2 multiplier for AIT was 3.98 and for LIT was 4.02. This means that each euro of expenditure for LIT generates gross output of 4.02 euros in the Irish economy while each euro of expenditure for AIT generates 3.98 euros in national output. Looking specifically at impact on employment, the employment multiplier for AIT was estimated at 8.04 and for LIT at 7.8, with significant impact on household expenditure. The Type 2 output and employment multipliers were used to estimate the economic impact of AIT and LIT. Using the 2017/2018 financial statements of both institutes of technology, their expenditure on staff costs and operating expenses and apply the output and employment multipliers, their impacts on the Irish economy was significant

The estimated combined impact of AIT and LIT on the Irish economy is a contribution of €418.5 million in economic output, while they support 827 jobs in addition to their own FTE count. This output has obvious benefits for the regional economies of the Mid-West and Midlands and generates revenue for the Exchequer in direct and indirect taxation. AIT's economic impact accounts for about 2.4% of the Midlands' economic output, as measured by Gross Value Added (GVA) in 2018. The corresponding figure for LIT is about 2.1% of output in the Mid-West.

The analysis in this section highlights some of the areas where the new TU can meet national and regional economic needs. Nationally, the overriding need is for a balanced pattern of spatial development to avoid excessive reliance on the Dublin region while other regions perform below their potential. Regionally, the need is for greater connectedness between the growth centres of Limerick and Athlone and their wider catchment areas, enabling local communities in the Midlands and Mid-West to participate more fully in the growth and development of their regions.

The new TU will help to meet these needs through developing the skills base and human capital of

Table 1.3 Estimate

Estimates of economic impact - LIT and AIT 2018

	Employment multiplier	
цт	7.8	
AIT	8.04	
LIT + AIT		

Sources: LIT and AIT Annual Reports; Zhang et. al. for multipliers.

the Midlands and Mid-West regions. Focusing on higher vocational, technical, technology-based and professional skills will be central to this objective. Raising regional productivity in the Midlands and Mid-West will be essential for future economic development in these regions, especially in the indigenous enterprise sector. A wider and deeper skills base will also make both regions more attractive for inward investment, especially by overseas companies, and will help to grow future jobs and incomes – making for a better balance of spatial development in Ireland.

Social impact

The social impacts of AIT – LIT include many aspects such as training for specific groups, disability services, development cooperation, volunteering, learning in the community, culture, health, sport, gender and other issues. The National Strategy for Higher Education in Ireland to 2030 (2011) states that links between HEIs and their local communities include educational, cultural, sports-related and civic activities. The relationship between AIT – LIT and the community is particularly important in the context of the promotion and achievement of greater equality in higher education.

Greater engagement and partnership between higher education institutions and community and voluntary Output impact (€'000)

Jobs supported

232.235451186.324376418.469827

groups offers significant potential to progress equality and community development and to further social innovation. Community education strategies have proven very effective in reaching out to nontraditional students and are purposely designed to build up and maintain resources within communities. Partnerships with community groups can contribute to the creation of an academic community engagement model that builds academic community partnerships to create long-term cultural and social change.

The Technological Universities Act (2018) highlights the role of the TUs in developing and promoting 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 are located. The Act also promotes effective relationships between TUs and organisations representing the social, creative and cultural interests of the community in the region in which the campuses of the technological university are located.

In essence, there are two distinct aspects to the social impact of the new TU:

- The system of engagement with stakeholder groups.
- The system of reaching learners in the under-represented groups through non-traditional programmes.

"The role of the new TU in the social development of its area is clear from this data. Meeting the needs of disadvantaged groups and opening up higher education to underrepresented groups will be an ongoing challenge."

Socio-Economic Study

"Social impact and diversifying the student population will be a core issue. This challenges the TU to engage with diverse stakeholders to improve access to higher education."

Socio-Economic Study



Both engagement of stakeholders and working with under-represented groups will address a series of significant disparities and social differences within the population served by the new TU.

The Pobal Index of Deprivation confirms the levels of affluence and deprivation for each local area, using eight categories of extremely affluent, very affluent, affluent, marginally above average, marginally below average, disadvantaged, very disadvantaged and extremely disadvantaged.

At national level, the area covered by the Limerick/ Athlone corridor shows up as a mixed area incorporating both advantaged and disadvantaged districts, but not apparently at major extremes. However, it is at the local level that sharp differences emerge. In Limerick, areas of extreme affluence and extreme disadvantage coexist in proximity to each other, a mosaic or patchwork of intense socioeconomic contrasts. In Athlone, similar contrasts are evident but not as apparent as in Limerick.

The role of the new TU in the social development of its area is clear from this data. Meeting the needs of disadvantaged groups and opening up higher education to under-represented groups will be an ongoing challenge. Social impact and diversifying the student population will be a core issue. This challenges the TU to engage with diverse stakeholders to improve access to higher education.



"The Technological University should focus both on Practical Teaching and Innovative Research with the aim of training students ready to take on the world and change society and workplace for the better with practical and innovative ideas"

Student Survey

"A wonderful, exciting time for both IoTs to expand and work collaboratively to enhance and enrich every student experience and continued growth through partnership with external stakeholders to make the new TU an attractive higher education provider for new, returning, continuing students and its staff."

Staff Survey





Overview of the new TU

This chapter sets out a broad overview of the new TU across the following areas:

2.1 The new TU collaborative and engaged confirms the centrality of the student in the mission of the TU, describing how we place the student experience and collaboration with stakeholders at the heart of the activities.

2.2 Apprenticeship and skills education in the new TU sets out the value we place on apprenticeship and skills education, and how we will meet growth in demand in this area and also adapt to changing workplace skills requirements.

2.3 The approach to teaching and learning in the new TU includes a brief outline of our educational philosophy, pedagogy and assessment processes, curriculum framework, provision for flexible learning pathways and lifelong learning, and how we plan programme provision.

2.4 The approach to research in the new TU covers the research principles, environment, infrastructure, performance and impact. It also deals with how we will build a sustainable research capacity and innovative research ecosystem, and how we will internationalise research.

2.5 The new TU's internationalisation strategy describes our place in an internationalised higher education context and the objectives for inward and outward mobility as well as 'internationalisation at home' and transnational education.

2.6 Quality strategy and processes in the new TU covers the quality assurance principles, processes, policies and procedures.

Characteristics of the new TU

- Welcoming: The new TU will be a place where students and staff feel included and can engage with one another without fear of judgement, regardless of background or circumstance.
- Student centred: The new TU will empower and support students to contribute to society and live positive lives.
- Collegial: The new TU will provide an environment in which colleagues can connect, collaborate and cooperate within a participative academic and work environment. The new TU will solicit and value input from all its stakeholders, across all functions, to make informed decisions.

- Accessible: The new TU will be open and communicate in a manner that is accessible to all – in the language it uses and in the technology platforms it uses to share its message.
- Visionary: The new TU will explore new ideas and approaches that can contribute to and generate excitement about education, research and industrial collaboration.
- Adaptable: The new TU will be aware of the evolving educational, industrial and cultural changes in society and will continually adapt to meet the new requirements driven by these changes.

Welcoming **Student-centred** Collegial Accessible Visionary Adaptable



2.1 The new TU: collaborative and engaged

Consistent with the mission, vision and values outlined above, the new TU will integrate engagement with its stakeholders as a key pillar of its ecosystem. It will recognise our existing achievements while also strengthening our commitment to becoming a technological university with a strong reputation for innovation. The engagement strategy will integrate all activities with a view to maximising regional, national and international visibility, impact and connectivity. This strategy and its associated infrastructure will support our students, staff, researchers and external partner stakeholders to deepen their relationships, recognise and acknowledge achievements and respond to regional needs, challenges and opportunities.

Centrality of the student

The approach to engagement recognises and values the fundamental role of the new TU as a place of learning, research and development that revolves around the student experience (Figure 2-1). The strategy will place the student at the centre of all collaborative activities between the new TU and its industrial, civic, governmental and representative body stakeholder organisations, and will enable it to:

- Be successful in attracting talented prospective students from our regional communities,
- Engage students through meaningful programmes of learning and research that are inclusive and engaged with key national and international stakeholders,

- Remain connected in a mutually beneficial way with alumni who will be ambassadors for the new TU.
- A distinguishing feature of the TU sector in Ireland is the "ladder system" of progressive levels of programmes and qualifications from NFQ Level 6 higher certificates, progressing to NFQ Level 7 ordinary degrees and further progression to NFQ Level 8 honours degrees. This progressive system of programmes and awards provides greater flexibility to students who wish to take a steppingstone approach to their education through short cycle programmes/ qualifications, with the option at each award stage to graduate or continue to the next level on the National Framework of Qualification.

Engagement occurs through the student life cycle and will permeate all areas of activity in the new TU (**Figure 2.2**), enabling it to maximise its impact and value across the region. The geographic spread of the campuses will support access and connectedness across the Midlands/Mid-West regions. The depth and breadth of engagement within the TU partners is already significant. There is a shared commitment to expanding and enhancing engagement, maximising the potential for impact within the regions.



A collaboration and engagement ethos will drive ambition to:

- Support the social, cultural, environmental and ecconomic development of the spine of Ireland: the Midlands and Mid-West regions
- Connect the TU locally and globally to its academic, industry, social, innovation and research partners through our students, staff and communities

- Inform the academic process and understanding of societal and environmental needs
- Become a living, dynamic, caring and responsive university community
- Combine a tradition of active learning with active, innovative participation





"I strongly support the development of the TU and believe that it presents an excellent opportunity to combine LIT's unique and innovative range of flexible and undergraduate courses with AIT's expanded post-graduate offering." Student Survey

The wider engagement strategy will enable the TU to:

- Engage with a broad spectrum of learners
- Respond to the needs of society and economy
- Be cognisant of emerging trends and needs
- Work seamlessly with industry to meet upskilling requirements
- Be responsive and responsible to environment and climate actions
- Be research-and policy-active and aware of national, European and global contexts
- Connect with regional initiatives, schools, organisations and communities
- Dynamically engage with local, national and global partners

- Embrace innovation with social, industry and research partners
- Be a resource for positive social, cultural and environmental engagement
- Be an exemplar for connecting people, ideas and actions
- Be collaborative and solution oriented
- Become future job-creators and jobshapers and instil an entrepreneurial and innovation spirit across our campuses and region

Engaged Connected Responsive **Research active** Dynamic Innovative Collaborative **Entrepreneurial**

Application for designation as a technological university

Chapter 2: Overview of the new TL



Apprenticeship and skills education in the new TU

Over the past fifty years, the constituent members of the AIT – LIT Consortium have nurtured and maintained a strong association with apprentice training and education. The AIT – LIT Consortium is highly regarded across both regions for the quality of its engineering graduates and apprentices and in particular for their readiness to take up employment in the regions. Apprenticeship and skills education will continue to be an integral and vibrant part of the life of the new TU. The associated craft areas are a cornerstone of the applied and practical learning delivered to meet the needs of industry and the economy. AIT and LIT work in partnership with the other bodies involved nationally in apprenticeship education such as SOLAS, ETBs, the HEA and the Apprenticeship Council.

Growth in demand for apprenticeship skills

There has been a significant increase in craft apprentice provision in the IoTs and in TU Dublin in recent years, rising from 3,300 apprentices in the 2015/16 academic year to circa 6,500 in the 2019/20 academic year. The government in its recent *Action Plan for Education*⁹ and its *Action Plan to Expand Apprenticeship*¹⁰ has placed an increased emphasis on the delivery of skillsbased programmes, including apprenticeships.

The commitment of the government to meeting the

renewed growth in the demand for apprenticeship skills is further illustrated by the 2019 capital funding allocation of €7.5million for the improvement of craft areas nationally. AIT and LIT collectively received €1.5 million from this funding. The apprentice programmes catered for by both institutes complement each other with little duplication. For that reason, the new TU will provide a wider range of both craft apprentice programmes and new apprenticeship programmes, and will contribute to continued economic growth in Ireland and in the region. The new TU will continue to expand and develop these apprenticeship programmes to take account of ongoing and future skills needs in the region, based on the skill needs reports produced by the Expert Group on Future Skills Needs and the Skills and Labour Market Research Unit.

Traditional craft-based apprenticeships (pre-2016) have been offered by the AIT – LIT Consortium in the trades of brick and stone, carpentry and joinery, electrical engineering MAMF (fitter), heavy vehicle mechanics, light vehicle mechanics, plastering, plumbing, stonecutting and tiling. **Table 2.1** summarises details of the trades offered from September 2020.

Table 2.2 summarises the seven new generationapprenticeships (post 2016) that are offered or arecurrently being developed by the AIT – LIT Consortium.

Table 2.1 Craft-b

Craft-based apprenticeships

AIT **Brickwork Carpentry and Joinery Electrical** MAMF (Fitter) **Heavy Vehicle Mechanic** Light Vehicle Mechanic (Motor) Plumbing

 Table 2.2
 New generation apprenticeships

	Offered	Occupational Profile		Coordinating Provider	Collaborative Provider
		Agreed	Not Agreed		
Industrial Electrical Engineering	Yes			LIT	IT Tallaght
Polymer Processing Technology	Yes			AIT	
Manufacturing Engineering	Yes			GMIT	LIT
Chef de Partie Apprentice	Yes			IT Tralee	LIT
Advanced Quantity Surveyor		Yes		LIT	
Manufacturing Data Integration Eng.		Yes		LIT	
Precision Machinist & Quality Control		Yes		LIT	
Science Aircraft Asset Management			Yes	LIT	

LIT: number of blocks
3
6
24
6
_
5

^{9.} See: https://www.education.ie/en/Publications/Corporate-Reports/Strategy-Statement/action-plan-for-education-2019.pdf
10. See: https://www.go<v.ie/en/publication/81ef9-action-plan-to-expand-apprenticeship-and-traineeship-in-ireland-2016-2020/

Range of apprenticeships offered

The range of apprenticeships offered by the AIT – LIT Consortium reflects the strong engagement with local, regional and national industries and relevant professional bodies. Industries supporting the new apprenticeships are the Limerick for Engineering Group (Industrial Electrical Engineering), Polymer Technology Ireland (Polymer Processing Technology) the Limerick for IT group (Manufacturing Data Integration Engineering), the Society of Chartered Surveyors Ireland (Advanced Quantity Surveyor) and the Precision Turned Parts Manufacturing Association (Precision Machining and Quality Control).

Industry in the regions, in conjunction with the regional skills forum managers, have identified shortages of key technical, trade and engineering staff as challenges to the growth and productivity of their enterprises. Their key skills needs include skilled engineers and craft workers in the electrical engineering, mechanical engineering and built environment disciplines.

Excellence in apprenticeship education

The traditional trade apprenticeships are undergoing significant revisions as they are mapped onto the NFQ. As part of the validation process, input is included from employers, employer groups, and industry representative bodies which allows benchmarking of the content and delivery of the training to best international practice. Within the consortium there is a commitment to achieving excellence in skills education.

Following the 2013 *Review of apprenticeship training in Ireland*,¹¹ apprenticeship has been defined more broadly as a mode of learning or as a set of learning outcomes from any applied programme of study. These new apprenticeships have been developed by industry to offer companies an opportunity to grow and develop their talent pipeline. They can range from Level 6 to Level 10 on the NFQ. The AIT – LIT Consortium was heavily involved in pioneering the first round of these "earn and learn" programmes. This earn and learn mobility is vital for learners who can only access higher education if it is financially possible. For that reason, pathways for apprentices and encouraging progression from traditional NFQ Level 5 through to NFQ Level 10 will be opened. This is a key component to developing top quality apprenticeship skills education in the new TU.

The aims are:

- Enable a progressive university culture where all apprenticeship students can fulfil their potential
- Improve awareness and understanding of the apprenticeships that are available through pre-entry initiatives
- <u>Understand where talented</u>
 <u>applicants from other backgrounds</u>
 <u>can fall between the cracks and put</u>
 in place work plans to encourage this
 <u>talent</u>
- Provide a work-focused curriculum developed in partnership with industry partners
- <u>Support the mobility of students</u> across the whole TU region.
- <u>Actively engage in Springboard+ and</u> labour market initiatives as they are rolled out nationally.

For small and innovative SMEs with little time or resources to devote to recruitment, the new TU will provide the initial support needed to employ their first apprentices. This will be of particular benefit to rural areas where the proportion of small businesses is higher than in urban areas. The new TU will go one-step further by designing a new online employer portal that will make it easy for any business to take the steps it needs to offer an apprenticeship and so support their business and workforce development strategy. The new TU will be presented with exciting possibilities for apprenticeships, earn and learn programmes and new models of programme development. The apprenticeship education sector is experiencing a period of profound change, exemplified by the new apprenticeship model of delivery. The new TU will be well placed to adapt and drive changes in the future of skill development.

The new TU will challenge career guidance teachers, school leavers and parents to see apprenticeships as high quality and prestigious paths to successful careers. Apprenticeship opportunities are now available across all sectors of the economy and at all levels, up to doctorate (NFQ Level 10).

The opportunity provided by having skills and apprenticeship education recognised as a university activity is to be grasped wholeheartedly as an important way to give adequate recognition to this stream of education. The flow of skilled apprentices is vital to local and regional economic development, and the Technological Universities Act 2018 acknowledges that one of the functions of a technological university will be to "support the development of a skilled labour force including, where appropriate, engaging in the education and training of apprentices". With the experience and range of AIT – LIT in apprenticeship and skills education, the new TU will be well placed to achieve this function.

By recruiting apprentices, employers can create their own supply chain of workers with qualities and skills to fill the gaps that exist within their business and workforce, as apprentices begin to learn and apply sector-specific skills from day one. AIT – LIT Consortium apprenticeships can help secure a constant supply of skilled young workers who tend to stay within the region. By having apprenticeships, companies can create a culture of training and lifelong learning which can stimulate long-term employees by bringing new ideas and innovation to the business.

Progression and transfer for apprenticeship students

Both staff and students from apprenticeship backgrounds have successfully progressed from NFQ Level 6 apprenticeship right up to doctorate level within AIT – LIT. The new apprenticeship programmes and traditional apprenticeships have supported success stories in this context and the new TU will continue to foster such progression.

Progression from all levels of apprenticeship is always encouraged in related or cognate areas through flexible learning and advanced entry to full-time programmes. The integration of apprentice programmes in the new TU will encourage those students with the ability and ambition to further their careers to continue within a familiar environment and system of learning. Former apprentice students with higher level qualifications in the engineering fields are highly valued in industry for their applied skills, advanced technical knowledge and experience. These graduates become leaders in their field of study and offer industry experience and knowledge coupled with advanced academic qualifications. The new TU will champion the recognition of prior learning and will foster motivation and confidence among students who wish to progress to the next level of learning so that they can achieve their full potential.

AIT – LIT has a long history of providing a natural progression route for both heavy and light mechanical trades as well as for manufacturing related trades. Along with these full-time programmes in automobile/transport and manufacturing engineering, it is planned to encourage and promote the development of NFQ Level 9 master's and NFQ Level 10 doctoral research in areas of green energy/green transport and manufacturing systems. Postgraduate research in sustainability and manufacturing is crucial for the further education and the professional development of students and apprentices in the mechanical trades area.

The consortium has proven its ability to meet the requirements of industry through the running of short courses and dedicated engineering, supply chain, logistics, vehicle diagnostics and manufacturing training. In collaboration, we will develop a series of progressive, evolving and dynamic programmes to serve the needs of stakeholders.

^{11.} See: < https://assets.gov.ie/24651/cc79197a8b454c8489890562e65abce8.pdf

68 **AIT-LIT Consortium**

Figure 2.3 Six pillars supporting excellence in learning and teaching

Pedagogies of engagement through active & applied learning

Learning Community of Intellectual Partnership

> Flexible learning pathways and lifelong learning

6

Graduate attributes

Graduate attributes have become an important feature of higher education agendas, and it is now widely agreed that graduates in the twenty-first century are required to demonstrate knowledge, skills and capabilities that extend beyond discipline specific or technical aspects of their roles in order to be prepared for an increasingly diverse and changing workplace. This has been noted in the National Strategy for Higher Education to 2030 which suggested that "the emphasis has switched from over-specialisation

The approach to teaching and learning in the new TU

The educational philosophy of the new TU

2.3

The new TU will provide a dynamic learning community that co-creates an inclusive learning experience through leadership in teaching, active learning, research, scholarship, industry and civic collaboration. The new TU will shape the future of our learners and respond to the social, cultural and economic needs of our community - locally, nationally and internationally.

This educational philosophy is sustained by six key pillars that support excellence in learning and teaching, as shown in Figure 2.3.

The new TU will promote research-informed teaching and learning within which knowledge generation is supported by current research, by best practice arising from disciplinary inquiry and by the promotion of student and staff engagement in research practice.

The research and information literacy skills required will include academic writing, critical thinking, and problem-solving and evaluation skills. These are skills that are developed incrementally across programmes and research modules at undergraduate and postgraduate levels. The new TU will also be committed to providing students with undergraduate and postgraduate conference experiences, where students and staff can work together to disseminate and share knowledge and new insight.

Development of the whole person and work readiness

The AIT - LIT Consortium is committed to making the best use of all aspects of the learning experience to ensure that graduates from the new TU are confident, competent and skilled, and can go on to play an important role in developing and sustaining a vibrant, successful knowledge economy and society. This includes providing learning experiences and activities that will contribute both to the development of the whole person and provide graduates with real competitive advantage in the employment market, including:

- Work-based learning opportunities to give students an authentic real-world experience that will integrate theory, practise and the competencies required for current and future workplace needs
- Development of life-long skills such as adaptability, critical thinking, creativity, teamwork, and problem solving. Transversal skills, like languages and entrepreneurship, will underpin Ireland's use of its talent offering as a global differentiator
- Professional accreditation of a range of programmes, along with entitlement for professional body examination exemptions and/or membership
- Involvement in volunteering, fundraising and charitable activities as part of students' overall development and contribution to active citizenship



towards deeper and broader disciplinary foundations, with learning objectives that explicitly seek to nurture in students the creativity, enthusiasm and skills required for continual engagement with learning."

^{12.} See: https://www.education.ie/en/publications/policy-reports/national-strategy-for-higher-education-2030.pdf


The graduate attributes set out in Figure 2.4 have been purposefully selected to elucidate the key commitments the new TU will make when preparing graduates for work and life, irrespective of discipline area. These will be evidenced through academic work and through contributions from outside the university - through the informal curriculum. They will also enable life-long skills and competencies that are agile, transdisciplinary, and transferable in global contexts.

The proposed TU graduates attributes will also inform programme design resulting in a broader interpretation of the knowledge, skills, and competences which

students are required to develop in higher education. This is particularly relevant to the demand for non-routine, creative problem-solving, and the requirement to be able to cooperate, collaborate and communicate with others in a digital world.

The proposed graduate attributes, however, are not just related to workplace requirements they also relate to how graduates will contribute to the communities and society in which they will live. For that reason, there is a close connection between the graduate attributes and the mission and values of the new TU.

Pedagogy and assessment

Pedagogies of engagement is an umbrella term for an educational process agreed within the AIT – LIT Consortium where students become vigorously engaged in exploring, assimilating, and constructing knowledge. It has at its heart an active learning dynamic where diverse models of learning motivate students to take responsibility for their own learning. It also enhances knowledge retention and development because of the deeper levels of engagement associated with knowledge construction.

Engaging pedagogies will be enabled at the TU through a variety of interactions, including student to content, student to student, student to faculty, student to industry, and student to research. These will occur along a continuum from individual-based activities to group-based collaborative activities. The pedagogical continuum ranges from small-scale encounters (pair and share, student presentations) to more extended and sustained active learning strategies including team-based learning, problembased learning, extended case-study method, and enquiry-based learning. These pedagogies promote the development of higher-order thinking, values development, intrinsic motivation, autonomy, personal mastery, self-responsibility, and psychomotor skills associated with specific disciplinary needs.

Assessment of, for, and as learning is a key enhancement theme for The National Forum for Teaching and Learning. Assessment is a pillar in supporting student engagement through expanding, exploring, and embedding knowledge. Best practice principles of validity, reliability, practicality, washback on learning, and authenticity underpin the assessment dynamic, which includes formative and summative approaches. As students at the TU progress through their studies, they will experience a range of innovative assessment approaches, which reflect disciplinary needs and professional practice requirements.

Assessment of, for, and as learning is reflected in the continuum of assessment which extends from verification of learning, to higher level outcomes involving formative feedback for improvement, self-assessment skills, and authentic assessment opportunities where real-world tasks and peer-assessment are enabled. Students are also engaged in active dialogue about the aims of assessment and criteria for success, sharing exemplars of excellence and providing feedback for faculty to guide ongoing improvement.

The TU will prioritise technological innovation and digital creativity as a key strategic focus to deliver its mission as a dynamic and innovative university. Digital literacy as a life skill is a key component for building digital capacity. The AIT – LIT Consortium fully embraces this digital agenda and supports the National Forum's recommendation to develop a consistent, seamless and coherent digital experience for students and actively engage with students and teachers to develop their digital skills and knowledge¹³. The AIT – LIT Consortium will continue to develop high capacity infrastructure and platforms to facilitate the development of technology-enhanced learning, digital capacity and creativity across its learning community.

Digital technology supports students on different learning paths so that content and learning approaches can be varied to meet the needs of individual students. Technology-enhanced learning is incorporated into coursework to complement the scholarship of teaching and learning in face-to-face, blended, and online contexts. Supports are available to help staff to integrate technology enhanced learning (TEL) into their teaching practice. The European Framework for the Digital Competence of Educators (2017)¹⁴ has provided a helpful benchmark for the AIT – LIT Consortium staff to develop a range of digital competencies across the following six domains: professional engagement, digital resources, teaching and learning, assessment, empowering learners, and facilitating learner digital competence.

The new TU will follow best practice principles and procedures to ensure that all assessment processes are quality assured. It will also prioritise assessment literacy and associated skill development for staff at all levels of curriculum design, delivery and implementation.

Irish-Higher-Education-A-Roadmap-for-Enhancement-in-a-Digital-World-2015-2017.pdf

^{13.} See: https://www.teachingandlearning.ie/wp-content/uploads/NF-2015-Teaching-and-Learning-in-

^{14.} See: https://ec.europa.eu/jrc/en/digcompedu

Curriculum framework design

The AIT - LIT Consortium commits to a curriculum framework that is values-driven with overarching principles and a focus on knowledge creation, co-creation and intellectual leadership. The AIT - LIT Consortium will commit to universal design for excellence and learner-centred models of curriculum design in the new TU. The framework will allow for different approaches, including linear sequencing, spiral curriculum sequencing, thematic sequencing and backward design sequencing.

The curriculum framework in the new TU will be responsive to change, evidence-based and will use data-driven approaches to continuous enhancement. This will inform new offerings and ensure that the new TU provides progression pathways at all levels on the framework, from micro-credentials to full degree programmes. The curriculum framework will seek to balance creativity and integrate the key principles of innovation with agility and efficiency throughout the design and approvals process as illustrated in Figure 2.5.

Autonomy and responsibility at faculty level

To ensure that the quality of provision is enhanced and sustained, the curriculum design and approvals process will require more autonomy and responsibility to be devolved to faculty level. This approach will enable the new TU to be an innovator and uphold the organisation's reputation for excellence.

Focus on students

The curriculum framework will be flexible in that it will allow for the embedding of pedagogies for engagement that are selected deliberately to move students from being passive receptors of knowledge to being co-creators and autonomous learners.

There will also be a commitment to students developing appropriate industry-led digital capabilities for living, learning, and working in a digital age. Problem-centred and inquiry-led curricula will be designed to incorporate authentic learning experiences. The new TU will be committed to providing placement experiences for students and to using capstone projects in which students can demonstrate the learning outcomes they have achieved. These experiences and projects will take place within a wider context of research-informed

learning, teaching, and assessment methods.

The curriculum design process can incorporate face-to-face, blended, hybrid and online elements, depending on the programme involved (undergraduate, postgraduate, flexible and special purpose).

Stakeholder inputs into curriculum design

The curriculum design process will involve collaboration, internally and externally with relevant stakeholders in order to maintain contemporary and relevant provision sensitive to the current and future needs of the region. Curriculum design will engage:

- Internally with academic staff, institutional managers, educational developers and technologists, technical staff, professional, management, support and library staff
- Externally with liaison and research staff in industry, state agencies, relevant professional bodies, placement agencies and a variety of disciplinary networks.

This will require a commitment to rethinking current approaches to timetabling and to the nature of student engagement both on and off campus.

The new TU will further develop its symbiotic relationship with industry as illustrated in Figure 2.6.

Curriculum design and the TU's educational philosophy

Curriculum design works best when it takes place in a context that embraces the overall educational philosophy of the university by:

- Enhancing the engagement between innovation and excellence in teaching and learning
- Taking a learner-centred active learning approach
- Focussing on applied learning and the development of employability skills
- Supporting personal development and growth of the whole person
- · Putting in place effective assessment practices to promote deeper learning
- Providing an inclusive, engaging and supportive learning environment
- · Fostering a culture that enhances research capacity
- · Developing and embedding a culture of quality enhancement



Curriculum Framework based on agreed values and key principles

Figure 2.6 AIT - LIT Consortium's symbiotic relationship with industry





In its curriculum design practice, the TU is committed to the key principles of curriculum design shown in Figure 2.7 and to using them with reference to the graduate attributes shown in Figure 2.4.

Support for staff

The successful implementation of the new TU's curriculum framework will require structures to support academic and technical staff in developing the teaching and supports for their discipline including pedagogic knowledge and skills as well as competence in developing applied, technical and professional skills while working in a digital university. This will ensure that every student in the TU will learn in an environment informed by research, scholarship and up-to-date practice and knowledge.

Flexible learning pathways and lifelong learning

AIT – LIT Consortium is fully committed to implementing recommendation 4 of The National Strategy for Higher Education to 2030, which states that the Irish higher education system must continue to develop clear routes of progression and transfer, as well as non-traditional entry routes characterised by flexibility and innovation. The new TU will build on the excellent track record of AIT and LIT and will commit to increase accessibility to higher education and increase the participation of a range of diverse learners through innovative curriculum provision, flexible learning pathways, distance learning modes and implementation of a transformative policy on recognition of prior learning. Cognisant of the social and economic profile of the TU hinterland, together with the distributed populations, the new TU will ensure access, transfer and progression routes that ensure the increased higher education engagement and success. Supported by the distributed campus structure, learning gates network and increased digital capacity, the TU will ensure flexible, lifelong opportunities to its community and beyond.

Lifelong learning is a form of self-initiated education that is focused on personal development. A significant strength of the AIT - LIT Consortium is its relationship with industry and is responsiveness to supporting the individual within the region. Working with industry partners, the new TU will be agile to respond to changing needs for practical education and upskilling whilst being able to lead the sectors in new trajectories

informed by research. This symbiotic relationship ensures that the TU will meet the educational demands in an informed, flexible and adaptable modality.

The online platforms for delivery of lifelong learning provision ensures a democratisation of access to students across the multiple AIT - LIT campuses. Students can avail of industry - informed courses regardless of geographical location. In line with the AIT - LIT Consortium's international vision, lifelong learning provides greater access for the inclusion of international students, researchers and international technical industry. The scope for this range and delivery is significant.

Lifelong learning courses provide access for industry partners to cooperate in defining needs and engage with research insights, ensure contemporary and relevant provision. The TU will provide a flexible model of curriculum provision, where components of its programme portfolio (including relevant creditbased modules), will be available to industry-based clients and to those seeking advanced professional development opportunities. Flexible learning pathways that use a credit accumulation system will be supported by online and blended learning approaches.

The new TU will offer a wide range of flexible learning, apprenticeship and Springboard+ education and skills programmes. The new TU's policy on recognition of prior learning will encourage and reward accredited and non-accredited prior learning. This will be a key enabler in ensuring equality of access, transfer and progression opportunities to advanced lifelong learning that will transform professional development opportunities for the new TU's learning community. Recognition of prior learning (RPL) is also a bridge for industry connection. The TU will develop an effective RPL policy and practice that ensures the experiences, skills and knowledge valued by industry are incorporated into the RPL for our students.

Figure 2.7 Key areas of focus for curriculum design

> Knowledge, Skills Appropriate to QQI guidelines and Competence for level and award

Includes Drovision for hegotiating

Threshold Concepts

Challenge

Includes provision for negotiating disciplinary concepts

Sequential & Incremental

Develops student motivation and Welops student motivation and provides learning challenges

Requires learners to progressively engage with higher order cognitive processes **Curriculum Design**



ed with

Table 2.3

Number of programmes offered across a range of mechanisms (Source: SRS Returns March 2020 AIT & LIT)

Entry Mechanisms

→	AIT	LIT
Mechanism	Number of Progran	nmes
CAO	57	87
Direct Entry & Adult Education / Flexible Learning	87	60
Springboard / ICT	29	27
Research	16	7
Apprenticeships	5	8
Access	1	1

Programme provision planning

Between them AIT and LIT offer more than 400 programmes across 7 campuses, 7 faculties, and 22 departments to over 14,000 students. These programmes are offered across a range of entry mechanisms, as summarised in **Table 2.3**.

The new TU will be able to build on this profile and will continue to ensure that programme provision at all levels of the NQF is informed by its regional remit.

The AIT – LIT Consortium has agreed the principles underpinning programme provision in the new TU. Cognisant of scale, variety, complexity and location, programme provision across the new TU will need to be strategically managed over time.

Executive management will review programme proposals to ensure their alignment with:

- · Strategic intent, plans and annual goals
- Academic discipline profile
- Campus and centres of excellence plans
- Stakeholder engagement and planned activities
- Industry needs

Academic governance will ensure that the new TU's programmes are suitably aligned to:

- The National Framework of Qualifications (NFQ)
- Academic award standard
- Valid, reliable programme and module learning outcomes
- Relevant teaching, learning, and assessment strategies and methodologies
- Both academic and/or professional accreditation quality standards.

This dual attention will facilitate strategic planning of the academic programme portfolio as well as decision-making at discipline, multi-disciplinary and campus levels.

2.4

The approach to research, development and innovation in the new TU

The new TU will support regional and national industry and other stakeholders, enable research collaboration, and provide world-leading facilities for the research community. The aim is to promote social and industrial innovation, including investment in key technologies and activities and the provision of tailored research support to SMEs, MNCs, community organisations and public entities. It will facilitate the development of the next generation of research leaders who will contribute regionally and nationally to Ireland's knowledge economy. While the TU's activities span the entire RDI continuum, the focus is on higher technology readiness level (TRL 4-9) research is a key differentiator from traditional universities and will ensure that technological and social breakthroughs are transformed into viable products, outputs, and societal impact, built upon partnerships with industry and the public sector.

AIT – LIT Consortium employs a joined-up approach from an RDI perspective. There is a continuum through research, development to Innovation that supports the spin-in and spin-out activity. The RDI approach includes start-up support and links to community in a wider engagement ecosystem of co-located Enterprise and research centres. The socioeconomic study conducted as part of this application draws attention, *inter alia*, to:

- The relative performance, by comparison of the regions as a whole with the with the state as a whole, in attracting FDI and large multinationals
- The relatively higher regional reliance on domestic and small-scale enterprises
- The expectation of local enterprise and enterprise development of relevant applied and close to market research support from the new TU.

Research vision

The new TU will deliver excellence in multidisciplinary research practice and encourage collaboration between researchers and strategic European and Global partners in industry and academia. The aim is to advance the key research priorities relevant to the region, aligned with national research priority areas, European research priorities, and the United Nations' Sustainable Development Goals (SDGs).

The new TU will support, develop, and welcome knowledge creators, innovators, and entrepreneurs. Building on the expertise of staff this will attract and retain talented students and lead the training and development of the next generation of research leaders who will contribute to Ireland's knowledge economy and rich cultural heritage.

The TU's key research vision is underpinned by commitment to:

- Practice: The emphasis of the postgraduate student experience is on practice and on providing opportunities to apply knowledge gained, and to benefit from engagement with contemporary practitioners.
- Support: Providing a research environment that supports and engages the researchers, enabling them to achieve their full potential in their pursuit of learning, scholarship, knowledge transfer and innovation.
- Accessibility: Enabling wider access and participation in research activities by embracing open science principles and providing flexible approaches based on diversity and individualised attention.
- Respect: Promoting fairness, equal opportunity, respect, positive outcomes and career pathways for all researchers.
- Governance: Commitment to transparent research governance and quality assurance for research, building upon peer review mechanisms, good ethical principles and research integrity.

The strategic research goal for the new TU is to be a partner of choice for enterprise and community stakeholders, to bridge the gap between academic research, deployment and commercial application, and to deliver economic and social value. To achieve this goal, the new TU will work in close partnership with industry – from start-ups to established Ireland-based companies and multinationals – in undertaking applied research to help deliver market-ready solutions.

Research environment

The AIT - LIT Consortium has developed a culture in which cross-cutting research is organically grown and sustained through an integrated support structure. The Research Office and the new Graduate School will be intrinsically linked to the research institutes, research centres and to the faculty research structures through dedicated faculty research leads embedded within the faculties who have a remit to empower researchers. These are supported by the Research Office and the Knowledge/Technology Transfer Office which ensures a sustainable future-facing research environment. The TU is committed to a Research Career Development Programme to support TU researchers in identifying clear personal career paths which will encourage inter-sectoral and international mobility during their careers. As part of its Research Career Development Programme, the TU will implement recommendations by the HEA National Review of Gender Equality in Irish Higher Education to address gender issues with respect to career progression in research.

The research environment (see **Figure 2.8**) of the new TU will include the following elements:

- The Graduate School takes responsibility for the maintenance and development of post-graduate programmes across the new TU, including the quality assurance of postgraduate research awards, generic skills training, and flexible modes of delivery. One of its key goals will be to encourage undergraduates to continue their studies at NFQ Level 9 and 10 at the new TU and so grow the research cohort.
- The Research Office exemplifies consistent robust growth in the quality, quantity and impact of the research undertaken. It coordinates all aspects of research activity, including supporting proposal development and submission and monitoring research performance and coordinating dissemination of research outputs.
- The Knowledge/Technology Transfer Office (TTO) protects, develops and leverages IP generated by the TU. It acts as a bridge between client companies of the new TU's Business Incubation Centres and research







TRL 9	Actual system proven in operational environment
TRL 8	Actual system completed and "right qualified" through test and demonstration (ground or space)
TRL 7	System prototype demonstration in a space environment
TRL 6	Systems/subsystems model or prototype demonstration in a relevant environment (ground or space)
TRL 5	Component and/or broadboard validation in relevant environment
TRL 4	Component and/or broadboard validation in laboratory environment
TRL 3	Analytical and experimental critical function and/or characteristic proof of concept
TRL 2	Technology concept and/or application formulated
TRL1	Basic principles observed and reported

institutes on knowledge transfer and innovation to ensure that the TTO practices remain responsive and relevant to industry needs. The new TU will engage with industry partners to identify, develop, and license new technologies developed by researchers.

- The **Development Unit (DU)** places a specific focus on engaging and R&D activities aligned to the field of sustainability and SDGs. It plays a vital role in enabling communities, enterprises and stakeholders to co-create solutions to societal problems. It has a particular focus on higher TRLs and is extensively networked across the EU.
- The **Research Institutes** are centres of excellence in their focused disciplines and collaborate nationally and internationally to develop innovative products and processes. Research groups and centres are also integral and may in time scale to become research institutes.

Enterprise and innovation

The TU's enterprise and innovation mission is to turn ideas into innovation and innovation into thriving business, helping to drive economic growth within our region and across Ireland, driven by the quintuple helix innovation model. This involves interactions among five key elements of society:

- Academia
- Industry
- Government
- Culture
- Environment

The TU will aim to maximise the impact of the research and enterprise development for social, environmental, and economic benefit tackling the key challenges connected to the global goals for sustainable development (SDGs).

It will do this by facilitating and nurturing the advancement of the best ideas of its staff, learners and engaged external community from discovery to commercial application by providing key supports for its stakeholders and environments for them to thrive in. Business incubation is central to the TU's engagement with industry. Currently, the incubation centres operate as a converging hub for innovation, research, and enterprise. They provide dispersed incubation facilities for innovative and knowledge-based enterprise, enterprise programmes for entrepreneurs and startups, and they make available the wider resources and expertise of the TU to support client companies.

The AIT – LIT Consortium currently hosts four oncampus incubation centres: The Midlands Innovation and Research Centre in Athlone, the Hartnett Enterprise Acceleration Centre in Limerick, Thurles Chamber Enterprise Centre in Thurles and the Questum Research and Enterprise Centre in Clonmel. These centres provide regional entrepreneurs with easy access to our research, innovation, and enterprise development capabilities – working in partnership with Enterprise Ireland, InterTradeIreland, IDA Ireland and the region's local enterprise offices (Figure 29).

Supporting the research, innovation and entrepreneurial ecosystem, the TU will continue to facilitate the commercialisation of research by putting in place initiatives and programmes that support researchers to work more innovatively and ensure that external businesses are able to tap into the resources and expertise available within the new TU. Businesses will be supported through partnerships and collaboration helping to create viable routes for translating research and discoveries into products, processes, and services of benefit to society. The TU will commit to growing internal IP and producing spinouts, licences and patents. The TU will continue to grow its global network, which is essential to support its research, innovation, and entrepreneurial ecosystem. Social capital has a positive effect on entrepreneurship, something we have seen first-hand in our centres since inception. The TU will continue to build collaborative opportunities with other partners in Ireland and internationally as well as a growing network of expertise across professional and academic networks.

Research performance: impact and excellence

Science Foundation Ireland defines impact as the direct and indirect influence of research or its effect on an individual, community, or society as a whole including benefits to our economic, social, human and natural capital. The United Kingdom has adopted the Research Excellence Framework, (REF) which contains one of the most widely cited definitions of research impact: an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life beyond academia. The REF weights societal impact at 20% in the current period rising to 25% from 2021 highlighting the importance of factors beyond academia on the impact of research.

Impact is the change or effect that research has on the world, or "the demonstrable contribution that excellent research makes to society and the economy"¹⁵. The TU regards the impact journey as involving inputs, activities, outputs, outcomes, and to consider who will benefit from research and how they will benefit.

One of the key drivers for measuring research is to measure its impact and thus its relative value so that limited funding can be distributed accordingly. Relative measure of research has proved challenging for a number of reasons, primarily that the value of research is multifactorial and may not be truly felt until long after the research itself has been conducted and society, industry, NGOs and community groups have had sufficient time to absorb and apply it. Importantly, measurement of applied research should differ from that of basic or fundamental research as they effect society in different ways and over different timescales and they are frequently responding to different drivers. It is imperative that the new TU does not just count what can be easily measured, but measure what counts.

The TU describes research impact in the following thematic ways

- Industry and academic Nexus
- · Scholarship and impact
- Funded research
- · Social and community impact
- Sustained network and collaboration

Industry and academic nexus

The performance of the AIT – LIT Consortium has been particularly strong in the applied research domain, specifically in the higher TRLs focused Enterprise Ireland technology gateway network programme. Hence our delivery of technological solutions for Irish industry in their close-to-market needs is exemplary. The research gateways APT, COMAND and Shannon Applied Biotechnology Centre act as open access points for industry of all sizes to the wider resources in the Irish research infrastructure and have a proven track record of delivering societally impactful results for our industry partners. Of the more than 4,200 industrial projects completed since 2013 within the fifteen THEA/consortium gateway network (see **Figure 2.10**), AIT – LIT Consortium gateways represent 27% of total industry project engagements including 28% of the large industry innovation partnership projects.

The new TU will value researchers and teams who engage in research directly relevant to industry needs and who work repeatedly with specific industrial partners. Industry income can be seen as a proxy for industrial relevance. Industries who regularly interact with research groups are more likely to generate high value jobs and knowledge intensive services, leading to increased exports and profitability as often advocated by Enterprise Ireland. One of the key strengths of the technological sector is the engagement with indigenous SMEs on smaller projects that are of relatively larger impact to the company than a large project is to established multinationals. This is evidenced through AIT – LIT extensive engagement in Innovation Vouchers and innovation partnerships.

The purpose of research in the technological sector is heavily biased towards preparing researchers for careers in industry, working on cutting edge projects or as part of high performing teams while providing essential knowledge to their employer. Technological research is often of an applied nature at a high technology readiness level (TRL). As such, it is often carried out with input from, or in partnership with, industry. Transfer of knowledge that enable new techniques, process improvements, product redesigns etc. is an important function of the new TU as it enables both job creation and improves job retention.

Scholarship and impact

Although traditional measures of research impact have some limitation in relation to the focus and agenda of research within the new TU, there is much utility in dissemination of research excellence and developing the profile of the areas of research strength. Scholarship at all levels requires reflection and development. Dissemination and measurements of engagement create a cyclical process where research is undertaken, shared, used in developing other research and then progresses Figure 2.10 Enterprise Ireland Research Gateways



^{15.} (UKRI: Pathways to Impact) https://www.ukri.org/news/pathways-to-impact-impact-core-to-the-uk-research-and-innovation-application-process/

to new research ideas and outputs. Using scholarly measurements to collect evidence of outcomes and impacts helps to communicate a comprehensive picture of the TU's overall research impact and capacity.

The TU is committed to impact the following:

- Cultural
- Economic
- Environmental
- Health and wellbeing
- Policy-related
- Scientific or academic
- Societal e.g. increasing awareness or understanding (EPE)
- Technological
- Training and capacity building

To create a comprehensive picture of overall research impact, bibliometric measurements including quantitative indicators as well as qualitative information can be used. SciVal offers an excellent overview of published material, but skews the optics of the TU towards research which is measured chiefly in this way. It proved more challenging to measure the practice-based research and non-traditional modes of dissemination, such as research-based exhibitions. As practice-based education and research is a distinguishing feature of AIT – LIT, new approaches to define and capture these research outputs is required.

Tracking research performance within the TU will focus on the Horizon Europe impact objectives. Societally, there will be measurement of the impact of research and innovation in developing, supporting, and implementing policy, and supporting the uptake of innovative solutions in industry and society to address global challenges. The scientific impact will create and diffuse new high-quality knowledge, skills, technologies and solutions to global challenges. The economic impact will foster all forms of innovation, including breakthrough innovation, and strengthening market deployment of innovative solutions directly to industry floors of its research partners.

Engaging all stakeholders within the new TU to codesign and co-create interdisciplinary research and innovation will be a key focus. Researchers and groups across the discipline areas of social sciences, arts and humanities and the technological disciplines will come together to form interdisciplinary clusters. These clusters will break classical boundaries between disciplines, sectors and policy areas bringing more

collaboration and increased impact to generate new knowledge with transformative power. The TU requires an evolved way of measuring and articulating scholarly research impacts beyond traditional boundaries.

SciVal has been selected as the primary data resource for the measurement of research performance for AIT – LIT consortium and ultimately for the TU. SciVal offers comprehensive access to the research performance of over 14,000 research institutions and their associated researchers from 230 nations worldwide. It will allow the TU to have a broader more comprehensive view of scholarly output.

The established academic measuring tools do not generally include research from the humanities, in particular areas such as art and design. The measure of research output is used for a variety of reasons. Primarily, it allows for comparison, especially in technological environments where there is a high emphasis on research output that result in metrics. To provide a comprehensive review of research outputs the new TU is developing research infrastructure to ensure the broadest capture of research and applied research output and activity that falls outside the scope of the SciVal system in terms of publications and outside the traditional scholarly publication metrics altogether, such as exhibitions, social and community projects, policy engagement, developing curriculum etc. The Consortium's adoption of the ORCID system establishes this core value of striving to ensure our definition of research and impact is inclusive and representative of the energy, effort and expertise of all of our staff and their academic, research and professional activities. Building on ORCID and SciVal, other foundational research information systems for the new TU will include integrations of these systems with a new Research Information Management System (RIMS), an upgraded shared institutional repository and grant management system.

An overview of research scholarly output is captured in Figure 2.8 and this includes the number of authors, number of scholarly outputs, field weighted citations¹⁶, citation counts and citations per publication.

For the AIT – LIT Consortium, the score of 1.17 means that the outputs have been cited 17% more times than expected. The AIT - LIT consortium saw a 119% rise in scholarly output from 2015 to 2019 demonstrating the commitment of academic staff and researchers to engage in research activity.

The AIT - LIT Consortium already has established areas of research strength and several emerging research areas. Figure 2.11 illustrates the summary of consortium publications by subject area. Figure 2.12 highlights the top four subject areas that are aligned with ISCED codes.¹⁷

Figure 2.13 presents comparative data for the top four subject areas by publication:

Interfacing with the broader remit of the library system in the new TU, provides an emerging capacity to utilise altmetrics including social media engagement to further dissemination research outputs, outcomes and excellence to industry and the general public.

Funded research

In addition to Industry funded research activity, the AIT – LIT Consortium has been particularly successful in securing competitive research funding and the success in delivering multiple prestigious research projects, demonstrates the potential of the new TU to further deliver on research successes once designated with full awarding powers and the support to liberate the full research potential.

Since 2014, the AIT – LIT Consortium has been involved in 56 EU-funded research and development projects, acting as coordinator for 19 with a cumulate value over €20M. It has also participated as a beneficiary in a further 37 with a consortium value of almost €12M. These projects are interdisciplinary and diverse encompassing social enterprise, energy management ICT, biotechnology, materials science, creative arts and design enterprise, and have been funded variously from the H2020, INTERREG, Erasmus+, Creative Europe, MCSA and EASME EU programme platforms.

Social and Community Impact

The application of research to numerous domains as opposed to being applied to a narrow field of study is a key measure of the translation of technological research to addressing societal needs. Research that results in the development of new national standards,

applies to numerous industries or helps create enterprise opportunities for regional communities.

Supported by the RUN-EU alliance, the development of research innovative hubs will further develop the connectedness of industry, funded research and research excellence. Transformative Innovation Policy (TIP) is an innovative way of doing science, technology, and innovation (STI) policy with global reach, research, and co-creation of knowledge to meet the Sustainable Development Goals (SDGS). In the context of the new TU, there will be a continuation of these types of initiatives as they resonate with our academic and research ideals. Transformative innovations are shared activities, ideas, and objects from across locally or geographically embedded initiatives that challenge existing conditions or practices. Sustainability initiatives are developed through growing, partnering, replicating, instrumentalising and embedding these changes. The diffusion of these research and development initiatives is supported by interconnected local I networks. Given the geographical positioning of the new TU the trans-local relations is complementary in the networks connect and influences different places and people at the same time. Conditions or events at one place have an immediate impact on other connected places. Transformative innovation is locally rooted and globally connected.

The Empower Eco initiative is an exemplar of a current transformational innovation hub that will be a blueprint for the new TU. The Empower Eco initiative is an economic change maker, an environmental test bed and an inclusive skills champion epitomising the principles of real social enterprise and entrepreneurship linked seamlessly to education. It will deliver future-proofed regional enterprise stimulus in a climate change challenge through a four-strand targeted response to unemployment, environmental and economic renewal challenges. Through the Transformational Innovation Hub in Lough Boora, Co, Offaly there has been significant job creation (97 jobs by the end of year 2 across 27 new businesses and 25 testbeds) that integrates natural resources enterprise, circular economy, biodiversity, community and social innovation with lifelong learning. Under the shared vision and direction of the AIT – LIT Consortium, Empower Eco

^{16.} Field-Weighted Citation Impact (FWCI) is the ratio of the total citations received by the denominator's output, and the total citations that would be expected based on the average of the subject field. A Field-Weighted Citation Impact of greater than 1.00 indicates that the publications have been cited more than would be expected based on the world average for similar publications. For the AIT – LIT Consortium the score of 1.17 means that the outputs have been cited 17% more times than expected.

^{17.} Caveat: all data taken from SciVal with Scopus as its source which means that not all research outputs are indexed.





Top four research subject areas of TU publications (AIT - LIT grouping) Figure 2.13

Subject Areas		Publications	Citations	Average Per Paper	Field-Weighted Citation Impact
Engineering & Technology	23.3%	177	963	5.4	1.12
Computer Science	20.1%	140	790	5.6	1.5
Physical Sciences	17.4%	128	1035	8	0.97
Clinical, pre-clinical & health	17.1%	124	807	6.5	1.28

Collaboration in publication authorship (2015-19) Figure 2.14

Metric		Scholarly Output	Citations	Citations Per Publication	Field-Weighted Citation Impact
International Collaboration	43.5%	197	1,466	7.4	1.42
Only National Collaboration	26.7%	121	959	7.9	1.24
Only Institutional Collaboration	24.3%	110	441	4.0	1.07
Single Authorship (No Collaboration)	5.5%	25	19	0.8	0.31

CLG, Bord na Móna, Enterprise Ireland, Offaly County Council, Maynooth University, Kilcormac Development Association and many SME partners will mobilise the Midlands' next generation of green enterprise innovators and entrepreneurs and stimulate regional job creation through high potential projects that build on market trends (e.g. food for good) and innovations in the eco enterprise and sustainability space. This transformational innovation hub has full regional reach and has the potential to create impact in East Galway, Kildare, Laois, Longford, North Tipperary, Offaly, Roscommon and Westmeath and the regional economies that are most impacted by the ending of peat harvesting for power generation in the Midlands region. This initiative showcases the collaborative environment connecting expertise from both LIT (Social Enterprise, Energy, Climate Action, Bioeconomy); AIT (Food, Environmental Science etc.) with knowledge, resources and participation of public and private stakeholders.

The Superhomes 2030 project, funded under H2020, is a partnership between LIT and Tipperary Energy Agency. Together, TEA and LIT plan to expand the delivery of residential deep retrofitting services Nationwide with a particular focus on the Just Transition region in the short/medium term. Supporting investment of €55m and generating approximately 1,000 FTE jobs in the region and this ambitious delivery plan, hosted within the TEA which is a social enterprise, will contribute to the economic and environmental transformation of the Midlands and Just Transition region. LITs education and research expertise in the field of sustainable energy are aligned with TEAs market development and project delivery services.

From Outdoors to Labour Market (FOLM) is a unique programme targeting young people (aged 18 to 29) who are not engaged in education, employment or training and needs support to re-connect and plan their future. Based on a successful model in Scotland, LIT works with partners in Spain, Poland and Scotland to deliver a transformation programme using outdoor learning as the catalyst for change. Supporting approximately 300 people over 3 years the programme connects delivers social, environmental and economic benefits to the target group and region.

Sustained Network and Collaboration

The TU sees collaboration as a foundational priority in ensuring research capacity building and sustainable growth. The AIT – LIT Consortium seen an increase of 265% in international collaborative scholarly output from 2015 to 2019. Figure 2.14 highlights our drive to establish national and international research partnerships.

The AIT – LIT Consortium recognises the importance of collaborations. Strategically, the sequential connectivity of low and higher-TRL research collaboration will be maintained as a critical parameter of sustainable research activity. The national consortiums that are presently engaged with are illustrated in (Figure 215), in Europe (Figure 2.16) and globally. (Figure 2.17)¹⁸

AIT and LIT are also members of a number of EU networks, including The Association of European Renewable Energy Research Centres; European Federation of Agencies and Regions for Energy and the Environment and The European Platform for Sport Innovation. AIT - LIT are also central to many national networks with strong EU links e.g. the Irish Bioeconomy Foundation, Ireland's national Bioecomomy campus, based at the former Lisheen mine site, proximate to LIT's Thurles campus. LIT is a founder member of this Enterprise Ireland support initiative, along with Tipperary County Council, Glanbia, CMP (Commercial Mushroom Producers), TCD and UCD.

Building sustainable research capacity

Building on areas of research strength and supporting emerging areas, the new TU will commit to:

- Invest in research activity
- Supporting research excellence
- Engage, support, develop and attract research talent
- Grow student numbers

The new TU will continue to develop establish international multidisciplinary research teams to address major societal challenges, with a particular focus on sustainable, renewable energy and climate change; on agriculture, food and the bio-economy; on smart connected technologies for transport and factories of the future; and on the social sciences

^{18.} Note: the incidents of research and the comparative scale are identified by dots on each of the three maps.

TU collaboration in Europe Figure 2.16





and creative innovation. All of these will be connected to the relevant and appropriate SDGs and enable research informed teaching and learning.

Over the last five years, research performance within our partnership has shown significant growth in research expenditure, recognition by national and international research awards, strong societal outputs from research, and in knowledge transfer. Figure 2.18 illustrates the AIT – LIT Consortium research expenditure by comparison to the average sectoral expenditure.

Research is an essential partner to contemporary and relevant undergraduate provision. With TU designation will come a different balance between academic operation and research, and this will require support in the form of staff development underpinned by appropriate QA policy and process development.

The AIT - LIT Consortium has proven its capacity to grow the numbers of postgraduate students in recent years (see Figure 2.19). There is a commitment to growing the community of postgraduate researchers undertaking advanced research degrees from a total of 4% to 7% over the next ten years. This will be achieved

by deepening and strengthening our engagement with regional, national and international collaborators, as well as by researcher exchange and national and international co-supervision of students.

The AIT – LIT Consortium is committed to building a reputation as a leading provider of successful student-centred and researchinformed higher education that will:

· Support the recruitment and retention of high calibre staff to further advance and lead new research innovations



- · Facilitate collaboration with our RUN-EU partners, existing and future international HEIs and industries bringing us onto the global stage
- Increase collaboration with industry and other external organisations and impact on their development.
- Attract talented undergraduate students
- Attract more postgraduates (internal and external) to undertake research degrees



Leading edge knowledge, technologies and approaches pioneered by our researchers will feed into our undergraduate and postgraduate provision and lifelong learning programmes, supporting contemporary and relevant programmes of study.

An important impact of technological research is to shape the undergraduate offerings in a higher education institution – research that informs the skills of institute graduates brings immediate impact through the more advanced skill set and familiarity with cutting-edge technologies and techniques. The technological sector excel at the creation of bespoke training programmes for industry (utilising mechanisms such as Springboard+) to deliver programmes where the researchers utilise hands-on knowledge, translating cutting-edge research into upskilling and CPD opportunities for the regional and national workforce. Research and teaching connectivity will remain a core agenda in the new TU. Undergraduate and taught postgraduate student participation in research embedded activities (annual research colloquium, national Science Undergraduate Research Conference (SURE) and the Irish Survey of Post Graduate Student Engagement (Studentsurvey.ie) will remain important components in ensuring that the new TU's teaching and learning is research-informed.

Researcher ecosystem

The AIT – LIT Consortium has put together a detailed and vibrant plan to develop and an internationally recognised sustainable research culture and an innovative ecosystem (Figure 220) that can meet and sustain targets for TU designation. It includes the following elements:

 Researcher ecosystem: growing a dynamic, responsive and agile researcher ecosystem that combines a broader regional-focus with a global orientation

- Graduate researchers: harnessing our graduate school model and quality assurance to ensure research excellence.
- **Sustainable finance:** using dynamic financial models to support a diversity of research, innovation, and enterprise funding.
- Successful organisation: developing a strong organisational structure to build researcher expertise, ambitions, capacity, progression, and scale in tandem with our strategic partnership model.
- Internationalisation: enhancing researcher mobility and multi-cultural engagement through a strong international strategic partnership model.

The ecosystem plan will be enhanced research capacity and scale across the new TU. It will also ensure the sustainability of its research model and help to recruit new researchers, internally from staff and undergraduates and externally from national and international contributors and collaborators. The plan will also enable the TU to:

- Leverage established successes and associated partnership networks to foster further growth, for example, via Horizon Europe through optimisation of the structures, systems and human capital
- Promote cross-disciplinary work to further enhance socioeconomic impact of research.
- Nurture and retain high-calibre undergraduate researchers
- Use leading international researchers as mentors to support mentor and train early-phase researchers.
- Differentiate its research agenda from the traditional universities.
- Internationalise the mobility of researchers through ERASMUS, MSCA RISE, and the Regional Universities Network (RUN-EU).

Internationalisation of research

Our research and internationalisation agenda provide a coherent umbrella that nurtures existing and new relationships to stimulate break-through, cross-disciplinary research themes and reinforce our culture of dynamism, diversity and resilience. A comprehensive international outlook primes our research institutes, groups, staff and postgraduate students to convert challenges into opportunities and to boost innovation-led growth. Our objectives are to:

- Raise the TU global research profile, showcasing its researchers, projects and outcomes so that world-class researchers are attracted, secure diverse talent pipelines and provide a role model for the promotion and growth of a progressive culture of internationalisation across all the research disciplines and activities of the TU
- Build on comprehensive international relationships and partnership to provide a global frontier knowledge base for strategically directed research to spur economic growth and job creation
- Enhance innovation and provide impactful collaborative contributions to the UN Sustainable Development Goals (SDGs) in partnership with international research and innovation networks, civil society organisations, cultural bodies, enterprise and end-users
- Benefit from and adapt new technologies (such as immersive computing and AR/VR), to widen access to international learners and to facilitate and enhance their internationalisation experiences
- Enable enhanced learner outcomes through internationally acquired experience, equipping our postgraduate learners and research staff with a comprehensive world view and with the adaptive and requisite skills for the jobs of the future.



100

50

2014-15

2015-16

2016-17

2017-18

2018-19

2019-20

Figure 2.18 Research expenditure in AIT-LIT Consortium and other IOTs €7,000,000 €6,000,000 €5,443,077 €4,843,666 €5,000,000 €5,036,099 €4,000,000 €4,648,146 ● €4,226,447 €3,000,000 €3,912,892 €3,688,942 €2,000,000 €1,000,000 €0 2015 2017 2016 2018 Consortium Average (11 x (loTs) AIT-LIT research enrolment Figure 2.19 350 312 300 250 200 163 162 192 188 187 150



€5,914,588



orina	Internal Research
Jing	Awareness
aff onment	Community
pinone	Practice

"Aligned with the emerging <u>needs of industry, enterprise,</u> and communities of place. **Dedication to equality**, diversity and socially-engaged practices. Ecologically and environmentally focused – with sustainability central to the design and delivery of 21st century education."

Staff Survey

2.5

Internationalisation

The commitment of the Irish Government to the development of internationally-oriented, globally competitive institutions is one of the key ambitions outlined in the National Strategy for Higher Education to 2030. This aligns with the most recent international education strategy for Ireland, Irish Educated, Globally Connected 2016-2020,19 to support the development of global citizens through an internationalised education system.

The AIT – LIT Consortium's internationalisation objectives, in particular those relating to mobility of staff, students and researchers, to intra-institute cooperation on curriculum design, and to the internationalisation of research will be realised through collaboration activities with our regional, national and international partners.

The AIT - LIT Consortium is committed to a whole-of-institute internationalisation strategy and has embarked on the journey with the launch of the Regional University Network-European University (RUN-EU).

International context

The new TU's ambition is to embrace the benefits of a truly internationalised higher education by looking to international (and particularly European) practice. The AIT - LIT Consortium's vision is for a world-class TU that promotes and embeds global perspectives in all of our activities, through the

commitment to an internationalised curriculum, transnational research and education partnerships, and an extensive staff and student mobility network.

To realise this vision, the TU will set itself a range of internationalisation targets and ambitions; in doing so, it will:

- Provide graduates, through a truly internationalised curriculum, with the skills and global perspective they need to succeed in international and intercultural environments
- Recruit promising and ambitious students, researchers and staff from around the world
- Promote and support international study, work placement and exchange opportunities for the new TU's students and staff through national and international exchange programmes
- Develop transnational partnerships and manage strategic alliances that will establish the new TU's global footprint
- Build research-based international strategic partnerships and attract world-class researchers

Internationalisation framework

Our commitment to comprehensive internationalisation covers five elements as illustrated in Figure 2.21. Four of these elements are described briefly.

^{19.} See: https://www.education.ie/en/Publications/Policy-Reports/International-Education-Strategy-For-Ireland-2016-2020.pdf



Internationalisation at home

The key principle underpinning AIT – LIT's 'internationalisation at home' approach is that all students should be offered global perspectives and enabled to develop the international and intercultural competences they need as global learners and citizens within their programme of study, while graduates should be prepared for employment in international and intercultural settings. The TU's objectives of internationalisation at home are to:

- Internationalise learning outcomes and assessment in the formal curriculum, developing international and intercultural perspectives, making explicit reference in the learning outcomes at programme, course and module level to global perspectives and intercultural competence within the discipline and including international and intercultural perspectives in assessments
- Embed elements of internationalisation such as foreign language studies and intercultural awareness modules into the core curriculum.
- Use cultural diversity in the classroom and on campus for inclusive learning, teaching and assessment practice. The cultural diversity of the staff and student cohort can be used as a resource to stimulate exchange and collaboration in both formal and informal settings among staff and students from culturally diverse backgrounds
- Integrate with informal (co-)curriculum activities across the new TU, creating a culture on campus that promotes and supports international and intercultural initiatives and fosters engagement with international students through initiatives such as intercultural communication workshops, tandem language learning opportunities and cultural programmes
- Create opportunities for student engagement with people from diverse cultural backgrounds beyond the university campus – for example, by cultivating a culture of welcome and inclusion for those seeking sanctuary and by availing of the benefits of globalisation, migration, and cultural diversity in the wider community. As a University of Sanctuary, the new TU will welcome and include refugees, asylum seekers, migrants and members of the Traveller Community into its community
- Interact with international partner universities virtually, so enabling collaborations with guest lecturers and the online sharing of international teaching practice

institutions overseas

Outward mobility

The outward mobility objectives for the new TU are to:

- Provide international opportunities to students, staff and researchers to identify, adopt and share best practice
- Expand study abroad through international placements, summer programmes, short-term training and educational visits to international partners; and motivate current student population to consider international opportunities for study and traineeships
- Incorporate mobility opportunities with funding from Erasmus+, foreign embassies and EU and non-EU Government sponsored programmes for study and traineeships
- Provide internal scholarships to underrepresented student groups in mobility programmes
- Increase the range of engagement opportunities at home and abroad, working with diverse community groups on volunteering projects and designing achievement awards to enable participation in such schemes

Inward mobility

The inward mobility objectives for the new TU are to:

- Employ a sustainable approach to attracting high-quality undergraduate and postgraduate students from a diverse variety of regions, bringing the new TU into line with the HEA's target of having 15% international students in the overall student population
- Use traditional recruitment methods and expand agent networks in line with Education in Ireland priority markets, develop long-term relationships with well performing agents and identify opportunities to attend networking events and education fairs in priority markets
- Innovate with non-traditional recruitment methods, identifying appropriate social media channels in priority markets to tie in with recruitment cycles internationally, developing and delivering a suite of short-term study options including study abroad and summer schools and using alumni as international ambassadors in priority markets

 Use established models and programmes (such as Erasmus+, Government scholarship schemes) that support international mobility

Transnational education

The AIT – LIT Consortium's transnational education objectives for the new TU are to:

- Enhance the reputation and reach of the new TU internationally
- Identify and build long-term partnerships, pathways and collaborations with appropriate institutes overseas, enabling transnational delivery of programmes and modules
- Design and accredit programmes for delivery at international partner universities
- Expand opportunities for joint programmes with international partners in priority markets.
- Create opportunities for blended learning and online delivery of modules to students at partner universities overseas

"The TU will Enable and inspire students to achieve their creative potential and be confident, engaged citizens of the world"

Student Survey



2.6

Quality strategy and processes in the new TU

Statutory quality framework for higher education

The new TU will operate under the Technological Universities Act 2018, the Qualifications and Quality Assurance (Education and Training) Act 2012 and the Qualifications and Quality Assurance (Education and Training) Amendment Act 2019. The new TU's quality assurance will be in line with the standards and guidelines for the European Higher Education Area (ESG, 2015)²⁰ and with national guidelines and criteria for QA procedures, including the QQI Sector Specific Quality Assurance Guidelines for Designated Awarding Bodies.²¹

Quality assurance principles

The new TU will operate on the overarching principle that QA is everybody's business. Professional, management, support services (PMSS) and academic staff will work in a collaborative and collegiate model to promote quality assurance and enhancement. To ensure an integrated approach to QA across the total student experience, PMSS will participate in all aspects of QA, including academic QA through policy development and participation in academic council subcommittees. As a designated autonomous awarding body, the new TU will adapt a consolidated

quality framework that builds on the existing robust quality principles and processes of AIT and LIT.

The new TU will also draw on the eight guiding quality assurance and enhancement principles established by the Technological Higher Education Association (THEA) in its Technological Higher Education Quality Framework (THEQF),²² published in 2017 – a brief overview of these is provided below, and they are illustrated in Figure 2.22.

THEQF principles of quality assurance and enhancement

- Academic excellence and student-centred values: strive for academic excellence and prioritise the whole-student experience. We will listen to and respect the student voice.
- · Fostering a quality culture: organisational culture will be characterised by the shared commitment of all students and staff to ensuring quality.
- Informed practice and stakeholder engagement: engage with all relevant stakeholders including students, staff, industry, enterprise and educational and professional bodies, whose needs are addressed in the education, training, research, and wider enterprise and innovation activities and services that we provide.

^{20.} See: < http://www.thea.ie/contentfiles/ESG_2015.pdf 21. See: < https://www.qqi.ie/Downloads/Sector-Specific%20Quality%20Assurance%20 Guidelines%20for%20Designated%20Awarding%20Bodies.pdf 22. See: < http://www.thea.ie/quality-assurance/



- · Proportional implementation: ensure that all our processes contribute effectively to maintaining excellence and high standards, and are fit for purpose and proportionate to their context of the new TU.
- Comprehensive, transparent and publicly accountable procedures: demonstrate high standards of transparency, academic integrity and accountability by documenting and publishing all relevant information relating to our governance, management and operational activities.
- Evidence-based decision making: measure and monitor data on all performance areas to enable us to take the appropriate evidenceinformed decisions to ensure effective academic planning and the achievement of excellence.
- Consistency with policy and international effective practice: take account of our statutory obligations and act in accordance with all relevant national and European statutory quality assurance guidelines. This will include rigorous assessment of our quality system against international benchmarks.

Institutional Autonomy and Academic Freedom: acknowledges the ownership of responsibility for quality and standards that accompany autonomy, academic freedom, and freedom of enquiry. It takes account of the need to be open and transparent to stakeholders about its quality policies, regulations, and procedures.

Processes of quality assurance and enhancement

The new TU will comply with the QQI requirement for HEIs to maintain their quality assurance system on a 'cross-organisational basis ... that includes all levels of management, administration, teaching staff and learners' - from QQI's Core Statutory Guidelines.23 The overarching processes required to achieve compliance and ensure a fit-forpurpose quality assurance system include:

- The development and implementation of a comprehensive suite of university-wide policies, procedures, and academic regulations
- The establishment and conducting of a broad range of internal reviews
- Participation in annual monitoring and reporting to QQI, in addition to participation in periodic cyclical external reviews.

This approach to quality assurance and enhancement (QAE) is illustrated in Figure 2.23.

Quality assurance policies and procedures

As a designated autonomous awarding body, the new TU will have the authority to make awards form Level 6 to Level 10 on the NFQ. In line with its statutory obligations, the TU will also have responsibility for the QAE systems of any linked providers. The TU's quality assurance policies and procedures will provide a systematic approach to promote and enhance quality and will set out clear lines of authority showing where responsibility for quality lies.

23. See: https://www.qqi.ie/Downloads/Core%20Statutory%20Quality%20Assurance%20Guidelines.pdf

The Academic Council and its associated subcommittees will oversee the monitoring, review and reporting of the academic quality assurance policies, procedures, and regulations. The TU will be cognisant that quality assurance covers both tangible and intangible aspects of the quality agenda and will operate committee structures that deal effectively with maintaining and improving the quality of education and research provided and produced. All committees with an input to quality assurance will have clearly defined membership and terms of reference and operate under unambiguous standing orders with minutes recorded and retained.

It will be the policy of the TU to benchmark its quality assurance procedures against its statutory obligations, the ESG and QQI policies and procedures, in addition to complying with the national framework for higher education quality assurance. The quality assurance policy and quality assurance procedures will also be subject to rigorous internal and external monitoring and review processes.

Reviews and monitoring

The AIT – LIT Consortium is committed to self-study, peer review and benchmarking and recognises that these play a pivotal role in monitoring the effectiveness of quality policies, procedures, and regulations. The new TU will operate a broad cyclical programme of internal reviews of programmes of study, departments /faculties/ schools, research reviews, service delivery units and thematic reviews, as appropriate. The reviews will lead to the development of associated quality improvement plans (QIPs) and these will be linked to achieving the strategic goals of the TU. The policies governing these reviews will require a cross-organisational approach with QIP's integrated across different units and functions.

Table 2.4 Four-stage process for the development of the QAE system



The new TU will also take part in reviews with QQI and the HEA:

- · For its annual submission to QQI, the new TU will prepare an Annual Institution Quality Review (AIQR) detailing all developments in QAE during the academic year. It will also engage with QQI in an Annual Dialogue Meeting complementing the AIQR process. QQI will also coordinate an international external quality review of the new TU in each seven-year period.
- The new TU will also take part in annual monitoring and reporting on governance and management performance with the HEA, including the development of systems performance frameworks and performance compacts.

TU QAE Handbook

The internal governance of quality within the new TU will require a structured methodology for the review of existing policies and procedures. This will enable the analysis, classification, and development of a comprehensive suite of quality policies, regulations, and procedures. These will be published in the TU QAE Handbook at the time of designation, followed by approval by the new TU's Academic Council.

A summary of the proposed methodology to enable the establishment of such a unitary QAE Handbook is summarised in Table 2.4.



Stage 4

Approval and publication

a. Formal approval and adoption of the new IQAE policies, regulations, procedures, and processes for the technological university.

ensive strategic review of the organisational and
ent structures across AIT and LIT pertaining to the
ent of quality assurance and quality enhancement (QAE).

b. Comprehensive audit of existing IQAE frameworks in AIT and LIT, including quality policies, regulations, procedures and processes and including a consultation process with key stakeholders.

a. Development of common terminology to be used in the

b. Identification of gaps and differences in IQAE policies, regulations, procedures and processes with a view to determining their retention, harmonisation and/or development.

c. Classification of all IQAE policies, regulations, and procedures and processes identified in Stage 2 into categories.

a. Creation of working groups, based on the categories of QAE policies and procedures identified at Stage 2.

(i) Complete a period of consultation with all key stakeholders towards the development of a QAE Handbook for the new TU (ii) Produce the QAE Handbook for the new TU, incorporating a set of harmonised/new QAQE policies, regulations, procedures, and processes

b. Publication of the QAE Handbook.



"The new TU will be a place of pride for the people of the region and somewhere they feel they belong to and are welcome in whether for sport, leisure, education or the arts. Learning will be beyond the academic realm and the pursuit of personal development of the people of the region will be facilitated by the TU across the lifespan."

Staff Survey





Supports in the new TU

This chapter describes the support infrastructure that is proposed for the new TU, including technology, people and campus infrastructure.

3.1 Student development at the new TU – setting out the services and supports that will be available to students, across the range of academic, health and welfare, representative, and social and recreational activities.

3.2 The new TU's people strategy – how we will invest in our people to meet the emerging needs of the new TU.

3.3 Professional services at the new TU – the services that will support staff and students across the range of teaching, learning and research activities.

3.4 The new TU: a digital campus – an overview of the new TU's digital campus ecosystem and our digital infrastructure blueprint.

3.5 The new TU's campuses – an overview of our campuses in Athlone, Limerick, Clare and Tipperary.

3.1 Student development at the new TU

The value of the student experience

The AIT – LIT Consortium is ambitious, contemporary, and vibrant; delivering a positive student experience is a hallmark of our educational philosophy. Our TU strategy and vision will be realised in a dynamic and studentcentred culture that is informed by students themselves and supported by innovative and committed staff.

The student proposition in the new TU will be one that ensures a supportive pathway to education and provides a cohesive student experience that is embedded across all campus communities. The diversity of the student profile in the new TU will enrich the experience of all students.

Graduates will be agile and adaptable in their working lives. The new TU will be an institution that students, staff and alumni can be truly proud of and which will be ranked accordingly.

Student administration

Student administration will provide a range of organisation-wide services to support and enhance the student experience. All students will be treated with respect, equity, empathy and professionalism through all their interactions with the new TU. Building on the excellence of existing administration services, student administration services in the TU will be organised in a coherent structure that includes the following elements:

- Student administration will work collaboratively to increase effectiveness, recognise best practices with emphasis on student retention and student satisfaction rates, thus facilitating a seamless administrative journey for the student.
- Faculty administration will contribute to student development and provide seamless integration of faculty and general administration. The combined knowledge and experience create an exciting opportunity to enhance the TU operational functioning and effectiveness in supporting both students and staff.
- **Student finance:** While fulfilling the government remit of fee collection, the new TU will implement transparent, equitable fee collection policies in a supportive and empathic environment. This will help ensure that students from all socioeconomic backgrounds have the opportunity to succeed higher education.
- Examinations: The new TU will promote innovative methods in summative assessment and support active learning and authentic performance, while at the same time maintaining standards of validity, fairness and consistency. The TU will deliver robust, consistent examination and assessment policies designed to support all learners, (online, flexible, full-time and part-time) and recognise the changing needs of students and the diversity of the student population.
- Conferring: Conferring ceremonies will be key events in the academic calendar of the new TU, and they will offer graduands the opportunity to celebrate their academic achievements together with family, friends, and the TU community.

Student welfare services

The new TU will provide students with a range of professional, focused and student-centred support and welfare services. These are services that integrate the academic learning environment with students' personal development and growth to provide a rewarding and enriching student experience. The new TU will provide students with an environment that stimulates and supports their personal, social, sporting and cultural experiences. The range of welfare services will include the following:

 Counselling: The TU will provide a quality, ethical and professional student counselling service across campuses, and these will be adequately staffed in line with recommended guidelines and operating to best practice IACS and PCHEI guidelines. The significant increase in help seeking behaviour among third level students in psychological distress is well documented (My World Survey

distress is well documented (My World Survey 2, http://myworldsurvey.ie/ and PCHEI National Statistics https://www.pchei.ie/). Presentations include anxiety, depression, suicidality and complex mental health issues. On-campus counselling services are best placed to respond and support, providing right time, right place, right people responsiveness, embedded in a deep understanding of the developmental, psychological and academic challenges that students in higher education face. The new TU will provide a quality responsive service to all students and will further develop outreach, preventative and positive mental health supports across the TU. The investment of significant resources and capacity will enhance the psychological services already available to students.

- Chaplaincy/pastoral care: The chaplaincy/ pastoral care services will contribute to the care for the whole person, bringing a specific competence to care, community and spirituality. Chaplaincy/ pastoral care in the new TU will share life, death, failure, pain, love, success, celebration and occasions in and beyond college, while providing a link for all faith communities in the TU.
- Student health: The new TU will provide students with high-quality, accessible and equitable professional health care. It will also help students to stay committed to their studies and to engage in the care of their own health. The new TU will take a holistic whole-campus view of health, and seek to create a learning environment and organisational culture that enhances the health and wellbeing of the entire

TU community. We will also put in place integrated processes, policies and structures towards attaining a Health Promoting University status (WHO).

- Learning support: As an integral part of the new TU's student-centred learning support model, we will work with students in areas where they feel they need further academic support to enable their success and achievement. Tutor support, academic writing centres and assistive technology are among initiatives that will be available. As the new TU develops, this learning support model will actively contribute to realising its mission and educational philosophy.
- Careers and employability: the new TU will have services relating to careers, employability and work-based learning that will provide key connection points between industry and academia. These services will contribute significantly to the new TU brand and reputation both nationally and internationally. An adaptive, cohesive and joined-up approach to industry engagement fosters deep and lasting partnerships through work-based learning opportunities and the employment of graduates. The TU will help to develop the profile of graduates and support students throughout their lifecycle from pre-entry through to post graduation.

Sports, clubs, and societies

The new TU will adopt a collaborative approach to sport and physical activity across all of its campuses. Sport and other clubs and societies give students opportunities to develop outside of the classroom environment. The sports strategy will offer appropriate flexible learning supports for elite sports people in conjunction with the Irish Institute of Sport and the national governing bodies of different sports disciplines. The TU's combined knowledge and resources will enable the delivery of an enhanced sporting experience.

Participation in clubs and societies is an important component of higher education and the social experience of students. The new TU will encourage students to participate in a wide range of club activities and in the different societies that support student interests. As a member of the European Regional University Network, the new TU will be particularly committed to supporting European social capital and democratic values, encouraging our students to participate in the democratic process and in political parties. "To positively contribute to the educational and economic development of the region, through the provision of accessible, internationally recognised educational programmes, which focus on developing professional skills.

To be recognised as an international centre of research and teaching excellence, achieving global impact through our alumni, research and strategic partnerships"

Staff Survey

Student Unions

AIT – LIT Student Unions have been proactive in preparing for the new TU. Working collaboratively and ably led by the student officers, the Student Unions have engaged an experienced, independent facilitator to prepare a new constitution. The legal structure of the new TU Students' Union will be incorporated as a company limited by guarantee, the most appropriate structure for noncommercial organisations and representative bodies. It is envisaged by the student officers that the new structure and constitution will be in place at the TU Appointed Day.

The Student Unions facilitated a survey of students in the lead up to the TU application. The outcome of the student survey was an overwhelming endorsement of this TU application by the current student body of AIT – LIT.

Ensuring access for all students

AIT – LIT is committed to promoting equitable access to, and successful participation in, higher education for all members of society. Developing educational pathways, with a central focus on empowering and engaging across the breadth of communities ensures that barriers to education are reduced and capacity is built to best serve the region. The new TU will develop a regional admission and access strategy that values community, and it will commit itself to an adequately funded partnership approach to widening participation.

The new TU will continue to offer programmes that use "the ladder system", to actively encourage access among students of all abilities and to fulfil a regional remit to provide graduates across a range of Level 6 to Level 10 programmes on the National Framework of Qualifications.

The new TU will be a centre of excellence in supporting access and progression to higher education for the most under-represented student groups, including students from communities experiencing the lowest levels of educational attainment, mature students, and students with disabilities. Committed to the national access strategy,²⁴ the new TU will deliver targeted and innovative strategies for widening participation, which will provide a comprehensive range of pre-and post-entry supports for targeted students, including financial, academic and social supports.

24. See: https://hea.ie/assets/uploads/2017/06/National-Plan-for-Equity-of-Access-to-Higher-Education-2015-2019.pdf

Research on regional barriers to participating in third-level education will inform the development of focused outreach activities, using shared resources and targeting the most under-represented areas. Continued development of access routes and TU-specific access programmes are models of education that will inspire and engage.

The new TU's disability service will support students whose journey through third level education is impacted by disability or accessibility limitations.

The new TU will be a University of Sanctuary, affording the opportunity of third-level education to those living in Direct Provision.

The AIT–LIT Consortium is currently the leading provider of higher education to the Traveller community, providing education for nearly half of all members of the community in higher education in Ireland; the new TU will continue this commitment to the Traveller community.

Giving first-year students a sense of belonging

A positive first-year experience provides students with the building blocks to engage, commit and succeed not only during their time as a student but also in their future careers. Recognising the pivotal importance that the first-year experience has on increasing student retention and delivering graduates to the region, the new TU will put in place a comprehensive support structure for first-year students, including:

- Induction: A comprehensive induction programme that delivers a solid basis for going forward will ensure the transition into third level is a positive one. The new TU's approach to student induction will cover the breadth of the student experience and will include academic and college-wide induction initiatives to help build a sense of belonging and commitment among new students.
- **Post induction:** The strength of the support model is that it extends beyond the first weeks of a student's programme, ensuring that students are supported throughout their time at the new TU. Students will have the opportunity to engage with academic mentors, to build connections with their peers and to interact with technology across multiple platforms and across all campus locations.

3.2

The new TU's people strategy

The AIT – LIT Consortium's people strategy has been developed to support the mission, vision and values of the new TU. It is founded on the realisation that people are central to delivering the new TU's strategic priorities. The effectiveness of the university staff will be central to success in achieving strategic TU development and sustaining the long-term future.

The people strategy will aim to support the achievement of the TU's vision, mission and values by focussing activity on the following objectives:

The university of choice for staff

The strategy is informed by the AIT – LIT Consortium's key values, and it aims to ensure that the new TU is the employer of choice with policies, procedures and a culture that sets high expectations whilst providing a stimulating and inclusive environment for its people through:

- Communication and collaboration: The origins of the AIT - LIT Consortium are built on the communication and collaboration of cross-functional teams of management and staff from across AIT and LIT, and this approach will be paramount to the future success of the new TU. This continued engagement will help maintain and enhance trust, confidence, loyalty, and commitment across the TU.
- A positive work environment that embraces and values equality, diversity and inclusion: The new TU will sustain a positive working environment that will inspire and support staff to achieve their full

potential. A positive employee experience is essential to delivering an excellent student experience that recognises the contribution and professionalism of PMSS colleagues. The new TU will champion a culture of equality, diversity and inclusion to best reflect the student body and the society we serve.

 Supporting employee wellbeing through work-life balance, engagement and wellness: The TU will maintain current health and wellbeing initiatives and will further develop these to meet the needs of the new TU and to contribute to a positive, productive, and rewarding TU environment. The promotion of work-life initiatives will be implemented in a fair and consistent manner across the TU. Placing greater emphasis on the health and wellbeing of staff will help ensure that employees perform to their full potential. The new TU will support employees with flexible approaches to work and work-life balance.

Investing in our people

In the new TU, we will invest in our people and build a workforce for the future. We will do this through the following initiatives:

· Recruitment and retention: We will attract, recruit, develop and retain high-calibre staff to build a diversified, supportive, innovative and inclusive workforce that is reflective of the wider community. To respond to the social, economic and cultural challenges that face us over the coming decades, the new TU will implement best practice policy in

recruitment, selection and appointment procedures. Together with progressive staff policies and procedures, this will ensure we have a competitive edge in attracting and retaining talented staff.

 Staff development: We recognise that staff development is fundamental to the success of the new TU. A strategic, professional and holistic approach to employee development will help the new TU to attract and retain high-calibre employees with the skills and competencies necessary to deliver its objectives. The commitment to excellence in teaching, learning, research, engagement and the provision of high-quality professional service to its students, community and local regions, will be supported by talent acquisition and continuing professional development. The development of PMSS staff acknowledges the dynamic working environment for all colleagues and ensures that staff received developmental opportunities to career development and progression.

The commitment to invest in staff, management and leadership development will support the planning and delivery of high-quality service and strengthen the TU's ability to navigate and lead in a changing higher education system.

• Employee recognition: The new TU will explore the introduction of recognition schemes for outstanding employee achievement across academic, professional, management, support and technical staff. In doing so, we will engage with different categories of employees to ensure that proposed schemes are flexible and fair following consultation with relevant Trade unions.

Ensuring HR excellence and innovation

The new TU's HR function will be committed to developing the appropriate structures and organisation to meet any challenges. This will be done through:

• Promoting HR as the strategic partner: HR will adopt a more innovative and strategic role in the new TU, and it will champion modernisation, creativity and talent acquisition. HR functions will adopt forwardlooking ways of supporting the TU in its objectives. A range of new HR approaches will be embedded

across the new TU in areas of governance, people management and service delivery - this will ensure that decision-making is informed, transparent and accountable. The overall HR service delivery will be more streamlined, responsive and effective. Staff will avail of professional development opportunities to meet the challenges of the overall HR service delivery.

Fostering a culture of respect: The new TU

will foster a culture where staff feel engaged, empowered, recognised for their contribution, and treated with dignity and respect; the culture will be driven by the following values:

- Teamwork and inclusion
- Quality results
- Collaborative communication and transparency
- Improvement and innovation
- Service excellence
- Employee development and wellness
- Honesty, integrity and trust

 Embracing technology to add value: The new TU will support a technology-enabled workforce. Our technical staff's expertise and commitment to modernisation will be embedded in the development of the workforce. TU service transformation will be supported by further developing the services offered and the associated systems. Making practical use of the opportunities afforded by technology will make a positive contribution to the staff and the TU's rich data will support informed decision-making.

 Building a strong employer brand: The new TU brings the opportunity to develop a strong employer brand with a national and international reputation that will attract high-calibre staff.

Recognition for HR excellence in research

The AIT-LIT Consortium holds the HRS4R (HR Excellence in Research) award in recognition of its commitment to providing a stimulating and favourable working environment for researchers.

The new TU will continue to be committed to continuous improvement in line with HRS4R's European Charter for Researchers²⁵ and the Code of Conduct for the Recruitment of Researchers.²⁶

^{25.} See: https://cdn2.euraxess.org/sites/default/files/brochures/am509774cee_en_e4.pdf

^{26.} See: https://euraxess.ec.europa.eu/jobs/charter/code











Professional services in the new TU

Professional services in the new TU play a significant role in the transformational and future delivery of the new TU's functions. PMSS staff in both AIT and LIT make a significant contribution to the organisational culture and service provision that drives current success and will play a significant role in developing future professional, management, support and technical services in addition to supporting staff and students across the range of teaching, learning and research activities.

Teaching and learning support

The AIT – LIT Consortium proposes the further development of an extensive Teaching and Learning Unit to support and enhance teaching and learning in the new TU. This unit will have a fundamental role to play in helping the new TU to meet its ambitions. Its exact structure and management are not yet determined and will be agreed within the overall structures of the new TU; in broad outline it will:

- · Be dedicated to the support and advancement of learning, teaching and assessment in the new TU.
- Reside under the remit of the Office of the Registrar.
- Operate independently of the faculties to supporting teaching and professional support staff across the distributed campus in a crossfunctional and multidisciplinary manner.

- Develop excellence in pedagogic practice and the appropriate use of digital technologies - working in evolving roles as academic developers/learning technologists.
- Provide a diverse range of CPD for staff to develop their pedagogic practices, in particular those related to remote delivery.
- Continue to emphasise the provision of inclusive, learner-centred and flexible learning experiences.

The unit will provide a diverse range of unaccredited and accredited CPD for new and existing staff to develop their pedagogic practices along a continuum of enhancement opportunities.

Technology supported learning

Recently both AIT and LIT demonstrated capacity to engage technology supported methodologies to facilitate online teaching and learning. Both have pivoted quickly in unique circumstances to hybrid/ blended modes of delivery while ensuring the core technological and practical focus remained central to the student experience. Deploying simulated practical experiments, online video tutorials, and hands-on guides with innovative use of digital technologies and cutting edge campus infrastructure. The Report of the TU Research Network 2019²⁷ notes that

"comprehensive adaptation to digital learning requires new approaches to programme design, delivery and assessment". With increased investment in an integrated digital infrastructure for a geographically dispersed, multi-campus university, the new TU will need to:

- · Remain flexible and agile to ensure that their digital infrastructure remains relevant.
- Provide development opportunities in digital skills and literacies to enable academic, professional, management, support and technical staff provide a high-quality student experience.
- Use an evidence-based approach to select appropriate digital platforms to meet the needs of staff and students.

Comprehensive adaptation to digital learning requires new approaches to programme design, delivery and assessment. Digital platforms and predictive analytics will also enable the TU to deliver programmes that can provide differentiated education experiences for individual learners, and in particular to facilitate access for at-risk learners and to improve retention in this group.

The provision of supports for selective integration of digital technologies for learning in undergraduate, postgraduate and flexible programmes can help the new TU to make a deep and sustained impact. These will be provided by the proposed unit and they are key to enabling capacity building in this domain; they include:

The development of a comprehensive policy

framework: The development of an adequate policy framework is essential to ensure that the benefits of digital tools are optimised in line with national and European Statutory Quality Assurance Guidelines. Such a framework can also provide guidance in the use of digital tools to maximise their benefits for teaching, learning and assessment.

The development of the digital infrastructure:

The integration of digital technologies will enable more diverse ways of delivering content and communicating with and assessing students. It also offers students more flexible and engaging ways to learn, as well as a higher degree of personalisation and learner autonomy.

Support for staff to develop their digital literacy

skills: Academic staff in the TU will need to be supported in the use of digital technology so that they can incorporate it routinely in their professional learning, teaching and assessment practice. The National Professional Development Framework for all Staff who Teach in Irish Higher Education²⁸ and the European Framework for the Digital Competence of Educators²⁹ allows staff to comprehensively assess and develop their pedagogical digital competence and provide tools that they can use to develop their digital literacy and professional competencies in line with these professional frameworks.

Library services

The technological university library represents the third space for students, all staff and researchers. This positioning places the library alongside the learning space and home as a collaborative and community space. The library is a safe, neutral space where students develop critical thinking and knowledge evaluation skills. Working in consultation with our academic partners, the library provides the print and electronic resources to support students in completing assignments, learning about their subject areas of interest and to explore information beyond the assigned reading list. Librarians are communicators and facilitators of communication who work with the professional support of administrative library colleagues to engage, connect and develop our students. These skills allow for the bridging of a range of academic, technical and information skills requirements and resources. Technical colleagues provide excellent support in the integration of IT systems, security and monitoring systems used extensively in the library environment. The technological university library is the place where everyone finds a voice in their understanding of their studies, their campus life and their place in the world.

In this space, which is physical as well as virtual, the library provides connections in the academic community and is central to the student learning journey. The TU libraries will support the teaching, learning, research and communities of the campuses and regions. To

29. Redecker, C., European Framework for the Digital Competence of Educators: DigCompEdu. Punie, Y. (ed). EUR 28775 EN.

^{27.} Connectedness and Collaboration through Connectivity Report of the Technological University Research Network to the Department of Education and Skills. 2019. Available at: https://www.gov.ie/en/publication/339099-connectedness-collaborationthrough-connectivity-report-of-the-techn/

^{28.} National Professional Development Framework for All Staff Who Teach in Higher Education (2016). Available at: https://www.teachingandlearning.ie/our-priorities/professional-development/the-nationalprofessional-development-framework-pdf-for-all-staff-who-teach-in-higher-education/

Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-73494-6, doi:10.2760/159770, JRC10746

achieve this the libraries are aligned to the TU strategic plans and by the commitment to the technological university vision and mission. The delivery of engaging and innovative experiences, spaces, services and collections delivered by subject and skills experts for the campuses, the region and higher education in Ireland. Alongside curriculum subject supports, information skills and training programmes for success in academic studies, the employability of graduates and potential further education are top priorities. It is recognised that the region has specific educational needs to meet the goal of both broadening education provision and creating inclusive environments for all learners.

The TU libraries have a core role in supporting the TU's research agenda with critical digital infrastructure for building research skills, capacity, and impact. The services offered facilitate research in developing the information and communications skills they need to navigate the research and scholarly publishing landscape. There is expertise in research impact, metrics and benchmarking support research at the individual level, and enhance appreciation of the collective work of research groups and the TU as a whole. This expertise is a key for the development of the TU's institutional reputation, strategic research development, enterprise engagement and understanding the impact of the research. The libraries are also critical hubs of the research outputs of the TU, hosting the institutional repository and leading the open science agenda, ensuring that the public have free and full access to TU research.

A modern university library is more than collections, technologies, and comfortable workspaces; a great library inspires, and its structures and technology create paces that encourage collaboration, reflection, creativity, and wonder. The libraries in the new TU will continue to develop the print collections and online information resources in consultation with academic staff to meet the requirements of all students. The libraries' online resources will provide 24-hour access to material that is in direct support to student learning and research requirements.

The libraries in the new TU will play a key role in providing the critical digital infrastructure that researchers need. They will support researchers to develop the information and communications skills they need to navigate the research and scholarly publishing landscape. The libraries will also be actively involved in research development, collaboration and scholarly engagement.

The new TU libraries will also take the lead in:

- Active engagement with academic partners
- Collaboration and support from PMSS colleagues.
- Ensuring that the diverse requirements of the library users are met – in particular, to ensure inclusion and access to information, facilities and resources.
- Providing support for all level and stages of academic provision.
- Developing information and digital literacy initiatives.
- Active involvement in research development, collaboration and scholarly engagement.
- The knowledge, ability and expertise of the learning community and the libraries.
- Teaching, learning and knowledge sharing in physical and virtual spaces.
- Innovation and collaboration in facilitating access to knowledge and information.
- Intellectual freedom of knowledge, knowledge sharing and knowledge transfer.
- Building key partnerships and collaboration at local, regional, national and international level.
- Bringing positive attention through collective national and international efforts of collaborations and research project activities in the EU and beyond. The library activities will continue to contribute to the TU institutional reputation, impact and success

The library staff are information professionals and professional administrators (PMSS) who actively engage with academic partners in the teaching, learning and research environments in which we work and bring complementary expertise in these areas.

Library spaces

- Building on traditional library environments the TU libraries will develop enhanced digital hubs that will encourage collaborative and engaging learning for students. Other areas such as high-tech discussion rooms and innovative seating and collaborative spaces will promote learning and discovery.
- The installation of consultation spaces will enhance the integration of library staff instruction and support in all aspects of academic integrity.
- Learners can use the consultation spaces and services to learn about new technology and seek assistance from librarians or information experts.
- Learners can also avail of the sanctuary areas where they can find safety in silence and solace in the wellbeing collections. Quiet spaces for thinking, reflection, and creative work are essential for those

Stage 1

Operational Systems

These are all systems that will to distinguish the new TU as a The systems to be integrated limited to) the Microsoft archit and in the cloud (including Off infrastructure, Microsoft Exch TU website and associated co (telephone system, social med presence) and any relevant in APIs between these systems

Stage 2

These consist mainly of Institu applications (under the EduCa as the HR/Payroll, Financial M Records Management, Library Credentials systems.

Corporate Systems

These include all other syster timetabling, printing, business

Value-Added Systems

Stage 3

seeking to study on their own in silence.

- The libraries also offer areas for the learners to engage
 with their wider community.
- The library space will provide areas to facilitate activities such as talks, presentations, book discussions, exhibitions, and poetry readings in the training rooms and give learners a sense of belonging to a larger community.

Information communication and technology services

Information communication and technology services will play a central role in the new TU, particularly in realising the vision of a TU digital campus ecosystem – see section 3.4. Planning for the new TU's operational systems integration commenced in Q2 2020 and forward planning with EduCampus, which includes the development of a project governance framework, is currently under way.

l be required immediately a single entity. include (but are not tecture, both on-campus fice 365, Azure cloud nange, Teams etc), the ommunication channels dia channels and frastructure/integration and other systems.	Integration of Stage 1 systems will be completed by the Appointed Day to ensure the new TU can function with essential operational systems that are unified and supported by a single policy and process suite.
ute of Technology shared ampus umbrella) such lanagement, Student y and Student Awards/	Integration of Stage 2 systems will follow those of Stage 1 and with the assistance of EduCampus and the relevant services providers, it is expected that this will be completed within two years of the Appointed Day.
ns, including those for s intelligence etc.	Integration of Stage 3 systems will be completed within four years of the Appointed Day.

The AIT – LIT Consortium is following a multi-stage strategic ICT plan that is focused on delivering the harmonious integration of the ICT systems and forming the critical enabling framework and foundation on which a digital campus ecosystem can be built. Technical support staff will be invaluable in the design and delivery of these services. An audit of IT systems across AIT and LIT has revealed many similarities in the systems at both institutes, which will facilitate the integration of dual instances into a single TU instance of the various systems in use. The staged ICT integration plan articulates three distinct stages of integration, together with the systems to be integrated in each stage as shown in **Table 3.1**.

This multi-stage strategic ICT planning approach will ensure the multiple campus requirements of the new TU are catered for in a consistent and planned way. All stages will be implemented with the ultimate goal of achieving the 21st century digital campus ecosystem. It is envisaged that mutually essential elements of some systems may bridge between stages to ensure seamless integration and appropriate data flow between systems.









The new TU: a digital campus

Overview of the TU digital campus ecosystem

State-of-the-art digital infrastructure and ICT are mission-critical for technological universities. Such an infrastructure will create an opportunity to meet and address regional and national needs for digitisation, to cater for 21st century learning and research, and to ensure the new TU is equipped to deliver on national policy for the creation of a new type of university.

The nature of third level education, its role in society, and its contribution to the financial and knowledge economy are increasingly predicated on its digital capacity. Its remit must extend to a wider set of stakeholders, beyond traditional singular disciplines and academic activities, and beyond traditional geographical boundaries. The internal structure of the third-level institution must not curtail how it interacts with students, enterprises, industries, or researchers. It must interact seamlessly. The capacity to deliver the state-of-the-art digital campus is contingent on a commitment to support professional and technical development of its staff, this will be support by the new TU.

Innovative business models are required by third-level institutions to remain relevant, competitive, and selfsustaining in the 21st century digital age. A technological university with a multi-campus profile requires digital connectivity to ensure equal access for all learners and a consistent and high-quality educational experience, regardless of physical location. This digital connectivity also facilities systemic collaboration, connectedness and engagement with the regional, industrial, enterprise, and social community that the TU serves.

As referred to in the discussion on graduate attributes, the TU must be designed and delivered with the 21st century graduate in mind. That graduate has higher levels of digital sophistication, experience and expectations than their 20th century counterpart. Equally, the TU must equip graduates with high levels of digital skills by offering exposure to digital technologies. Learner experience will be delivered ubiquitously and effectively across a range of media and digital channels using innovative modes and methodologies of learning. The 21st century learner judges the value proposition of a third-level institution on its capacity to address immediate educational or research needs and by how it facilitates them to engage when they want and how they want. In a TU, the learning journey is expected to contribute directly to employment and future career success. For these reasons, the new TU will have a strong digital identity and digital infrastructure (including equipment, hardware and software), and the TU digital campus experience will support the academic content and the academic experience.

The digital campus proposed in this application has its strategy embedded in the wider TU strategy. The digital campus will reflect the digital age within which the new TU will operate – strategically, tactically and operationally. The digital age mediates the direction of the relationship between the HEI and its students. For example, digital learning influences programme design and delivery; academic and support staff will require the skills and equipment to deliver through digital platforms; and predictive analytics will indicate levels of student engagement and identify those at risk. The primary research conducted in the TU will require a secure digital infrastructure. The digital age will positively impact the new TU's relationship with its internal and external users in terms of media channels and their consumption, mobile device connectivity, cloud-based computing, the usage of smart devices and virtual/augmented reality, unified interoperability + APIs, data warehousing, telepresence solutions, artificial intelligence, location sensing, and predictive – advanced analytics.

The New TU – a digital-first organisation

Digital infrastructure blueprint for the TU

The TU will make a distinctive contribution to education and research through digital connectivity throughout the region it services. The digital infrastructure blueprint for the TU digital campus is based on distributive internal and external operations. Conducting the business of the new TU across a network of eight campuses across four counties will require a comprehensive, robust, and future-proofed digital infrastructure.

• <u>The Digital infrastructure blueprint for the TU as</u> it relates to teaching, learning and assessment

1. The digitally enabled student

The TU digital campus will increase the capacity for digital learning through:

- Innovative delivery that uses a range of learning methods and learning supports.
- Maximising the capacity for students to engage in their digital learning environment synchronously, asynchronously, online, face to face, or via a blended array of these – and enhance the ability of students to "earn and learn".
- The global classroom allowing students to interact without physical or geographic borders for their academic studies and personal skills development.
- The digital library enabling self-directed learning through access to a limitless portal of quality-assured learning resources.
- A flexible model of education that includes blended and online programmes – an online digital campus can reach a wider cohort of students, supporting CPD and lifelong learning.

 The integration of digital literacy skills as part of the student learning experience. Digital literacy skills are essential for graduates entering the workforce in the 21st century. A key enabler for this is the use of digital tools and applications (including virtual/augmented reality) to enhance the learning experience and create innovative opportunities for student learning, collaboration, and assessment.

2. Enabling digital teaching

The digital age has increased the capacity to support the educator including:

- Induction and training for staff involved in the design, development, and delivery of an engaged learning experience through a digital classroom.
- The provision of continuous and varied CPD opportunities (aligned to the National Professional Development Framework) for staff that cater for the multiple range of teaching requirements and schedules.
- Provision of digital tools and software licences for staff to use in the development of learning resources and delivery of online coursework, including access to recording booths, webcams, digital and virtual solutions (including virtual/ augmented reality) that enable a digital classroom.

3. Enabling digital assessment

Digital assessment can be enabled through:

- The necessary governance, protocols and guidelines are in place and made known to both staff and students and that will support the online assessment of students.
- The necessary digital support structures to allow students to verify their identity when completing online assessments and ensure the validity of online assessments.
- Familiarity of staff with the various digital assessment tools within the VLE.

4. Library and information support

The TU digital campus libraries will leverage the availability of digital information and resources with innovative virtual library support services to serve the learning community. The digital library will be proactive and responsive to the latest trends in digital technology and information consumption, as well as tailoring resources and services to reflect and anticipate the needs of users.

Table 3.2 A Digital Infrastructure blueprint for a digital campus supporting students

Interaction

Digital Infrastructural Blueprint Examples

Student Services

1. Predictive - Advanced Analytics:

- to identify dis-engagement trends to enable targeting interventions thus preventing attrition and increasing retention
- to monitor student's interaction with all campus service provision.

2. Student Digital Hub:

- App(s) to deliver interactive information/ services:
- · Schedules: Class timetables, class activities, social activities, and public transport
- Access services Student Supports
- Life skills
- Academic supports
- Careers services
- Health services
- Communication tool
- Students' Union Website
- News feeds: campus
- information, updates.

Interaction	Digital Infrastructural Blueprint Examples			
Marketing	Development and delivery of personalised messaging to engage potential students, students, and alumni across a range of media-channels with targeted educational and/or institutional offerings.	Predictive – advanced analytics to: (i) identify traction of offerings and brand in the marketplace; (ii) monitor social media; (iii) perform trend analysis.		
Student Administration	 1. Admissions: Digital interaction with applicants continuously during the admissions lifecycle including applications, offer(s), and acceptance(s) and enrolment. 2. Predictive analytics on enrolment: Programme traction Enrolment trends Social media analytics Trend analysis of annual programme applications, offers, enrolments. 	 3. Student Information and Records Management Cloud hosted Web-based service on a range of functions that both internal staff and students interact with including: (i) Registration; (ii) Admissions; (iii) Financial: fees/payments/grants; (iv) Curriculum management; (v) Examination/assessment management; (vi) Graduations; (vii) Information reporting. 		
Student Knowledge Resources	 Accessing e-resources 24/7, 365 days a year, anywhere in the world Endeavour to provide access to e-textbooks for students and to ensure equality of access to resources 	• Supporting academic staff so they can effectively and efficiently identify and connect their reading lists to e-resources through the VLE to make the content available to students		
Student Assessment	 Uniformity – Production of examination papers with a consistent form and standard using universal design properties, commensurate with student needs Predictive – Advanced Analytics on Student/Module Performance: Student: to identify performance trends by module across components to enable targeting interventions thus preventing attrition and increasing retention Module-related: to identify performance trends across module(s) and components to assess discipline/subject trends. 	3. Virtual Learning Environment: • Availability of historic assessments for the module; marking rubrics.		

3. Access to cloud infrastructure: to allow the student virtual access to their academic work.

4. Smart devices distributed across the campuses to:

- to record and monitor student attendance
- to deliver webinars. For example, "healthy campus" targeted at addressing: (i) Student Resilience; (ii) Mental Health; (iii) Consent; (iv) Student Diversity and Inclusivity.

5. Virtual learning environment accessible anywhere/anytime.

Table 3.3 Examples of software applications to support teaching, learning, and assessments

Function	Application
Course management	VLE – Moodle
	 Key Links (Reading Lists)
	MS Teams
Developing asynchronous learning resources	Panopto
	Camtasia / Screencast-o-matic / OBS Studio
	• H5P
	Articulate
	Captivate
Synchronous delivery – online classes	MS Teams
	• Zoom
Plagiarism detection	Urkund / Turnitin
Digital badges	Open Badge Factory
Learning guides	LibGuides
Library resources	KOHA Library System/Library Databases/LibGuides
AIT - LIT institutional repository	DSpace Repository System

The library will engage with learning community through digital platform and tools such as the Library Management System, databases and discovery tools. It will introduce learners to enriched content, information and knowledge, will teach them to think critically about digital information sources and will support them in achieving digital competence - through information and digital research skills training programmes.

5. Software applications to support teaching and learning

Examples of the software applications required to support teaching and learning in a digital campus are listed in Table 3.3.

3.5 The new TU's campuses

The new TU will include the campuses currently occupied by AIT in Athlone and LIT in Limerick City Centre, Moylish, Ennis, Thurles and Clonmel.

Operating a multi-campus institution will bring its own challenges but also opportunities across the breadth of operations and activities that we envisage. In the future campus development plans, take into account the national development and planning context as well as particular strategic objectives of the National Development Plan.³⁰

AIT current campus profile

In 1970, Athlone Regional Technical College opened its doors as part of the national expansion of third-level education, and in 1997, it was reconstituted as Athlone IT. The original campus was located on 42 acres of land on the eastern outskirts of Athlone town. In 2001, an additional seven-acre site (known as the East Campus) was added, and in 2008, the institute purchased a fouracre site to the north-east of the main campus that has been identified as a location for development of a polymer research facility. The building stock on the campus has also grown significantly since 2000, and today stands at 64,000 square metres of building floor area.

Hurling, football and athletics are sports that have most participation in AIT. Table 3.4 summarises the estate details of the Athlone campus, and Figure 3.1 shows an aerial view of the campus.

LIT current campus profile

The current LIT traces its roots through the Limerick Regional Technical College and the Limerick College of Art, Commerce and Technology right back to the School of Ornamental Art which was founded on Leamy St in 1852. LIT now has campuses across counties Limerick, Tipperary and Clare. The main LIT campus is located in Limerick at Moylish Park, with three Limerick city centre locations: Clare Street, Merriman House and George's Quay. The two Tipperary campuses are in Thurles and Clonmel and the Clare campus is at Bindon Street in Ennis.

One of the attributes of LIT is the co-location of enterprise acceleration centres within its campuses in Limerick, Thurles and Clonmel. LIT has sports hall facilities in Limerick and Thurles and is in the process of developing a running track on the Clonmel campus. Basketball, hurling and rugby are the most dominant sports in LIT.

Figure 3.2 and Figure 3.3 show some of the sports facilities at Thurles and Moylish.

Table 3.4 and Table 3.5 summarise the current and projected estate details of the LIT campuses, and Figure 3.4 shows an aerial view of the Moylish campus.

^{30.} See: https://www.gov.ie/pdf/?file=https://assets.gov.ie/37937/12baa8fe0dcb43a78122fb316dc51277.pdf#page=null

Table 3.4 Athlone campus: estate details, existing and projected

Status	Building	Area M ²
Existing building stock	Main Institute of Building	18,260
	Hotel, Tourism & Leisure	3,600
	John Count McCormack Centre	3,235
	Auburn Buildings	1,635
	Engineering Building	12,790
	Trades & Research Hub	6,065
	Nursing Building	2,375
	MIRC	1,255
	AIT International Arena	14,650
Total Current Floor Space		63,865
Building projects	MIRC Extension (under construction)	1000
underway		1,000
	STEM Building (planning achieved (HEPPP)	6,065
Total Floor Space 2021/22		→70,930

Figure 3.1 Aerial view of Athlone campus



Figure 3.2 View of sports facilities at Thurles Campus



Sports Lab - Strength and Conditioning Facility

Catering - 100 players

Figure 3.3 View of sports facilities at Moylish Campus



- 2 Full Size GAA Pitches, 1 sand-based
- 1 Full Size Rugby Pitch
- 1 Full Size Soccer Pitch
- 1 Full Size Astro surface pitch.
- 4 dressing rooms
- 2 Indoor Halls (range of sports) 1 Gym
 - Catering for 250 players

Figure 3.4 Aerial view of LIT Moylish campus



Table 3.5 LIT campuses: current estate details	
Location	Campus
Limerick North side	Moylish Campus
	Moylish HEAC/blocks 12
Limerick City Centre	Clare Street Campus
	Georges Quay Campus
	Merriman House Campu
Tipperary	Thurles Campus
	Clonmel Campus
Clare	Ennis Campus
Total square meters	
Table 3.6 LIT building projects u	under way
Location	Campus
Limerick Building Projects Underway	Coonagh Campus – Pha (expected completion da
	AS & IT Building PPP (M secured, expected com
Clonmel Campus	Clonmel Sports Hub in c local industry – outdoor facility, cycle track etc.
Total square meters	

Total projected sq. m. by September 2021/22

	Area Sq. Mt
	35,448
3,14,15	4,998
	9,172
	1,687
	855
	5,508
	1,864
	674
	→60,204

Area Sq. Mt

5,984 5,158

ase 1 ate September 2021)

oylish) Planning permission Netion date September 2023

onjunction with local authority and sports facilities including athletics



Campus development plans

The AIT – LIT Consortium has campus development masterplans that show the ambition to increase capacity and provide much needed upgraded facilities across all locations for the new TU. These plans are summarised in **Table 3.7**, **Table 3.8**, and **Table 3.9** (for Athlone, Limerick and Tipperary respectively).

Tabl	e 3.7 Athlone campus development plans	
Dev	/elopment	Budget
1 1 c ł	Feaching block development including campus arrival and entrance The new entrance building would provide a badly needed focal point of entry for the campus and organisation. The building would consolidate existing teaching spaces and create additional lecture nall capacity to underpin the development. The building will also create supplemental space for support services.	€8m
2 S	TEM building (PPP) This development at AIT under the HE PPP Programme, comprising 6,000sq.m. of space providing orimarily lab space for the Faculty of Science.	€18m
3 / t	AIRC extension An extension to the Midlands Innovation and Research Centre (MIRC) doubling the capacity of he building to provide additional capacity to significantly increase the number of high-growth mowledge-intensive export-focused businesses in the Midlands region.	€3m
4 I t c	Library Information Resource Centre The campus has an acute shortage of library and learning space, with the library currently housed at the western end of the MIB. A new library and learning facility would be developed at the front of the sampus, facing the Dublin Road; in conjunction with the new entrance building, this would provide a new streetscape on the Dublin Road. The development would also be located on the Promenade and be one of the buildings enclosing the central quad.	€20m
5 (TEM quadrangle development phase 1 The development comprises the extension of the APT technology gateway and refurbishment of existing spaces to provide additional capacity for applied polymer technology research and innovation.	€10m
6 I 2 2	Aidlands Technology Campus To be located on a greenfield 4-acre site to the north-east of the main campus, the facility will meet a key strategic goal for the development of a new centre for polymer and industrial research, an area in which AIT has a successful history and expertise.	€30m
7	Refurbishment and renewal These are projects to refurbish and renew existing accommodation to improve the quality of the earning and work environment.	€5m
8 F / t	Public realm and landscaping A multi-element priority development to improve the external environment to create a public realm hat is cohesive and suitable for the new TU campus.	€5m
Tot	al	€99M

 Table 3.8
 Limerick campus development plans

Development

- 1 Applied science and IT building, Moylish (PPP) Planning permission secured, expected completion date Q 2 2
- 2 Phase 1 of engineering campus at Coonagh
- 3 Library Information Resource Centre Development of a fit-for-purpose Learning and Information Re elements to the project with extensive refurbishment of existing

of an extension to accommodate student numbers

- 4 City North Sports Campus and sports facilities upgrade In partnership with Limerick GAA, Camogie and Ladies footba carpet and one 4G; all multi-sport size and fully floodlit with as facilities.
- 5 Community Engagement Gateway Reimagined – home for Basketball Ireland Regional Centre of B community facing facilities.
- 6 Phase 2 of engineering campus development at Coonagh Refurbishment and fit out of further engineering Facilities to fa engineering Facilities from Moylish Park to Coonagh, including the Engineering faculty.
- 7 Refurbishment of attic space and quad in Clare St. campus Expansion of research facilities and teaching facilities includin workspaces. The development of the quad on the ground floo studio spaces together with a new dining and exhibition/perfor
- 8 Move culinary discipline from the Moylish campus Moving Culinary Arts to better facilities to enable delivery of the skills need. Move to City Centre location to facilitate the growt
- 9 Upgrade to existing one-storey building in Moylish Critical upgrade to deliver fit-for-purpose facilities to new and Important adjacency realignment of departments and activitie with the new ASIT building and refurbishment and repurposing activities to Coonagh.
- 10 Thomond Plaza including new entrance on Moylish campu Critical upgrade to deliver fit-for-purpose facilities to new and project involves creating a new entrance to the centre of the c toward Thomond Park, putting learning on display on arrival to realm and set down/arrival space including bus stop facilities f campus services.

Subtotal Limerick Campuses

2024	€18m
	€18m
esource Centre (LIRC). There are two ng library facilities and development	€21m
all: three pitches of which two sand sociated car parking and changing	€15m
Excellence, LIT access service and	€12m
acilitate the complete decant of g all apprenticeship programmes in	€21m
s ng the provision of academic staff or will deliver nine additional teaching/ ormance space for the campus.	€6m
ne growth potential and the regional th of remaining disciplines in Moylish.	€14m
appropriate standard for TU. s. This will support the integration g following transfer of engineering	€9m
appropriate standard for TU. This ampus, reorienting the campus o the campus as well as new public for shuttle bus and Bus Éireann	€6m
\rightarrow	€140m

Table 3.9 Tipperary campus development plans

Development		Budget
1 Reg	ional Sports Hub – Clonmel	€5m
2 Thu 1x 4 2x s Ten	rles: sports facilities as per LSSIF application G multisport pitch and carpet multi-sport pitches his facility and extension to sports labs	€17m
3 Thu This requ	rles: multi-purpose hall is require to facilitate exams, and other campus-wide activities that uire a large flexible space for multiple uses.	€3m
4 Thu re: le	rles: possible link with Tipperary Education and Training Board ocal post Leaving Certificate college integration	€15m
5 Clor Relo FE c	nmel: Kickham Barracks Education Campus ocation from Frank Drohan Road and co-locate adjacent to ETB Plc/ college on a shared campus.	€21m
Subtotal Tipperary Campuses		→€61m

Campus development and the **National Planning Framework**

The recognised City of Limerick and Athlone identified as a regional growth centre reinforces the importance of the regional adjacency and as a result the TU's sphere of influence. The National Planning Framework (NPF) 2018,³¹ aims to shape and guide the future growth and development of Ireland up to 2040. The NPF supersedes the National Spatial Strategy 2002-2020 (NSS) and focuses on economic development and investment in housing, water services, transport, communications, energy, health and education infrastructure.

The NPF provides the policy context for regional spatial and economic strategies and local level development plans. In an effort to move away from developer-led development to one informed by the needs and requirements of society, a number of objectives and policies have been put in place for more sustainable development. The population of Ireland is projected to increase by approximately 1 million people by 2040, which will result in a population of roughly 5.7 million. This population growth will place further demand on both the built and natural environment.

National strategic outcomes relevant to the development of the new TU

A number of national strategic outcomes are relevant to the development of the new TU - especially in relation to the development of campus facilities. These are set out below.

National Strategic Outcome 8 (Transition to a Low Carbon and Climate Resilient Society)

This establishes an objective in achieving transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050.

National Strategic Outcome 5 (A Strong Digital Economy Supported by Enterprise, Innovation and Skills)

This establishes an objective to develop challengebased disruptive technologies initiatives to ensure that Ireland stays at the forefront of technological innovation, market application and commercialisation and can spur the next generation of technology-led enterprises, drawing on R&D activities in the higher education sector and enterprise in the regions.

National Strategic Outcome 10 (Access to Quality Childcare, Education and Health Services)

This establishes an objective to provide access to a range of quality education and health services, relative to the scale of a region, city, town or community is a defining characteristic of attractive, successful and competitive places. Compact, smart growth in urban areas and strong and stable rural communities will enable the enhanced and effective provision of a range of accessible services.

Climate-related objectives

Climate-change mitigation objectives have been outlined on a global scale through international agreements such as the United Nations' Paris Agreement. Commitments under such agreements have trickled down through national strategies in the Climate Action Plan for Ireland.³² This plan, in conjunction with the National Planning Framework has set the stage for Ireland to transition to a sustainable future in which climate action is integrated throughout all sectors.

Furthermore, regional plans and strategies have established the importance of the green growth of Ireland's regions and this trickled down into county and local level development plans and strategies. For the new TU, the following aspects of climatechange and sustainability need to be integrated into the campus development masterplans:

- Greenhouse gas reductions
- Sustainable energy supply
- Energy efficiency and green buildings
- Sustainability and climate action in education and communication
- Waste management and recycling
- Green financing and procurement
- Biodiversity and water resource management
- Green campus initiatives
- Transport alternatives

AIT – LIT has made significant progress in managing the energy performance of their buildings (LIT 33% and AIT 22% reduction relative to baseline). LIT Thurles campus is heated using biomass and an application for Green Flag designation will be made in 2020. Positioning our TU campus infrastructure to showcase best practice, deliver on national commitments and connect with education, research and development agendas is a key priority for the organisation and a demonstrable commitment to the UN SDGs.

^{32.} See: https://www.dccae.gov.ie/en-ie/climate-action/publications/Documents/16/Climate_Action_Plan_2019.pdf

^{31.} See: <http://npf.ie/

"The new TU can promote enterprise clustering around specific sectoral opportunities such as the Green Economy, digitisation and biotechnology."

Socio-Economic Study





Meeting the criteria of the Technological Universities Act 2018

This chapter describes how the AIT – LIT Consortium meets the criteria for designation as a technological university set down in section 28 of the Technological Universities Act 2018.

All metrics quoted below have been audited and verified through independent auditors Deloitte. Between March and September 2020, Deloitte carried out a series of in-depth audits on each of the criteria and metrics, with the audit results set out below.




Student profile criteria

Leg	islative criteria	How the AIT-LIT Consortium meets the criteria
1.1	S.28 (1) (a) of the students of the applicant institutes registered on a programme that leads to an award to at least honours bachelor degree level – At least 4 per cent are research students registered on a programme which leads	The total number of students across AIT – LIT who are on programmes that lead at least to a bachelor degree is 7,380 Of the above students, 318 or 4.31 per cent are research students registered on a programme which leads to an award to at least master's degree level
1.2	(ii) at least 30 per cent fall within one or more than one of the following classes of students:	The 30 per cent threshold is 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;	Of the total number of 7,380 students, 733 or 9.93 per cent are students who are registered 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 professional, the community, local interests in the region in which the campuses of the applicant institutes are located;	Of the 7,380 number of students, 3,553 students, 48.14 per cent , are students registered on programmes that are designed and being delivered with the involvement of industry within the region.
	(III) students who are not less than 23 years of age	Of the 7,380-total number of students, 2,639, 36 per cent , are students who are not less than 23 years of age.
1.3	(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 4 per cent to at least 7 per cent, the proportion of their research students referred to in paragraph (a)(i);	The AIT – LIT Consortium has developed a detailed vibrant plan to meet the required research capacity which is outlined in the subsection on Building sustainable research capacity in section 2.4 of this document <i>The approach to research in the new TU</i>

4.2 Staff profile criteria

w the AIT-LIT Consortium meets the criteria	Leg	islative criteria	How the AIT-LIT Consortium meets the criteria
total number of students across AIT – LIT who are on grammes that lead at least to a bachelor degree is 7,380 he above students, 318 or 4.31 per cent are research students	2.1	S.28 (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 degree level- (i) at least 90 per cent hold a master's degree or doctoral degree	Currently 93.45 per cent of staff hold a masters or a doctoral degree
stered on a programme which leads to an award to at least ster's degree level		at least 45 per cent hold: (I) a doctoral degree, or	Currently 35.36 per cent of staff possess a doctoral degree
30 per cent threshold is exceeded for sections (II) and (III)		(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, and	
he total number of 7,380 students, 733 or 9.93 per cent are lents who are registered on a programme that is provided on a ble basis.		not more than 10 per cent hold only the qualifications referred to in subparagraph (ii)(II)	Currently 9.96 per cent of staff hold only the qualifications referred to in subparagraph (ii)(II)
he 7,380 number of students, 3,553 students, 48.14 per cent , students registered on programmes that are designed and ng delivered with the involvement of industry within the region.	2.2	(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 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);	Currently 45.33 per cent of staff possess a doctoral degree or equivalent AIT – LIT has a detailed plan to increase the proportion of full-time academic staff who will meet this requirement
he 7,380-total number of students, 2,639, 36 per cent , are dents who are not less than 23 years of age.	2.3	 S.28 (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 	Currently 91.95 per cent of such full-time academic staff hold a doctoral degree
AIT – LIT Consortium has developed a detailed vibrant plan neet the required research capacity which is outlined in the section on Building sustainable research capacity in section 2.4		(ii) The conduct of research;	Currently, 96 per cent of such full-time academic staff hold a doctoral degree and are engaged in the conduct of research
is document The approach to research in the new TU	2.4	 S.28 (1) (f) (i) 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 (II) a terminal degree, as well as sufficient practical experience gained in the practice of a professional 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 	Currently, 100 per cent of such full-time academic staff hold a doctoral degree.
		(III) has a record of continued conduct of research in an area relevant to the programme	Currently 100 per cent of such full time academic staff have such a record



Research activity criteria

4.4 Engagement criteria

Leg	jislative criteria	How the AIT-LIT Consortium meets the criteria	Legi	islative criteria	How t
3.1	 S.28 (1) (g) in respect of not less than 3 fields of education (i) The applicant institute provide programmes that lead to awards to doctoral degree level, and (ii) the academic staff and students at the applicant institutes conduct research; 	Programmes leading to doctoral degree level are provided in the following seven areas: Delegated authority: Software engineering and ICT Polymer engineering	4.1	S.28 (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	Eviden docum
		Microbiology Sport and health science QQI accreditation Life and physical sciences Biology		(ii) that the innovation and research has 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;	Evider docum Socioe
		QQI approval Social studies	4.2	S.28 (1) (k) The applicant institutes demonstrate to the satisfaction of the advisory panel that the applicant institutes have, at the time it applies under section 29 for an order under section 36.	Evider docum Socioe
3.2	S.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 the institute, a technological university or a university specified in paragraphs (a) to (d) of section 4(1) of the Universities Act 1997;	AIT and LIT are both compliant with associated procedures relating to quality assurance regarding the provision and award of doctoral degrees as required by the Qualifications and Quality Assurance Authority of Ireland. Transitional arrangements are provided in s.61(1)(2) and ss.63,64 of the Technological Universities Act (2018)		 the capacity to effectively perform the functions of a technological university and in particular demonstrates (i) That they have strong links with business, enterprise, the professions and other stakeholders in the region in which the campuses of the applicant institutes are located 	
3.3	S.28 (1) (j) The applicant institutes have a plan that demonstrates to the satisfaction of the advisory panel that it would have the capacity, as a technological university to increase within 5 years of the date of making of an order under section 36, from at least 3 to at least 5, the fields of education referred	Programmes leading to doctoral degree level are provided in seven fields of education.			

to in paragraph (g);

ow the AIT-LIT Consortium meets the criteria

idence to support this is outlined in section 2.2 of this cument: The approach to research in the new TU.

idence to support this is outlined in section 2.2 of this cument: The approach to research in the new TU and in the *ncioeconomic Impact Study* conducted by AIT – LIT.

idence to support this is outlined in section 2.2 of this cument: The approach to research in the TU and in the procession on the ID and the section of the



Governance criteria



Legi	slative criteria	How the AIT-LIT Consortium meets the criteria	The	e impact of COVID-19 on the international even less severe than	
5.1	S.28 (1) (k) (i) The applicant institutes demonstrate to the satisfaction of the advisory panel that the applicant institutes have, at the time it applies under section 29 for an order under section 36, the capacity to effectively perform the functions of a technological university and in particular demonstrates that they have integrated, coherent and effective governance structure in place concerning academic, administrative and management matters,	AIT – LIT's governance structure 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.	exp AIT exp	pected. International student numbers joining – LIT in 2020 are down on pre-pandemic pectations. While there have been individual cases	-
5.2	S.28 (1) (k) (iii) The applicant institutes demonstrate to the satisfaction of the advisory panel that the applicant institutes have, at the time it applies under section 29 for an order under section 36, the capacity to effectively perform the functions of a technological university and in particular demonstrates		6.1	S.28 (1) (v) (I) The applicant institutes demonstrate to the satisfaction of the advisory panel that the applicant institutes have, at the time it applies under section 29 for an order under section 36, the capacity to effectively perform the functions of a technological university and in particular demonstrates	T O E fr tl
	(iii) that they have, under section 28 of the Act of 2012, established procedures in writing for quality assurance in relation to which –	Each institution has had its QA procedures approved by QQI under section 28 of the Act of 2012.		 I hat they – (I) provide opportunities for staff and students of the applicant institutes to teach, learn or conduct research at institutions that provide higher 	
	 (I) no notice has been furnished by the Qualifications and Quality Assurance Authority of Ireland under section 36(1) of the Act of 2012, or (II) approval has not been withdrawn under section 36 of that Act 	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	6.2	education outside the State , or to obtain relevant work experience outside the State, (II) provide opportunities for staff and students of	lı
5.3	S.28 (1) (k) (iv) The applicant institutes develop and have procedures in place for the development of programmes that respond to the needs of business, enterprise, the professions	AIT – LIT will develop and have procedures in place, under the direction of the Governing Body and Academic Council, for the development of programmes that respond to the needs of business, enterprise, the professions and other stakeholders in the region in which the compused of the application institutes are		institutions that provide higher education outside the State to teach, learn or conduct research at the applicant institutes, and	р 8 2
	campuses of the applicant institutes are located,	located	6.3	(III) collaborate with institutions that provide higher education outside the State, including on joint research projects and for the purpose of provision or	T O

where people have had difficulty accessing flights and visas, the majority of continuing international students have returned to Ireland. A small number with specific circumstances are continuing their programme of studies from their home country.

How the AIT-LIT Consortium meets the criteria

There are currently 272 International Agreements of Cooperation offering such opportunities.

Both AIT and LIT are members of the Regional University Network - European University (RUN-EU) along with six other regionally focused European higher education institutes (Section 2.15.1 of this document)

nternational students comprise 9.7 per cent of full-time student population during academic year 2019-20.

84 nationalities represented on campus during academic year 2019-20.

There are currently 272 International Agreements of Cooperation offering such opportunities.

AIT – LIT are members of the Regional University Network – European University (RUN-EU) along with six other regionally focused European higher education institutes (see the subsection on International context for the new TU in Section 1.1 of this document: Introducing the AIT-LIT Consortium TU.

"The new Technological University will be a vibrant and diverse learning community which will strive to meet the ever-evolving needs of its students, by the deliverance of excellent and accessible higher education where students and staff are supported in reaching their full potential."

Staff Survey





The financial viability of the AIT – LIT Consortium

This chapter describes the financial viability of the proposed new TU. It provides details of the following for the first five years of the new TU's operation:

- Projected income and expenditure
- Projected student and staff numbers
- A consolidated financial summary
- Campus Development Capital Expenditure budget
- Assumptions relating to financial projections





Projected income and expenditure of the new TU

5.2

Student numbers in the new TU

Table 5.1 TU Projected income and expenditure 2019/20 to 2024/25, figures in €000's

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
	Draft	Forecast	Forecast	Forecast	Forecast	Forecast
Income	122,079	126,610	130,470	133,400	136,188	139,366
Expenditure	120,093	124,914	128,761	131,323	134,161	137,337
Surplus/(deficit)	1,986	1,696	1,709	2,077	2,027	2,030

The establishment of the new TU is a value-added activity that will have significant educational, social, civic and economic impact in the regions it serves. The financial projections presented here are based on the draft accounts for 2019/2020 forecast changes, together with the operating programmes and budgets for 2020/21, as submitted to the HEA in March 2020. Projected income and costs in future years are driven by changes in student numbers and changes in levels of research activity.

See section 5.4 Consolidated Financial Summary for further detail on financial projections.

Table 5.2 TU forecast student numbers 2019/20 - 2024/25

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	
	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	
Undergraduate	12,812	13,139	13,440	13,645	13,861	14,161	10,50%
Postgraduate (research and taught)	937	969	1,016	1,058	1,092	1,135	21,1%
Total	13,749	14,107	14,456	14,703	14,953	15,296	11,2%

Projected student numbers for the new technological university are shown in Table 5.2.

Student numbers are projected to grow by 11.2% over the five-year period from 2019 to 2024 (undergraduate by 10.5% and postgraduate by 21.1%).

The undergraduate growth projection is supported by demographic data showing a 4.3% increase in the number of 18-year-olds in the TU catchment area over the period. Growth will be further enhanced by new programme offerings and by an expected uplift in applications resulting from TU designation. The higher rate of growth among postgraduates is due to the focus on increasing research activity and on delivering more postgraduate programmes.

Changes in student numbers in areas of particular focus

The AIT – LIT Consortium has identified opportunities for growth for the new organisation and has developed plans to deliver student number growth at accelerated rates in those areas. The details are given in Table 5.3. Student numbers are broken down by ISCED in Figure 5.1.

Note: student numbers are shown as headcounts, and not full-time equivalents.

Figure 5.1 Student numbers by ISCED code



Table 5.3 Areas of focus and their expected impact

Area of focus	2019/20 Actual	2024/25 Forecast	% uplift over 5 years	Reason for expected changes
International	613	724	18.1%	TU access to an increased number of international partner institutions
Online/blended	911	1,117	22.6%	Increased focus on Springboard and HCI funding streams
Apprentices	864	1,091	26.2%	Increased demand and expanded facilities
Research	318	436	37.1%	Increased capacity in Athlone (Midlands Technology Campus) and recurrent funding for research
Engineering	3,506	3,998	14.0%	New Engineering Campus in Limerick (Coonagh)
Natural Sciences & ICT	2,551	2,933	15.0%	Increased demand and new STEM and ASIT Buildings from 2024

5.3

Staff numbers in the new TU

Table 5.4 Staff numbers for the new TU, 2019/20 TO 2024/252019/202020/212021/2021/2021/2021/2021/2021/2021/2021						
	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
	Actual	Forecast	Forecast	Forecast	Forecast	Forecast
Academic	732	746	760	768	774	783
Research	136	141	148	155	166	178
Professional, management, su	pport 408	417	425	433	441	449
Total	1,276	1,304	1,322	1,356	1,381	1,409

Total staff numbers are expected to increase by 10% during the five years from 2019 to 2024. Details are given in Table 5.4.

Much of the increase is driven by the increase in research activity, which shows a 31% increase over the period and a proportional increase in staff numbers.

Additional academic, technical and administrative staff will be required as student numbers increase. The expected rate of increase for academic, professional, management, and support staff over the five-year period is 7.6%.



Consolidated financial summary

Table 5.5 TU Consolidated financial summary, 2019/20-2024/25, figures in €000'S

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
	Draft	Forecast	Forecast	Forecast	Forecast	Forecast
Income						
State grant	53,506	55,886	57,240	58,652	59,656	60,684
Tuition fees/student contribution	44,152	45,893	47,664	48,473	49,285	50,359
Amortisation of capital grants	5,345	5,418	5,418	5,418	5,418	5,418
Research grants and contracts	10,188	10,438	10,960	11,508	12,313	13,175
Other income	7,460	7,569	7,796	8,030	8,271	8,519
Student support	1,428	1,460	1,475	1,489	1,504	1,519
Total income	122,079	126,610	130,553	133,571	136,448	139,675
Costs						
Pay	83,178	87,261	90,086	91,929	93,648	95,572
Non-pay	20,878	21,280	22,063	22,329	22,559	22,856
Research (pay and non-pay)	10,188	10,438	10,960	11,508	12,313	13,175
Depreciation	5,849	5,935	5,935	5,935	5,935	5,935
Total costs	120,093	124,914	129,043	131,702	134,455	137,539
Surplus / (deficit)	1.986	1.696	1.510	1.869	1.993	2.136

Table 5.6 Non-higher education funded projects

Development - non-higher education funded projects

Regional sports facilities - LSSIF and partners - Thurles Campus

Link with ETB re PLC College- ETB - Thurles Campus

Kickham Barracks Education Campus - URDF & Partners

City North sports campus & sports facilities upgrade URDF & Partn

Move culinary discipline from the Moylish campus - URDF & Partn

Community Engagement Gateway - Philanthropic & Partners

Subtotal

Table 5.7 Purpose built on campus student accommodation Development - purpose built on-campus student accommodat Purpose-built student accommodation - Athlone campus This will meet a key need to facilitate the expected growth in stude Purpose built student accommodation - Moylish campus Essential to generate third stream income and develop enriched st Student accommodation (150 beds) - Thurles campus Essential to generate third stream income and develop enriched st Subtotal Table 5.5 shows the consolidated financial momentum towards the creation of a regional TU with summary for the years 2019/20 to 2024/25. a significant increase in research output and capacity. In addition to the recurring income and expenditure A number of other transition and integration activities

shown in table 5.6, the AIT - LIT Consortium project has received funding from the HEA Transformation and Innovation Fund to implement the planned merger. This funding commenced with €2m TU landscape funding in 2019 with a further €5m awarded in October 2020. The investment has created significant

	Budget
	€17m
	€15m
	€21m
ners	€15m
ers	€14m
	€12m
	€94m

tion (PBSA)	Budget
ent numbers.	€50m
tudent experience.	€45m
tudent experience.	€25m
	€120m

will continue over the period post designation and initial elements have been included in the multiannual cost set out below. The total cost estimated for the TU development projects in the three years ended August 2023 is in the order of €31m, with the State contributing €22m as follows:

Table 5.8 Estimated State contribution towards cost of TU development projects, figure in €000s

Project	State contribution	AIT-LIT contribution	Total cost
Programme and change management	1,621	36	1,657
Governance and management structures	299	631	930
Academic affairs and quality assurance	3,964	1,236	5,200
Research capacity building	8,785	7,055	15,840
Communication and stakeholder engagement	1,450	0	1,450
Corporate affairs/operational	861	30	891
Digitalisation/IT systems	2,889	403	3,292
Student administration and support	2,020	60	2,080
Total	€21,889	9,451	31,340

Figure 5.8 outlines the estimated cost of the transformation activities to 2023.

Supported by the TUTF fund and matched by the Consortium funding will be utilised to deliver on the transformational agenda. In line with the TURN report, digitalisation, research capacity building and academic affairs will form the core of the next phase of the project plan. Within this plan the current activities will support developing academic and corporate governance and management systems, staff development supports, system integration and research development.

5.5

Campus development budget

The capital development plans of the new technological university are summarised in **table 5.9**. Further details are available in section 3.5.

The campus development projects are included in the current campus masterplans of both institutions and are expected to be developed in the next 10 years. It is assumed the projects identified or in progress will be fully funded. Funding has been approved for the Public Private Partnership (PPP) projects at Athlone and Limerick, and these projects are expected to be completed by Q2 2024. In addition to the proposed campus developments above, there is an identified need to develop oncampus student accommodation to address growing demand, to support international student growth and address student mobility issues. Access to a borrowing framework will be necessary to progress on-campus student accommodation. The estimated cost is €120m as per **table 5.10**.

Table 5.9 TU Campus Development projects - HE funded

Project	Budget
Athlone campus	
STEM Building (PPP)	€18m
Teaching Block development, including campus arrival and entrance	€10m
STEM quadrangle development – phase 1	€5m
Midlands Innovation & Research Centre (MIRC) extension	€3m
Library Information Resource Centre	€18m
Midlands Technology Campus (MIRC)	€30m
Refurbishment and renewal	€10m
Public realm and landscaping	€5m
Subtotal: Athlone campus	€99m
Limerick campuses	
Engineering campus Coonagh (PPP)	€18m
Applied science and information technology building (PP)	€18m
Library Information Resource Centre (LIRC)	€21m
Upgrade to existing one storey building in Moylish	€9m
Refurbishment of attic space and quad in Clare Street	€6m
Engineering campus Coonagh (phase 2)	€21m
Thomond Plaza including new entrance to Moylish campus	€6m
Subtotal: Limerick campuses	€99m

Tipperary campuses

Total capital development plans for TL	£206m
Subtotal: Tipperary campuses	€8m
Multi-purpose hall – Thurles campus	€3m
Regional sports hub – Clonmel	€5m

Table 5.10 Purpose Build Student Accommodation Projects, figures in millions

Purpose-built student accommodation Athlone campus Limerick campus Tipperary campus **Total expected cost**

0

Budget €50m €45m €25m



Assumptions relating to financial projections

The following assumptions have been used in the building up the current financial projections.

Student numbers and research:

- Designation as a technological university is expected to lead to a 5 per cent increase in student numbers in the four years post-merger. This is in addition to forecast baseline increases and increased capacity generated by the availability of new facilities. The expected uplift is a consequence of the enhanced attractiveness of the new technological university.
- Designation as a technological university, together with other research enhancing initiatives including membership of the RUN-EU consortium, is expected to lead to a 26 per cent uplift in research activity during the four-year postmerger period. This is reflected in research grants, research costs and research staff numbers.
- It is assumed that the effect of the COVID-19 pandemic on student numbers will impact mainly in 2020/21. Total student numbers in 2020/21 are in line with pre-COVID forecast. Strong domestic demand has compensated for the COVID-related reduction in international student numbers in 2020/21. The consequent reduction in income due to the lower average fees has been included in the projections and partly offset by expected reductions in travel and other costs.

• Funding:

- The State grant will increase proportionally to the previous year's increase in student numbers.

- Tuition fees/student contributions will increase proportionally to the current year increase in student numbers.
- The RFAM funding mechanism will not change for the period to 2024/25.
- There is no provision for potential changes to funding that may arise as a result of the review of the Resource Allocation Model (RAM) for funding.
- There will be no change to the current level of State grant per capita, tuition fees or student contribution in the period to 2024/25.
- No impact of performance funding arrangements has been included.
- Devolved grant is not provided for or included in the future consolidated projections.
- It is assumed that separate State funding will be available for the capital expenditure programme, the programme of development projects and the expected integration costs.
- It is assumed that separate State funding will be available to cover the costs related to the COVID-19 pandemic.



Other costs:

- There is no provision for pay increases as part of any new Public Service Stability Agreement in the period. It is assumed that any such increase will be funded within the recurrent funding allocation.
- The projections include the annual recurrent budget implementation costs of the Memorandum of Understanding and related position papers agreed by the IR Forum to apply in the TU from 2020/21 onwards.
- Superannuation is calculated in the normal way based on retention of deductions from staff.
- There is no provision for inflation on non-pay costs. It is assumed any such increase will be funded within recurrent funding allocation.

PPP arrangements:

 No adjustment has been made to capital grant amortisation or depreciation in relation to the STEM and ASIT buildings, as these are financed by Public Private Partnership (PPP) arrangements.



"Scaling up will enable the new TU to build closer and higher value-added RDI linkages with enterprise agency clients."

Socio-Economic Study

Acknowledgements

Significant ventures rarely happen without people working together in the spirit of common purpose to deliver a new initiative. On behalf of the TU project directors, Dr Niall Seery (AIT) and Terry Twomey (LIT), this is an acknowledgement of the work and commitment of colleagues and students in the development of this application as we begin our journey towards achieving technological university designation. We would also like to thank stakeholders drawn from academia, industry, politics, and public life whose feedback and ambition for the Midlands and Mid-West have helped shape the vision of the new technological university.



#DeliveringTogether