



**Technological Universities**

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**CONNECTEDNESS &  
COLLABORATION  
through CONNECTIVITY**

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**Report of the Technological Universities Research  
Network to the Department of Education and Skills**

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**October 2019**

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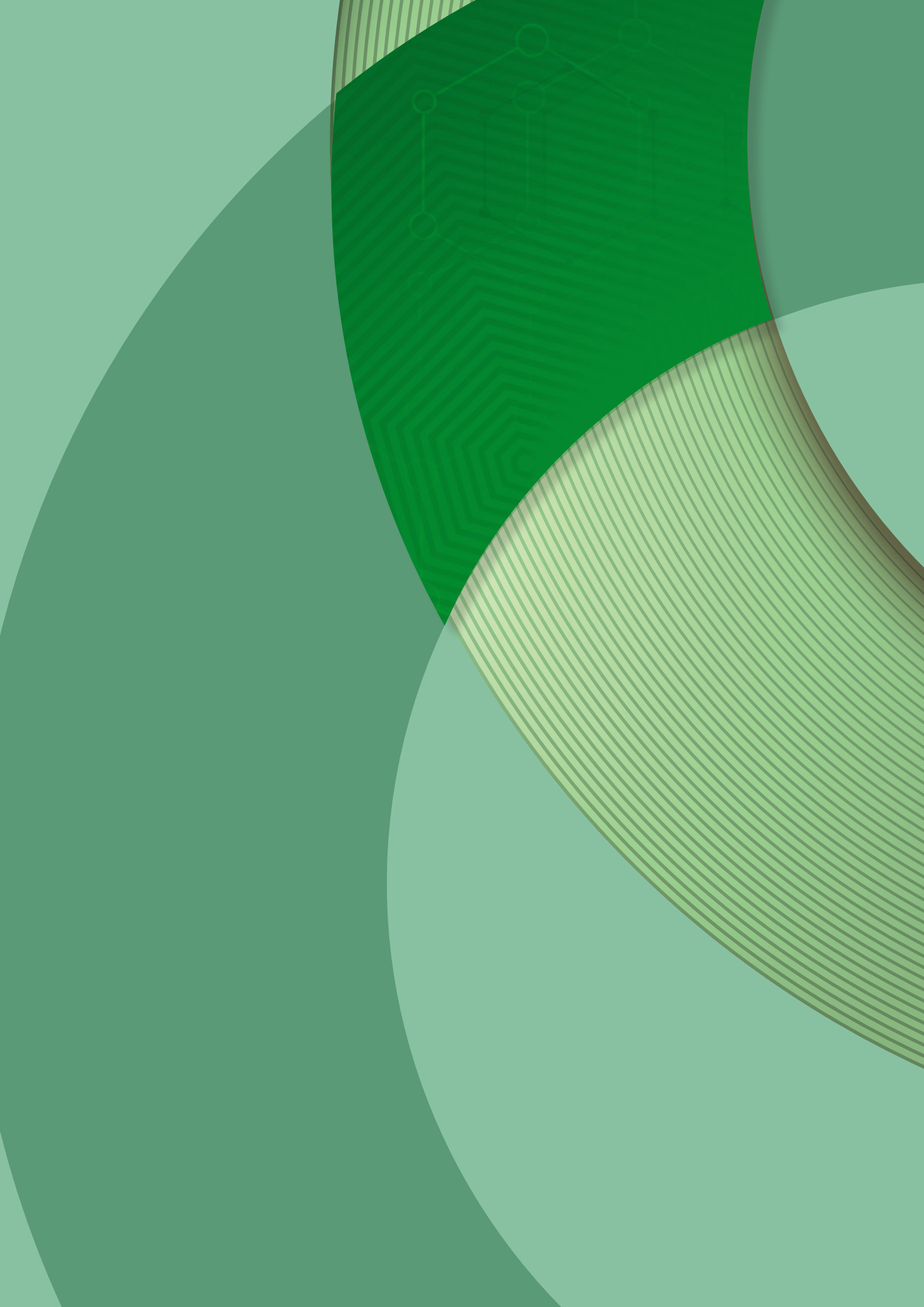
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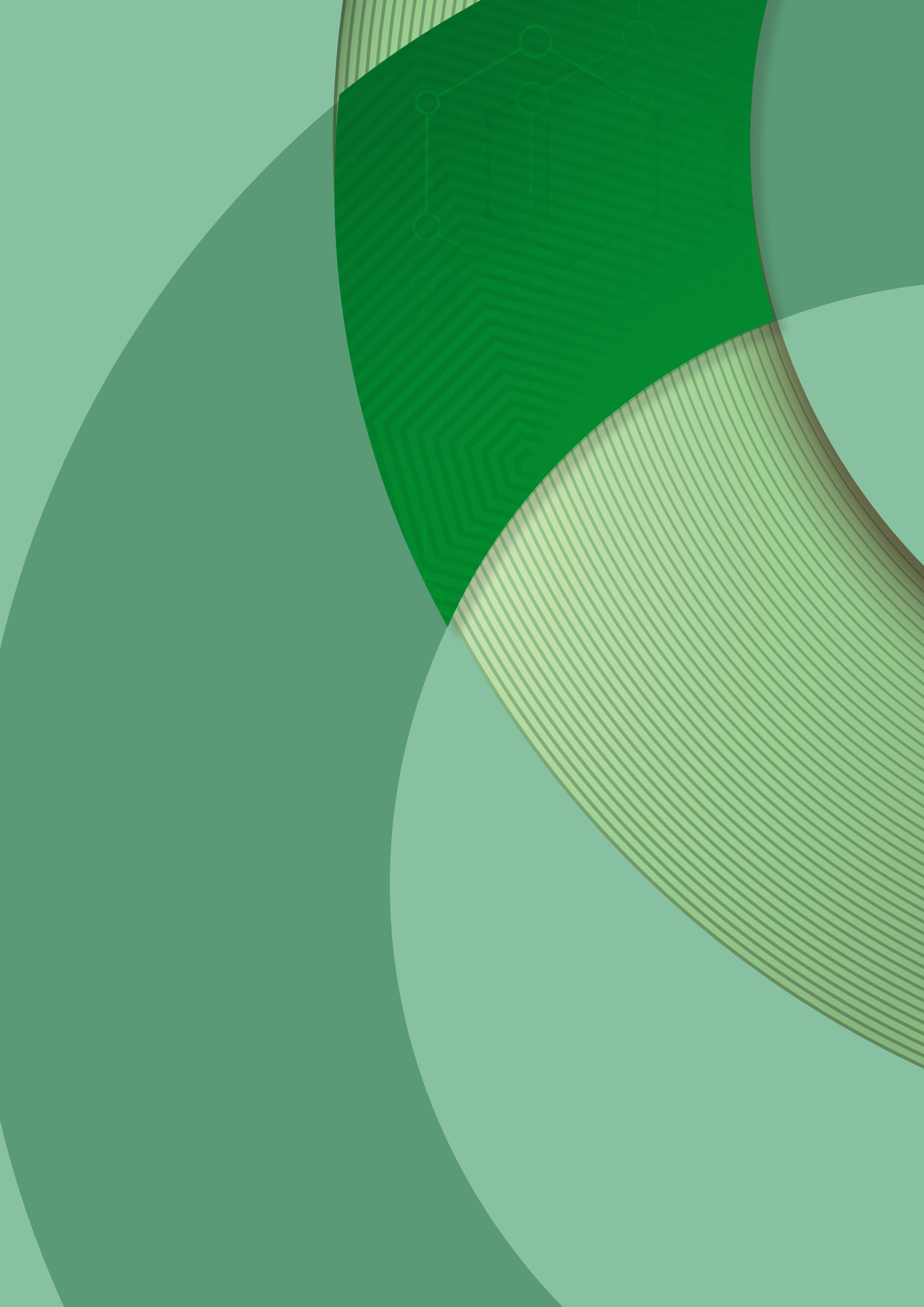


*The TU concept is distinctive - a wide scope of levels of technological provision, rooted in regional connectedness, reaching out nationally and internationally through teaching, learning and research collaborations, and enabled by digital connectivity*



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## Foreword by the Chair

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The economic and social challenges and choices Ireland faces are set out and addressed in a wide range of Government strategies. The performance of the education system as a whole, and higher education, in particular, is critical to responding successfully to them.

The introduction of Technological Universities into the higher education landscape in Ireland is a bold and important step towards meeting the challenges that we face. Though already part of the education landscapes of other countries, the Irish Technological University concept is distinctive in its rootedness in regional and local communities and economies, reaching out internationally from those roots and drawing international education and research practices directly back into the regions.

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

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

A strategic framework for these new universities, underpinned by clear statements of ambition and support, is essential to ensure the realisation of the full potential of technological universities.

**This report aims to set out that vision and ambition** and how it can be achieved. It emphasises, in particular, the scope for these new universities to make a distinctive national and international contribution through *connectedness* and *collaboration*, enabled by digital *connectivity* throughout the regions in which they are rooted, enhancing opportunities for learners, employers and society, through:

- research, teaching and learning informed by societal challenges to meet the employment and skills needs of Ireland's regions, sourced through well-established and embedded links to employers and local communities, and benchmarked internationally;
- provision across the full range of Levels 6-10 on the National Framework of Qualifications (NFQ) enabling the delivery of a comprehensive talent and skills pipeline to regional employers with an emphasis on STEM and other higher vocational, technical, technological and professional skills programmes;
- high quality research concentrations, developed with a particular focus on industry collaboration and innovation;
- universities of scale, operating on an international level and enabling a wider spectrum of provision and access through, for example, digital provision, allowing learners to progress beyond previous boundaries complemented by the continuation of the provision of the broad range of programmes at Levels 6-8 on the NFQ that already provide important educational pathways for many learners; and
- operational autonomy and flexibility, as required by all universities, allowing for the efficient and effective development of teaching and learning, research and the associated facilities to meet the needs of future learners and employers and changing regional and national economies.



**This report seeks to identify key actions and the next steps** for the technological university sector to optimise its contribution to national economic and social development including:-

- realigning and reshaping the policy and regulatory environment to accommodate a new type of university including, for example, accelerated reform of funding models and the establishment of university career frameworks to build capacity and scope for higher research and enhanced academic performance;
- creating collaborative networks between technological universities and with other HEIs to jointly address key shared challenges and opportunities, building sectoral capacity and cohesion and reinforcing their role as drivers of regional investment;
- building research capacity to secure the transformation of research performance required for technological universities to function as major engines of innovation and economic growth; and
- investing in leading edge digital infrastructure, so that technological universities can connect with learners and other organisations effectively and consistently across their regions, prepare their learners for the changing digital economy, and collaborate seamlessly across the spectrum with regional, national and international research and training partners.

The Technological University Research Network (TURN) Working Group has brought together this sector to identify their particular distinguishing characteristics as well as the key actions and projects required to enable their development and success. Our discussions have convinced me that the emergence of technological universities will provide a more diverse and successful national higher education system for Ireland, and add to its international standing.

I believe this work provides the strong foundations upon which each technological university can deliver on its own distinct, unique and individual mission, values and purposes. It respects the potential diversity of each individual university as an inherent strength for the emerging sector and encourages each one to use the shared vision set out in this document as a framework for its own developmental journey.

TURN's work sets out a matrix of actions, within and across institutions, through which the potential of technological universities can be fully realised and harnessed for the benefit of Ireland and its regions. The recommendations at the end of this report set out the most critical enabling actions to attain this potential identified by the Group.

It was a great pleasure and privilege for me to have had the opportunity to chair the work of this Group. I wish to pay tribute to the great commitment, energy, imagination and substantial expertise demonstrated by all members of TURN, its various working groups and wider contributors, and not least the Secretariat, for the quality of their contributions culminating in the completion of this report.

**Professor Philip Gummatt**

*Chair*

# 1 Introduction

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The Programme for Government (May 2016) stated that the Government will support the creation of technological universities.

This commitment underscores the analysis presented in the 2011 National Strategy for Higher Education, which recommended that a network of Technological Universities (TUs) should be established within the higher education (HE) landscape. It recommended that these should evolve from the existing Institutes of Technology (IoTs) towards the formation of universities of greater critical mass, capacity, capability and reach.

As detailed in this report, the achievement of this critical reform leading to the creation of new universities is fundamental to meeting a range of strategic national priorities and key sectoral objectives.

The Technological Universities Act 2018 was enacted by the Government as a legislative priority in March 2018 to provide a detailed and comprehensive statutory framework for the establishment of technological universities (TUs).

The first, Technological University Dublin, was established on 1 January 2019<sup>1</sup>.

In February 2019 the Department of Education and Skills established a High-Level Technological University Research Network (TURN) Working Group with an independent Chair, Professor Philip Gummatt. TURN was established to examine and report on how TUs could most effectively achieve their sectoral and national objectives<sup>2</sup> and the supports that would be required for them to do this.

The Working Group's membership comprised the President of TU Dublin and the Presidents of each institution participating in the three TU development consortia currently working towards designation, together with senior representatives from the Technological Higher Education Association (THEA), the Higher Education Authority (HEA) and the Department of Education and Skills.<sup>3</sup>

The TURN Working Group concluded on a series of specific recommendations for outcomes that will provide TUs with a solid foundation for their development. These are set out at the end of this report and centre upon the three thematic areas that the TURN Group has identified as the essential building blocks for successful TUs, which are:-

- the prioritisation of capital investment in TUs and funding for integrated multi-campus digital infrastructure;
- investment in research capacity building in the form of developing researcher human capital, facilitating research activity and opportunities for existing staff and implementing a new researcher career development and employment framework, addressing infrastructural deficits and prioritising research strategies within TUs exploiting fully the mutually supporting roles of teaching and research; and

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1 See Appendix 1.

2 See Appendix 3.

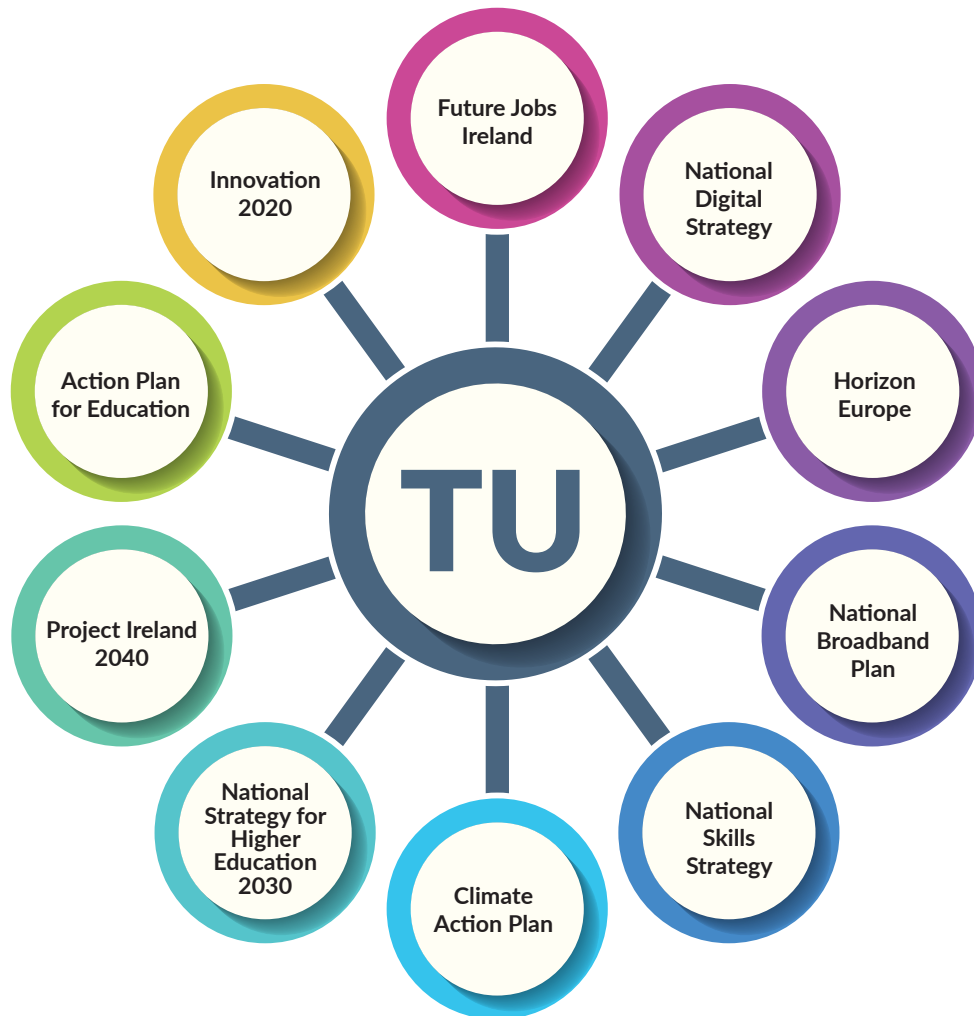
3 See Appendix 2.

- the expansion of institutional autonomy and support for reform through the implementation of TU-apposite career structures with the support of the Department of Education and Skills, the reform of the grant allocation model to accommodate TUs, the creation of post-designation TU funding streams and the creation of a borrowing framework for TUs.

TURN recognises that these priority actions can only be achieved through a structured, system-wide, relevant and dynamic process that will ensure value for money, underpinned by a robust and evidence-based set of monitoring and evaluation arrangements.

The next section of the report sets out the strategic context and Government priorities for Ireland's TU sector.

## 2 TUs: Delivering on Government Priorities



The creation of TUs represents a state change in the HE system in Ireland and strengthens the ambitions of Government for technological education.

The core mission and purpose of TUs is closely aligned to meeting a number of key National Strategic Outcomes (NSOs) and Public Investment Priorities contained in Project Ireland 2040 and the National Development Plan 2018 – 2027. The NDP specifically highlights the role of TUs in meeting the NSO for deepening the talent pool for regional sectoral clusters and driving applied research and innovation.

The missions of TUs, corresponding to the functions and the criteria set out in the Technological Universities Act 2018, span a multi-spectrum through:

- establishing high-quality higher education institutions (HEIs) of scale that build an international profile for technological higher education, intensify the mission, purpose and values of Institutes of Technology (IoTs) to achieve sufficient scale, quality and impact to drive regional economic, social and cultural development;
- meeting the HE needs of a wider range of learners in all regions of the country on a more even basis, in particular enabling greater access to the full spectrum of HE in disadvantaged and remote communities, providing a major impetus to addressing regional and socio-economic disadvantage;
- promoting an increased alignment of HE and further education and training (FET) and a stronger profile for skills to underpin the creation of an integrated Tertiary Education and Skills system in Ireland;
- building regional TU knowledge and learning hubs to underpin the development of regional economic clusters and secure more balanced regional development in line with the National Strategic Outcomes and the Public Investment Priorities detailed in Project Ireland 2040 and the National Development Plan 2018 – 2027;
- substantially accelerating the role, contribution and importance of using strategically focussed research and innovation expertise to co-create and find solutions for the challenges of the 21<sup>st</sup> century consistent with the objectives of Innovation 2020 and the Climate Action Plan 2019 and achieving international standards of research excellence including those proposed under the EU’s Horizon Europe programme;
- actively working with employers and industry to meet their needs and drive, in line with the objectives and priorities of Future Jobs Ireland and the National Skills Strategy, a sustained national effort to meet the higher vocational and professional skills needs of workforce throughout longer working lives, responding to the major challenges of future work for the economy, technology and the environment;
- reflecting the nature and purposes of HE outlined by the Expert Group on Future Funding for Higher Education to address complex wider societal challenges; and
- facilitating, in line with the National Strategy for Higher Education to 2030, a student experience of education that is excellent, relevant and responsive, collaborating to provide an enhanced programme portfolio and access to a broader range of academic expertise.

The TU sector builds on the achievements to date of the technological sector: their provision of the overwhelming majority of Level 6 and 7 programmes in HE; their provision of apprenticeship, part-time, full-time, campus- and work based modes of learning; their role in key STEM disciplines; their enrolment of a diverse student base; and their close links with industry and other employers.

The potential of the TU sector can only be achieved through consolidating these strengths, particularly through ensuring that the existing diversity in the provision of learner and employer relevant programmes at levels 6 and 7 is maintained, and using them as a solid foundation for the development of robust TUs and the achievement of new missions.

Each TU will chart its own mission, values and purposes, aligned, as appropriate, to its unique environment and diverse learner and stakeholder constituencies and collaborators, both within and outside the institution. Potential individual TU mission diversity is a strength for the sector and, though collaborative projects in the emerging sector will ensure efficiency and opportunities for sharing and adding value, each TU must be provided with the scope to develop their own trajectory and timelines, to allow these to take priority and to progress and take the initiative as individual autonomous institutions. One of the purposes of this report is to highlight the core requirements for achieving these goals, building a full scope of capacity for TUs.

The talent, skills and abilities of our people and our workforce are pivotal for securing Ireland's international competitive advantage, increasing the country's attractiveness to foreign direct investment (FDI) and strengthening the indigenous commercial sector. The role of TUs in enhancing human capital in the economy is fundamental to their mission and is explored further in the next section.

## 2.1 TUs: Underpinning Ireland's Skills and Human Capital Development

*A Strong Economy, supported by Enterprise, Innovation and Skills* is one of the ten overarching National Strategic Outcomes (NSO) and Public Investment Priorities contained in Project Ireland 2040 and the National Development Plan 2018 – 2027 and the creation of TUs is presented as a centrepiece of this NSO.

This achievement is a fundamental determinant of the achievement of all ten NSOs of Project Ireland 2040 including, for example, Strengthened Rural Economies and Communities.

TUs also have a pivotal role to play in meeting in a responsive and agile way the skills priorities for the Irish economy, as highlighted in Future Jobs Ireland. The acute focus of TUs on higher vocational, technical, technologically-based and professional skills will be crucial to this mission and an essential step towards rebalancing and revaluing skills and technology in HE and in wider society thereby achieving the objectives of:-

- strengthening the productivity performance of the indigenous sector of the Irish economy helping to close the productivity gap with foreign-owned firms;
- maintaining and increasing Ireland's attractiveness to foreign investment, which in turn underpins Ireland's long-term growth objectives;
- enhancing the innovative capacity of the economy by building management capacity in SMEs, focussing on those not currently engaged in innovation activities, providing access to skilled research-active academics and engaging in strategically focussed research activities that deliver innovative solutions for society and the economy, particularly employers;
- creating vibrant, dynamic and self-sustaining economic, social and cultural regions facilitating more balanced growth on a regional basis;

- reducing the risk of poor labour market outcomes and long-term unemployment in exposed and vulnerable economic sectors by improving skills profiles, stimulating SME development and attracting FDI;
- raising living standards and promoting greater social mobility; and
- ensuring that Ireland’s labour force is equipped with the broad range of skills, abilities and expertise to accommodate the changes necessitated by sustainability and the climate emergency.

These outcomes are closely linked to the policy objectives for the creation, effectiveness and success of TUs as enablers for Ireland’s economic and social sustainability. In so doing TUs need to balance the provision of knowledge, skill and competence that can sustain learners over a lifetime of work and participation in society with the provision of skills that can prepare them for employment now.

There is a substantial opportunity and, moreover, a necessity, for current and future TUs in Ireland, acting through enhanced individual autonomy and shared actions to rise to these challenges.

TUs will be required to play a significant role in enabling Ireland’s digital economy and fuelling balanced regional development and this is discussed in the next two sections of this report.

## 2.2 TUs: Enabling Ireland’s Digital Economy

As a small open economy in a highly competitive globalised environment, Ireland’s future economic performance, aligned to its social progress, depends crucially on achieving a leadership position internationally in responding to the challenges and opportunities of the digitalised world of the 21st century.

A suite of key Government strategies provide the national policy framework at a whole of Government level to enable the accelerated development of Ireland’s digital economy. These include:

Project Ireland 2040

National Development Plan

Future Jobs Ireland

National Digital Strategy

National Broadband Plan

These strategies highlight the central role of developing digital literacy and digital skills and expertise across the entire workforce as a prerequisite for adaptation to and mainstreaming of digital technologies across all sectors of the Irish economy.

Fostering high-levels of digital literacy and digital skills is an imperative for the entire Tertiary Education and Skills system i.e. both HE and FET systems.

**The focus of TUs on the transfer of knowledge and the development of higher vocational and professional skills underscored by technical and technological capability will play a key role in:**

bringing a new agility, flexibility and responsiveness to anticipating and meeting digital skills needs

future-proofing Ireland's international competitiveness as a knowledge-intensive digital economy

moving Ireland closer to the forefront of the international digital economy

TUs will therefore become a cornerstone for Ireland's success in further developing the higher value-added sectors of its economy and knowledge intensive products and services.

By expanding their capacity to build on and through international links, TUs also have the potential to deepen the national response to new and emerging technical and technological sectors.

**The potential depth and breadth of digital skills provision in TUs will, when co-created with industry, be indispensable to ensuring the flow of a skills and a talent pipeline that can provide a major impetus to:**

regional and wider employment growth

sustainable employment

re-skilling and up-skilling the workforce



In achieving this, TUs must not simply seek to meet current identified skills shortfalls but will need to be able to act as far-sighted and strategic partners and collaborators with industry and other employers in determining and meeting the skill needs of the future, while developing learners and citizens who can operate actively and independently in the society and economy of the future.

The next section of this report discusses the potentially transformative role of TUs in relation to regional development.

### 2.3 TUs: Fuelling Balanced Regional Development

Project Ireland 2040 and the National Development Plan 2018 – 2027 reiterate the pivotal role of HE in regional development, enabling deep collaboration between industry and other employers and the Tertiary Education and Skills system through, for example, shared objectives for applied research and innovation in strategic sectors of the regional and national economy. Future Jobs Ireland strongly endorses the role of technological HE to drive the development of regional clusters with a particular focus on innovation, technology and SMEs.

Each TU will provide learning and research activities with an international dimension in their region which will be shaped in response to the unique character, environment and skills requirements of the region.

Through the creation of new knowledge in various disciplines, through social, cultural and civic engagement and through, the generation of a skills pipeline and links to innovation each TU will, in turn, help to shape its region. The symbiotic relationship between the TU and its region strongly resonates with a core priority under the National Strategy for Higher Education (2011) to create regionally based clusters or networks of learning and research through collaborating HEIs.

Each TU will serve as an anchor institution in the development and the national and international advancement of its region. This regional rootedness is also a bedrock for the wider national and international ambitions of each TU.

International experience demonstrates that successful regional economic clusters are multi-faceted, and while each is unique and atypical in its own terms, there are several common or essential characteristics including:

- leading-edge anchor HEIs closely connected to clusters of innovative, technology intensive enterprises prioritising research activities;
- multiple actors – educators, companies, entrepreneurs, development agencies, skilled workers, researchers and innovators – drawn from disparate business sectors and institutions, each possessing different knowledge and expertise that can be combined in innovative ways through co-creation and co-production;
- capacity through proximity, density and agglomeration within the cluster to generate knowledge spill-overs;
- accessible innovation requiring extensive and intensive collaboration and networking between participants to underpin the seamless transfer of knowledge and the acceleration of innovation; and

- functional and organisational structures that are porous and agile.

International experience demonstrates that drawing frontier technological developments to regions through such mechanisms as intensive collaboration with industry and close engagement with international researchers, can be fundamental to the creation of regional 'knowledge hubs'. These 'knowledge hubs' can in turn act as major catalysts for further regional, national and international investment, research, innovation and employment growth.

A pronounced benefit of a TU in a region will be its national and international engagements and impact. The inherent connectedness and collaboration of TUs, manifested in the multiplicity of linkages, relationships and interdependencies that they will develop and sustain through connectivity, is intrinsic to the successful delivery of their core regional development mission.

Building on their existing connectedness, TUs are well positioned to play an integral role as anchor institutions and leaders in the development of "sticky" regions, regions that encourage learners to remain in their communities while pursuing their studies in HE and throughout their careers.

TUs will create a regional lifelong learning anchor where people can learn at their own pace, anywhere, anytime without barriers, ensuring that *all* learners are supported and have opportunities to develop to their fullest potential. TUs will be rooted in a multiple-campus physical environment complete with state-of-the-art learning resources such as libraries, laboratories and e-learning facilities, utilising this solid campus base to support the provision of online and distance learning.

TUs will be acutely focused on providing a learning system that seamlessly facilitates transitions and pathways from a range of different starting points, recognition of prior learning (RPL), transfer and progression within and between TU and other HEIs, and progression to employment, further learning and participation in society. Acting as anchor HEIs, with the creation of knowledge / learning hubs, each TU will therefore lead in the formation of 'sticky' regions. This is critical to fostering the development of the skills base that arguably is the single most important factor in:

attracting investment into the region and safeguarding and supporting existing investment

creating the high-quality, highly skilled jobs that underline the region's economic substance and potential

encouraging the growth of new, and resilience of existing, SMEs in the region

promoting innovation and entrepreneurship and providing the dynamism to drive further economic development, social progress and vibrant cultures

The next section of this report discusses the distinctive and differentiated opportunities for TUs to realise regional and national development objectives and priorities.

### 3. TUs: Distinctiveness and Opportunity

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Each TU will have its own individual mission, values and purpose derived from its unique scope and character, reflecting, in part, the region in which it is based. The TU sector as a whole will also occupy a distinctive space in the HE landscape in Ireland, building on the achievements of their antecedent institutions, complementary to the work of other universities and rooted in their regional environments, meeting national policy objectives with an international profile and reach. Within that distinctive space each TU will map its own strategy and set its own trajectory for the development of a unique institution.

#### TUs ARE DISTINGUISHED BY THEIR...

**Connectedness:** A regionally rooted anchor for skills, knowledge and talent; a centre for community, social and cultural activity; a broker between regional needs, national policy objectives and international trends in industry, enterprise, teaching, learning and research; a regional base for responses to skills, higher vocational and professional needs; promoting multi-disciplinary and problem solving approaches in education provision and in the creation of knowledge in technological areas; connecting up pathways between education, life and work; and building new qualification pathways for new disciplines across levels, expanding their reach and impact. Working closely with local communities and interest groups to embed each TU as a focal point of social and cultural life in its regions;

**Collaboration:** Informed by international engagements and informing international development; working closely with other regionally based educators universities, IoTs, ETBs and other FET providers; linking with other regional groups such as regional assemblies, enterprise planning and development bodies; leading and participating in international research projects through Horizon Europe and other opportunities; developing strategic partnerships with similar international institutions for collaborations, benchmarking and other purposes; partnering with industry and enterprise for knowledge and skills creation and provision and real working world links; partnering with educational institutions for access, transfer and progression; collaborating between staff, students and employers to co-create and provide new and adaptable curricula.

**...and enabled by Connectivity:** Embracing advanced digital and other advanced means of connecting; using data and analytics to enhance and ensure high quality teaching, learning and research; leading as a digital 'example' in the region.

The principles articulated in the National Strategy for Higher Education 2011, for the period up to 2030 and encapsulated in the Technological Universities Act 2018, reflect the distinctive and strongly complementary role of TUs to that of the existing universities in the HE landscape. It is not necessary for TUs to emulate existing universities but, by working together and individually, they will carve out a unique identity for the TU sector and generate equivalent credibility and international recognition for this new university sector as part of the wider Tertiary Education and Skills system.

In his 2011 paper, which informed the designation criteria for TUs, Professor Simon Marginson<sup>4</sup> identified that “the key to quality is lifting capacity and performance to meet the challenges of the regional, national and global knowledge economies” (Marginson, 2011). This distinctive quality of TUs will become even more explicit in light of the highly networked economic and societal contexts in which TUs will operate in the coming decades of the 21st century.

Creating larger scale institutions in the form of TUs is necessary but is not the sole condition for success. Characterising the TU project as simply ‘mergers’ of existing institutions fails to capture the breadth and ambition of a state change in the HE landscape in Ireland. TUs will not only augment and intensify the roles of their antecedent institutions but also supplement them with substantial new additional functions befitting their status as fully-fledged universities. Their staff profile will also need to change over time to reflect and enable these new and enhanced functions.

The status of TUs as multi-spectrum, (by level, field of learning and mode of learning) autonomous, self-awarding bodies across Levels 6 – 10 on the NFQ will mean that they can create meaningful and useful credential and qualification pathways for learners and employers. Though of interest to established universities too, the prioritised pursuit by TUs of connectedness with their communities and regions means that this is a strength for which they can build a recognised leadership position.

**Taking a unique position in the HE landscape, TUs have the potential to take ownership of the following characteristics:**

continue to open HE to the ‘first in family’ cohort, building on this strength of the technological sector, to be a nucleus of response to socio-economic and educational disadvantage in the system through further enhancing access, transfer and progression opportunities for learners

provide extensive opportunities for problem-, project- and action- and research-based teaching and learning practices, facilitating multi-disciplinary learning and the acquisition of essential transversal skills for work-ready graduates

open up HE to innovative modes and methodologies across the full spectrum of apprenticeship, work-based, campus-based, online and distance teaching and learning

embed useful work placement opportunities in the learning experience

<sup>4</sup> Marginson, S. (2011) Criteria for Technological University Designation.

create particular strengths in areas such as entrepreneurship, knowledge transfer and the production of curious, confident and employment-ready graduates

ensure a strategic focus on a deepened, distinctive, internationally recognised and inherently technological research base

focus on research closely linked to innovation and human capital and skills development and strongly aligned to the needs of the economy, especially the needs of employers, and society, whilst facilitating the required underpinning basic or theoretical research

translate and transform knowledge into innovation

individually in regions, and together nationally, advocate models of learning which include closer alignment to applied and technologically focussed domains at all NFQ Levels, rebalancing the spectrum of knowledge, skill and competence nationally more evenly between theoretical and applied, and knowledge and skill domains in HE

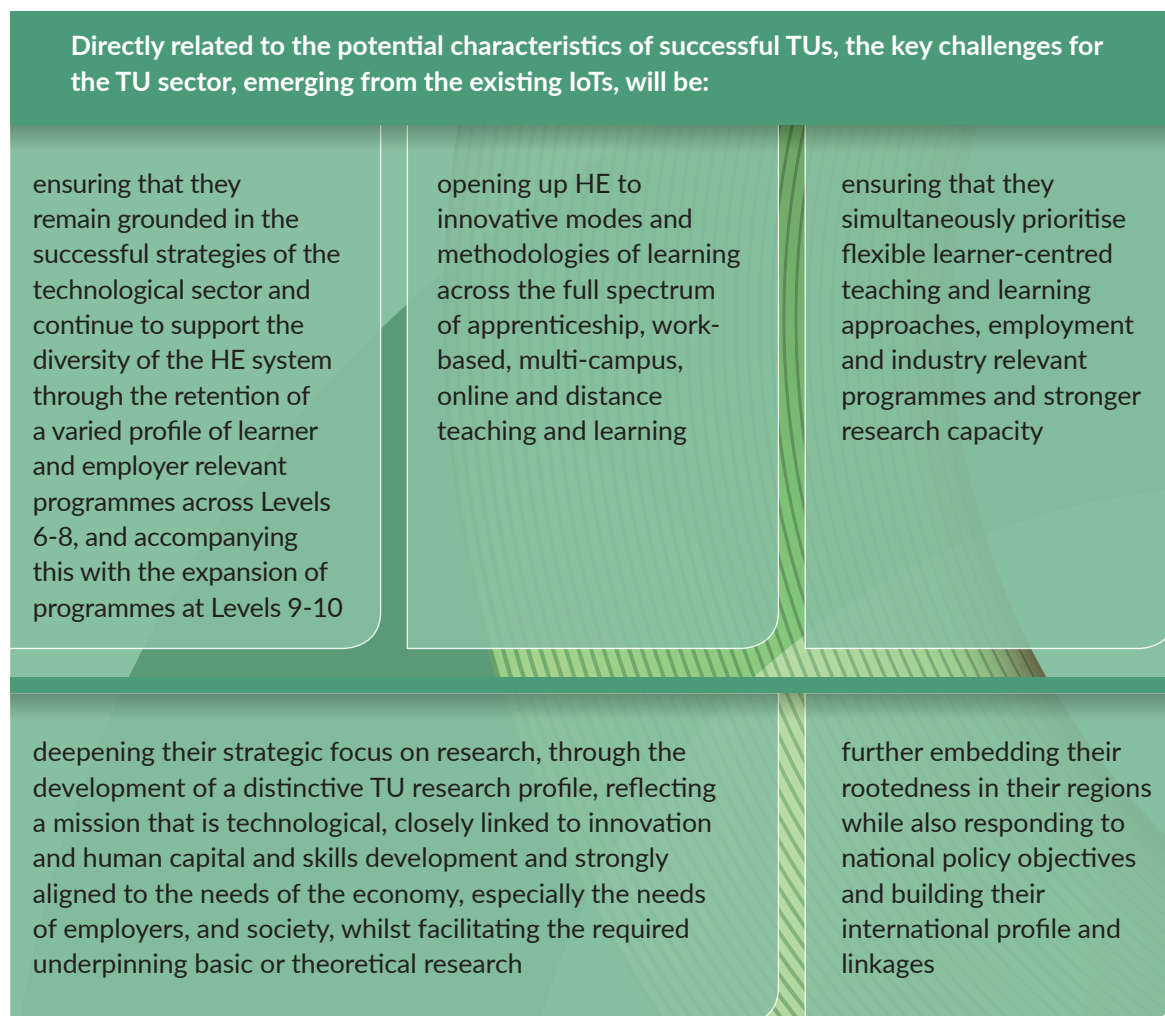
**Marginson (2011) set out the core features of TUs as:**

a seamless presence across all NFQ Levels 6 (Advanced and Higher Certificate) – 10 (PhD)

significant strengthening in capacity in both upper level vocational training and applied research

a “thickening” of networking with industry and community organisations in training and research and an expanded international orientation and portfolio of international activity

In order to reap this potential, policy and strategically focussed funding must foster the creation of a TU sector exemplifying the full range of characteristics highlighted above. Some of the characteristics and structures of the current institutions will need to change and adapt to meet these challenges.



Each of these challenges relates to the capacity for TUs to accommodate diversity across various spectrums; levels; modes and methodologies; missions; location. There is an opportunity for TUs to capitalise on these challenges by transforming their adaptability to diversity into a strength for their institutions and linking it to similar wider European and international trends. TUs are being established at a time where they can learn from the experiences of international peers by ensuring that they avoid the risk of academic drift and embrace the full potential of their freedom to create meaningful and useful credential and qualification pathways, of varying durations and levels, for learners and employers.

The next two sections explore in greater detail two of the defining themes for TUs that further underpin the distinctive nature of the sector as:

deeply learner centred and inclusive

research-driven and responding to disruption

The latter sections of this paper will seek to identify and explore the enablers for meeting these challenges which are: realigning the policy and funding framework for TUs; research capacity building and digital infrastructural provision.

### 3.1 Deeply Learner-centred and Inclusive

Education is the engine powering social mobility, securing economic growth and addressing embedded socio-economic disadvantage. The life opportunities of a large cohort of learners have been transformed through the successful access policies and educational practices of HEIs, in particular those of the technological sector.

As previously discussed (Section 2.3), the distinctive quality of a learner-centred and inclusive TU is that it provides a regional learning / knowledge hub where people can learn and link with research at their own pace, anywhere, anytime without barriers. This, in effect, is the achievement of a regional lifelong learning system with seamless transitions and pathways from a range of different starting points, transfer and progression within and between TUs and other HEIs, and progression to employment, further learning and participation in society.

In meeting the criteria for their establishment, TUs will already have demonstrated their capacity to make provision for flexible and work-based education as well as provision for adult learners. TUs can use their regional embeddedness to build on the achievements of their antecedents by enhancing and making more porous flexible access pathways into HE for students in FET, within an integrated Tertiary Education and Skills system. They can further extend access within their regions to a wider range of learner cohorts including, for example, people in employment, adult learners who have caring responsibilities or other commitments and geographically remote learners.

As envisaged by the Technological Universities Act 2018, TUs will provide a diverse industry and research-informed suite of programmes ranging from apprenticeships to PhDs in a wide variety of flexible modes and formats whether full-time, part-time, modular, blended and whether campus, online or distance-based. Offering awards from Levels 6-10, TUs will be capable of providing a range of programme and award options of varying levels and duration, closely aligned to the variety of industry needs.

The use of online and digital learning means that TUs can also rethink and redevelop on-campus as well as off-campus learning methodologies for an enhanced student experience more closely aligned to contemporary learning, life and work.

TUs can play a major role to address the inter-generational education gap and facilitating longer working lives through upskilling, reskilling and lifelong learning for individuals of all ages, through the provision of opportunities to recognise learning gained in other contexts (RPL) and by participation in initiatives such as Springboard+ and the Human Capital Initiative (HCI).

TUs will engage with students for lifelong learning, providing them with opportunities to return and upskill and forming alumni networks to stay connected with their graduates. TUs, therefore, can allow learners to balance work and education needs through a comprehensible and easily navigable set of HE pathways with multiple entry and exit points and employment relevant portable and transferable qualifications.

In this way, TUs will further support the development of the scenario in which the continuous acquisition of new knowledge and skills over the course of a person's life is seen as both socially desirable and commonplace. They can also support engagement with wider society as people age through age-friendly policies and practices.

TUs will match pedagogic innovation with robust quality assurance. The internal quality systems of TUs must be efficient, transparent and integrated into their normal activities. TUs must ensure that there can be confidence in their standards, systems and, most importantly, outcomes and that the qualifications of their graduates will have international recognition.

TUs will need to construct a new quality culture for their new institutions and to share and enhance it through building organisational capacity for the use of data, learning from student, staff and employer engagements and through benchmarking and peer learning opportunities between themselves and with comparator institutions internationally.

Digitally based learning analytics will be essential to ensure that they can keep track of the progress and needs of the diverse student body and remain responsive to changing needs.

Through linkages and inter-dependencies with the school system, FET providers, enterprise, employers and the wider community, TUs have the potential to generate a symbiotic matrix of educational, economic, social and cultural opportunity within regions to meet learner needs.

This mix of education, skills and lifelong learning delivered via the wide suite of methods and modes referenced above can help underline the creation of a virtuous circle in 'sticky' regions in which:-

- learners study and progress to higher levels of study within the TU or other HEIs in their region;
- learners move in and out of the TU educational hub over the course of their lives and working careers;
- high calibre research-active staff are attracted to live and work in the region:
- a highly qualified regenerative skills base and pipeline that attracts investment is created;



- productivity growth in SMEs is supported; and
- stable, higher-paid, high productivity employment is provided.

This is key to securing the successful place-making and sustainable regions intended to be delivered by Project Ireland 2040, the National Planning Framework and the National Development Plan 2018 - 2027.

The overall 'bundle' of flexible full scope provision at Levels 6 - 10 on the NFQ, coupled with region-wide and international connectedness and digital connectivity, places TUs in a distinctive space in the Irish HE landscape.

The ways in which they can achieve this potential is further developed in Section 4.3.

### 3.2 Research Driven and Embracing Disruption

Section 2.2 highlighted the transformation of the economy and society already under way through digitalisation and technological development. While this transformation is profoundly disruptive it is also necessary for national competitiveness. The challenge for society is to respond, adapt and seek to benefit from the opportunities that this disruptive change brings.

Responsiveness, adaptability, agility and creativity are key to taking the high road in realising the opportunities and mitigating the risks from digital and technological disruption. These are key potential characteristics of TUs, in particular, in the vital area of research and innovation.

A defining strength for TUs will be their development of a strategic focus on deepened, distinctive, internationally recognised and inherently technological research underpinned by robust basic or theoretical research.

TU research will be closely linked to innovation and human capital and skills development. It will be aligned to the needs of the economy, flowing from their connectedness, and collaboration with local, regional, national and international partners, enterprise and employers more generally. Situating a research leadership within TUs will also provide for a richer regional interplay between research, education and innovation.

Reinforcing synergies with industry through Regional Skills Fora, Skillnets, Springboard+ and the forthcoming HCI and will be critical. Strengthened industry collaboration in research under Enterprise Ireland, SFI, and Horizon Europe funding, as well as the expansion of apprenticeship into new and innovative areas and a wider range of levels will assist the collaborative process, enhanced linkages and the creation of positive inter-dependencies.

Marginson (2011) recommended that initially the approach to TU research should be deep rather than broad. He argued that seeking to spread research and PhD training across the full range of fields in the initial period following the establishment of a TU would risk both compromising the effectiveness of research and PhD standards. His analysis also emphasised the importance of ensuring that research activity and PhD training move in lock-step with one another.

Starting from their current research base, TUs will therefore need to establish incrementally, field by field, a sustainable, deepened research capacity. Its quality must be internationally recognised to ensure that TUs can attract international research talent and collaborative partners to further build and enhance capacity.

As set out in earlier sections of this report, a number of major Government strategies focus on embracing innovation, technological change and, indeed, disruption. The research activities and innovation of TUs will also be very important in assessing, predicting and testing the emerging and new areas of learning and skills provision that are likely to be required in five, ten and twenty years' time.

Another key mission for TUs is the promotion of innovation and its diffusion, through support for firm-level innovation, developing research centres and gateways in established and emerging regional clusters and ensuring that the research system in the regions is internationally connected.

Accordingly, there is a direct relationship between major Government strategies and the distinctive mission and objectives for TUs which should ensure that maximum gain is derived from the disruptive opportunities of digitalisation and technology.

To succeed in these ambitions it is critical that, in building research capacity and critical mass from a relatively low base, each TU must be equipped to compete successfully for research funding nationally and internationally including often on a multidisciplinary basis and in diverse and new areas. The strategy for achieving this is taken up later in section 4.2.

## 4. Three pillars for priority investment in TUs

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The TURN Working Group has concluded that a state-change is required for TUs to meet the challenges they face and to achieve what Government expects of them. This section of the report assesses the requirement for prioritised and targeted action and investment across three key pillars so that the TU sector will have the capacity, capability and infrastructure to realise its potential and support Government to deliver its strategic priorities.

Earlier sections of this report highlight the scale of the challenges – both economic and societal – encapsulated in major Government strategies such as Project Ireland 2040, the National Development Plan, Future Jobs Ireland and Innovation 2020. They outline the potential for TUs to drive responses to these challenges in fundamental areas such as: skills and human capital development; balanced regional development; digitalisation and technological disruption; and innovation and research.

In setting out the distinguishing features of TUs, Section 3 also highlighted the key challenges for the TU sector in transforming from IoTs to successful TUs that will occupy a distinctive space in the HE landscape. These were:

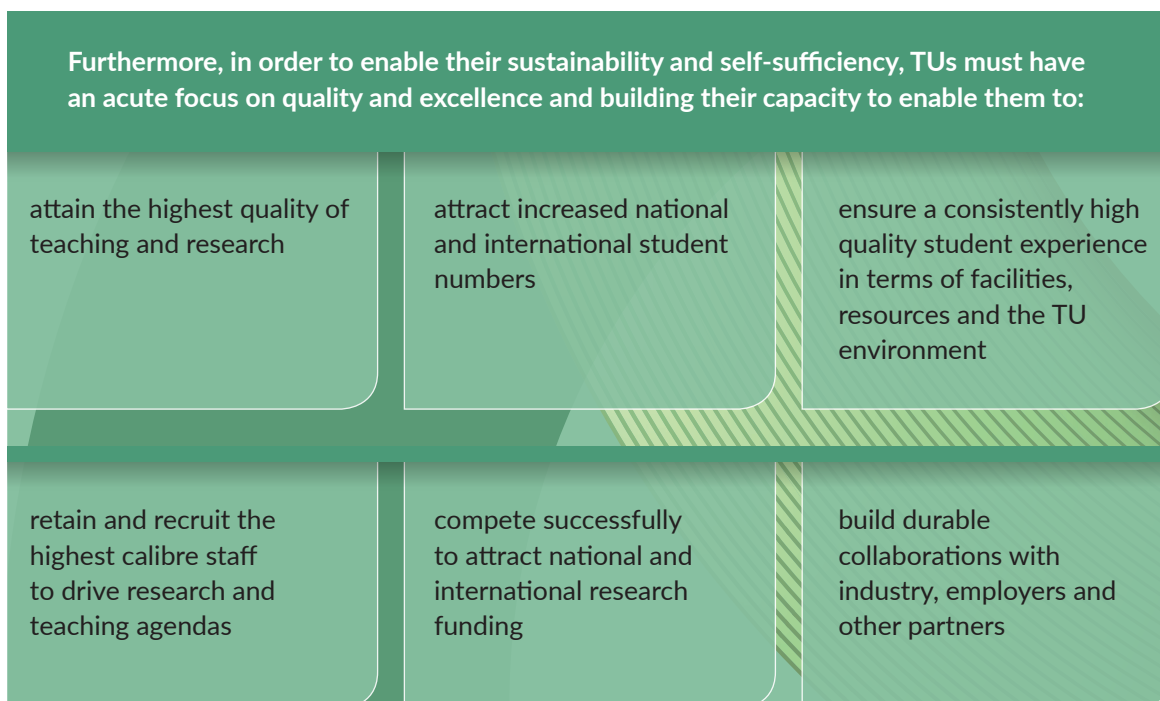
ensuring that they remain grounded in the successful strategies of the technological sector and continue to support the diversity of the HE system through the retention of a varied profile of learner and employer relevant programmes across Levels 6-8, and accompanying this with the expansion of programmes at Levels 9-10

opening up HE to innovative modes and methodologies of learning across the full spectrum of apprenticeship, work-based, multi-campus, online and distance teaching and learning

ensuring that they simultaneously prioritise flexible learner-centred teaching and learning approaches, employment and industry relevant programmes and stronger research capacity

deepening their strategic focus on research, through the development of a distinctive TU research profile, reflecting a mission that is technological, closely linked to innovation and human capital and skills development and strongly aligned to the needs of the economy, especially the needs of employers, and society, whilst facilitating the required underpinning basic or theoretical research

further embedding their rootedness in their regions while also responding to national policy objectives and building their international profile and linkages



Since 2013, Exchequer funding of some €20 million has assisted consortia to develop their potential to become TUs. A further €14 million is being provided this year for the progression of TUs (as well as for other HE landscape restructuring projects<sup>5</sup>).

In response to this investment, there is a concomitant onus on the leadership of the TUs to drive forward this transformative agenda and individually respond to Government objectives, spearheading the necessary reforms and essential innovations, drawing on these funding resources. Each TU must develop its own individual profile, based on its own strengths and the unique needs of its region and stakeholders.

TUs must also work together to respond to Government policy. The process for the establishment of Technological University Dublin presents an exemplar of collaboration and cross-institutional co-operation, which can be modelled by other TU consortia. They need to work together to build the reputation of this new university sector since they share responsibility for that reputation nationally and internationally. TUs that are being formed in more or less the same period have an opportunity to identify and collaborate on achieving mutual projects to ensure the most efficient use of resources and the widest impact for investment, particularly in the initial phases of TU development. In a dynamic, evolving sector there will often be issues faced in common, experiences and learning that can be exchanged and mutual objectives that can be pursued jointly. As the sector evolves there may be opportunities for joint projects in areas such as change management, systems integration, capacity building of leaders and staff and approaches to building research capacity. There will also be opportunities to share learning through cross-institution peer group review and other channels for sharing advice, experience and perspectives on key challenges and opportunities.

<sup>5</sup> These include institutional incorporations, cross-border alliance building and regional HEI clustering.

Equally, individual TU mission diversity is a strength for the sector and, though collaborative projects in the emerging sector will ensure efficiency and opportunities for sharing and adding value, each TU must be provided with the scope to develop their own trajectory and timelines, to allow these to take priority and to progress and take the initiative as individual autonomous institutions.

To meet the Government's objective of a modern, highly flexible and responsive TU sector and ensure that it becomes a reality, TURN has identified three key pillars for priority action and investment, which would enable TUs to begin the process of delivering a truly transformative approach for the sector. These are:

- realigning the policy framework and funding for TUs;
- building research capacity; and
- investing in digital infrastructure.

these pillars and the specific actions proposed for each are assessed in the remaining sections of this report.

#### 4.1 Realigning the policy and funding framework for TUs

Delivering on both institutional priorities and the potential for TUs to achieve broader national strategic priorities depends on a significant reconsideration of vision and the responsibilities of governing bodies. This relies on a shared commitment for change across the sector, complimented by capacity building for individuals and teams working within TUs. It requires cohesive organisation-wide mobilisation and innovative and, where useful, cooperative approaches to capacity building in leadership and staff to address the challenges of moving from IoTs to TUs, outlined in earlier sections.

In order to pursue, attain and maintain excellence, TU leadership must be prepared to embrace actively a culture of high performance illustrated by:

- openness, transparency and accountability;
- adopting a data-informed and self-questioning approach to making decisions and assessing performance incorporating benchmarking against international standards;
- evaluating fairly the achievement of key goals and objectives;
- critically examining the effectiveness and efficiency of internal processes;
- objectively identifying areas for improvement; and
- determining and implementing the actions required to address shortfalls in performance.

As highlighted earlier, key actions for TUs include systems integration, change management and capacity building at all levels. Long-standing practices and policies inherited from antecedent institutions should be carefully assessed to ascertain whether they align with the TUs mission, values and purposes.

As autonomous, independent, self-governed universities there is a clear onus on TUs to harness the considerable knowledge and expertise within their own institutions to address the challenges that arise, respond to opportunities as they present themselves, build excellence in individual fields and to contribute more widely to the development of high performing institutions. In this regard, the establishment of appropriate university career structures will, in particular, be an essential step for TUs to build further capacity and scope for research and academic performance.

Furthermore, as these institutions transition from their prior organisational incarnation to become universities, some important elements of the current policy and regulatory framework will need to be reviewed to ensure that it supports and enables the new universities in meeting their ambitions and to compare favourably with other universities nationally and internationally.

Adaptations to the following external enablers are required to support this change:-

- the design of the grant funding model;
- TU capacity building;
- delivery on capital investment plans for the TU sector;
- STEM investment;
- a sustainable borrowing framework; and
- appropriate regulatory autonomy.

Each of these key issues is discussed separately in the sub-sections immediately following.

#### **4.1.1 The grant funding model**

The TU sector is strongly positioned to respond to and deliver on the future vision for HE. However, an appropriate grant-funding model is required to support and enable the TUs in so doing.

An independent review of the model for allocating grant funding to universities, institutes of technology and colleges was completed on behalf of the HEA in December 2017<sup>6</sup>. The review recommended that the current “binary” funding model should be replaced with a universal approach for all HEIs. This would involve the same standard student driven methodology to determine base allocations, and a broadly universal set of metrics for research and innovation support, with individual adjustments and targeted funds ensuring that sufficient incentives remain to protect and reinforce the diversity of different individual missions as well as ensuring adequate funding for areas of national priority.

6 Review of the Allocation Model for Funding Higher Education Institutions: Final Report by the Independent Expert Panel for the HEA; December 2017. The Chair of TURN, Professor Philip Gummatt, was also member of this review team.

It was also recommended that this model should be underpinned by a consistent and comparable costing system which can ensure that the funding model can differentiate between the distinct cost drivers of different institutions and respond accordingly, without which it would not be possible to move to a universal funding system. Though the independent review did not explicitly consider the implications for the current grant funding allocation model of the establishment of TUs, it recommended a rationale for moving to a more “fluid two pot” system *en route* to a universal approach largely prompted by the expected arrival of TUs.

In light of the major reconfiguration of the landscape of HE in Ireland resulting from the emergence of a TU sector, examination is urgently required of the three following options for the future operation of the grant allocation model in advance of the development of the universal model:-

- maintaining TUs within the IoT funding model (with or without any revisions/adjustments);
- transitioning TUs to the university funding model; and
- creating a separate TU funding model.

Given the urgency of this issue, an immediate review of the three options should be carried out by the Department of Education and Skills and the Higher Education Authority, in consultation with stakeholders. The review should be completed by the end of 2019 to enable the development of TUs by making recommendations on the preferred option.

#### **4.1.2 Capacity building**

In order to develop sustainably and with increasing levels of self-sufficiency, TUs must build their capacity to compete for research funding and for the recruitment and retention of high calibre staff, to drive high quality research and teaching agendas and to attract increased national and international student numbers in direct competition with other universities and HEIs. There is an opportunity for TUs to install a culture of continuous improvement in the capabilities of all of their staff from the outset. TUs will need to carefully balance an initial focus on lifting capacity in profile growth areas with broader strategies for the development of all academic, research, senior executive and professional, management, support and adjunct staff who bring external expertise to the institution. Marginson (2011) proposed that in the initial phase special attention should be paid to growth areas such as research, Level 10 provision and a career framework for staff with management responsibilities.

Though not solely reserved for TU capacity building, so-called ‘landscape funding’<sup>7</sup>, has been an essential support for the transformation of the technological sector into TUs. To continue to support this essential capacity building, landscape funding will need to be reconfigured to redirect a more significant tranche to the organisation and change management that needs to take place post-establishment, and aspirant consortia will also need to continue to be supported. It is essential that this funding continues to be based on measurable high quality outcomes, outputs and the achievement of key national strategies, agendas and policies on a value-for-money basis. TUs, with the support and assistance, as appropriate, of the Department of Education and Skills, and the HEA will need to work together to develop appropriate employment frameworks.

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<sup>7</sup> An Innovation and Transformation Fund has been established with some €8.5m allocated to the technological sector following a competitive call. In addition, funding of €5m was allocated to the technological sector in relation to research and innovation based on postgraduate completions (20%), competitive research funding (40%) and knowledge transfer metrics (40%).

TUs themselves must demonstrate their ability to transform from their antecedent individual operating institutions to regional, national and international institutions of scale. TUs must also adopt an increasingly international outlook, expanding their international orientation and enhancing their portfolio of international activities including greater attention to international research collaboration and joint research projects as part, for example, of EU research programmes. As their capacity for research and research-informed teaching and learning develops they can, over time, earn a return on the initial investment by Government by contributing to the delivery of key national strategic objectives.

#### 4.1.3 Capital investment plans for the TU sector

Project Ireland 2040 is a driver for the Tertiary Education and Skills system realising its potential to enable more balanced population and employment growth across Ireland's regions. Improvements to this system will also help to address current infrastructure deficits and cater for the projected increase in the student population between now and 2029.

Project Ireland 2040 provides for a €11.9 billion investment in the education and training sector over the period 2018 to 2027. This will almost treble the HE sector capital budget compared to the past decade (€0.8 billion to €2.2 billion). It will result in an annual average investment of approximately €300 million in the second half of Project Ireland 2040 period, compared to the €30 million investment in 2018. Over the lifetime of Project Ireland 2040, taking in PPP investments and support for research, investment of €2.8 billion is planned for HE.

A key priority set out under Project Ireland 2040 is the establishment of a clearly prioritised Exchequer-supported HE building programme, including bolstering the capacity of multi-campus TUs. The importance of sustaining this programme of capital investment in HE under the National Development Plan 2018 – 2027 to ensure that the on-campus experience is of a high quality in terms of infrastructure, equipment, facilities and the teaching and learning environment cannot be over-stated. This investment will serve to secure multiple-campus physical environments complete with state-of-the-art learning resources such as libraries, laboratories and e-learning facilities, providing a solid base to support the provision of more widely accessible online and distance learning environments.

As stated, TUs in particular will drive the talent pool for distinctive 'sticky' regional clusters and deepen research and innovation with a focus on meeting economic and societal needs. They will also significantly facilitate the generation of the additional capacity necessary on a system-wide basis to support the projected increase in enrolments as well as responding to skills needs at a regional and national level and the need for lifelong learning provision.

If TUs are to deliver fully on their potential to assist Government in the achievement of vital regional development and socio-economic policies their funding allocation must be safeguarded, prioritised, and brought forward to a formative point, particularly in circumstances where TUs remain exclusively dependent on Exchequer resources.

As such, Government's ambition for enhancing the physical infrastructure and expanding capacity for HE provision in TUs must be realised in practice and early on in the development of these new universities. This is essential to ensure that the substantial benefits of TUs detailed in this report are realised.



#### 4.1.4 STEM investment

The achievement of a strong STEM education and research presence is central to a broad range of Government strategies, to meeting current and future skills needs, strengthening the indigenous sector of the economy and attracting and retaining FDI.

The availability of modern industry-relevant graduates remains a cornerstone need of the Irish economy and cannot be delivered without access to modern industry-relevant laboratory and workshop equipment. STEM education by its nature demands that significant amounts of learning and assessment take place through laboratory, workshop and project activities. The nature of STEM education is such that, unlike for example, education in business related disciplines, scaling existing STEM programmes to cater for increased numbers of students is only feasible if laboratory equipment and facilities are scaled in a similar manner. To underscore the credibility of Ireland's commitment to STEM education and to develop the necessary analytical skills in laboratories, workshops and projects it is essential that learners are educated and trained in, and given ample opportunity to work with, the type and quality of equipment and facilities that they will encounter in employment.

There have been consistently low levels of investment in STEM laboratory equipment and facilities since the effective cessation of dedicated funding for STEM from the end of the PRTLTI programme in 2010. The HEA Financial Review of the Institutes of Technology<sup>8</sup> further identified that the rebalancing of funding towards student contribution away from the state grant has had a negative impact on funding for courses that are expensive to deliver, such as courses in the area of STEM. STEM and other employment and industry-focused provision and research, bedrocks for the TU sector, have seen systemic reductions in funding through the dilution of the impact of the positively weighted core funding model with a proportionately greater contribution of STEM-neutral student contributions and contracting grants. This may have also served as an unintended consequence to effectively dis-incentivise the key national priority to promote growth in STEM.

The erosion of the STEM equipment and facility bases is one of the biggest risks not only to the TU and wider technological sector but also for the continued economic development of the country. A marked reversal in investment patterns is required to correct this anomaly. In 2017, a €200 million Public Private Partnership (PPP) Programme for the Higher Education sector was announced. This capital investment in infrastructure across 11 Institutions of Technology will lead to a step change in STEM-related skills, including ICT, engineering and life sciences across the country. These new facilities will help drive regional development and will be transformative for the individual institutions and the regions they serve.

#### 4.1.5 TU borrowing framework

It is essential that TUs will have or will develop the capacity in the medium to longer term to compete on a level playing field with other universities. At present TUs are considered to be General Government entities and borrowings by TUs contribute towards General Government expenditure and affect the General Government balance, with loans treated as General Government Debt. This restricts TU access to non-Exchequer funding sources and commits TUs to accessing funding from the 'zero sum game' *single-pot* source for all HEIs. This is in contrast to the other universities, who are free to borrow from other sources without impacting on General Government Debt.

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8 HEA Financial Review of the Institutes of Technology, 2016.

In 2016/17 the aggregate amount of monies borrowed by the universities was €637 million.<sup>9</sup> Arising from the universities' capacity to borrow, and the ability of some institutions to utilise reserves or source philanthropic funding, Exchequer contributions have been supplemented. Capital (mostly building) development projects have benefited considerably from the injection of European Investment Bank lending to the universities. These sources are not available to TUs.

An illustration of the current disparity between universities and the technological sector is the provision of adequate student accommodation provision. Exchequer capital funding is focused on the development of core campus infrastructure. However, universities, with the benefit of loans, have continued to develop purpose-built student accommodation (PBSA) on, or near, their campuses.

The 2017 Review of the Allocation Model for Funding Higher Education Institutions highlighted that there is an urgent need to resolve issues which restrict TUs from borrowing, as this will severely undermine the system's ability to accommodate future student demand. The Review also warned about the incentives, in the absence of a borrowing framework, for institutions to increase their dependency in cross-subsidisation and create unintended consequences such as pursuing unsustainable numbers of international students or setting uncompetitive or unfair postgraduate fee levels.

Recognising current and planned Exchequer capital investment in HE, there is also a need to ensure that the state change of TU ambition is fully realised through their ability to leverage funding from a wider range of sources, including commercial loan finance. An expanded funding framework for TUs will be vital to enhance the quality of the student experience and in so doing increase the attractiveness of the TUs. It will provide investment to support the growth of international student numbers which can make an important contribution to providing an additional source of funding to TUs, thereby further reducing their dependency on State finances.

The development of a borrowing framework for the TU sector under the relevant provisions of the Technological University Act 2018 is crucial to ensuring that the TUs have access to loan finance to fund the development of facilities and physical infrastructure. Such a framework should be agreed and put in place as soon as possible.

#### **4.1.6 Appropriate Regulatory Autonomy**

TUs will be required to have the same levels of capacity for teaching, learning, and research as any other national or international university. TUs need to be provided with appropriate flexibility and autonomy commensurate with that already provided to other universities to reach the highest standards required and expected of them and to enable them to grow, develop and compete on a level playing field. TUs will need the support and assistance of Government and its agencies to attain this autonomy, within approved career frameworks and quality standards, so that they can ensure that their performance levels are equivalent to the best universities nationally and internationally.

As TUs develop and expand in the range and complexity of their activities, they will require changing levels of senior academic, professional, management and support staff in order to:

<sup>9</sup> Source: HEA

- ensure that the relevant functional operations of the university can be delivered;
- ensure a strong cadre of academic staff to provide high quality research and teaching and learning to students;
- ensure a high quality student experience in terms of facilities and services;
- deepen their capacity for research; and
- facilitate the introduction of an advanced digital infrastructure to enable each of these.

At a senior level, a new structure of senior executive posts will be necessary to lead the range of strategies required of TUs to pursue their unique missions, values and ambitions. The cadre of academic staff may see leadership opportunities in taking on the challenge of senior executive work. Academic staff profiles will also need to align more closely to university norms, including the appointment of professors and associate professors. In general the roles and responsibilities of staff will need to adapt and adjust in step with this transformative change.

In building their research capacity, TUs must adopt the researcher career development and employment framework developed under Action 3.10 of the Government-approved national research strategy Innovation 2020. The provision of high quality research and Level 10 programmes are dependent on a high level of staff PhD intensity and building such intensity is a priority initial action for TUs.

Ensuring a high quality student learning experience through the adaptation of existing programmes and the development of programmes in emerging fields will be important for TUs. Ensuring that programmes can be offered in ways that use innovative pedagogies, promote the acquisition of transversal skills and provide useful work experience requires senior experienced academic and pedagogic leadership to set high educational standards, anticipate new directions and work across the large, multi-disciplinary, multi-campus teams of TUs.

The achievement of new, apposite career structures is necessary to facilitate the retention and recruitment of high calibre staff. These career structures will correspond with the distinctiveness of TUs, balancing enhanced teaching and learning and research progression, attractiveness to international high calibre staff, new support roles required to deal with increased digitalisation, the retention of professional expertise and more porous adjunct staff facilitation. One TU has already been established, TU Dublin, so the development of these career structures is an urgent matter.

It is also important to ensure that the new roles and responsibilities for academic, research, senior executive and professional, management, support and adjunct staff are mapped and continuously updated to the highest quality standards of recruitment, competence and performance. TUs require the flexibility to move towards output-related approaches, recognising professional, autonomous and self-responsible working patterns and incorporating comprehensive year-round activities like research and curriculum development. TUs must also be ceded appropriate autonomy within the framework of national policies for the regulation and oversight of performance and quality standards.

The key regulatory issues to be considered include:-

- the operation of the Employment Control Frameworks; and
- the ability to work appropriately within public service pay/salary ceilings and grading structures towards the development of new career framework for TUs.

The Department of Education and Skills and the Higher Education Authority should, where appropriate, assist and support TUs in the consideration and advancement of these issues, having due regard to Government pay and staffing policies.

## 4.2 Building Research Capacity

TUs are expected to assist in positioning Ireland's HE system as a Global Innovation Leader. TUs will be the national leaders for building strong cultures of research and postgraduate education for the technological sector. TUs will need to raise the level of their research and innovation capacity substantially to achieve these targets.

The achievement of the national priority for balanced regional development envisaged by Project Ireland 2040, of embracing innovative technological change as envisaged by Future Jobs Ireland and the further transformation of regional economies, calls for deepening the focus on research to meet economic and societal needs, linking it more closely to innovation and human capital and skills development; and deepening their rootedness in their regions whilst also responding to national policy objectives and building their international profile and linkages. Marginson (2011) acknowledged the constant interplay between basic and applied work so this deepening of focus must also be complemented by the development of innovative basic research.

Enabling the new TUs to meet the expectations placed upon them is a major challenge. They start from a relatively low base of historical investment and activity in research. For instance, in terms of internal research pipelines, TU Dublin, the largest higher education institution in the state, begins with a similar postgraduate research profile to some of the smaller established universities<sup>10</sup>. The other TU consortia start with significantly lower postgraduate research enrolments that are more balanced towards the provision of research masters than PhD programmes. Yet they will now be expected to seek research funding, nationally and internationally, in a highly competitive environment where funders are anxious to ensure that they only fund first-rate research. It is therefore critical that each TU is adequately supported and equipped to compete successfully for research funding whilst simultaneously ensuring that their research has a direct impact for industry and enterprise in their region.

This disparity in research capacity must be addressed to bring TUs to a level where they can fully engage with national strategic policies for research and innovation as detailed in Innovation 2020 and Future Jobs Ireland.

Promoting a strong research and innovation culture will dictate the ability and capacity of TUs to drive economic and social development. They must build critical mass of scientific excellence in

<sup>10</sup> HEA Factsheet - Postgraduate Research – 2018; HEA Key Facts and Figures 2017/18: Staffing Statistics - HEA Institutions - Numbers in Whole-Time Equivalents (WTEs).

research areas of strategic national importance, including through increased postgraduate research provision, leading to improvements in the scale, quality and impacts of research outputs. The availability of a comprehensive National Framework for Doctoral Education<sup>11</sup> provides a quality infrastructure within which this expansion can be supported.

Support for the research communities based both in, and linked to, multi-campus and multi-disciplinary environments is crucial to building the reputation of TUs and imperative to raise the international visibility of TU research to attract front-line international research talent.

**International research emphasises the role of research-active and innovation-driven HEIs in securing the success of regional clusters. TUs must, therefore, ensure that their activities and outcomes are defined by:**

a bedrock of internationally competitive cutting-edge research

the ability to grow, attract, develop and retain a pool of talented researchers

the establishment of knowledge-intensive hubs for attracting and building research-intensive companies, investment and catalysing innovation

The scale of the challenge involved in transforming research capacity should not be underestimated. The step up in ambition and performance required is, however, fundamental, to the realisation of the research potential of the TU sector.

For TUs to bid successfully for major national, EU and other international funding on a competitive basis, a significant acceleration is essential in research activity in order to build a stronger track record of research excellence such as has been created over many decades in the rest of the university sector.

To date performance has been uneven and research capacity has depended on a relatively small cohort of research leaders in individual institutes, creating pockets of excellence but on a small scale. Correspondingly, there has been limited success in competitive access to research funding compared to other universities<sup>12</sup>. In 2015/16 the IoT sector accounted for just 14% of the total research income of higher education institutions.

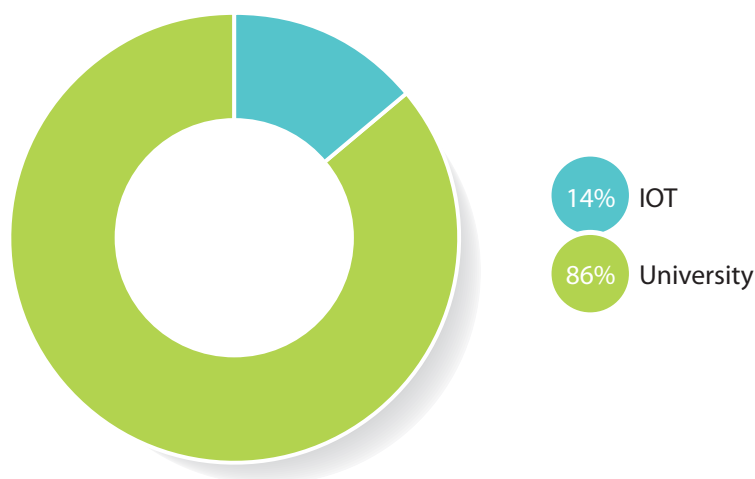
TUs need to identify, develop and act on new research opportunities, through enhanced relationships with industry and other employers, cluster activity and integrated national and international cross-HEI research based programmes.

The criteria established for research in the TU designation process have already had an impact on the research capacity in institutions<sup>13</sup>. Capacity building commenced in preparation for TU

<sup>11</sup> National Framework for Doctoral Education

<sup>12</sup> Research Income 2015/16 (Excludes Core Grant) – Source: HEA

<sup>13</sup> HEA – Key Facts and Figures Series 2013/14 to 2017/18

**2015/2016 - Total Research Income - €500m**

designation with significant investments in staff research qualifications and activity and increasing the numbers of postgraduate students. The disparity between the proportion of research and specialist staff in established universities (37%) and IoTs (11%) for research in 2017 is indicative of the scale of development that is still required.<sup>14</sup> The landscape investment now needs to be consolidated by the TUs and the successes of their staff to date rewarded with strong leadership in research and a clear strategy to make use of this success to deepen research in key areas (Marginson 2011). The necessity for the development of research human capital, including, recruitment, postgraduate training and supervision, and schemes for collaborative knowledge-transfer and mobility is of common interest to all TUs. In building their research capacity, TUs must adopt the researcher career development and employment framework developed under Action 3.10 of the Government-approved national research strategy Innovation 2020. In so doing it is acknowledged that this will be challenging to balance their complement of academic staff with research expertise with academic staff with real world industry expertise.

The creation of TUs provides an opportunity to increase the scale and scope of research of value to the economy and to society, strengthening the innovative capacity of the regions and making Ireland a more attractive magnet for inward investment and for leading international research talent. A key building block therefore, is the creation by each TU of a research development strategy to set objectives and targets over specified time horizons, linked as appropriate to a broader strategic development plan, identifying areas for deepening research as well as opportunities for collaborative development and coupled with a time limited investment in research capacity building.

In order to meet the appropriate quality standards for university-led provision, the deficits in educational and research infrastructure in TUs must be corrected. These will also enable TUs to operate in a contemporary open research environment. The specific deficits for STEM research have been taken up in Section 4.1 but these also extend to other technical equipment, laboratory facilities, research software and equipment as well as e-journals, publications/research data repositories and bibliometric tools.

<sup>14</sup> HEA Key Facts and Figures 2017/18, Staffing Statistics - HEA Institutions - Numbers in Whole-Time Equivalents (WTEs)

### 4.3 Investing in Digital Infrastructure

A series of major Government strategies focus on embracing innovation, technological change and, indeed, disruption. Investment in state-of-the-art digital infrastructure and ICT provision for TUs will, from the outset, create an opportunity for the sector to meet and address regional and national economic needs for digitalisation, to cater for 21<sup>st</sup> century learning and research and to ensure that the new TUs are equipped to deliver returns on the national policy for the creation of a new type of university. Modern TUs with a strong digital identity have the potential to advance the student learning experience and become national and international leaders in this area.

Digital infrastructural provision is the key to opening up the connectivity that will enable the connectedness and collaboration of TUs. It will be essential for meeting the challenges for TUs, especially those of:

- opening up HE to innovative modes and methodologies of learning across the full spectrum of apprenticeship, work-based, multi-campus, online and distance teaching and learning;
- ensuring that they simultaneously prioritise flexible learner-centred teaching and learning approaches, employment and industry relevant programmes and stronger research capacity; and
- deepening their strategic focus on research, through the development of a distinctive TU research profile, reflecting a mission that is technological, closely linked to innovation and human capital and skills development and strongly aligned to the needs of the economy, especially the needs of employers, and society, whilst also accommodating the required underpinning basic or theoretical research.

As discussed in sections 2.1 and 2.2, TUs will play a central role in meeting the economy's urgent requirement for digital skills including by producing industry-ready graduates with a deep knowledge and understanding of digital technologies. Furthermore, in the digital age and knowledge economy it is critical that learners acquire highly relevant transferable skills and the education system prepares learners for transformed modes of working, radically different workplaces and the labour market of the future. The acquisition of knowledge and skills needs to be underpinned by an up to date digital infrastructure.

The development of a state-of-the-art digital infrastructure for multi-campus settings will also ensure more integrated unitary organisations, as well as optimising the ability of the new institutions to meet the needs of the stakeholders in their role as key drivers of regional economic, social and cultural development. Digitally enhanced TUs can better facilitate systemic engagement and data-informed decision making, significantly enhancing connectedness and collaboration with industry partners, institutional stakeholders, regional and community groups. Digital technology can modernise business systems and reduce inefficiencies, freeing up time for higher value work.

New TUs are by definition non-traditional HEIs. They are distinctive in comprising multi-campus which are appropriately expected to deliver a consistent and full menu of high quality learning experiences irrespective of location, course type or award level. Digital connectivity means that there can be equal access for all learners, ensuring a consistent and high quality educational experience, regardless of physical location.

TUs will cater for diverse cohorts of learners at the same time and fully digitally enabled TUs can ensure that they will all be equally enabled to connect and engage. The various cohorts of learners will expect and demand a seamless digital experience across a variety of learning environments, whether they be on- or off-campus, part- or full-time, through various modes of delivery including online, blended, distance and work-based learning, using state-of-the-art learning technology.

Digitalisation has the power to profoundly change and enrich the HE learning environment. Newer generations of learners in TUs will also expect contemporary digitally based academic, administrative and support services in order to meet their 'digital native' expectations, their ease with technology and their need to access education from a range of locations at a pace in keeping with their personal circumstances.

Comprehensive adaptation to digital learning requires new approaches to programme design, delivery and assessment. Academic, support and professional staff require the appropriate skills and systems to enable a high quality learning experience. Digital platforms and predictive analytics will also enable TUs to fundamentally transform and deliver programmes designed to meet the personalised education needs of the individual learner, in particular facilitating access and retention for at-risk learners. For TUs, the use of extensive digitalisation will ensure more effective engagement with students and efficient access to contemporary information about the student experience and the success of programme strategies, research quality and impact which, in turn, will mean that TUs can be more responsive in improving and enhancing quality.

Modern research requires digital services combining software tools, data and computing across different institutions and across heterogeneous learning and research environments. Digital infrastructure is required for effective research collaborations, particularly internationally. Researchers need to communicate and share resources securely and efficiently.

Data driven research requires solutions for finding, accessing, integrating and reusing research data. There is also scope in planning and provision of digital infrastructure for sharing resources and for collaboration between TUs and other HEIs in relation, for example, to digital publications, e-journals, the creation of shared digital repositories and on-line access by learners, staff and researchers. Further, TUs and other HEIs could benefit from the capacity to jointly negotiate and advocate for open publications and other areas to reduce costs.

The extent to which all of these objectives can be achieved depends crucially on investment in digital infrastructure. TUs must be proactive and at the forefront of these developments and the strategic investment sought will enable a very significant step-up in the TU teaching and learning environment, knowledge creation and innovation. Digital technology evolves rapidly and TUs will need to remain flexible and agile to ensure that their digital infrastructure remains relevant.

Digital infrastructure is also an enabler for promoting innovation, its facilitation in geographically distributed regional clusters and its diffusion into industry and employment. Investment in digital and ICT infrastructure is the foundation toward the vision of enabling TU multi-campus for 'sticky' regions, that is, regions with greater opportunities for people to remain in their communities while pursuing studies in HE, thereby fostering the full-scope skills base that arguably is the single most important factor in:



- dissolving geographical boundaries, providing students with a consistent high-quality teaching and learning experience across geographically dispersed campuses;
- facilitating non-standard educational provision by extending the reach beyond campuses to provide flexible lifelong educational delivery to an expanding and more diverse learner population;
- sharing experience on a dispersed basis through online and blended lifelong learning bringing HE into homes, workplaces and communities.
- facilitating engagement and collaboration, thereby enabling the pooling of expertise; and
- enabling more porous knowledge transfer, innovation and collaboration with enterprise.

Digital capability is required of all HEIs. There has been insufficient investment in digital capacity building in recent times in the technological sector, evidenced in the consistent gap between required and actual expenditure on ICT which in 2018, for example, was estimated at -25%<sup>15</sup>. Dedicated gap funding will be required to redress this imbalance in tandem with enabling the capacity of the institutions to diversify their funding sources to continue to adapt and respond to digital changes as they evolve.

While recognising that a similar challenge is faced by all HEIs in this area, there is a strong argument to prioritise this investment for TUs immediately so they can, from the outset, build the digital connectivity required for their transformation. This is essential in ensuring that TUs can respond to what is expected of them by Government, their learners, their industry partners, their regions and their communities for the achievement of multi-campus, multi-modal regional institutions delivering a lasting and profound impact.

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<sup>15</sup> Data provided by HEA from institutional ICT equipment returns 2017/18

## 5. Conclusions and Recommendations

### 5.1 Conclusions

The introduction of TUs into the HE landscape in Ireland is a bold and important step towards meeting the economic and social challenges and choices faced by Ireland and addressed in a range of Government strategies. The Irish TU concept is distinctive in its rootedness in regional and local communities and economies, reaching out internationally from those roots and drawing international education and research practices directly back into the regions. Through the formation of a symbiotic network of educational and knowledge creation hubs within regions, the TU sector has potential to add substantial value to Government human capital and global innovation policies and strategies.

The development of new universities in the shape of TUs represents a substantial enhancement to the overall capacity and potential of the Irish HE system. It provides an opportunity for a fundamental re-evaluation within the Irish education system and Irish society of the role and value of core higher vocational, technical, technological and professional skills and qualifications in particular in terms of the demands and opportunities of the future world of work.

A strong mandate for TUs was presented in the National Strategy for Higher Education 2011, and provided with statutory recognition in the functions and obligations of the Technological Universities Act 2018. The establishment of Technological University Dublin on 1 January 2019 was a seminal development in the further diversification and strengthening of the Irish HE landscape. These new institutions must over time strive for greater self-sufficiency and autonomy linked to accountability and delivery of their core missions, values and purposes.

The distinctive quality of a learner-centred and inclusive TU is that it provides a regional lifelong learning anchor where people can learn at their own pace, anywhere, anytime without barriers ensuring that *all* learners are supported and developed to their fullest potential. A learning system that seamlessly provides for transitions and pathways from a range of different starting points, transfer and progression within and between TUs and other HEIs, and progression to employment, further learning and participation in society.

TUs are expected to help achieve the ambition to position Ireland's HE system as a Global Innovation Leader. TUs will establish excellent strategically focused as well as basic research capacity appropriately aimed at meeting economic and societal needs through an incremental field-by-field process, underpinned by the attraction and retention of high calibre staff and robust infrastructure and facilities. International recognition of the quality of this research is key in ensuring that TUs can attract international research talent to further build and enhance research capacity.

Investment in state-of-the-art digital infrastructure and ICT provision for TUs will, from the outset, enable unparalleled regional connectivity. This connectivity is essential for the delivery of a consistently high quality student learning experience across multiple campuses and extending into the workplace, the community and the home. Modern TUs with a strong digital identity have the potential to become national and international leaders in this area.

The range of funding and accountability mechanisms for TUs must be monitored and reviewed to ensure that they can adapt to provide a sustainable and relevant funding framework for the TU sector, as well as other HEIs. The development of a vibrant TU sector capable of sourcing additional funding streams including competing for national, EU and international research funding, can also widen national research capacity, deepen its intensity and societal relevance and build stronger international research profiles.

The provision of these supports will help to ensure that TUs have the capability to work and progress adaptively within enabling policy and funding frameworks.

The establishment of TU Dublin is being followed closely by proposals for the creation of TUs in other regions. TUs now have an opportunity to share a common developmental pathway in real time without in any way impacting adversely on the trajectory or constraining the ambition of any individual institution. In addition to addressing the specific needs of each institution, TUs will also identify and collaborate on achieving joint projects to ensure the widest impact for investment, particularly in the initial phases of TU development. TUs will also be required to build the reputation of these new universities and share responsibility for that reputation nationally and internationally.

There is clearly considerable goodwill, commitment and ambition within the emerging TU sector and in TURN's view, with the appropriate supports, there is a major opportunity for Ireland to maximise the benefits of this new type of university which combines the tradition of regional engagement, connectedness and cutting-edge, practice-based technological knowledge with the best facets of research-rich, internationally profiled universities, to create unique institutions of scale, practice, innovation and quality.

The specific recommendations below represent the key actions required to provide TUs with a solid foundation for the development of strong, regionally embedded, modern institutions.

## 5.2 Recommendations

### DIGITAL AND CAPITAL INFRASTRUCTURE INVESTMENT

#### Recommendation 1

In order to underpin the cohesion of regionally dispersed multi-campus TUs and facilitate new modes of learning, funding should be made available for integrated digital infrastructure (i.e. equipment, hardware and software) with consideration, where possible, of the achievement of efficiencies through collaborative projects.

*(Ref. Section 4.1, 4.3)*

#### Recommendation 2

There should be a prioritisation of capital investment in TUs in the allocation of capital funding resources to the HE sector under the NDP in circumstances where TUs remain exclusively dependent on Exchequer resources, complemented by an exploration of a borrowing framework for TUs (see Recommendation 10).

*(Ref. Section 4.1, 4.3)*

## RESEARCH CAPACITY BUILDING

### Recommendation 3

For the kind of significant increase in capacity required of TUs, research capacity should be enhanced through increased funding directed at developing researcher human capital in TUs, including staff development, recruitment, postgraduate training and supervision, networking, and collaborative knowledge-transfer and mobility schemes.

*(Ref. Section 4.2)*

### Recommendation 4

TUs should adopt and implement the researcher career development and employment framework developed under Action 3.10 of the Government-approved national research strategy, Innovation 2020.

*(Ref. Sections 4.2, 4.1)*

### Recommendation 5

In order to meet appropriate quality standards for university-scope provision, the serious deficits in educational and research infrastructure in TUs should be addressed in particular for STEM- and research-related technical equipment, laboratory facilities, research software and equipment but also including important underpinning tools such as e-journals, publications/ research data repositories, bibliometric tools.

*(Ref. Section 4.1, 4.2)*

### Recommendation 6

Responding to their statutory responsibilities in relation to strategic development planning under the Technological Universities Act 2018, each TU should prepare and publish its research development strategy, outlining its prioritised objectives and targets over specified time horizons, with a focus on research developmental and growth areas and highlighting, in particular, opportunities for national and international collaboration with industry and other employers, wider society and other HEIs.

*(Ref. Section 4.2)*

## INSTITUTIONAL AUTONOMY AND SUPPORT FOR REFORM

### Recommendation 7

The development of more apposite career structures to correspond with the distinctiveness of TUs, balancing enhanced teaching and learning and research development, attractiveness to international high calibre staff, new support roles required to deal with increased digitalisation, the retention of industry expertise and the facilitation of adjunct staff. As one TU is already established the development of these career structures is now an urgent matter.

Posts must be mapped to the highest quality standards of competence and performance, with the development of role descriptions aligned to the full scope of TU activities.

*(Ref. Sections 4, 4.1)*

### **Recommendation 8**

The Department of Education and Skills and the Higher Education Authority should, where appropriate, assist and support TUs in the implementation of Recommendation 7, having due regard to Government pay and staffing policies.

*(Ref. Sections 4, 4.1)*

### **Recommendation 9**

The Department of Education and Skills and the Higher Education Authority should reconfigure the existing HE landscape funding arrangements so that a dedicated funding stream is put in place to support TU development and organisational change management, including in the phase after a TU has been established. Amongst the actions required are:

- system integration development;
- change management processes;
- capacity building for members of governing bodies, leadership and staff;
- approaches to deepening the research base both in terms of meeting economic and societal needs and developing theoretical research;
- cross-institution peer group review; and
- channels for sharing advice, experience and perspectives on key challenges and opportunities.

*(Ref. Sections 4, 4.1)*

### **Recommendation 10**

As a matter of urgency a borrowing framework should be agreed and put in place for TUs as provided for in Section 21 of the Technological Universities Act 2018.

*(Ref. Sections 4, 4.1)*

### **Recommendation 11**

An examination of the the three options for the future operation of the grant allocation model in advance of the development of the universal model should be carried out by the Department of Education and the Higher Education Authority in consultation with TU stakeholders. This should result in a determination of the optimum approach to funding for TUs, be it:-

- maintaining TUs within the IoT funding model in RFAM (with or without any revisions/ adjustments);
- transitioning TUs to the university funding model in RFAM; or
- creating a specific TU funding model in RFAM.

This review should be completed by end-year 2019 and should examine each of these options and make recommendations on the preferred option.

*(Ref. Sections 4, 4.1)*

## IMPLEMENTATION

### Recommendation 12

Further work by all actors will be required to ensure that all of the above recommendations are implemented in a coherent and effective way. Implementation should be structured, system-wide, relevant and dynamic and should ensure value for money. Both the identification of actions and their implementation should be accompanied by robust, evidence-based monitoring and evaluation arrangements

# APPENDIX 1

## **Current Position in relation to Technological Universities and Institute of Technology consortia (at time of publication)**

On 1 January 2019 the first technological university (TU) in the State, Technological University Dublin, which formerly comprised Dublin Institute of Technology, Institute of Technology Blanchardstown and Institute of Technology Tallaght, was established under the Technological Universities Act 2018. This can be regarded as a landmark date in the evolution of Irish HE. With some 28,000 students, Technological University Dublin became the largest HEI in the State with campuses in Grangegorman, Tallaght and Blanchardstown.

On 12 February 2019 the Munster Technological University consortium, comprising Cork IT and IT Tralee, submitted an application to the Minister for Education and Skills seeking TU status under the 2018 Act. The relevant legislative procedures under the Act are in train in relation to the decision-making process in relation to this application.

Two other consortia of IoTs have made significant progress with their TU proposals. These are:

- Technological University for South East Ireland consortium, comprising Waterford Institute of Technology and Institute of Technology Carlow, and
- Connaught Ulster Alliance, comprising Institute of Technology Sligo, Galway-Mayo Institute of Technology and Letterkenny Institute of Technology.

It remains at the discretion of each individual IoT whether or not it chooses to join an existing consortium, or to form a new consortium, of institutes to progress together towards making an application for TU status under the 2018 Act.

The remaining IoTs are:

- Athlone Institute of Technology,
- Dundalk Institute of Technology,
- Limerick Institute of Technology, and
- Dun Laoghaire Institute of Art Design and Technology.

Some of these have commenced preliminary work towards the development of TUs.

Government continues to support institutions in working towards TU status with significant Exchequer funding.

## APPENDIX 2

### **Terms of Reference for the National Inclusive Working Group to consider appropriate areas for commonalities in approach in moving toward creation of a series of Technological Universities: Technological University Research Network (TURN)**

#### **Background:**

The enactment of the Technological Universities Act 2018 presents both a significant opportunity and challenge for institutions within the technological sector. In response, the TURN initiative seeks to provide a forum for the sharing of views and concerns and the consideration and development of approaches based on good practice in areas of common interest. This includes areas such as staffing and grading norms, capacity development, systems integration, multi-campus management, costs and funding.

TURN will be a time-limited inclusive working group comprising members from each of the current consortia and Technological University Dublin together with representatives from the Department of Education and Skills (DES), the Higher Education Authority (HEA), and the Technological Higher Education Association (THEA).

The work undertaken will be advisory. Any recommended approaches which may emerge will remain elective and lie with the governance structures of participating institutions and entities having regard to the autonomy and accountability provided for in the 2018 Act.

#### **Purpose:**

TURN is intended to assist participants through the sharing of appropriate information, experience, views and approaches with the aim of identifying effective and good practice, best use of public resources and avoidance of duplication of effort.

TURN is mindful that there are matters that are reserved for each individual consortium or TU and that such matters are best managed in direct engagement between the consortium and DES or the HEA, as appropriate.

TURN is mindful that there are differing or varied sets of concerns for each individual consortium and TU as it evolves on the trajectory of TU status pre-designation and of progression post-designation.

#### **Activity and timeline:**

TURN will seek advice on good practice, emerging international trends and the identification of exemplars, drawing upon internal or external resources, as appropriate.

TURN will advance its work plan to 30 June 2019, culminating in a report to the Department on its findings and recommendations. Its remit may be extended if the parties to the group consider it appropriate.



**Limitations:**

The Technological Universities Act 2018 provides the legislative framework for the functions and governance of technological universities. The Act sets out the provisions on institutional autonomy and accountability. TURN may record agreements and exchange advice but it remains an elective forum.

Conscious that there are separate established mechanisms to manage Industrial Relations matters, these are specifically excluded from the purview of this working group.

**Membership:**

TURN will comprise members of the three current consortia and Technological University Dublin. In addition, and in recognition of the legislative, policy, and funding elements that need to inform its deliberations, TURN will also benefit from input from DES and the HEA along with THEA as the sectoral representative body.

All participating entities will nominate two members to TURN and TURN may co-opt additional members where this is agreed by the group.

TURN will have an independent chair and administrative support will be provided by the DES. TURN meetings may be held in differing locations as agreed by the group.

**Output:**

TURN will identify areas appropriate for consideration and agree a schedule of work. Initial priority areas are:

- Defining the essence and added value of a TU in the Irish education system
- Staffing and grading norms and capacity building including research
- TU costs and funding model issues in developmental and establishment phases
- Systems integration, multi-campus management and the student experience

TURN may expand this list as it sees fit and upon the agreement of all members. It may also be necessary to liaise with other actors or sectoral stakeholders in this context.

## APPENDIX 3

### TURN Membership

Professor Philip Gummett, *Independent Chair*

Dr. Willie Donnelly, *President Waterford Institute of Technology*

Professor David Fitzpatrick, *President, Technological University Dublin*

Mr. Paul Hannigan, *President, Letterkenny Institute of Technology*

Dr. Michael Hannon, *Acting President, Galway-Mayo Institute of Technology*

Dr. Brendan McCormack, *President, Institute of Technology Sligo*

Dr. Mary Meaney, *TU Dublin Programme Lead, Technological University Dublin*

Dr. Patricia Mulcahy, *President, Institute of Technology Carlow*

Dr. Oliver Murphy, *President, Institute of Technology Tralee*

Dr. Jim Murray, *Director of Academic Affairs and Deputy CEO, Technological Higher Education Association*

Dr. Barry O'Connor, *President, Cork Institute of Technology*

Dr. Joseph Ryan, *Director General, Technological Higher Education Association*

Ms. Orla Nugent, *Deputy CEO, Higher Education Authority*

Mr. William Beausang, *Assistant Secretary, Department of Education and Skills*

Mr. Tim Conlon, *Head of Policy and Strategic Planning, Higher Education Authority*

Mr. Philip Crosby, *Principal Officer, Department of Education and Skills*

