

Institute of Technology Carlow

Vision Statement for the South East Technological University (SETU) and Implementation Framework

Submission to Mr Michael Kelly, appointee of Minister Jan O'Sullivan TD, Minister for
Education and Skills

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Vision Statement for the South East Technological University (SETU) and Implementation Framework

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1. Introduction

An acknowledged deficit in the South East Region of Ireland is the absence of a University. The Government provided an opportunity to create a South East Technological University (SETU) to fulfil this need under the *National Strategy for Higher Education to 2030* (Report of the Strategy Group, January 2011) and the *Programme for Government 2011-2016*. Government policy subsequently detailed a process and comprehensive set of criteria to help guide this development (*Process and Criteria for Technological University Designation*, February 2012).

The Institute of Technology Carlow (IT Carlow), with its history of serving the region for the past 45 years and its reputation as a dynamic, entrepreneurial and regionally engaged higher education institution, is committed to delivering a SETU for the region.

In July 2012 the Institutes of Technology (IoTs) at Carlow and Waterford (WIT) submitted a joint Stage 1 proposal to the Higher Education Authority (HEA) for the establishment of a SETU entitled “*The South East Institutes of Technology in the Future Higher Education Landscape*”. This Stage 1 SETU application was made under the national four-Stage process for Technological University (TU) designation and proposed a multi-campus TU for the South East with campuses in Carlow, Kilkenny, Waterford and Wexford. The Stage 1 SETU application detailed:

- An agreed Mission and Vision;
- A joint mapping of 2010 metrics relevant to TU criteria;
- Agreed 2017 projections to ensure trajectory towards TU criteria;
- An MOU signed by the Chairs and Presidents of IT Carlow and WIT on behalf of their Governing Bodies;
- An agreement, subject to due diligence, for merger in order to initiate the application for designation as a multi-campus TU.

Approval was forthcoming from the Minister for Education and Skills in May 2013 to progress to the preparation of a Stage 2 SETU Business Plan.

On the 21st October 2014 WIT decided to ‘*suspend all activities*’ on the SETU project citing ‘*concerns about the process of delivering a Technological University in the South East*’. An IT Carlow Executive Summary of the SETU Project is presented in Appendix 1. This Executive Summary was submitted to the Oireachtas Public Accounts Committee (PAC) in January 2015 as part of an IT Carlow submission detailing the SETU Project process from 2011-2014 (PAC-R-1657, Correspondence 3B, 15A, Meeting 148 22/01/15).

On the 4th of November 2014 the Minister for Education and Skills appointed Mr Michael Kelly to lead a new process of consultation with the Governing Bodies, staff and students in both IT Carlow and WIT in order to develop a shared vision for a TU in the South East. As part of this consultative process, both Institutes were asked to provide a submission on their individual visions for the SETU.

This paper details IT Carlow’s vision for the SETU, which has emerged from a detailed consideration of the unique set of regional, national and international environments in which the SETU will be established and developed. In particular, it aims to address the current movement of intellectual potential out of the South East Region, while simultaneously playing a transformative leadership role in the development of a regional economy capable of absorbing increased intellectual capital generated in the region for the benefit of the region.

The vision outlined in this paper has been greatly informed by an analysis of the characteristics of leading international TUs, including the University of Strathclyde, Scotland; the University of Coventry, England; the University of Oulu, Finland; RMIT University, Australia, and Eindhoven University of Technology, the Netherlands.

The organisational framework required to deliver on the vision has been crafted following consultations, site visit and/or discussion with other universities that have been through the process of merger and the establishment of a multi-campus institution, including the University of Ulster; the Metropolitan University, Copenhagen; University of Leuven, Belgium; Sheridan College, Toronto, Canada; and University of Illinois, USA.

2. International, National and Regional Context

2.1. National and International Context for the SETU Vision

The Irish higher education landscape is almost exclusively public in nature and is characterised by a binary divide, with traditional Universities and Institutes of Technology (IoTs) operating in parallel.

The IoTs in Carlow and Waterford were originally established as Regional Technical Colleges in 1970 and their structures and functions were framed by the *Mulcahy Report* (1967) stating;

“We do not foresee any final fixed pattern of courses in the colleges. If they are to make their most effective contribution to the needs of society and the economy, they must be capable of continuing adaptation to social, economic and technological changes. Initiative at local and national levels will largely determine how far this vital characteristic is developed. We are concerned that the progress of these colleges should not be deterred by any artificial limitation of either the scope or the level of their educational achievements”

The IoTs were placed on an independent statutory footing by the Regional Technical Colleges Acts 1992; Section 5 of which states that their primary function is to:

“provide programmes of higher education for the economic, technological, scientific, commercial, industrial, social and cultural development of the State, with particular reference to the region served by the college.”

The *National Strategy for Higher Education to 2030* (2011) espoused long term, high level strategic objectives for the entire Irish Higher Education sector and has set an agenda for transformation in the sector, which has continued to gain impetus. It is clear that globalisation and the increased focus of the Irish Government on the creation of a ‘knowledge economy’ have also influenced policy makers in this regard.

The National Strategy called for a *“coherent set of higher education institutions, each of significant strength, scale and capacity”* It demanded enhanced collaboration and institutional consolidation, particularly in the IoT sector, and envisaged that *“based upon demonstrated strong performance against mission-relevant criteria...some could apply for re-designation as technological universities”*. The National Strategy clearly stated that this was aimed at *“promoting institutional mergers and ensuring advanced institutional performance”*

In 2012, the Higher Education Authority (HEA) published *Towards a Future Higher Education Landscape*. This strategy document detailed the **process and criteria which IoTs would have to undertake to apply for designation as a TU** and included a requirement to merge with at least one other IoT before TU status can be conferred.

2.1.1. National TU Process

The four-stage process for designation was established in the Landscape Document (2012).

Stage 1 is a formal expression of interest from two or more IoTs to the HEA, which considers the application in the context of a system-wide analysis of Ireland’s higher education needs and the strategic implications arising from the establishment of a new university.

In July 2012, IT Carlow and WIT in a joint submission to the HEA set out their proposal for a TU in the South East (SETU). This met with approval from the HEA and with the publication of the HEA’s Report to the Minister of Education and Skills on *System Reconfiguration, Inter-Institutional Collaboration and System Governance*, IT Carlow and WIT moved onto Stage 2 of the process.

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Stage 2 involves the preparation of a business plan to meet the criteria. This business plan must address how an alliance proposes to meet the established criteria, setting out the process requirements and timelines in a detailed fashion.

As the establishment of a TU requires a merger of two or more IoTs, the Stage 2 business plan must be based on a legally binding memorandum of understanding (MOU) between the IoTs, which has been approved by the Governing Body of each, describing their consolidation into a new single institution.

Once the MOU has been agreed, and the business plan submitted, the alliance moves on to **Stage 3** of the process, which involves an evaluation of the plan by an international Expert Panel, appointed by the HEA.

This panel must consider the capacity of the partners to achieve the objectives of merger and the existing position of the partners in relation to each of the TU criteria.

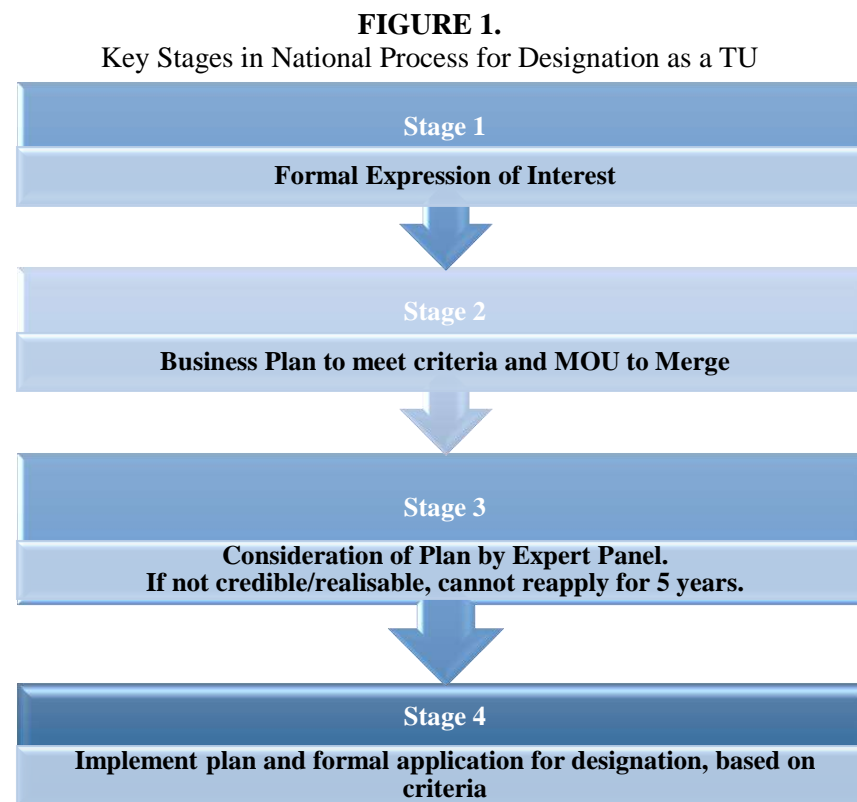
The Expert Panel will also consider the capacity of the partners, based on their developmental trajectory, to meet those criteria within a reasonable timeframe. If the expert panel agrees that the plan presented represents a credible and realisable proposal, the panel may offer advice to the alliance or the HEA relating to the implementation of the plan and the partners will proceed to Stage 4.

The **fourth and final stage** from an alliance is the application for designation as a TU. This can only be made when a legal consolidation or merger has been achieved and the alliance considers that all the criteria for designation have been met.

The application for designation is again reviewed by an Expert Panel, which will have regard to the criteria for designation, along with the legal and administrative requirements applying to Universities in Ireland, the configuration of institutions within the Irish higher education system, the characteristics of TUs internationally, detailed statistical profile data and the overall merits of the application.

The Expert Panel then makes a recommendation to the HEA which will consider the report and advise the Minister for Education and Skills on how to proceed.

The diagram in Figure 1 illustrates the four key stages in the process:



The publication of the Landscape document was followed by the publication of the *General Scheme of the Technological Universities Bill* (January 2014), which further details the process and criteria for designation as a TU. The Government has now committed to the enactment of this Bill in 2015.

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2.1.2. Criteria for TU Designation

In addition to the requirement for merger, the Landscape document and subsequent *General Scheme of the Technological Universities Bill* established key criteria which must be met by an alliance at Stage 4 before it can be designated as TU. Appendix A of the Landscape document established detailed **criteria around mission, institutional, student and staff profiles, teaching learning and curriculum development, research, international profile and leadership, management and governance.**

Under this framework, TUs must offer programmes across Levels 6 to 10 of the National Framework of Qualifications (programmes at sub-degree, degree and postgraduate levels including PhD/doctoral programmes).

TUs are expected to focus on the provision of programmes which are vocationally/professionally orientated, with a strong focus on science and technology. IoTs provide programmes of study across a wide range of discipline areas, including business, law, humanities and the arts. This area of study represents a large portion of the enrolment figures in most IoTs.

A TU is required to have research-informed, practice-led curricula and to employ teaching, learning and assessment processes which support its core mission to develop graduates who have a focus on the world of work, engagement, employability and citizenship.

In terms of research, the criteria stipulate that the focus must be on applied, problem-orientated research.

Additional criteria relating to the international profile and leadership, management and governance structures are also specified.

2.1.3. Concept of a TU - Building a Conceptual Framework

Higher education literature has identified **diversity as one of the key factors associated with positive system performance**, finding that it is an important structural strategy which can be used to meet student and labour market needs, enhance social mobility, allow for the combination of elite and mass education

systems, increase the level of effectiveness of individual institutions and provide opportunities for experimenting with innovation.

Recent Irish higher education policy has clearly articulated the **need for greater systemic, institutional, structural and programmatic diversity within the sector**, and the opportunity to create new TU's is one vehicle through which this need can be met. It is critical therefore that TU's be **distinguished from other institutional types** which currently exist in the sector as a whole and create a strong national and international identity.

When conceptualising a vision and mission for a new TU, the apparent ambiguity which surrounds the idea of a TU must be addressed and a clear vision of what a TU can and should be firmly established. To lead thinking in this regard, **IT Carlow is conducting ongoing research** and has identified an initial framework around which the idea of a TU will be fully explored and developed.

While various conceptual frameworks are used in national and international ranking systems, which aim to identify, categorise, score and rank higher education institutions on the basis of objective criteria covering the full range of their activities, these **hierarchical systems** have been the basis of much criticism, and are not always capable of uniform application across the diverse range of higher education institutions which exist globally (see 1.1.5).

Other frameworks, therefore, may offer a more 'rounded' view of TUs. Recent work by van Vught et al. (2010) builds upon ongoing research on higher education institutional diversity, typologies, mapping and profiling, and establishes a European classification system for higher education institutions.

The 2010 report by van Vught et al., *The European Classification of Higher Education Institutions* contains a conceptual and operational framework for a multidimensional, user-driven European-wide classification of higher education institutions.

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Underpinning the framework is the idea that **processing knowledge** is the general characteristic of higher education institutions and that this can entail the creation of new knowledge (through research) and its transfer to new users, be they students (education) or external parties (knowledge transfer) (Clark, 1983). The framework developed is known as ‘U-map’, and is a multidimensional institutional classification and profiling tool intended to provide a series of lenses through which important similarities and differences among higher education institutions can be described and compared (van Vught et al., 2010, p.16).

The framework focuses on **six key dimensions** of activity – teaching and learning profile; student profile; research involvement; involvement in knowledge exchange; international orientation and regional engagement (see Figure 2 for U-map key dimensions and indicators). For the purposes of the development of our vision for a TU, the U-map framework is particularly useful, as it is non-hierarchical, can apply to all higher education institutions and **is specifically designed to be used as a lens through which institutional similarities and differences may be identified, described and compared.**

We have adopted the six key dimensions of activity identified by van Vught et al. (2010, Figure 2) as a broad conceptual framework around which the mission and vision for the SETU is developed. In the Irish context, where Government policy is clearly directed towards diversity, the importance and significance of this approach cannot be overstated.

Additionally, we have incorporated dimensions on history/tradition, culture / values and mission / vision into our conceptual framework, to ensure that we capture the unique contextual factors which will necessarily shape the SETU.

The diagram in Figure 3 illustrates our conceptual framework which we have used to identify and analyse key characteristics of TUs. This has helped to shape our vision for a new TU for the South East Region as presented in Section 3.

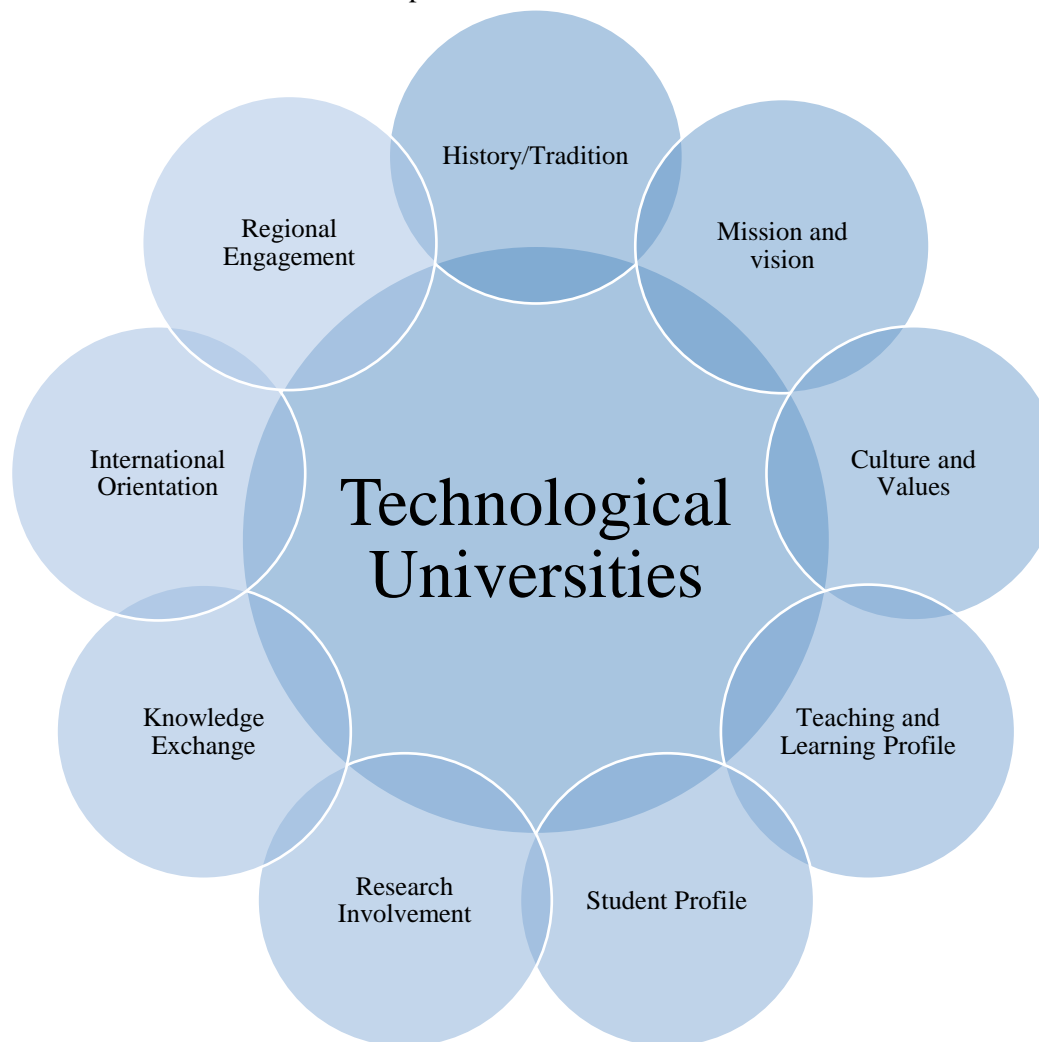
FIGURE 2.

An overview of U-Map dimensions and indicators (van Vught et al., 2010)

Teaching and Learning profile	Involvement in Knowledge Exchange	Student Profile
Degree level focus Range of subjects Orientation of degrees Expenditure on teaching	Start-up firms Patent applications filed Cultural activities Income from knowledge exchange activities	Mature students Part-time students Distance learning students Size of student body
International Orientation	Research Involvement	Regional Engagement
Foreign degree seeking students Incoming students in international exchange programmes Students sent out in international exchange programmes International academic staff The importance of international sources of income in the overall budget of the institution	Peer reviewed publications Doctorate production Expenditure on research	Graduates working in the region First year bachelor students from the region Importance of local/regional income sources F

FIGURE 3.

Conceptual Framework for TUs



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2.1.4. Characteristics of a TU - National and International Perspectives

It is critical that both national and international perspectives regarding characteristics of TU's be taken into account when shaping our vision for the future of education in the region.

The *National Strategy for Higher Education to 2030* states that internationally, a TU is “**a higher education institution that operates at the highest academic level in an environment that is specifically focused on technology and its application.**” Unfortunately, no reference is provided to illuminate the source of this definition.

The key characteristics proposed for the design of a **TU in the Irish context** are derived from various sources, notably the *National Strategy on Higher Education to 2030* (2011), *Towards a Future Higher Education Landscape* (HEA, 2012), *Completing the Landscape Process for Irish Higher Education* (HEA, 2013), the *Report to the Minister for Education and Skills on System Reconfiguration, Inter-Institutional Collaboration and System Governance in Irish Higher Education* (HEA, 2013), and the *General Scheme – Technological Universities Bill* (DoES, 2014), and are summarised and aligned with our conceptual framework in Table 1.

The *National Strategy on Higher Education to 2030* (2011), which introduced the concept of a TU, proposed that the first distinguishing characteristic of TUs in the Irish context is that they may only be formed by two or more existing IoTs which have merged.

Secondly, it stated that TUs are expected to have a distinct mission and character to preserve diversity in the Irish higher education system (DoES, 2010, p.103). TUs will be distinguished from existing universities by a mission and ethos that is “*based on career-focused higher education with an emphasis on provision at levels six to eight and on industry-focused research and innovation (DoES, 2010, p.105).*” This appears to indicate that while the mission and ethos of TUs and IoT's will be broadly similar, a distinction will be found in the level of industry focused research and innovation expected of TUs, which will be a defining characteristic.

It also indicates that TUs will operate primarily at levels six to eight (undergraduate certificates, diplomas and bachelor degrees) on the National Framework of Qualifications (NFQ), and states that while TUs will have “*involvement at levels nine and ten (masters and doctoral degrees) appropriate to their mission...the major proportion of activity at these levels will be concentrated within the existing university sector*” (DoES, 2010).

In relation to the academic focus of TUs, the National Strategy provides that “*the fields of learning will be closely related to labour market skill needs with a particular focus on programmes at levels six to eight in science, engineering and technology and including an emphasis on workplace learning...it will play a key role in facilitating access and progression (particularly from the workforce) by developing structured relationships with providers of further education and training (DoES, 2010, pp.105).*”

The National Strategy also establishes a two-step process for designation as a TU and broad criteria which would be required at each stage. These were supplemented in 2011 by the publication of the ‘Marginson’ criteria for designation as a TU.

However, more detailed guidance on the nature of TUs, and further, explicit criteria were provided by the HEA itself in 2012 in *Towards a Future Higher Education Landscape* (2012). Here, the HEA provided that mission of new TUs must have a systemic focus on the “*preparation of graduates for complex professional roles in a changing technological world. It will advance knowledge through research and scholarship and disseminate this knowledge to meet the needs of society and enterprise. It shall have particular regard to the needs of the region in which the university is located*” (HEA, 2012, p.12).

This clearly emphasises **the key regional role to be played by TUs in the Irish context**, and is something which the various consortia that have expressed an interest in applying for TU status, have focused on.

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TABLE 1

Key Characteristics Proposed for the Design of TUs in the Irish Context

Characteristics	Irish Context
History/ Tradition	<ul style="list-style-type: none"> • TUs – third type of HEI • Existing binary divide between Universities and IoT's will remain • TUs may only be formed by two or more existing institutes of technology which have merged
Culture and Values	<ul style="list-style-type: none"> • Entrepreneurial ethos - use and exploit its expertise and resources, whether commercially or otherwise • Externally orientated and engaged – meet the needs of its region, support links with enterprise, business, professions and stakeholders • Sustainable and efficient, service led organisation
Mission and Vision	<ul style="list-style-type: none"> • Prepare graduates for complex professional roles in a changing technological world • Advance knowledge through research and scholarship and disseminate this knowledge to meet the needs of society and enterprise • Vocationally/professionally orientated higher education, with a strong focus on science, engineering and technology and labour market skill needs • Breadth of programme provision across levels 6 to 10 of the NFQ, with an emphasis on provision at levels 6 to 8. Level 10 provision in small number of fields/departments only • Play a key role in facilitating access and progression (particularly from the workforce)
Teaching and Learning Profile	<ul style="list-style-type: none"> • Provide programmes from Levels 6 to 10 on the National Framework of Qualifications • Emphasis on provision at levels 6 to 8 and involvement at levels 9 and 10 appropriate to their mission • Vocationally/professionally orientated programmes with a specific focus on science, engineering and technology, providing opportunities for work based learning • Curriculum content and research-informed, practice-led teaching, learning and assessment processes which are developed in conjunction with business, professional organisations, etc., and which develops graduates who have a focus on the world of work, engagement, employability and citizenship • At least 90% of all full time staff will hold a level 9 qualification and that at least 45% of full time staff will hold a level 10 qualification or the equivalent in professional experience, rising to 65% of staff with level 10 qualifications within 10 years of designation

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TABLE 1 cont.

Key Characteristics Proposed for the Design of TUs in the Irish Context

Characteristics	Irish Context
Student Profile	<ul style="list-style-type: none"> • Provide accessible and flexible learning pathways • At least 30% of students enrolled must be lifelong learning students enrolled on professionally orientated programmes and industry upskilling, including part-time, work related programmes and work-study programmes and/or mature learners
Research Involvement	<ul style="list-style-type: none"> • Emphasis on industry/enterprise-focused research and innovation • Focus on applied, problem orientated research and social and technological development and innovation • At least 4% of full time equivalent students at levels 8 to 10 must be enrolled in research programmes • Research capacity to support on-going programmes, projects and doctoral training in at least three fields of knowledge as defined by ISCED fields of study at the two digit level, and demonstrate a trajectory showing that the institution can extend this to support two further fields within five years of designation. • Practice led, professional and industrial doctorate structures for level 10 provision
Knowledge Exchange	<ul style="list-style-type: none"> • Support entrepreneurship, enterprise development and innovation • Exploitation of intellectual property and technology and knowledge transfer • Provide consulting/problem solving services that are particularly relevant to the region
International Orientation	<ul style="list-style-type: none"> • International orientation which specifically reflects its mission • Sustainable range of international collaborations including joint projects, staff and student exchanges and collaborative programme provision
Regional Engagement	<ul style="list-style-type: none"> • TUs required to have particular regard to the needs of the region in which it is located • Primarily have an industry/enterprise focus – make a measurable impact on local, regional economic development, businesses and enterprise and support the development of a skilled workforce • Also required to serve their communities and the public interest by fostering close and effective relationships with local, regional, national and international stakeholders (e.g. local authorities and regional assemblies) and enrich cultural and community life

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The publication of the *General Scheme – Technological Universities Bill* (DoES, 2014) has provided further guidance on the proposed characteristics for the design of a TU in the Irish context.

Head 50 of that Bill highlights the role of TUs in providing and promoting, *inter alia*, enterprise focused course of study, opportunities for work based learning, enterprise focused research, development and innovation (RDI), accessible and flexible learning pathways and facilities for technological and professional university education. It calls upon TUs to support the development of a skilled workforce, to support entrepreneurship, enterprise development and to serve their communities and the public interest by fostering close and effective relationships with local, regional, national and international stakeholders

It is clear from the above that certain key characteristics including a history of transformation, a particular focus on the STEM subjects and vocational/professional education, an entrepreneurial culture, proactive engagement with stakeholders, sustainability, and applied research, innovation and knowledge exchange activities are characteristics required for the design of Irish TUs.

While we have necessarily been guided and influenced by the characteristics and criteria for the creation of a TU in the Irish context as outlined above, we have not been limited by it.

In order to more fully develop our understanding of what a TU is and should be, and of what type of HEI we could and should create for our region, we gathered and analysed data on the characteristics of a number of **international TUs**, which is presented in Table 2. This information is based on case studies conducted on the University of Strathclyde, Scotland; the University of Coventry, England; the University of Oulu, Finland; RMIT University, Australia, and Eindhoven University of Technology, the Netherlands. These cases were selected on the basis of expert elicitation on the phenomenon and provided a variety of contexts in which TU's could be examined (See Appendix 2 for a breakdown of each TU selected).

Of course, each TU will necessarily be fashioned by its own contextual factors, be they historic or present-day, regional or national, cultural, social, legislative or economic, and these factors will shape and differentiate TUs across regions, countries and continents. Nonetheless, it is a useful exercise to examine in an international context the key characteristics of other TUs, using our conceptual framework as a critical lens.

From data gathered, it appears that internationally, TUs (although often not explicitly labelled as such) are generally modern, ambitious, forward-looking institutions, many of whom have undergone a period of transformation, often brought about through system reconfiguration.

They are characterised by a focus on being useful, innovative and socially relevant, contributing to the good of society as a whole. They typically offer applied, vocationally and professionally orientated programmes across a range of discipline areas including science, engineering, business, humanities and design and in a variety of modes. Programmes have been developed with input from industry, graduates and relevant professions. Most programmes incorporate work placement/work based learning activities into the curriculum and many provide opportunities for students to tailor their programme of study by taking subjects outside of their discipline area to broaden their knowledge base, giving rise to a multidisciplinary curriculum.

The international TUs engage in industry focused, applied, multi-disciplinary research and knowledge exchange activities with a distinct focus on impact. Much of this research is collaborative in nature and is conducted in partnership with other universities or with industry.

A strong feature of all the TUs is that they are engaged in multi/inter/trans-disciplinary research involving the technical, human and natural sciences, with the focus on solving '*grand challenges*' or '*big questions*' of societal import, in areas such as energy or biosciences and health, for example. The key research areas have been identified and made explicit in the strategic plans of these TUs, with most choosing to concentrate on three to four key strategic areas.

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TABLE 2

Key Characteristics of International TUs

Characteristics	International Technological Universities
History/ Tradition	<ul style="list-style-type: none"> • Many former polytechnics/technical colleges/hogeschool • Historical reputations for technical education and research • Developed through merger/system reconfiguration to offer wider range of programmes • Name change a factor and word ‘Technological’ not used in title by most
Culture and Values	<ul style="list-style-type: none"> • Entrepreneurial, innovative and creative • Engaged, connected and collaborative • Value academic freedom, integrity, transparency and sustainability • Ambitious and forward looking • Pioneering – strive to make a difference to society
Mission and Vision	<ul style="list-style-type: none"> • To be useful – to create, utilise and apply new knowledge • To be socially relevant – transform the future for the benefit of people and the advancement of society • To be global/international universities • To be innovative and modern in outlook
Teaching and Learning Profile	<ul style="list-style-type: none"> • Offer programmes from levels 8-10 • Two of the TUs (RMIT and University of Coventry) facilitate provision at levels 6 and 7 and one (RMIT) provides apprenticeship/training programmes. These offerings are provided via distinct colleges which are separate legal entities. • Focus on applied programmes which are vocationally/professionally orientated developed with input from industry • Work placement/work based learning activities are a strong feature • Wide range of discipline areas including science, engineering, business and humanities, with the exception of Eindhoven University of Technology • Level 10 programmes offered across the discipline areas • Significant part time/CPD offerings • Distinct graduate schools • Options to tailor programmes by taking subjects outside discipline area – multidisciplinary curriculum

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TABLE 2 cont.

Key Characteristics of International TUs

Characteristics	International Technological Universities
Student Profile	<ul style="list-style-type: none"> • Variation in size of student population from 9,230 in Eindhoven to 82,000 in RMIT Melbourne • Positive correlation between size and percentage of undergraduate students • Higher percentage of mature student enrolments • Predominately regional, socially inclusive student body
Research Involvement	<ul style="list-style-type: none"> • Applied research in identified areas of specialism • Focus on impact and innovation – solving ‘big questions’ or ‘grand challenges’ • Multi/inter/trans disciplinary involving natural, technical and human sciences • Collaborative nature – conducted in partnership with industry/other universities
Knowledge Exchange	<ul style="list-style-type: none"> • Engage in full spectrum of KE activities, including consulting, intellectual property exploitation, joint ventures and spin-outs • Industry orientated, but also exchange knowledge with other universities, the public sector and the community • Targeted initiatives to support industry, particularly within the region in which the university is situated • Knowledge valorisation – research results translated into the creation of new products, processes and enterprises
International Orientation	<ul style="list-style-type: none"> • Global/international focus • Targeted/strategic collaborations with international partners providing student exchange, joint provision and research opportunities • Specific programmes, mainly at postgraduate level, targeted at international students
Regional Engagement	<ul style="list-style-type: none"> • Desire to contribute positively to the growth and development of the region • Proactively create regional/industry fora • Areas of research activity often linked to indigenous regional expertise/industry • Regional student population and graduate employment opportunities

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Finally, the international TUs are regionally engaged, particularly with industry, and often serve as an instigator of or a catalyst for regional development, but with a global outlook and impact.

The international TUs explicitly express a desire to contribute to the growth and development of the region in which they are situated, as well as a desire to contribute to national and global developments, a phenomenon known as 'glocalisation'.

Engagement activities are focused to a large extent on the formation of partnerships with regional industries through industry/regional fora which are established by the university.

Identified areas of research focus and activity are often linked to local industries and seek to build upon a tradition of expertise which is indigenous to the region. This regional focus is clearly embedded into the mission, vision and values of the TUs.

A comparative analysis of the Irish criteria for the creation of TUs with the international characteristics identified from this research reveal quite a close alignment between the two in some areas, although, as one would expect, some key differences between the proposed Irish characteristics and international comparators also emerge.

Table 3 indicates the similarities and differences between the characteristics proposed for the design of TUs in the Irish context. In particular, there appears to be a distinction between the mission and vision identified in the Irish context and that of international TUs.

The Irish mission is focused to a large extent on the preparation of graduates for the workplace and the advancement of knowledge in the region. There is also a stronger emphasis in the Irish context on TUs being sustainable and efficient, service-led organisations.

Internationally, TUs are more ambitious in their vision, aiming to advance society and transform the future, to solve 'big questions' and 'grand challenges' of our time, in addition to being socially relevant, modern and global in outlook.

It is therefore critical that in framing our mission and vision, we be as openly and boldly ambitious and imaginative as our international comparators and build an inspiring and convincing vision for the SETU.

The characteristics defined above are aligned for the SETU in this vision (see Section 3). These are the themes around which the SETU revolves.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

2.1.5. Public Confidence and Rankings

The SETU will be an internationally oriented organisation, with a robust self-evaluation, peer review and quality enhancement culture.

Paramount to ensuring public confidence will be a keen awareness of, and progression in, the various ranking systems, including the Quacquarelli Symonds (QS) and Times Higher Education (THE) systems.

While this is to be welcomed and embraced it is recognised that all such systems must be viewed with the caveat that these ranking systems can produce imbalanced and selective outcomes **not adequately reflective of differing missions and diversity of activities.**

For example, while rankings of institutions in higher education, ordered by different combinations of various factors, are conducted by disparate organisations, there are **no known rankings of student academic quality.**

There has been robust debate about rankings' usefulness and accuracy and there has been expanding diversity in rating methodologies and the accompanying criticisms of each indicate the lack of consensus in the field.

Two of the leading rankings, sometimes criticised as being disproportionately influential in establishing the status order of universities, are:

- The QS rankings which use peer review data collected from academics and recruiters and also incorporate citation per faculty member data, faculty/student ratios, and international staff and student numbers. QS also publish subject rankings drawn up on the basis of citations, academic peer review and recruiter review and are published in five clusters; engineering; biomedicine; the natural sciences; the social sciences; and the arts and humanities.
- The THE World University Rankings include 13 separate performance indicators, and the criteria are grouped under five broad overall indicators to produce the final ranking.

U-Multirank and its u-map system, is designed to contribute to the European Commission objective of enhancing transparency about the diversity and the performance of higher education institutions and research institutes as expected in the Bologna Accord and subsequent communiqués.

It will act as a planning and self-mapping exercise to the SETU.

By enabling quality, relevance and transparency, it will provide learners with clearer information to guide study choices.

U-map produces multi-dimensional listings rating universities on a much wider range of factors, focussed on the diversity of the organisation, compared to other existing international rankings.

The idea is to avoid simplistic league tables which can result in misleading comparisons between institutions of very different types or mask significant differences in quality between courses.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

TABLE 3
Comparative Analysis of Irish and International Characteristics of TUs

Characteristics	Similarities	Differences
History/Tradition	<ul style="list-style-type: none"> • Institutional transformation - Many TUs originated as other institutional types (e.g. polytechnics, technical colleges/ IoTs). • History of applied and technical education and research. • Many TUs developed through system reconfiguration/merger 	<ul style="list-style-type: none"> • Merger is a mandatory requirement before the creation of TUs in the Irish context. This was not the case in other countries, which allowed for the possibility of federation models as a transitory arrangement. • Word ‘Technological’ not used in title by most International TUs but this will be a requirement in the Irish context.
Culture and Values	<ul style="list-style-type: none"> • Key values broadly similar – i.e. entrepreneurial, innovative, externally orientated and engaged. 	<ul style="list-style-type: none"> • Stronger emphasis in Irish context on being sustainable and efficient, service-led organisations. • International TUs appear to place more value on ambition and a pioneering spirit.
Mission and Vision	<ul style="list-style-type: none"> • All aim to be relevant to enterprise and society. • Focus primarily on vocationally/professionally orientated programmes of study. 	<ul style="list-style-type: none"> • The Irish mission and vision for TUs is narrower in focus than International TUs – it is focused to a large extent on the preparation of graduates for the workplace, meeting labour market skill needs and the advancement of knowledge in the region. • International TUs are more ambitious in their vision, aiming to advance society and transform the future, to solve ‘big questions’ and ‘grand challenges’ of our time, in addition to being socially relevant, modern and global in outlook.
Teaching and Learning Profile	<ul style="list-style-type: none"> • Focus on applied programmes which are vocationally/professionally orientated, provide opportunities for work based learning and are developed with input from industry and which develops graduates ready for the work force. • Significant part time/CPD offerings to facilitate up-skilling, labour market and access initiatives. 	<ul style="list-style-type: none"> • Emphasis on Irish TUs to provide programmes from Levels 6 to 8 on the NFQ, with involvement at levels 9 and 10 appropriate to (and thereby limited to) their mission. Internationally, TUs predominately offer programmes from levels 8-10, with level 10 programmes offered across the discipline areas. • Irish TUs expected to focus specifically on science, engineering and technology programmes, whereas internationally, TUs tend to offer programmes across a broad range of discipline areas, including humanities and business.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

TABLE 3 cont.

Comparative Analysis of Irish and International Characteristics of TUs

Characteristics	Similarities	Differences
Student Profile	<ul style="list-style-type: none"> Emphasis on access and participation in Higher Education - high percentage of mature student enrolments and a predominately regional, socially inclusive student body. 	<ul style="list-style-type: none"> Size of TUs varies widely – Irish figure of 15,000 students is at the lower end in terms of student population.
Research Involvement	<ul style="list-style-type: none"> Emphasis on industry/enterprise-focused research and innovation in identified areas of specialism. Focus on applied, problem orientated research and social and technological development and innovation. Practice-led, professional and industrial doctorate structures for level 10 provision. 	<ul style="list-style-type: none"> International TUs focus to a greater extent on impact and innovation – solving ‘big questions’ or ‘grand challenges’. Greater emphasis internationally on collaborative, multi/inter/trans disciplinary involving natural, technical and human sciences.
Knowledge Exchange	<ul style="list-style-type: none"> Engage in full spectrum of KE activities, including consulting, intellectual property exploitation, joint ventures and spin-outs. Support entrepreneurship, enterprise development and innovation. Provide consulting/problem solving services that are particularly relevant to the region 	<ul style="list-style-type: none"> Internationally, there is a greater emphasis on knowledge exchange with other universities, the public sector and the community, and on knowledge valorisation.
International Orientation	<ul style="list-style-type: none"> Strategic international collaborations including joint projects, staff and student exchanges and collaborative programme provision. 	<ul style="list-style-type: none"> International TUs have a more global focus and provide specific programmes, mainly at postgraduate level, targeted at international students. Irish TUs expected to have an international orientation “which specifically reflects its mission” – could be a limiting factor.
Regional Engagement	<ul style="list-style-type: none"> TUs have particular regard to the needs of the region in which they are located - desire to contribute positively to the growth and development of the region Proactively create regional/industry fora. Areas of research activity often linked to indigenous regional expertise/industry. Regional student population and graduate employment. 	

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2.2. National and Regional Context for the SETU Vision

2.2.1. The South East Region, IoTs and the North / South Axis

Technological Universities exist worldwide and represent a diverse set of institutions, each of which has developed according to its own **unique regional, national and international context**.

Equally, the SETU will be differentiated in its focus in response to the particular traditions, culture, economic conditions and society of the region (*The South East Institutes of Technology in the Future Higher Education Landscape, Joint Submission by IT Carlow and WIT to the HEA, July 2012*).

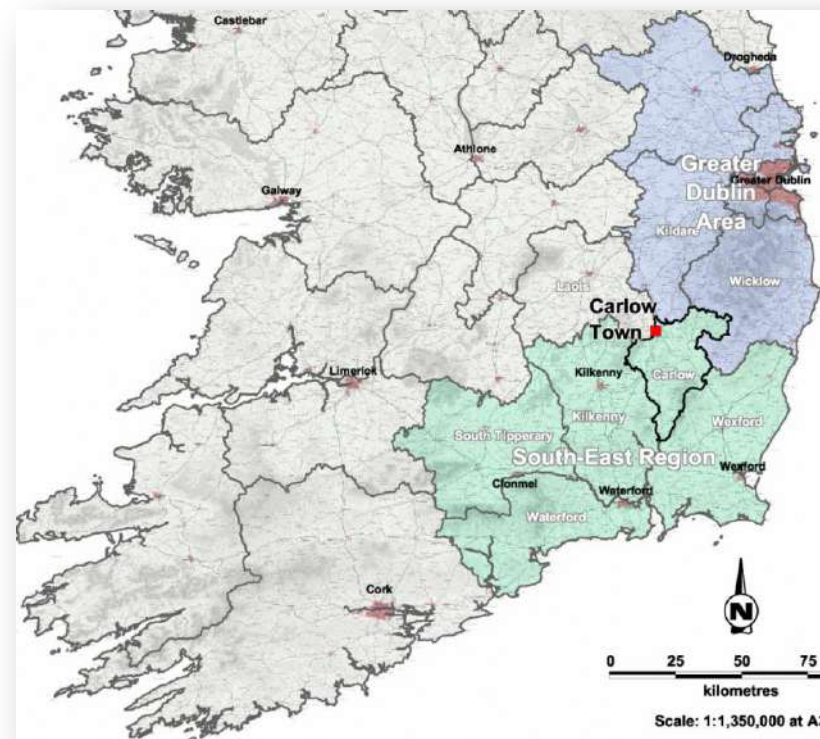
The SETU will help address the challenges unique to the South East Region, while providing an educational experience of international standard, providing access and opportunities for all within the region and beyond.

The South East Region has distinctive characteristics that have not been well served by the National Spatial Strategy (Bacon Report, 2014). It is the only region in the country that does not have a dominant urban centre driving economic activity across the region. The South East is characterised by the more prosperous northern region that benefits from the economic spill-over from the capital city and its hinterland, while the southern end of the region experiences high unemployment and limited economic activity. This has resulted in a region comprised of a number of urban centres spread across the South East Region in Carlow, Wexford, Kilkenny, Clonmel and Waterford.

The primary campuses of both South East IoTs are ideally placed to provide a strong **north/south axis** to the region which, through a unified and innovative SETU model, will provide a strong back bone to an otherwise diverse area, capable of influencing and driving the development of national, social, cultural and economic policies.

FIGURE 4.

Proximity of the South East IoTs to other Regional Authority Areas including the GDA to the North and the South West to the South.



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If the South East Region is to develop as a cohesive region for development, then future changes in higher education provision must be configured to:

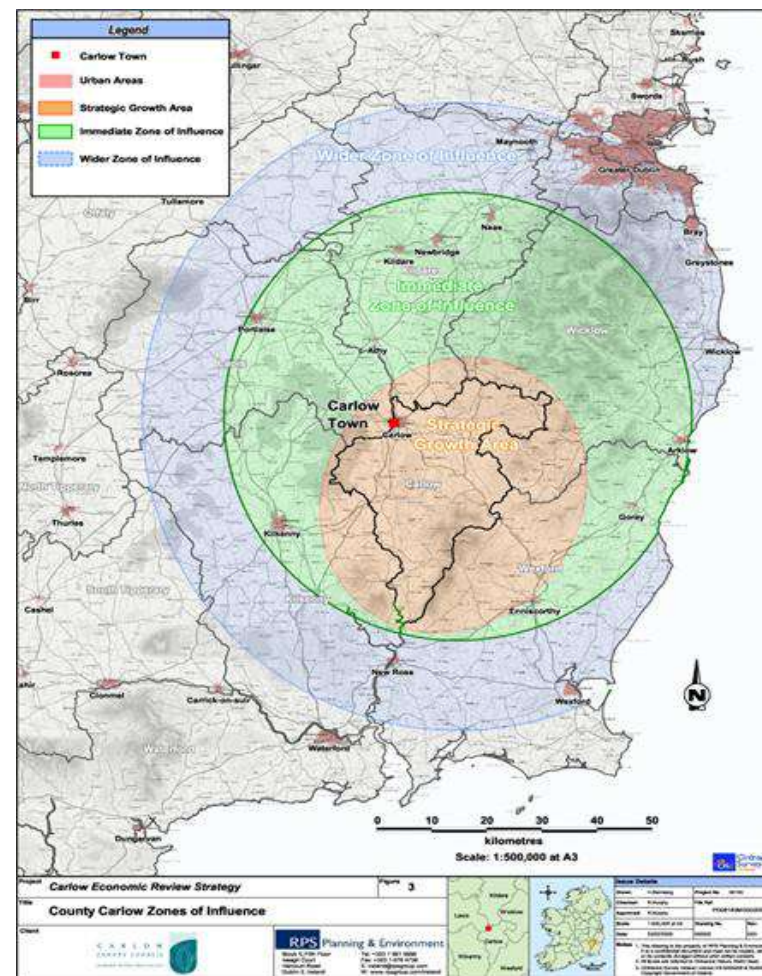
- Ensure engagement across the region to address the diverse regional agenda in the most innovative ways;
- Capitalise on the considerable opportunities provided by the neighbouring more economically-advanced regions, including the GDA adjacent to the north of the South East Region and the South-West Region to the south.

The SETU will serve to provide leadership and policy direction – connecting our region internally and externally for maximum beneficial impact.

The SETU is envisaged as an integrated, entrepreneurial and regionally-engaged multi-campus organisation with a significant and balanced presence across the South East Region, supporting and reinforcing the ‘zones of influence’ extending into neighbouring regions.

Carlow is strategically located at the most northern tip of the South East Region positioning it close to the Dublin, Mid-East and Midlands Regions (Figure 4). An *Economic Analysis of County Carlow* conducted by DKM concluded that the hinterland served by Carlow extends well beyond its county and regional boundaries, stretching into the Mid-East and Midlands regions. Based on a mapping of the ‘Zones of Influence’ of Carlow (Figure 5), DKM further concluded that Carlow’s location would be better described as at the centre of a **national strategic growth circle comprising Wicklow, Kildare, Laois, Kilkenny and Wexford** – collectively referred to as **South Leinster**.

FIGURE 5.
Carlow Zones of Influence (DKM 2009)



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This “strategic growth circle’ is evident for IT Carlow when the domiciliary origin of all IT Carlow national student enrolments are considered.

73.7% of all IT Carlow December 2014 student enrolments originate from the six counties of South Leinster comprised of Carlow, Wexford, Kildare, Wicklow, Laois, Kilkenny

In terms of **Regional Authority Areas**, IT Carlow 2014 enrolments are:

- **46.7%** from the South East comprised of Carlow, Wexford, Kilkenny, South Tipperary and Waterford.
- **31.4%** from the Mid-East and Dublin regions (the GDA) comprised of Kildare, Wicklow, Dublin and Meath.
- **11.2%** from the Midlands comprised of Laois, Offaly, Westmeath and Longford.
- **10.7%** from other Regional Authority Areas.

The above profile arises from the current flexible provision of higher education opportunities by IT Carlow across Level 6 to Level 10 of the NFQ in Carlow, Wexford, Wicklow, Kildare, Dublin and Shannon.

In terms of **Regional Authority Areas**, WIT 2013/ 2014 enrolments are:

- **77.2%** from the South East comprised of Carlow, Wexford, Kilkenny, South Tipperary and Waterford.
- **7.7%** from the Mid-East and Dublin regions (the GDA) comprised of Kildare, Wicklow, Dublin and Meath.
- **6.9%** from the South-West comprised of Cork and Kerry.
- **3.5%** from the Midlands comprised of Laois, Offaly, Westmeath and Longford.
- **1.5%** from the Mid-West comprised of Galway, Mayo and Roscommon.

IT Carlow is thus uniquely placed to provide a strong northern component of the north/south axis to the South East Region through the SETU, which together with the WIT southern component, would provide a strong platform for connecting the region internally and beyond to the Mid-East, Dublin and South-West Regions.

The **importance of a strong SETU north/south axis**, formed by a multi-campus unified organisation comprised of IT Carlow and WIT, is reinforced by regional population growth patterns to-date and regional projections to 2031 (CSO, December 2013).

Population increases in the period 2006-2011 may be summarised as follows:

- The South-East’s population increased from 460,838 to 497,305 an increase of 36,467 (**7.9%**)
- The Mid-East’s population increased from 475,360 to 530,437 an increase of 55,077 (**7%**)
- The Midland’s population increased from 251,664 to 282,195 an increase of 30,531 (**12.1%**)
- Dublin’s population increased from 1.18m to 1.27m an increase of more than 83,000 (**7%**)
- The Mid-West’s population increased from 361,028 to 378,410 an increase of 17,382 (**4.8%**)
- The South-West’s population increased from 621,130 to 663,176 an increase of 42,046 (**6.8%**)
- The West’s population increased from 414,277 to 444,991 an increase of 30,714 (**7.4%**)

Population growth in the selected spectrum of counties (Carlow, Wexford, Kildare, Wicklow, Laois, Kilkenny, Waterford, Tipperary) has been steady over the past 7 years, with the younger age demographics (5-9 years) showing particularly healthy growth: 14% between 2006 and 2011 against an overall

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population growth of 9.6%. 10-14 has shown similar strength in growth, 13.6%. This represents the future market for higher education in the state.

- Base population +9.6% (Census 2006, 2011)
- Ages 5-9 +14%
- Ages 10-14 +13.6%

Population projections to 2031 are summarised in Figure 6. In 2011

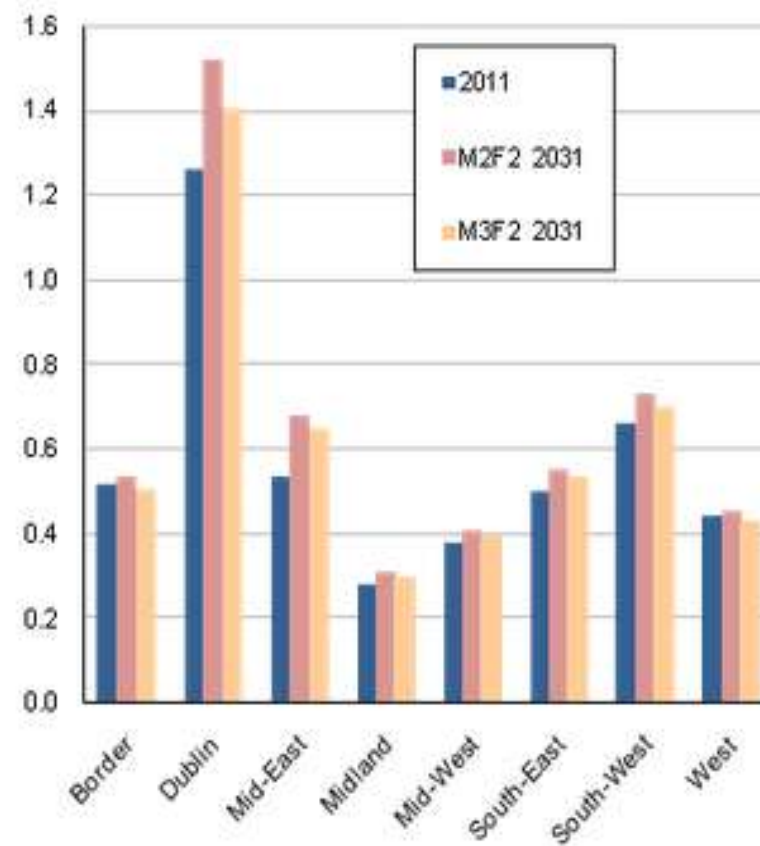
Dublin accounted for 27.6% of the total population while the Mid-East represented 11.7% of the total. This compares with just over 25.0 % for Dublin and 6.7% for the Mid-East fifty years earlier. Over the 50-year period from 1961 to 2011 this increase in share of total population for Dublin and the Mid-East was at the expense of all other regions, which lost population share.

Under the M2F2 scenario presented in the CSO projections, the **total population is projected to increase by 613,000 by 2031**. If a return to the traditional pattern of internal migration is experienced then the GDA (Dublin and Mid-East) is projected to grow by 401,400. This means that the **GDA will account for 42.4%** of the total population by 2031. Within this scenario the population of the **Mid-East will show an annual average increase of 1.2% while Dublin will grow by 0.9% annually** over the twenty year period. The population of all other regions will increase more slowly over the same period growing by between **0.2% (Border and West)** and **0.5% (South-East and South-West)** on an annual average basis and as a result will lose population share.

Based on DOES statistics (Table 4) secondary school enrolments are predicted to increase by **15-20,000 nationally** over the next four years alone. Given that the catchment area of IT Carlow represents 24% of the national secondary school population this equates to a projected increase in this area of 4,800 to 2016/17. The DOES data further concludes that this rate of increase will continue to 2023-25. However this appears conservative given the increase experienced since 2006 and taking into account the rise in 5 – 9 year olds in the 2006 – 2011 period.

FIGURE 6.

Actual and projected population for 2011 and 2031
(in millions, CSO projections 2013)



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TABLE 4.

Secondary School Enrolments (DOES Statistics *education.ie*)

	Carlow	Wexford	Kildare	Wicklow	Laois	Kilkenny	Waterford	Tipperary	Offaly	Regional Number of 2 nd Level Students	National No. of 2 nd Level Students
2006	5486	10763	13254	9739	4207	7042	8629	12969	5122	79217	332407
2007	5548	10971	13439	9828	4284	7062	8672	12969	5165	79945	333718
2008	5505	11070	13878	9835	4395	7078	8747	13157	5281	80954	335123
2009	5619	11310	14244	10128	4460	7164	8937	13311	5282	82464	341312
2010	5741	11593	14806	10565	4510	7334	9075	13546	5426	84606	350687
2011	5724	11661	15196	10757	4734	7367	9305	13724	5579	86058	356107
2012	5757	11746	15706	10757	4952	7286	9434	13762	5690	87102	359047
2013	5856	12008	16231	11009	5114	7345	9428	13937	5758	88699	362847

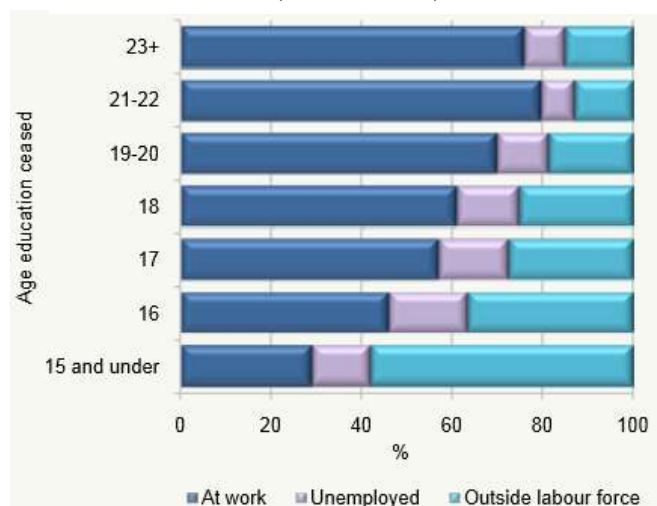
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2.2.2. The South East Region, Educational Attainment and the IoTs

Analysis of recent Census results confirms that there is an important link between **educational attainment and the subsequent economic status** of individuals.

The diagram below (Figure 7) shows the clear link between education attainment levels and employment prospects, with people who terminated participation in education early having a noticeably greater chance of being unemployed.

FIGURE 7.
Economic Status and Age Education Ceased
(Census 2011)

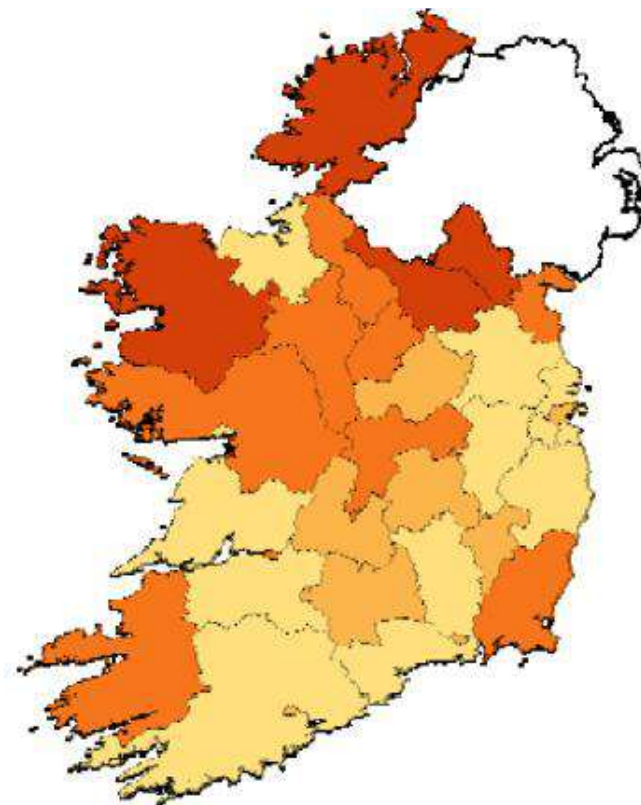


Across the spectrum between 2002 and 2011, the number of people ceasing education at Leaving Certificate dropped 11%, those finishing at third level at non-degree level rose by 52.6% and the number finishing at a degree level or higher rose by 46.1%.

Counties with the lowest educational attainment are indicated by the darkest shaded areas on the map below (Figure 8).

It shows that while low educational attainment is concentrated in the BWM region, there are also areas of low attainment in the South East.

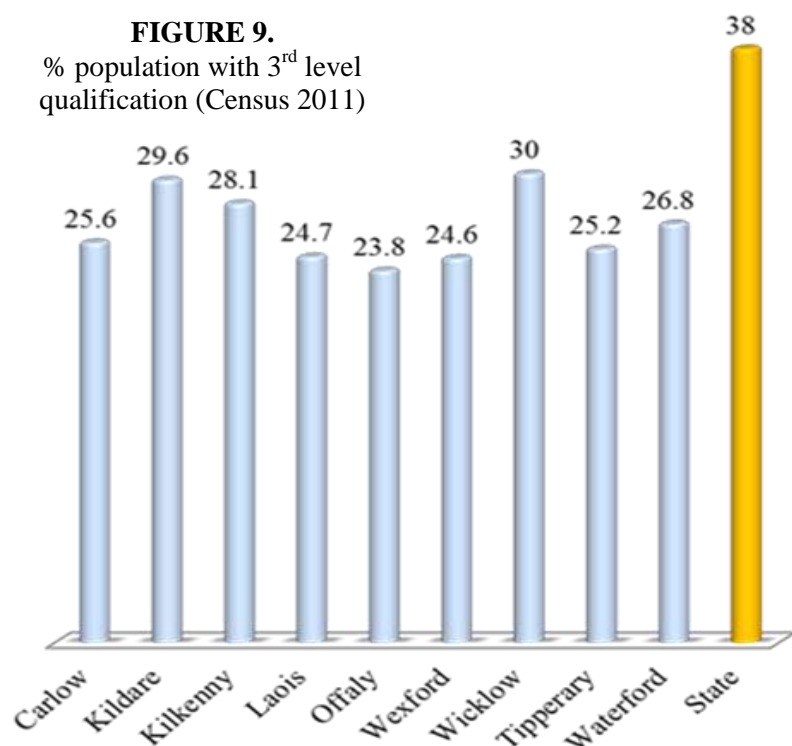
FIGURE 8.
% People (15+ Years) with No or Primary-only Education
(CSO, 2012 Profile 9- What We Know)



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FIGURE 9.

% population with 3rd level qualification (Census 2011)



CSO data shows that the **unemployment rate** in the South East region was slightly above the national average during the boom, but then rose much more rapidly and stayed close to 20% between mid-2011 and the end of 2012.

While this has fallen as the economy has begun to recover, the unemployment rate in the South East at **14.3%** (Q2 2014) remains well above the national rate of **11.8%**.

Given the already high age dependency ratio in the South East, this means that the total dependency ratio in the region –the proportion of people who depend on sources other than gainful employment from their income – is well above the

national average. This has clear implications for productivity, competitiveness and living standards in the region (Bacon, 2014).

Output growth and productivity have been weak in the South East region. During the ‘Celtic Tiger’ period from 2000 to 2007, GVA (gross value added per person) in the **South East grew by 39%**, compared to **54.8% for the State**. In 2007 it stood at €28,750 but by 2011, the latest year for which data have been published, GVA in the South East had fallen to €22,610, **a decline of 21.4%**. This compares with a fall in the State average from €37,937 to €32,224 in this period, **a decline of 15.1%**.

This indicates that the relative **underperformance of the region** has been **long term** and has been characteristic of both the boom and crash periods of the Irish economy (Bacon, 2014).

In the South East the serious weaknesses resulting in a relatively underperforming economic region include not only relatively low educational attainment and high unemployment rates, but also low disposable incomes, dependence on low value added sectors and low levels of foreign direct investment (Bacon, 2014).

The role of Waterford as a driving urban core in the South East region has been recognised in successive development plans for the region e.g., Regional Planning Guidelines for the South-East Region.

Waterford City’s position as the largest city in the region was undoubtedly the main factor leading to its identification as a Gateway in 2000 and its location as something of a transport node, notably the existence of Waterford Port, was also important.

However, research published by Forfás (2010) has cast doubt on the ability of **Waterford to serve as an effective Gateway for the South East region**, describing the city as ‘*a regional Gateway with limited regional impact currently*’.

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The study notes that the South East has a **distinctive settlement pattern** with five major centres of population in the region.

The study concludes that *‘The lack of genuine buy-in to Waterford as the regional gateway, the dispersed settlement pattern and competitive dynamics within the region has limited the realisation of the city as a driver for regional development’* (page 8).

The exact meaning of the reference to ‘competitive dynamics’ is not spelled out by Forfás, but Bacon (2014) has suggested that it is a reference to the fact that much of the northern part of the region – particularly counties Carlow and north Wexford – look more to Dublin for regional leadership. It is also likely that areas to the West of the Region look towards Cork City in a similar manner.

Given the emphasis that is placed in the NSS on local and regional leadership, this lack of an internal leading centre for development is a serious deficiency in terms of realising development along the lines foreseen in the NSS.

Independent researchers have also commented on similar problems with the NSS. For example, Meredith and van Egeraat (2013) conclude that, as a result of the lack of commitment at national, regional and county levels to the policy structure encapsulated in the NSS, the NSS has largely failed to deliver on its key objectives. This is certainly seen in the South East.

High level analysis of the economy of the South East indicates that there are a number of serious weaknesses that result in an underperforming economic region. The features of the South East economy have been noted in a number of reports and it is also clear that there are weaknesses in terms of the performance of Irish regional policy in the region and its potential to address the issues that have been identified.

The vision presented in this paper for the SETU acknowledges these realities and imagines a unique new knowledge infrastructure for the South East, configured to meet the unique challenges of the South East Region within the national and global context, and providing leadership, innovation and policy direction which will connect the South East internally and externally for maximum economic and social impact.

Pragmatic SETU organisational structures are envisaged for an engaged SETU capable of animating economic, social and cultural development. Specific examples include:

- **The SETU Regional Engagement Partnership Council developed as a coherent trans-regional entity and focused on developing the knowledge region of the South East from its current embryonic state into a structured interlocking system of counties, education providers, business, industry, community and regional partners.**
- **Configuring SETU Academic Units / Faculties for improved multi-disciplinary socio-economic innovation through an enhanced and flexible alignment with regional, national and international needs, rather than bound by historical discipline parameters.**

These and other proposals are elaborated on in Section 3 of this document and collectively generate an innovative business model for the SETU that will send a strong message to those seeking investment opportunities and research collaborations that there is a new strong vibrant and responsive organisation capable of making a regional, national and international impact.

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TABLE 5

Population Aged 15 Years and Over (Number) by Highest Level of Education Completed for each County or City *Census 2011*

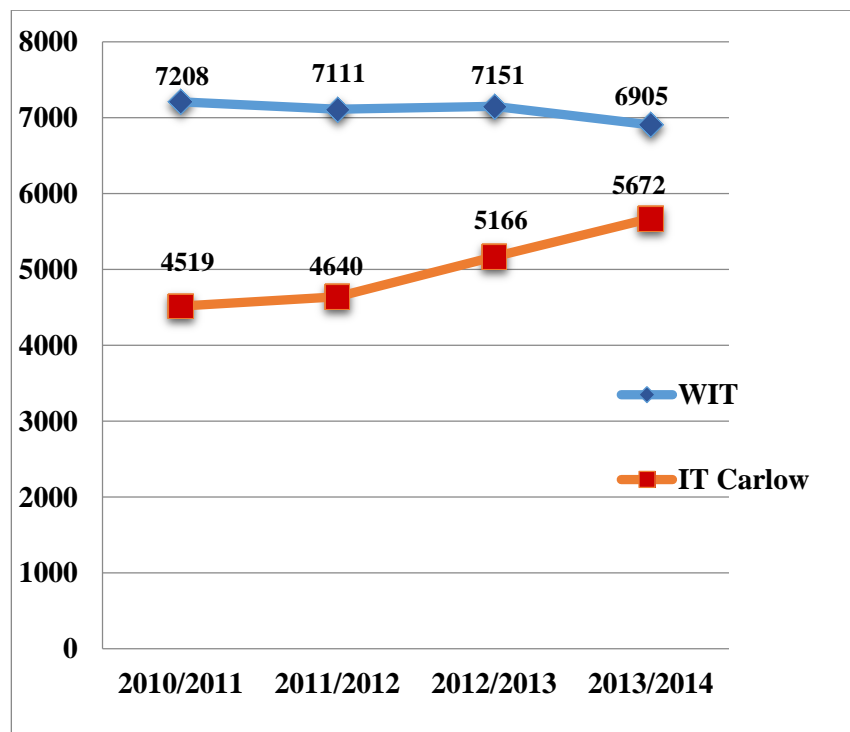
	Technical vocational	Advanced certificate/ apprenticeship	Higher Certificate	Ordinary Degree	Honours Degree	Postgraduate Diploma or Degree	PhD	Total
Carlow	3,519	2,422	1,685	2,102	2,376	1,754	130	13,988
Wexford	9,311	6,026	4,238	5,716	6,008	4,109	275	35,683
Kildare	12,310	8,403	6,866	10,654	12,720	10,294	920	62,167
Wicklow	8,233	5,640	4,605	7,196	8,056	6,600	689	41,019
Laois	4,894	3,196	2,397	3,298	3,646	2,374	129	19,934
Kilkenny	5,974	4,441	3,039	4,318	5,224	3,590	183	26,769
Waterford	6,981	4,455	3,389	4,896	6,011	4,330	386	30,448
Tipperary	9,801	6,840	4,266	6,789	6,938	4,953	421	40,008
Offaly	4,603	3,303	2,116	2,971	2,950	2,166	116	18,225

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2.2.3. Growth trajectories of the South East IoTs

The **growth trajectories of the two South East IoTs** are summarised in the diagram below (Figure 10). This data is comprised of all full-time and lifelong learning enrolments expressed as **whole-time-equivalent higher education learners on major awards**.

FIGURE 10
Growth Trajectories of the South East IoTs
2010/2011 to 2013-2014
(Expressed as whole-time equivalents)



In response to increasing demand for access to higher education opportunities, but decreasing state resourcing over several years, IT Carlow has re-organised and refocused its efforts to achieve sustained growth, with a 31% increase in enrolments over the past four years and a 56% increase in graduates over the same time period (2010/11-2013/14).

This total growth is comprised of a 22% increase in full-time students and a 52% increase in lifelong learners, which include those recruited under national labour market activation initiatives.

IT Carlow is committed to being at the forefront of new approaches to **balanced regional development** and distribution of the benefits of the economic recovery for all our stakeholders. The Institute is committed to the *2015 Action Plan for Jobs* and the key ‘Strategic Ambitions’ and ‘Disruptive Reforms’ detailed therein.

In terms of balanced regional development, it is significant that, in line with national trends, 50% of all South East full-time students pursue their studies in the IoT Sector (with 68% of these opting for either IT Carlow or WIT), with the remaining 50% pursuing their studies in the University Sector and specialist colleges outside the South East Region.

These figures have **remained consistent** from 2010/2011 to 2013/2014 according to published HEA data.

The collective ‘market share’ of South East full-time higher education students by the South East IoT’s has remained constant as the **total number of South East higher education students has increased by 2.5%** from 2010/2011 to 2013/2014 (from 19,110 to 19,587).

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The absence of a university in the South East Region means that 50% of the South East full-time student cohort is not catered for in the region.

Therefore it is evident that a new type of university, which caters for the students who have traditionally attended IoTs and a significant proportion of those with a tradition of attendance at universities, could be catered for in a unique multi-campus SETU.

This is consistent with the national vision for Irish TUs as evidenced by the *Process and Criteria for Technological University* (HEA, February 2012).

The 22% increase in full-time students experienced by IT Carlow over the four-year period is due to **multiple factors**, not least of these being increases in full-time learners from other Regional Authority Areas within the zone of influence of Carlow. For example, **full-time higher education students from the GDA have increased by 4%** from 2010/2011 to 2013/2014 (from 50,741 to 52,822).

The growth in **full-time students** at IT Carlow has been increasingly achieved through a **variety of mechanisms** including a strong focus on the **learner experience** and improved retention rates, growth in **international students** and **postgraduate opportunities**, increased movement towards **self-financing** higher education provision and diversified **income generation** to fund capital infrastructure.

With particular reference to the latter point, IT Carlow has brought **new multi-million euro facilities on-stream in 2012, 2013 and 2014**, and is scheduled to bring additional higher educational facilities on campus in **2016**.

This has been achieved over a time of no capital investment by the state in capital projects in higher education outside the GDA region.

The increased focus on self-financing higher education provision has now positioned IT Carlow as the sectoral leader in flexible higher education provision with 38% LLL students in 2013/2014; well exceeding the published TU criteria of 30%.

The growth in IT Carlow student numbers during a time of intense reform of the Irish higher education landscape and challenging economic times, is evidence of **IT Carlow's determination and ability to deliver for our region**.

IT Carlow's development has been guided by **sound governance and detailed strategic planning**.

It is an entrepreneurial and **financially-strong sustainable institution** that is well-positioned to form a SETU demanded by the stakeholders in our regions.

Our vision for the SETU is greatly informed by the **absence of a university in the South East Region** currently.

Our vision recognises the need to address the movement of intellectual potential out of the South East Region, while at the same time building a regional economy capable of absorbing increased intellectual capital generated in the region for the benefit of the region.

From the commencement of the SETU project with WIT in 2011, **IT Carlow has achieved all of the targets agreed in the joint 2012 Stage 1 SETU proposal** to the HEA (Section 5).

This **joint 2012 Stage 1 SETU proposal** formed the basis for Ministerial approval in May 2013 for progression of the SETU project to the next stage of the national TU process i.e. the preparation of a Stage 2 SETU Business Plan.

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In parallel with this, IT Carlow continues to roll out a number of **strategic capacity** building initiatives across all areas critical to the future SETU (see Section 5).

Our vision sees the **SETU providing synergies and critical mass** for the South East Region to a greater extent than any other higher education configuration.

Our vision for the SETU is focused on the full range of academic and scholarly experience across the spectrum of higher education opportunities and pursuits in keeping with the characteristics of internationally renowned Technological Universities.

We envision the SETU as a new type of Irish University: learner-centred in its philosophy; multi-campus in its organisation; devolved in its decision making; entrepreneurial and innovative in its thinking and culture, breaking down barriers between higher education, enterprise and community, driving knowledge creation and exchange, for the individual entrepreneur to the multinationals.

We envision that the SETU graduate will have a range of attributes, with traditional academic and technical skills and knowledge enhanced by inter-personal, social and innovative abilities, outlooks and attitudes that will drive the socio-economic and cultural development of the region and country into the future.

We envision that the SETU will build upon strong existing international traditions, with a significant percentage of SETU students from international backgrounds providing a diverse educational, cultural and social experience.

3. IT Carlow Vision for SETU

The opportunity to craft a new vision and a new form of university for Ireland in the 21st century and beyond is one that requires a new form of thinking and a new form of organisational culture and structure.

The Irish TU must have regional, national and international standing. It must develop alongside traditional Universities, Institutes of Technology, business, industry and the public sector, combining the academic rigour and long-term perspective with the commercial and business focus of industry.

As discussed in Section 2, the criteria published for Irish TUs appears to be focused to a large extent on the preparation of graduates for the workplace and the advancement of knowledge in the region. There is a particular emphasis in the Irish context on TUs being sustainable and efficient, service-led organisations.

International TUs are more ambitious in their vision, aiming to advance society and transform the future, in addition to being socially relevant, modern and global in outlook (Section 2.1.4).

It is therefore critical that in framing our vision, we meet the national requirements for TU designation while being as ambitious and as imaginative as our international comparators as we build an inspiring and convincing vision for the SETU and South East Region (Section 2).

The national requirement to merge with at least one other IoT before TU status can be conferred presents both opportunities and challenges for institutes.

The ultimate objective of building TUs is to lift capacity and performance of existing IoTs to better meet to meet the challenges of regional, national and global knowledge economies.

The challenge is to ensure a successful amalgamation of two or more organisations with complementary and mutually reinforcing strengths across a broad range of activities so that a new integrated stronger entity can emerge that provides the foundation upon which the new university can be developed

and take its place as an Irish Technological University alongside leading international comparators.

As summarised in Section 2 of this document, the SETU Vision presented by IT Carlow has been informed by:

- Government Policy including the Programme for Government 2011-2016
- The Irish Legislative Framework
- National Higher Education Policy and Strategy
- National Economic Strategy
- The Regional Economic, Social and Educational context and Stakeholder Expectations for the SETU
- International Institutional Classification Systems and International exemplars of successful TUs, including the University of Strathclyde, Scotland; the University of Coventry, England; the University of Oulu, Finland; RMIT University, Australia, and Eindhoven University of Technology, the Netherlands.
- Other universities that have been through the process of merger, and the establishment / development of multi-campus institutions, including the University of Ulster; the Metropolitan University, Copenhagen; University of Leuven, Belgium; Sheridan College, Toronto, Canada; and University of Illinois, USA
- Other Irish IoT Consortia who have progressed successfully beyond Stage 2 of the TU designation process in late 2014. [The International Independent Expert Panel Reports on the TU4 Dublin Consortium and the MTU Consortium are published on the website of the HEA].

Importantly, IT Carlow's Vision for the SETU is shaped by its beliefs and values, its history and successes, and a confidence in its future positioning within a rapidly-changing national higher education landscape.

A Vision Statement for the SETU is presented in Section 3.1. An overview of the Six SETU Vision Themes are presented in Table 6 and are elaborated on in Section 3.2

Vision Statement for the South East Technological University (SETU) and Implementation Framework

TABLE 6

Overview of the Six Themes for the South East Technological University

THEME 1	A Values-Aligned and Values-Driven Technological University
THEME 2	A Regionally-Engaged and Globally-Facing Technological University with a proven Transformative Leadership Role in Connecting the Region for Balanced Socio-Economic Advancement.
THEME 3	Professionally Ready Technological University Graduates
THEME 4	Focused Research Excellence for Enhanced Competitiveness and Future Growth
THEME 5	Achieving the Technological University Vision through Enhanced Intellectual and Human Capital
THEME 6	Establishing Public Confidence in the new Technological University

3.1. SETU Vision Statement

Ireland's Leading Technological University

Inspiring Individuals, Advancing Knowledge, Connecting our Region, Transforming Futures

At the South East Technological University, we inspire a lifelong passion for learning, exploration and discovery through education, research and knowledge exchange.

Our focus on 'knowledge in use' and our commitment to an outstanding learner-centred experience reflects our core values that prioritise student success, employability and entrepreneurialism.

We empower our students to be ambitious, courageous, innovative leaders and active global citizens.

The Technological University values all staff and supports them in pursuing their academic and professional interests in an intellectually stimulating, challenging and rewarding environment.

Through our intellectual capital and global partnerships we excel in a range of strategic research and knowledge exchange domains in key national and European priority areas. Our ongoing engagement with academic, industry and business leaders generates the highest calibre research and commercial outcomes, drives enterprise creation and development, and shapes our pedagogical and regional engagement strategies.

The Technological University, with its multi-campus structure and culture of creativity, innovation and connectedness, is at the heart of a diverse network of relationships designed to maximise its impact on our region and nation.

We provide transformative leadership with a global outlook, purposefully strengthening, connecting and uniting our region in policy development and implementation of ambitious strategies that ensure sustainable economic and social prosperity.

Our culture of innovation and enterprise maintains our world-class quality provision across our core strategic missions of teaching, research and engagement at the forefront of higher education.

3.2. SIX SETU THEMES

3.2.1. SETU THEME 1: A Values-Aligned and Values-Driven Technological University

Successful organisations identify and develop a **clear, concise and shared meaning of values/beliefs, priorities, and direction** so that all stakeholders understand and can contribute. Once defined, **SETU Values** will impact on every aspect of the organisation.

Research shows that organisations that seek to **align the values of the organisation with the values of its stakeholders and vice versa**, have the best long-term performance, are rewarding to work in, and more focused on the needs of stakeholders.

The values described below are those set out in IT Carlow's Strategic Plan 2014-2018 and these were formed through a detailed process of consultation

and facilitated workshops with the Governing Body, all staff and student representatives of the Institute in late 2013.

A cross-institutional collaborative and consultative process shall be employed to deliver an agreed SETU Values Statement. This process will create a shared understanding between partners and will build a shared vision.

The identified SETU Values will shape, drive and inform the organisational goals, strategy and decision making.

IT Carlow holds to its over-arching core value of the learner experience, sustained and enriched by our commitment to knowledge in use and achievement of excellence; to the principles and practice of connectedness, to creativity and innovation; and to ensuring high standards of integrity, moral and ethical behaviours in all its endeavours (Strategic Plan 2014-2018).

Learner Experience: We foster an inclusive and positive environment that values and supports learners in achieving their highest potential. We expect learners to be successful and to have pride in the achievement of their goals.

Knowledge: We are dedicated to enquiry and critical analyses, the creation of knowledge, its dissemination and application through our teaching, research and knowledge exchange activities.

Achievement of Excellence: We are proud of our professional reputation and celebrate our success in maintaining a proven track record and in our ambition to succeed.

Connectedness: Our growth is strengthened through nurturing and maximising our internal collaborations and our relationships with the communities we serve. We seek out and foster rewarding partnerships with our local, regional, national and international stakeholders.

Creativity and Innovation: We focus on the generation and sharing of ideas aimed at problem solving and providing innovative solutions that add value.

Ethics: Robust ethical principles underpin our purpose. Mutual trust and respect are foremost and are reinforced by strong governance, clear accountability and high values of integrity.

SIX SETU THEMES

3.2.2. SETU THEME 2: A Regionally-Engaged and Globally-Facing Technological University with a proven Transformative Leadership Role in Connecting the Region for Balanced Socio-Economic Advancement.

The SETU Regional Engagement Council

Through the *SETU Regional Engagement Partnership Council*, the organisation delivers an integrated and responsive provision that proactively engages and collaborates with regional, national and international partners in a structured, systematic and strategic manner.

The Council provides a coherent trans-regional entity, identifying and responding to real opportunities across the region through timely, dynamic and open dialogue with relevant stakeholders.

The primary objective is to develop the knowledge region of the South East into a coherent and structured interconnecting system of county leaders, education providers, business, industry, community and regional partners. It provides:

- Strategic advice and critical guidance to the SETU leadership on major strategic objectives.
- Leadership and policy direction with a global outlook, strengthening, connecting and uniting the South East Region in the formulation and implementation of ambitious strategies that significantly improve balanced regional economic and social progress.

The SETU Engagement Strategy

The SETU Engagement is structured around three key pillars:

- Education Provision
- Industry and Business Engagement
- Civic and Community Engagement

The SETU leverages its extensive networks to ensure regional connectivity in a global context.

In terms of **education provision**, the primary objective of the *SETU Regional Engagement Partnership Council* is to:

- provide high level advice on provision of a portfolio of programmes relevant to strategic regional development and to
- address access and progression issues by generating meaningful and systematic dialogue between education partners across the post-primary, further and higher education sectors. The existence of robust links between further education providers and the SETU is an important, distinguishing feature of the organisation.

With respect to higher education, and in addition to SETU's active participation in the *Southern Regional Cluster* and alliances with other national higher education Regional Clusters, systematic partnerships form an important part of the Council's and SETU's Engagement Strategy.

In relation to **business, industry and community**, the *Regional Engagement Partnership Council* develops collective intelligence for the economic and social profile of the South East Region and provides a forum for two way communication between the participants on new initiatives aligned to regional needs and imperatives.

The Council places those needs within a global perspective and guides the development of the SETU and the South East Regional Agendas.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

The Council is a mechanism for the SETU to exchange research and knowledge outputs, an internationalised outlook and best practice to regional partners, thus leading industry and professional development as well as responding to regional requirements.

It provides a forum to **harmonise the strategic plans** of the partners and facilitates the development of **collaborative bids** for development grants from national, EU and international sources. It provides a comprehensive collaborative base for the attraction of **international inward investment** across the region.

The SETU is fully committed to the national higher education *Charter on Civic and Community Engagement* and is to the fore of best international practice in meeting and exceeding its civic role and responsibilities through its teaching, community-based learning and research, volunteering, public discourse and policy direction activities.

The Globally-Facing SETU and the SETU Internationalisation Strategy

SETU is a regional leader providing a genuine nexus between supply and demand through proactively anticipating and responding to regional business, industry and community needs, bringing new global thinking to bear on regional challenges and thereby also shaping supply and leading demand in its teaching and learning, research, innovation and knowledge exchange endeavours.

SETU's Internationalisation Strategy is closely aligned with the National Strategy's definition of target countries and the particular needs of the SETU. In addition, a key principle of the SETU is international collaboration with similar institutions.

The SETU's global network of partners increases access to the necessary intellectual, physical and financial resources required: to ensure that SETU graduates take an active citizenship role in shaping the world; to enhance graduate and staff mobility internationally; to enrich the learner experience and graduate attributes through an internationalised curriculum and culturally diverse environment; and to reinforce regional development initiatives

through international activities and strategic partnerships, increasing capacity and complementarity. The SETU's internationalised curriculum is an essential component in the local becoming global, in our learners being 'glocalised' citizens.

The SETU *International Strategy* reinforces balanced regional development in the South East via the encouragement of inward investment from non-national companies, arising from SETU's leading expertise in: research and knowledge exchange; innovative and flexible higher education programme development and provision across the region; connecting indigenous companies with international partners; producing globally aware graduates whose international outlook can be engaged with wider markets.

The SETU continuously widens its portfolio of strategic partnerships to enhance its capacity and impact; to enable it to access new markets and acquire international funding; and to secure complementary expertise.

These encompass joint/double degrees; student and staff exchange; postgraduate programmes; joint research projects and off-campus international provision. International benchmarking is of paramount importance to the SETU and it engages strategically with leading international TUs to ensure the highest standards across all areas of activity in: teaching and learning; research, innovation and knowledge exchange; and engagement.

The Unitary Multi-Campus SETU and Academic Units Configured to maximise Socio-Economic Innovation

The achievements of the SETU in this important thematic area is enabled by the university's commitment to an entrepreneurial, innovative and creative organisational culture, that is focused on breaking down barriers between higher education, enterprise and community, driving knowledge creation and exchange, from the individual entrepreneur to the multinationals.

The innovative configuration of SETU faculties is reflective of the current and future needs of the region, and continues to provide an important mechanism for stimulating enhanced economic, social and cultural innovations, through improved alignment with regional and national innovation priorities.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

This has been an important factor in supporting the South East Region in its transition from an over-reliance on low-technology industries, towards a more balanced and advanced economic performance in areas such as the Bio-economy, Agri-Food, Bio-energy, Tourism, Internationally Traded Services, ICT (Services & Software), Health and Life Sciences.

Examples include:

1. The SETU Faculty of Health and Life Science, aligning Humanities, Science, IT and Engineering for the improved identification of societal issues for research and teaching relating to, *inter alia*, nutrition, active aging and social care, healthcare, data analytics.
2. The SETU Faculty of Sustainability Systems, aligning the traditional engineering skills of the region and the development of energy technology in biomass, wind and tide, with future energy storage technologies and economics thereby connecting science, business and engineering disciplines in the SETU.
3. The SETU Faculty for Internationally Traded Services, aligning IT / IS, humanities, hospitality, design, logistics, digital communications, and marketing with law and finance to focus on the domains of economic activity at which the region may excel now or in the future working with the entrepreneurial actors who are not only the people creating new companies but also innovators in established companies, in academia and in the public sector.

These and other innovations have secured the reputation of the SETU as a strong vibrant and responsive organisation, making a significant contribution to regional and national development.

SIX SETU THEMES

3.2.3. SETU THEME 3: Professionally Ready Technological University Graduates

SETU's programme portfolio spans level 6 to level 10 of the NFQ, embracing the spectrum of academic disciplines that align with the universities commitment to 'knowledge in use' and with regional and national development needs.

The SETU prioritises and continuously invests in the creation of a vibrant, **learner-centred environment for innovative teaching and research** as it serves the needs of an increasingly diverse regional learner population.

Pioneering developments in teaching, learning, assessment and curricular development emphasise '**knowledge in use**' as a core tenant of the modern universities. This approach is consistent with the strategic teaching and learning objectives articulated in the *National Strategy for Higher Education to 2030* and is one of the key distinguishing features of the SETU.

SETU provides all learners with the highest quality **learning and teaching experience**; integrating research; enhancing the first-year experience; ensuring flexibility of programme provision; and strengthening the focus on learning outcomes to ensure that all SETU graduates are equipped for the challenges and opportunities of a dynamic, globalised, technologically-advanced and knowledge-based society.

The SETU **situates industry-based and practice-based learning** in its programmes in the form of internships, work based learning, research and practice. Central to this approach is a formal and dynamic engagement with external stakeholders, particularly employers and industry groups, to ensure SETU graduates are ready to make an immediate and significant contribution to society, culture and the economy.

The *SETU Regional Engagement Partnership Council* provides an important mechanism to engage systematically with external partners in **curriculum development** / enhancement and to drive the regional development agenda.

Student attainment is assessed in diverse, innovative and directly relevant ways, in order to measure and demonstrate subject-specific knowledge, skills and competencies and important generic graduate attributes. Quality is defined in terms of outputs such as student performance, rather than inputs.

The learning environment goes beyond the traditional boundaries of a university, emphasising **learning in different modes and in different contexts**.

SETU's investment in e-learning and infrastructural development is a vehicle not only for delivering discipline-specific content but for engaging students with technology in an innovative manner and creating a student-engaged peer learning space.

This is developed to provide the platform for programme design and delivery targeting alternative student cohorts with options to participate in SETU programmes and building on current proven capabilities.

Building digital capacity in SETU is focused on developing '*skills, competences and attitudes that enable people to work, live and learn in a complex world that is increasingly digital*'.

This speaks in a particular way to the vision for change articulated in the National Strategy for Higher Education:

"The nature of the learning community and the modes of teaching and learning will also change significantly over the coming years. These changes will be supported through innovative approaches to research-led teaching and learning, programme design, student assessment and a quality assurance system – all of which will reflect a new emphasis on nurturing creative and innovative minds."

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Building digital capacity **challenges the SETU to address the complex and dynamic balance between innovation in academics' teaching practices and the changing expectations and learning experience of digitally-proficient students exploiting the virtual learning environment.**

The second report of the *High Level Group on the Modernisation of Higher Education* (2014) focuses specifically on new modes of learning and teaching in higher education and asserts:

“There remains a culture of conservatism within European higher education which needs to change ... while a broad range of good practice is already emerging across Europe, this is happening to a large degree in an uncoordinated bottom-up approach. It is now time for governments and institutions to develop comprehensive strategies at both the national and institutional level for the adoption of new modes of learning and teaching within higher education.”

The SETU embraces active learning through blending face-to-face, virtual, synchronous and asynchronous interaction in novel ways.

The **quality assurance and enhancement approach of SETU is aligned with the learner-centred, externally-engaged curricular approach** outlined above. The quality assurance approach by necessity involves a strong focus on externally-engaged activities.

The SETU promote the holistic development of all learners in a **supportive professional environment** in an equitable manner irrespective of campus, meeting their personal, social and educational needs.

The SETU continues to enhance and integrate professional learner support services and to encourage vibrant personal development activity and **civic engagement** through partnership with the Students' Union and the learner body.

The SETU continuously invests in people, facilities and services to ensure that it delivers an outstanding learner experience.

SETU Graduate Attributes Charter

The SETU has, as a constant thread, the development and promulgation of **graduate attributes** across the spheres of teaching, learning, research and engagement.

The qualities and skills embodying the core values of the SETU have been specifically chosen to give the graduates the strategic edge in employability as well as enhancing their capacities to be leaders in the community leveraging their ethical understandings. SETU graduate attributes embody the core values of the university and ensure graduates who are ambitious, courageous, innovative leaders in the global community.

The *SETU Graduate Attributes Charter* details the curriculum map, facilitates constant curriculum renewal and drives the pedagogic and assessment processes within the university. These attributes are principles that the SETU community values, and therefore seeks to foster through all of its programmes and the learner's broader experience. They provide the learner with the means to identify, strengthen and communicate how they are:

- **creative and critical thinkers**, generating original ideas and concepts, and appreciating innovation and entrepreneurship
- **empowered**, having both the capacity and confidence to pursue the attainment of full potential
- **engaged**, contributing positively to diverse communities through service and leadership
- **ethical**, acting with integrity in intellectual, professional and community pursuits
- **knowledgeable**, building disciplinary and interdisciplinary knowledge through a scholarly approach incorporating global and regional perspectives

The structure of the *SETU Graduate Attributes Charter* allows interpretations of the statements to differ between academic domains, yet retaining overall cohesion. This tailoring is designed to ensure the graduate attributes are relevant to all levels within the SETU.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

‘Graduate attributes are the qualities, skills and understandings a university community agrees its students should develop during their time with the institution. These attributes include but go beyond the disciplinary expertise or technical knowledge that has traditionally formed the core of most university courses. They are qualities that also prepare graduates as agents of social good in an unknown future.’

Bowden, Hart, King, Trigwell & Watts (2000)

Staff development processes and quality assurance and enhancement activities are in place to ensure a consistent approach to graduate attributes development within the university.

The development and enhancement of the *SETU Graduate Attributes Charter* demonstrates a commitment to broadening and deepening the learner experience and reinforces the **outward-looking entrepreneurial nature of SETU education and research**.

The *Regional Engagement Partnership Council* (Theme 2 of the SETU Vision) informs the continual enhancement of the Graduate Attributes Charter and acts as conduit to inform the organisation as to the key features SETU graduates must possess to prepare them for the world of work and as agents for social good.

The Charter also acts to:

- make clear to current and prospective students the **wealth of opportunity** that studying through the SETU offers to them;
- describe a **common experience** for learners studying in varied and disparate areas;
- provide an easy and coherent structure against which to **identify the merits of new developments**, especially in relation to learning and teaching, research and engagement.

SIX SETU THEMES

3.2.4. SETU THEME 4: Focused Research Excellence for Enhanced Competitiveness and Future Growth

Research and Development is driven by collaboration between academic research centres, industry partners and key government and other agencies of the State.

SETU's research strategy and activity **harness these collaborative energies to focus and align research activity with regional, national and European prioritisations**. This ensures that research activity can achieve the highest international standards and that plays a major part in EU, national and regional economic development.

The **SETU research paradigm** is built around "**Knowledge in Action**". It focuses primarily, although not exclusively, on applied, problem-oriented research and social and technological development and innovation, with direct social and economic impacts and public and private benefits for our region and country.

This principle of **enquiry-based learning is embedded across all programmes and is a hall-mark of the university**.

SETU has clear recognised international standing in **strategic research** areas, offering continued focus on areas that have potential for the regional economy and already identified for prioritisation at National or European level.

It is a core principle of 'Knowledge in Action' that this research is an open and embracing activity that **contributes to the wider teaching and regional engagement agenda of SETU**.

Focused Research Excellence at SETU

SETU is operating at an internationally-recognised level in a number of high priority areas with track-records in high quality outputs and economic impact (see Appendix 3) including:

- Telecommunications Software and Networks,
- Bioenvironmental and Agricultural Sciences and
- Biopharmaceuticals.

These areas of research excellence represent a significant research and innovation resource for the South East Region and are a **draw for potential FDI partners and international research collaborators**.

These areas offer significant potential for continued expansion and SETU has established a **clear strategic investment and development plan** to capitalise on advances in these areas for the benefit of stakeholders.

Early-Stage and Emerging Research at SETU

Emerging areas with strategic potential are identified and developed. For example current developing themes include:

- Enterprise Development and Regional Economy,
- Interactive Applications, Software and Networks,
- Knowledge and Organisational Networks,
- Product Design,
- Macular Pigment research,
- Men's Health,
- Addiction Research,
- Applied Materials Research,
- Security Technologies,
- Microelectronics and
- Aero-Engineering.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

SETU's **intellectual capital** and **global partnership network** builds the research system into one that ensures a dynamic relationship between learners across all levels of the NFQ with external partners to significantly accelerate and expand the realisation of commercial value from **innovation related activity** and lead and build on **regional innovation strategies** of local authorities and national development agencies.

Research and Knowledge Exchange in Regional Development

An effective **knowledge exchange framework** enhanced by strong relationships with industry and regional stakeholders has characterised research activity to-date.

The SETU partners are identified by Enterprise Ireland as the top-performing participating HEIs in their funded Innovation Voucher initiative (over 300 industry-focused projects completed under the programme since its inception in 2009). This continues to be an important focus for SETU.

External engagement and enterprise/ industry collaborations are cornerstones of the research philosophy and research practice of both SETU partners and this ensures constant attention to the relevance of research output and a willingness to develop and adapt programmes to meet demand.

Our research system is a key driver in informing and shaping graduates and is embraced by a wide portfolio of teaching programmes that emphasise self-directed learning and develop the research skills for all our learners.

SETU Graduate Programmes

SETU has established **cross-campus graduate supports and programmes to reinforce research practice and strategy across the region.**

SETU **Graduate School** programmes draw on (a) established and emerging research strengths and (b) collaborations with other higher education institutes and industry partners.

A defining characteristic of SETU Graduate Programmes is the embodiment of the principle of 'Knowledge in Action' and this is manifest in:

- Innovation in design
- Flexibility / modality of delivery
- Relevance of focus

to ensure a broad portfolio of programmes at level 9 and above for learners across the region, whether in the workplace or on campus.

Research Careers and Mobility

Building up the human capital or resource base for research activity across the region is a key priority for the SETU. Graduate Programmes are mapped to clear research career pathways and opportunities for international mobility – both in and out of the region.

SIX SETU THEMES

SETU THEME 5: Achieving the Technological University Vision through Enhanced Intellectual and Human Capital

The achievements of SETU arise from the **talent, creativity, imagination and commitment to excellence of all staff** in delivering SETUs vision.

The University prioritises the attraction, development and retention of the **brightest intellectual capacity** available to ensure **global competitiveness**.

The SETU motivates staff toward the **highest levels of performance and achievement**. Performance processes and benchmarking build upon best practice and professional relationships.

Roles are well designed, fit for purpose and support staff in enhancing their careers, with many opportunities for individuals to develop beyond the confines of their current role.

Managers and leaders are focused on staff development and the **nurturing of talent**. They actively encourage innovation and support the pursuance of the vision and ethos of the University.

This is achieved through the following measures:

- The **recruitment** of highly qualified, experienced and talented staff who are **entrepreneurial** in outlook. In recruiting academic staff the emphasis is on attracting the best with appropriate **Level 10 qualifications and other terminal professional qualifications**, coupled with the skills and attributes of excellent teachers who are **learner-centred, research active and professionally committed to working collaboratively with external agencies and employers**. SETU professional support staff are qualified and **practiced in their field**. They are committed to the vision and mission of the SETU and are creative and responsive in meeting new challenges.

- The SETU is a knowledge-focussed environment committed to the continuous enhancement and development of staff expertise. The SETU academy fosters a **culture of scholarship and enquiry-based learning** which informs teaching across all fields. Structures are in place to support all staff to develop and enhance appropriate qualifications and expertise. Supports encompass, *inter alia*, **staff exchanges, research sabbaticals and visiting faculty**. The vision and ethos of the SETU drives the design and delivery of this continuous development programme, its entrepreneurial focus and the imperative of being responsive in all activities.
- The SETU is outward looking and agile in meeting the needs of enterprise and other external stakeholders. This is facilitated by the ability and enthusiasm to work with adjunct faculty, visiting professorial and professional staff from industry.
- The SETU consults with professional and occupational groups, business and industry organisations, and individual employers, as appropriate, in developing its curriculum. Exchange programmes provide opportunities to gain experience that will inform learning and enhanced organisational capacity in all its activities. Inward exchanges from industry further enhance and enrich institutional capacity.

The SETU values academic endeavour and excellence and in pursuit of this, it embraces a culture of equality, diversity and access.

SIX SETU THEMES

3.2.6. SETU THEME 6. Establishing Public Confidence in the new Technological University

As a Technological University, SETU is a **new institution** in the context of Irish Higher Education. As such, it is critical to establish public understanding and confidence in the new entity.

Public confidence in the SETU is determined by the extent to which it achieves and communicates its vision and mission, the quality of its leadership and extent of its contribution to society.

Leadership of the SETU provides the University with clear direction, a sense of purpose, enlightened strategic thinking, a culture of responsibility and accountability and a set of values that inspire all members of the university to excel.

The SETU is an internationally oriented organisation, with a **robust self-evaluation, peer review and quality enhancement culture**.

A keen awareness of, and progression in, various ranking systems such as the Quacquarelli Symonds, Times Higher Education (THE) and U-Multirank systems, play a role in building public confidence for academic institutions.

SETU recognises that all such systems must be viewed with the caveat that these can produce imbalanced and selective outcomes not adequately reflective of differing missions and diversity of activities. Of the systems currently available SETU uses U-Multirank as a planning and self-mapping framework because of its stronger focus on higher education diversity and quality of academic offerings.

A culture of **openness and transparency** transcends all activities of the SETU and supports the **goal of excellence** in all SETU endeavours in an environment through which **academic freedom and creativity thrives**.

The SETU has a distinctive organisational, governance and management structure that draws on international best practice for distributed management and administrative support structures for a regionally engaged multi-campus higher education organisation.

Governance and management functions reside on and between campuses to provide connectedness and accountability between the organisation, learners and stakeholders across and beyond our region.

The structure embodies a culture of accountability, transparency and a cognisance of the **public good** as a publicly owned and funded organisation should.

This culture transcends all activities of the SETU and supports its goal of excellence in all its endeavours.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

4. Implementation Framework for delivering the SETU Vision

4.1. Introduction

The criteria set by the HEA for TU designation that relate to governance, management and leadership have guided much of our deliberations and these are summarised as follows:

- Governance structures that reflect the **external orientation** of the institution and the engagement focus of its programme of study;
- An integrated academic governance structure that gives coherence to **multiple units**, with consolidation of previously autonomous institutions where they existed, within the framework of the institution’s mission;
- A **leadership team that combines strong academic credentials and experience in enterprise and professions** relevant to the institute’s mission;
- **Effective** institutional-level academic **governance** with the authority, processes and competence to ensure the quality of programmes of study and the quality and integrity of other academic matters.

Recent draft legislation also includes criteria relating to the requirement to have “*a high standard in the overall management and governance of the institute concerned, including the establishment of properly integrated and effective academic governance structures sufficient to enable the institute to deliver the objects and functions of a technological university in accordance with Section 50.*” (General Scheme Technological Universities Bill, Head 28(2) (h)).

4.2. Ten SETU Organisational Principles

The Governing Bodies of both Institutes committed in their Memorandum of Understanding (2012) to an agreed structure for a merged institution that “....

*will be based on the fundamental principle of a **strategic amalgamation for mutual growth** of the two institutions, leading to the amalgamated new entity becoming a Technological University.”*

In arriving at a proposal for this new entity the principles set out in the 2012 MOU have been developed further to provide the basis for determining the structures of the SETU. These are:

- i. Existing management and operational structures will not be transferable to the new institution and new management structures will be required.
- ii. The **multi-campus nature** of the SETU will be one of its distinguishing features; this will present opportunities and challenges that cannot be realised by the existing, independent and separate institutions.
- iii. We are creating **one new integrated unitary entity** from two existing autonomous institutions. Consequently, we will have one new governing body, one new academic council, one executive team and one management structure for the new organisation. This management structure will give expression to the core principles by which the SETU will operate.
- iv. The management and administration of this new type of institution will be distributed across the region. **Governance and management functions will reside on and between campuses** to provide connectedness between governance and management and the staff, learners and stakeholders across the region.
- v. The approach to the Governance and Management philosophy of the multi-campus Merger/SETU will be peripatetic. **The regular presence of the President, Management Team and Governing Body at all campuses in particular is crucial for success** – facilitating positive perceptions, accessibility and the undertaking of local business.

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- vi. **Staff and learner participation** will be ensured through consultation forums established across the SETU. **The statutory bodies, Governing Body and Academic Council, will convene their meetings across the various campuses on a rotation basis.**
- vii. The Faculty will operate as the locus for the delivery of the SETU's academic strategy; Faculty plans will derive from and be consistent with the SETU's overarching strategic plan.
- viii. Faculty structures will differ from existing School structures in the IoTs to allow for **greater flexibility and will have devolved responsibility.**
- ix. The SETU learner experience and awards will not be distinguishable by location. All academic programmes and support services will be based upon **common institutional standards** and a commitment to excellence in service delivery to all learners and staff.
- x. All principles will be underpinned by a **common quality assurance framework** ensuring equity for all learners of the SETU.

Academic Affairs and Learning Experience	<ul style="list-style-type: none"> • Academic Affairs, Strategy and Planning; Learner Admissions and Assessment; Learner Support; Library and Information Services
Research and Innovation	<ul style="list-style-type: none"> • Research and Innovation; Graduate Studies, Enterprise Support and Knowledge Exchange
Flexible and Lifelong Learning	<ul style="list-style-type: none"> • Extended Campus, Work-based Learning and Outreach; Distance and e-Learning; Post-experience and Executive Learning

4.3. A SETU Leadership and Organisational Framework

- 4.3.2. **Governing Body** - The statutory basis of the Governing Body of the SETU will be enshrined in the forthcoming Technological Universities Act and its functions will be largely determined by that legislation.
- 4.3.3. **Academic Council** - The statutory basis of the Academic Council within the SETU will also be established in legislation.
- 4.3.4. **Quality Assurance Framework** - The SETU quality assurance and enhancement framework will embed and validate the highest standards of quality within learner and staff development, programme offerings across all levels of the National Framework and research output and will provide a mechanism to monitor and validate SETU-wide performance across the multiple campuses.
- 4.3.5. The **Senior Executive Team** will be comprised of the President, four Executive Deans and six Vice-Presidents leading the areas summarised below:

Engagement and Internationalisation	<ul style="list-style-type: none"> • Regional Engagement; Internationalisation, Civic and Community Engagement, Communications
Human Resources	<ul style="list-style-type: none"> • Human Resources Strategy, Employee Relations; Recruitment, Selection and Resource Planning; Organisational Development
Corporate and Professional Services	<ul style="list-style-type: none"> • Finance, Physical Infrastructure, Legal, Corporate and Secretariat

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4.4. Academic Management Structure

- 4.4.1. A key driver in achieving the desired level of academic autonomy will be the Faculty which will be **largely decentralised, cross-campus and autonomous**, while remaining subject to institutional strategies, policies and procedures governing the SETU.
- 4.4.2. Faculties will be organised as **multidisciplinary clusters** of discipline-specific subject groups encompassing research activity of international standing.
- 4.4.3. **Innovative and systematic cross-Faculty arrangements** will be planned to ensure inter-disciplinarity as a strong and distinguishing feature of the SETU.
- 4.4.4. Faculties will be of **sufficient scale** to ensure the sustainability of a range of activities, specifically flexible programme delivery (undergraduate, taught post-graduate, and research degrees), research activity, and to maintain appropriate formal external partnerships.
- 4.4.5. **The Faculty management structure will consist of the Executive Dean, Vice Dean, Associate Deans and the Faculty Manager.**
- 4.4.6. **Professors, Chairs and Adjunct Faculty**
 - 4.4.6.1. Faculty academic leadership will be supported by a cohort of professors, who have achieved academic prominence with clear criteria, based on international academic and research metrics for their recruitment, promotion and performance measurement.
 - 4.4.6.2. Policy around professorial appointments, style and title will be located within a comprehensive policy on institutional promotion pathways where such promotion is a competitive process.

- 4.4.6.3. Provision will also be made for the formal appointment of Adjunct Faculty who will be individuals distinguished by high achievement in business, enterprise and society who have been recognised by peers as outstanding in their field.

4.5. Administrative and Professional Support Structures

- 4.5.1. Administrative and Professional Support Structures will be **integrated across all campuses** of the SETU. A **multi-centre model** will allow for the **equitable and consistent provision of supports** and services to all, where centralised units are **distributed across campuses**, supported by additional complementary units on other campuses. They will be required to:
 - (i) Develop, implement, review and continuously enhance SETU strategies and policies across all of the key functions underpinning the learner experience and support for all aspects of the SETU including IT/IS, Finance, Student Support Services, Academic Administration, HR, Estates, Enterprise Support and Knowledge Exchange etc.:
 - (ii) Manage the day-to-day operations of the SETU.
- 4.5.2. Faculty **administrative functions will not be campus-specific** but will be integrated across campuses, mirroring the larger Faculty structures.
- 4.5.3. The Faculty-based SETU will have **an agile and responsive resource allocation** model.

4.6. Research Units

- 4.6.1. The capacity of the SETU for the creation and exchange of knowledge in **prioritised research areas** will be derived from the breadth and depth of expertise and physical infrastructure / assets across the multi-campus SETU, and that of our national and international collaborative partners.

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- 4.6.2. Prioritised research areas will be strengthened by **cross-campus groups, centres and institutes, leveraging intellectual capital and collaborative partnerships, and maximising access to valuable research infrastructure across the region.**
- 4.6.3. Research groups and centres will **operate within the Faculty structure** to ensure a **strong connectivity** with the SETU's **wider teaching and regional engagement agenda.**

4.7. Graduate School for the South East

- 4.7.1. In keeping with the vision for the SETU Graduate School, programmes will be developed in **partnership** with local industry and other stakeholders across the region to ensure that provision represents a response, not only to European or national funding prioritisation but that provision also represents an informed response to specific regional and sectoral demand; once again '**connecting our region**'. This **responsiveness to regional and sectoral need** will continue to be a distinguishing feature of graduate education provision by the SETU across the region.
- 4.7.2. The SETU will offer a comprehensive range of programmes at NFQ Level 9 and NFQ Level 10. Academic supervision and programmatic responsibility for the delivery of discipline-specific elements of graduate programmes will rest with the Faculties, the Executive Deans and through them, with programme boards. Individual learners will be attached to a specific Faculty. Typically a learner's principal supervisor will be attached to the same Faculty as the learner. In this manner, the Faculties will ensure **a seamless integration of research and research-led teaching and learning** that will inform the development and enhancement of programmes at all levels.

- 4.7.3. The co-ordination and support of programme delivery at NFQ Level 9 and NFQ Level 10 will be the responsibility of the SETU Graduate School.
- 4.7.4. A **Graduate School Board** will have responsibility for the governance and oversight of the Graduate School. The board will comprise the VP for Research and Innovation and each of the Executive Deans (or nominees) and three representatives from regional industry.
- 4.7.5. A **Graduate School Director** will be responsible to the Graduate School Board for the direction, development, operation and management of the SETU Graduate School.

The terms and conditions of staff in the Technological University will be determined by relevant legislation, by procedures determined by the Minister for Education and Skills and by collective agreements arrived at with recognised trade unions representing institute staff. In achieving the new structures the following will inform developments:

- There will be no compulsory redundancies.
- There will be no compulsory redeployment between campuses.

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5. The South East IoTs Stage 1 SETU Submission 2012 and Progress Towards Agreed 2017 Targets

IT Carlow is the 4th largest of the 14 Institutes of Technology with over **7,000 total students** in the current academic year (2014/2015), 700 staff and more than 40,000 graduates who are pursuing fulfilling and successful careers in all walks of life, nationally and internationally.

An Institute with extensive collaborative provision and strong international links across Europe, China, Korea, USA, Malaysia, Saudi Arabia, Oman, Brazil and India, IT Carlow currently provides access to high quality higher education opportunities from Level 6 to Level 10 of the National Framework of Qualifications, in Carlow, Wexford, Wicklow, Kildare, Dublin and Shannon.

IT Carlow has a published vision to be *'Ireland's leading Technological University by 2030'*.

Combining the strengths of two or more institutions is an important element of the national TU process and one that IT Carlow has subscribed to in the context of a multi-campus SETU. There is an expectation that the successful amalgamation of two or more Institutes will create a new integrated entity that will broaden and deepen the academic, research and engagement activities across the new unified institution, while ensuring an enhanced platform on which to build an internationally-recognised and nationally-relevant Irish TU, that meets and exceeds a high level of performance across at least 40 nationally-established TU criteria.

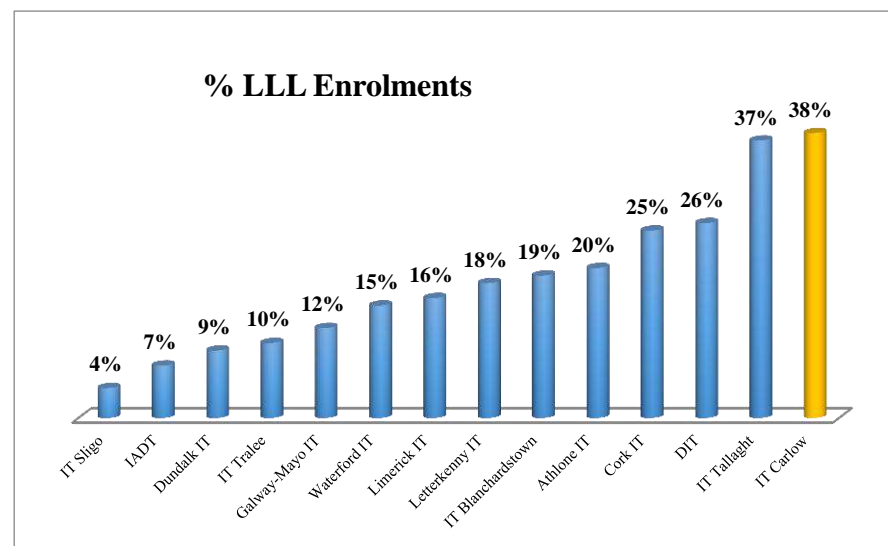
These criteria fall under the following eight general categories: Mission; Institutional Profile; Student Profile; Staff Profile; Teaching, Learning and Curriculum Development; Research; International Profile; Leadership, Management and Governance.

From the commencement of the TU process, **IT Carlow has achieved 2017 targets agreed in mid-2012 with WIT**. These targets were detailed in the Stage-1 joint submission of IT Carlow / WIT in July 2012 to the HEA, which

was assessed by an international panel and approved to proceed to Stage-2 of the national process in May 2013 by the Minister for Education and Skills. The considerable progress in all areas are presented in the following sections.

5.1. Flexible Provision

An international review panel has commended IT Carlow for its entrepreneurial spirit and culture in broadening opportunities for learners through a range of flexible higher education provision models, while also developing non-exchequer income streams. Evidence of this is the fact that IT Carlow is the sectoral leader in flexible higher education provision with **38% LLL students in 2013/2014**; already exceeding published TU criteria of 30%.



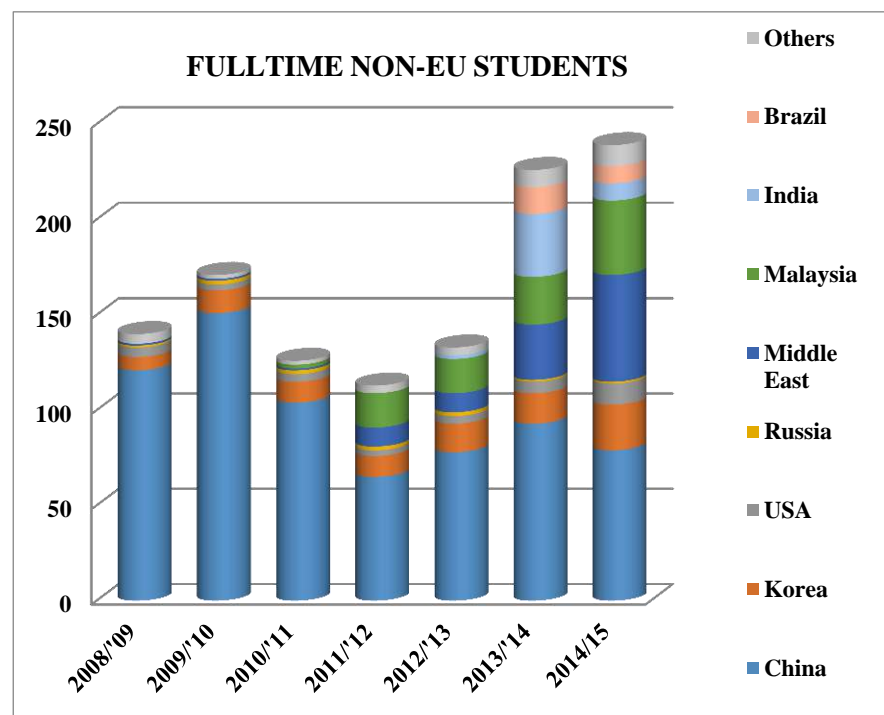
The same metric for the **combined SETU was 24%** in 2013/2014 (Table 8). This compares to 22% and 27% for the MTU and TU4Dublin Consortia, respectively. This strong performance in the flexible provision of higher education opportunities has contributed to the **31% overall increase in total students** since 2010/2011 in IT Carlow in 2013/2014. **Graduates have increased by 56%** over the same time period (2,100 graduates with major awards in November 2014).

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5.2. International Students

The Institute has increased non-EU International fee paying enrolments by 52% in the past three years. In line with the Governments International Education Strategy 2010-2015, IT Carlow has worked with state agencies to diversify their student intake with a particular emphasis on BRIC countries

and on the emerging Middle-East scholarship market. Together with a vibrant EU / Erasmus student body the Institute now has a high quality multi-cultural environment meeting all of the requirements for the soon to be launched International Education Quality Mark.



5.3. Postgraduate Research

The new IT Carlow **Dargan Centre for Research and Innovation** was **opened in 2014** and provides an integrated and high quality physical environment for the Institutes targeted high priority areas for postgraduate studies, knowledge creation and exchange activities in:

- Bioenvironmental Technologies,
- Product Design,
- Computer Gaming,
- Advanced Security and Protection Technologies
- Microelectronics Circuits Design
- Applied Social Policy.

96 higher degrees by research have been awarded to-date across these research areas, with **40% at doctoral level**.

The impact of the research is high, as indicated by high weighted-citation impact results for research publications in peer-reviewed international journals.

For example, the comparative data presented in Table 7 exemplifies the **quality** of the research currently conducted at IT Carlow. This metric was compiled using the SciVal research metrics tool from Elsevier and covers a broad range of international science, computing and engineering publications from **2009 to 2013**. This shows that IT Carlow scores well above the IoTs combined and are up or above 'University level'. This provides a clear indicator of quality and now the Institute is in the process of **scaling these areas up** to meet and exceed TU criteria by 2017.

IT Carlow has achieved a **66% increase** in postgraduate researchers in the past two years, while achieving a number of knowledge exchange targets that continue to deliver jobs and add value to the economy. Of the current postgraduate researchers cohort 40% are on the doctoral pathway.

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TABLE 7.

Field-Weighted Citation Impacts

Institution	Field – Weighted Citation Impact *
Massachusetts Institute of Technology	2.45
California Institute of Technology	2.42
<i>Institute of Technology Carlow</i>	<i>1.82</i>
Trinity College Dublin	1.71
University College Cork	1.42
University of Ulster	1.38
NUI Maynooth	1.30
University of Strathclyde	1.26
Dublin City University	1.23
Institutes of Technology Ireland (combined)	1.10
Waterford Institute of Technology	1.07
Cork Institute of Technology	1.06

*A Field-Weighted Citation Impact of exactly 1 means that the output performs just as expected for the global average; more than 1 means that the output is more cited than expected according to the global average; less than 1 means that the output is cited less than expected according to the global average.

These metrics apply to a time period which pre-dates / or runs concurrently with a significant number of **additional capacity-building measures** which have been put in place over the past three-year period. The additional measures include:

- MOUs with national and international partners in Europe and China.
- Recruitment, staff development and mentoring programmes to increase research active academics;
- New innovative practice-led structured research programmes which will be launched in 2015;
- Provision of internal research funding;
- A dedicated research and commercialisation support centre;
- A dedicated postgraduate studies support office;
- Adjunct faculty policy for key collaborative partners;
- An institute-wide curriculum development strategy to ensure an integrated approach to research activity at all levels of the national framework of qualifications.

Research funding is not a specified KPI for TU designation. Since 2012, IT Carlow has invested €8 million in research infrastructure and supports. In addition IT Carlow Research CORES (Centres of Research and Enterprise) have attracted a further €8 million in external funding from Framework Programmes, Enterprise Ireland and Research Council programmes.

These and other initiatives will ensure that IT Carlow will achieve and exceed the agreed target by 2017.

IT Carlow has **full Delegated Awarding Authority for NFQ Level 9 and Level 10** Research Programmes in Biotechnology and Molecular Environmental Science

A comprehensive set of **detailed research reviews were completed in 2013-2014 by IT Carlow** which involved an evaluation of the **research**

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environment at IT Carlow across all disciplines (including supervisory quality and capacity; research graduate attributes; collaborative research partnerships; research strategy and leadership; quality assurance and enhancement policies/procedures for postgraduate researchers; information and physical research infrastructure; research outputs etc) and **objective third-party reviews involving national and international experts.**

The outcome of these reviews resulted in the **continued approval for all areas and levels sought by IT Carlow from HETAC / QQI** including:

- Computing, Research Levels 9 and 10
- Engineering, Research Levels 9 and 10
- Sport and Health Sciences, Research Level 9
- Business and Humanities, Research Level 9
- Industrial Design, Research Level 9

Under the recently published QQI/IoTI Sectoral Protocol for the delegation of awarding authority for research degrees to NFQ level 9, IT Carlow is in the process of applying **for full delegated awarding authority** for all of the above areas in April 2015. Additionally, the Institute will seek early approval to build on its strong research capability to **extend provision at Level 10** in the areas of Industrial Design and Health Sciences once the national QQI protocols are finalised.

The Institute has an **agreed 2017 target of 3.4% of FTE** enrolments at research level 9 and 10 to meet TU criteria as part of a merged institution. In the 2013/2014 academic year **IT Carlow was at 2.0%.**

The same metric for the **combined SETU was 2.5%** in 2013/2014 (Table 8). This compares to 3% and 2.6% for the MTU and TU4Dublin Consortia, respectively.

Feedback to the latter two Consortia from the **Stage 3 International Expert Panel December 2014** on progress towards this metric stated “.....*the target for 4% of postgraduate research students at Level 9 and 10 has not yet been reached but the plans in place to fill the gap are entirely plausible*’.

5.4. Staff Qualifications

Staff development is a strategic priority for the Institute.

The published criteria for TU designation requires Institutes to have a minimum of 90% of full time academic staff to hold a level 9 qualification and 45% of staff to hold a doctoral qualification or terminal degree appropriate to their profession.

In the current academic year, **96% of fulltime academic staff at IT Carlow holds a Masters or Doctoral qualification.**

Since 2011, there has been a doubling of academic staff with doctoral qualifications ensuring that **28% of staff hold Level 10 qualifications.**

With the roll-out of additional targeted supports for staff development, there has also been a 3-fold increase in staff pursuing doctoral studies, translating into an **additional 14% of staff pursuing Level 10 qualifications.**

Collectively all of these developments place the Institute on a strong trajectory to achieve the criteria on staff qualifications within a two-to-three year time frame.

The same metric for the **combined SETU is not available**, but comparative metrics for the MTU and TU4Dublin Consortia, respectively, are 90% Level 9 & 29% Level 10 and 87% Level 9 &

37% Level 10 (Table 8). Feedback to the two Consortia from the **Stage 3 International Expert Panel December 2014** on progress towards these metrics noted “.....*clear and plausible plans to increase these percentages*”.

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TABLE 8
Key Comparators for Irish TU Consortia

	MTU	TU4Dublin	SETU
Size – Total Student Enrolments*	12,815 (22% ITTra & 78% CIT)	25,886 (13% ITB, 18% ITTD & 69% DIT)	14,758 (44% ITC & 56% WIT)
Lifelong Learning (% of student enrolments*) <i>30% National TU Target</i>	22% (10% ITTra & 25% CIT)	27% 19% ITB, 37% ITTD & 26% DIT	24% (38% ITC & 15% WIT)
Postgraduate researchers (% of total Level 8-10*) <i>4% FTE National TU Target</i>	3%**	2.6%**	2.5%* (2% ITC & 3% WIT)
Staff Profile / Qualifications	90% L9** 29% L10**	87% L9** 37% L10**	ITC 2013-2014 96% L9 & 28% L10* (+ 14% pursuing L10)
<i>National TU Target 90% L9 (or equiv.) to include 45% L10 (or equiv.)</i>			WIT 2012/13*** 89% L9*** & 28% L10****

*Data Source: HEA published and unpublished data 2013-2014; **Expert Panel Reports to the HEA on the TU4Dublin and MTU Applications, September 2014; ***2013-2014 data not available (NA); ****WIT Summary document February 2015.

MTU, Munster TU Consortium; TU4Dublin, Dublin TU Consortium; SETU, South East TU Consortium

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5.5 Student Profile

In terms of the 2017 student profile, IT Carlow continues to meet or exceed the trajectories and targets agreed with WIT in July 2012 as part of the joint stage 1 submission for TU designation..

The SETU joint submission the HEA in July 2012 contained assumptions having regard to the enrolment trajectories and overall student population growth.

TOTAL HIGHER EDUCATION STUDENTS							
Category	Metric	2010-2011		2013-2014		2017 Projections	
		ITC	WIT	ITC	WIT	ITC	WIT
Total Student Headcount (HC)	Total Head Count	4869	8074	6376	8350	5940	9292
Whole Time Equivalents (WTE)	Total WTE	4519	7208	5672	6905	5551*	8296*

(Calculations for 2017 projections for WTE based on 2013-2014 ratios)

The above data confirms the following:

- A **31% increase** in total higher education students for IT Carlow since 2010/11
- A **3.4% increase** in total higher education students for WIT since 2010/11
- An overall increase of **13.7%** for IT Carlow / WIT since 2010/11

In terms of the student body profile, an agreed target of the July 2012 joint submission was that IT Carlow was to have 25% of its total students classified as LLL/Flexible Provision students by 2017.

The data below demonstrates that IT Carlow has exceeded this target in 2013/2014 and indeed is on track to potentially compensate in a merged institution for the shortfall.

LLL HIGHER EDUCATION STUDENTS							
Category	Metric	2010-2011		2013-2014		2017 Projections	
		ITC	WIT	ITC	WIT	ITC	WIT
Whole Time Equivalents (WTE)	WTE LLL	1278	NA	1888	489	1231	708
	%WTE LLL	28.2%	NA	33%	7.0%	22%	8.5%
Total Student Headcount (HC)	Headcount LLL	1503	1494	2284	1282	1478	1824
	%Headcount LLL	30.8%	18.5%	36%	15.3%	24.8%	19.6%

IT Carlow has achieved a diversified growth in its student enrolments across award levels. The largest increase has been registered at Levels 9 and 10, reflecting the **increased emphasis on postgraduate activities in the institution, followed by Level 8, and a welcome strong growth of 18% at Level 6 and Level 7.** The latter has been achieved against a backdrop of a consistent decline in CAO acceptances at Level 6 and across the country for the past 10 years. This ongoing commitment of the institution to offer a diversified range of programmes is in keeping with the nationally-described mission for a Technological University.

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STUDENT PROFILE PER AWARD LEVEL OF NFQ

Metric	2010-2011		2013-2014		2017 Projections	
	ITC	WIT	ITC	WIT	ITC	WIT
Total Students 9 & 10 Taught	58	524	122	537	207	591
Total Students 9 & 10 Research	33	175	55	157	108	265
Total Students 8 HDip	51	92	217	252	84	100
Total Students 8 (Hons Degrees)	2474	4128	3199	4066	3340	4757
Total Students 6 & 7	1916	2997	2260	2645	1766	3381
Total Other (occasional)	337	158	523	693	435	198

5.6. Quality Assurance and Enhancement

A culture of rigorous quality assurance / enhancement, peer reviews and external validation is at the heart of all high quality higher education institutes and IT Carlow has embedded this culture in all of its activities.

The Institute engages in regular robust self-evaluation and peer review as a key component of its quality enhancement culture.

This philosophy has served the Institute well in maintaining a **high standard of achievement in recent formal quality assurance / enhancement reviews.**

In 2014 IT Carlow was awarded the *Sunday Times Institute of Technology of the Year*. The judges in making the award stated that the Institute was deserving of the award “*off the back of a strong academic performance, a high completion rate and a good record in the graduate jobs market*”.

As part of its proven commitment to a learner-centric experience, IT Carlow continually monitors student progression. This is a key measurement of quality demonstrating **student achievement**.

In the four years 2010/11 to 2013/14, the **overall rate of progression** in the Institute has increased from **79% to 83%**. This compares to the **IoT national average of 77%** in 2012/2013 (the latest available HEA figure).

Within this overall figure, progression rates on programmes in IT Carlow at NFQ Levels 6 and 7 have increased from **71% to 83%** and **77% to 82%**, respectively, in the same period. This is significantly ahead of **IoT national averages of 74% and 72%** in 2012/2013 (the latest available HEA figure).

PROGRESSION RATES (%)

	IT Carlow			
	2010/11	2011/12	2012/13	2013/14
Level 8	87	81	82	82
Level 7	77	74	75	82
Level 6	71	76	75	83
All Levels	79	78	79	83
	All Institutes of Technology			
	2010/11	2011/12	2012/13	2013/14
Level 8	83	83	83	NA
Level 7	72	71	72	NA
Level 6	69	70	74	NA
All Levels	76	76	77	NA
	National Progression Rate (IoTs and Universities)			
	2010/11	2011/12	2012/13	2013/14
Level 8	89	89	88	NA
Level 7	72	71	72	NA
Level 6	69	70	74	NA
All Levels	84	84	84	NA

5.7. Graduate Employment

One of the primary missions of the TU is to provide graduates with the necessary attributes and skills to obtain meaningful employment and to contribute to the economic, social and environmental capital of the nation. IT Carlow's graduates have maintained an **average employment level at 90%** between 2009 and 2013.

This is a reflection of the esteem in which the Institute and its graduates are held by employers. This achievement has been possible through the continuous development of a range of highly innovative and highly sought after postgraduate programmes, particularly in response to national economic trends.

5.8. Strategic Plan 2014-2018

IT Carlow finalised its **Strategic Plan 2014-2018** in late 2013 following a broad inclusive consultative process with staff, learners, collaborative partners and external stakeholders. This plan has been designed to ensure that IT Carlow contributes maximally to the **attainment of the joint Mission and Vision for the SETU** articulated by the South East IoTs in their successful Stage 1 TU submission.

The goals and strategies presented in the plan go beyond the achievement of quantitative metrics in the published TU criteria / agreed 2017 projections, to address the key characteristics of a regionally-engaged Technological University in a more holistic manner. Work is well advanced on **strategic and programmatic five-year reviews** across all Schools, Centres and Campuses at IT Carlow to deliver on the various measures identified under the five key areas of:

- The Learner Experience and Graduate Attributes
- Knowledge Creation, Application and Exchange
- Strategic Collaborations and Partnerships
- Societal, Economic and Environmental Impact
- Reputation, Public Confidence and Sustainability

Conclusion

IT Carlow is clearly on track to meet all of the agreed 2017 targets/ TU criteria and is a strong, vibrant, well-governed and financially strong sustainable institution, which is well-positioned to form the South East Technological University

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BIBLIOGRAPHY

- Bacon, P., 2014. *Issues for Consideration when Assessing the Potential Impact of a New Technological University on the Economy of the South East*. Independent economic report commissioned by IT Carlow.
- Barnett, R. 2011. *Being a University*. Oxon: Routledge
- Birnbaum, R., 1983. *Maintaining diversity in higher education*. San Francisco: Jossey-Bass.
- Clark, B.R. (1983). *The Higher Education System. Academic Organization in Cross-National Perspective*. Berkeley & Los Angeles: University of California Press.
- Clark, B.R., 2007. *Creating Entrepreneurial Universities: Organizational Pathways of Transformation*. Bingley: JAI Press
- Coventry University, 20120. *Corporate Plan, 2010-2015*. Coventry, England.
- Davies, J., 2014, *Reflections on the vision for and evolution of the new Technological University sector in Ireland from an international perspective*. Dublin, Ireland: Baker Tilly Ryan Glennon
- Department of Education and Skills, 2014. *General Scheme – Technological Universities Bill*. . Dublin, Ireland: Department of Education and Skills
- Department of Education and Skills, 2011. *National Strategy for Higher Education to 2030*. Dublin, Ireland: Department of Education and Skills
- Eindhoven University of Technology, 2011, *Where Innovation Starts: Strategic Plan 2020*. Eindhoven, the Netherlands
- Eindhoven University of Technology, 2012, *Institutional Plan 2013-16*. Eindhoven, the Netherlands
- Forfás (2010) *Regional Competitiveness Agendas: Overview, findings and actions*.
- Government for National Recovery, March 2011. *Programme for Government 2011-2016*. Dublin, Ireland
- Higher Education Authority, 2012. *Towards a Future Higher Education Landscape*. Dublin: Higher Education Authority.
- Higher Education Authority, 2013. *Completing the Landscape Process for Irish Higher Education*. Dublin: Higher Education Authority.
- Higher Education Authority, 2013. *Report to the Minister for Education and Skills on System Reconfiguration, Inter-Institutional Collaboration and System Governance in Irish Higher Education*. Dublin: Higher Education Authority.
- Hinfelaar, M. 2012. *Emerging higher education strategy in Ireland: amalgamate or perish*. Higher Education Management and Policy. 24(1), pp. 1-16.
- Houses of the Oireachtas (Joint Committee on Education and Social Protection), 2014. *Report on the General Scheme of a Technological Universities Bill*, Dublin, Ireland.
- Huisman, J., 2005. *Differentiation, diversity and dependency in higher education*. Utrecht: Lemma.
- Huisman, J., 2005. *Shifting boundaries in higher education: Dutch hogescholen on the move*. Center for Higher Education Policy Studies, University of Twente

Vision Statement for the South East Technological University (SETU) and Implementation Framework

Huisman, J. (2001), The Netherlands, in: J. Huisman & F. Kaiser (eds), *Fixed and fuzzy boundaries in higher education. A comparative study of (binary) structures in nine countries*. Background study for the Advisory Council for Science and Technology Policy. Den Haag: AWT

Institute of Technology Carlow and Waterford Institute of Technology, 2012, *The South East Institutes of Technology in the Future Higher Education Landscape - Joint Submission to the Higher Education Authority*. Ireland; ITC & WIT.

Marginson, S. 2011. *Criteria for Technological University Designation*. Dublin: Higher Education Authority

Meredith, D. and C. Van Egeraat (2013) *Revisiting the National Spatial Strategy ten years on*. Administration, Vol. 60 (3) pp. 3-9

OECD, 2009. *Higher education to 2030*, Vol.2: Globalisation

Royal Melbourne Institute of Technology University, *Transforming the Future: Strategic Plan, 2015*. Melbourne, Australia.

Tiechler, U., 2007. *Higher Education Systems, Conceptual Frameworks, Comparative Perspectives, empirical findings*. Rotterdam: Taipe.

Trow, M., 1979. *Elite and mass higher education: American models and European realities*. Stockholm: National Board of Universities.

University of Strathclyde, 2011. *Useful Learning: Strategic Plan 2011 – 2015*. Strathclyde, Scotland.

University of Oulu, 2012. *Strategy*. Available at: <http://www.oulu.fi/english/about-us/strategy>

Uyerra, E., 2010. Conceptualizing the Regional Roles of Universities, Implications and Contradictions, *European Planning Studies*, 18(8), pp 1227-1246.

van Vught, F. , J. Bartelse, J. Huisman, M. van der Wende., 2005. *Institutional profiles, Towards a typology of higher education institutions in Europe*. CHEPS, Enschede

van Vught, F., F. Kaiser, D. Bohmert, J. File, M. van der Wende., 2008. *Mapping diversity; Developing a European classification of higher education institutions*. Enschede, CHEPS.

van Vught, F., Ed., 2009. *Mapping the Higher Education Landscape: Towards a European Classification of Higher Education Institutions*. CHEPS, Enschede

van Vught, F.A., Kaiser, F., File, J.M., Gaethgens, C., Peter, R. Westerheijden, D.F., 2010. *The European Classification of Higher Education Institutions*. CHEPS, Enschede

APPENDIX 1

IT Carlow Correspondence to the Oireachtas Public Accounts Committee 14th January 2015
(PAC-R-1657, Correspondence 3B, 15A, Meeting 148 22/01/15)

Executive Summary

from

*‘A note from the Institute of Technology Carlow on the
Process and Costs associated with the South East Technological University Project,
January 2011-December 2014’*

2. Executive Summary of the SETU Process To-date

2.1. IT Carlow entered into the SETU process in early 2011 with WIT following an approach by the then Chair and President of WIT in January 2011, and in response to the Government's stated commitment in March 2011 to explore the establishment of a multi-campus Technical University in the South East (*Programme for Government 2011-2016*).

2.2. In tandem with the publication of the national *Process and Criteria for TU Designation* in February 2012, and following changes in the Governing Body Chairs and Presidents of WIT and IT Carlow, the SETU process gained momentum in early 2012. This resulted in a joint Stage 1 SETU submission to the HEA (under the national four-stage process for TU designation) which was prepared and reviewed over a 16 month time period. Approval was forthcoming from the Minister for Education and Skills in mid-2013 to progress to the next stage of the TU process i.e. the preparation of a Stage 2 SETU Business Plan. During this time period, financial and governance difficulties became apparent in WIT regarding the funding of a number of projects. These difficulties gave rise to a statutory inspection and Public Accounts Committee hearings, which effectively stalled the SETU project for approximately nine months.

2.3. Senior political support for the SETU project resulted in the appointment of a facilitator by both institutions and the establishment of a new steering group in mid-2013 to deliver the Stage 2 SETU Business Plan in accordance with Government policy. During the life of this group (until mid-2014), various issues emerged that were inconsistent with the vision for the SETU and key principles underpinning the partnership with IT Carlow. These issues ran contrary to the agreement reached by the two Governing Bodies in the *IT Carlow / WIT MOU* (July 2012) and diverged from the joint Stage 1 SETU submission underpinning the 2013 Ministerial decision for the project to progress to Stage 2 of the national TU designation process.

2.4. It had been agreed in the Stage 1 SETU submission that due diligence would be carried out by the respective institutions on each other in order to inform the Stage 2 SETU Business Plan. IT Carlow commissioned a firm, through public competition, and had agreed Terms of Reference with WIT. This standard due diligence process on behalf of the IT Carlow Governing Body met with resistance from WIT throughout 2013 and 2014 and remains incomplete.

2.5. In addition to conventional due diligence on IT Carlow, WIT proposed in February 2014 to commission a unilateral feasibility study 'to consider the desirability and practicality of establishing a new TU by the merger of IT Carlow and WIT'. IT Carlow queried the timing of, and rationale for, the WIT feasibility study on the SETU project. This was based on the following:

- (i) The joint Stage 1 SETU submission had been approved by the Minister for Education and Skills to proceed to Stage 2 of the national TU process in mid-2013 following a 16 month planning, review and approval process, involving significant national and international expert input on behalf of both Institutes and the HEA;
- (ii) Any further future analysis of the feasibility and desirability of the SETU project should be based on the SETU Business Plan required under Stage 2 of the national process for TU designation.

South East Technological University Project – Note on Process and Costs from IT Carlow

However, in order to progress the due diligence process and Stage 2 SETU Business Plan, IT Carlow acceded to the request.

- 2.6. The steering group established in mid-2013 could not overcome the difficulties encountered in (i) agreeing the nature and organisation of the new proposed entity and (ii) completion of due diligence on behalf of the IT Carlow Governing Body. This steering group was disbanded in mid-2014 and a group comprised of both Presidents and both Governing Body Chairs undertook to agree a governance, management and organisation structure for the SETU, while simultaneously completing the due diligence which had commenced in WIT. These discussions were externally facilitated, agreement was reached and an MOA was signed by both Chairs and Presidents in September 2014 that was to be recommended to the respective Governing Bodies on the 15th October 2014.
- 2.7. Simultaneously, a document emanated from WIT indicating that the WIT-commissioned feasibility study questioned the timescales for achieving TU criteria for a merged institution. On the 14th October the author of the draft document in circulation met IT Carlow representatives where he acknowledged that the document was seriously flawed on a number of levels, that it should not have been distributed and that he wished to withdraw it unreservedly. The author formally withdrew his report in a communication to the Presidents of WIT and IT Carlow the following day (15th October 2014).
- 2.8. WIT decided to withdraw from the SETU project on the 21st October 2014. This was communicated to IT Carlow through the following statement:

"The Governing Body of Waterford Institute of Technology met today (October 21st) to discuss concerns about the process of delivering a Technological University in the South East. The members agreed to seek an urgent meeting with the Higher Education Authority and the Department of Education and Skills to discuss and address their concerns and they further agreed to suspend all activities related to merger. WIT remains committed to a Technological University in the South East which will have a significant economic and social impact."
- No further contact has been received by IT Carlow from WIT regarding the SETU project since this date.
- 2.9. On the 4th of November 2014 the Minister for Education and Skills appointed Mr Michael Kelly to lead a new process of consultation with the governing bodies, staff and students in IT Carlow and WIT in order to develop a shared vision for a Technological University in the South East. IT Carlow has since engaged with Mr Kelly.

APPENDIX 2

Key Characteristics of International Technological Universities

Vision Statement for the South East Technological University (SETU) and Implementation Framework

	University of Strathclyde, Scotland	University of Coventry, England	RMIT University, Melbourne	Eindhoven University of Technology	University of Oulu, Finland
History/ tradition	<ul style="list-style-type: none"> • Began as Anderson's university with a reputation for technical education and research • Merged in 1960's with Scottish College of Commerce to broaden business and arts provision. • In 1964, the university was granted the Royal Charter and became the University of Strathclyde. • 1993, the University merged with the Jordanhill College of Education, one of Scotland's main teacher training college 	<ul style="list-style-type: none"> • Originally formed by merger of Coventry College of Design (formed in 1843), Lanchester College of Technology and Rugby College of Engineering Technology in 1970. • The resulting institution was called Lanchester Polytechnic after the Midlands automotive industry pioneer, Dr Frederick Lanchester • In 1987 the name changed to Coventry Polytechnic and it became a university in 1992 	<ul style="list-style-type: none"> • Founded as a Working Men's College in 1887, providing courses in engineering and applied science • Became Melbourne Technical College in 1934 and Royal Melbourne Technical College in 1954 • 1950's to 1970's – programme portfolio expands rapidly • Became Royal Melbourne Institute of Technology and began offering degree programmes in 1960 • Merged with Emily McPherson College of Domestic Economy, teaching finance, food science and tourism. in the 1979 • Unsuccessful merger talks with Victoria University of Technology in 1991 • Merged with Phillip Institute of Technology in 1992 and granted university status under the Royal Melbourne Institute of Technology Act 1992 • Merged with Melbourne College of Decoration and Design in 1993, Melbourne College of Printing and Graphic Art in 1995 • 3 campuses in Australia and 2 in Vietnam 	<ul style="list-style-type: none"> • Founded as the Technische Hogeschool Eindhoven (THE) in 1956 by the Dutch government. • The University was known for its research in Automobile sector • In 1986 an amendment to the law saw the THE become Eindhoven University of Technology (TU/e). • Now a research university specializing in engineering, design, science & technology. • Forms part of 'Universities of Applied Science' sector in the Netherlands • Its motto is 'Mens agitat molem' - the mind brings matter into motion • Situated in Eindhoven, the high-tech heart of the Netherlands. 	<ul style="list-style-type: none"> • Founded 1958 and situated in Northern Finland • Forms part of 'Universities of Applied Science' sector in Finland • Regionally based, multidisciplinary science university with international operations. • Four main campuses in Northern Finland

Vision Statement for the South East Technological University (SETU) and Implementation Framework

	University of Strathclyde, Scotland	University of Coventry, England	RMIT University, Melbourne	Eindhoven University of Technology	University of Oulu, Finland
Culture and Values	<p>Culture</p> <ul style="list-style-type: none"> • Entrepreneurial culture at heart of the university – UK Entrepreneurial University of the Year 2012/12 and 2013/14 • Innovative - focused on discovering and applying knowledge with impact • Collaborative – work collaboratively with integrity and in an open, respectful, way • Bold - creative, confident and challenging • Ambitious –for the institution, it’s staff and students • People Oriented <p>Values</p> <ul style="list-style-type: none"> • Respect for others • Equality of opportunity • Openness • Integrity and honesty • Collegial idea of <i>One Strathclyde</i> 	<p>Culture</p> <ul style="list-style-type: none"> • Entrepreneurial Culture - UK Entrepreneurial University of the Year 2011/12 • Engaging – both with students and enterprise • Forward-looking and modern in approach <p>Values</p> <ul style="list-style-type: none"> • Academic freedom, • Rational enquiry conducted with integrity. • Lifelong relationships with students • Contribution to solving some of the most important problems or ‘grand challenges’ in our society. • Excellence, innovation, creativity and enterprise • Sustained partnership with external organisations • Collaboration across international boundaries. • Diversity, fairness and equality of opportunity. • Cost effectiveness and continuing improvement 	<p>Culture & Values</p> <ul style="list-style-type: none"> • Creativity- creating opportunities to explore test and fulfil potential, imaginative curriculum and research solutions, creative and inventive culture which values achievement. • Connectedness – to students, industry and community, collaboration and team work is encouraged and a sense of belonging • Fairness - ethical, honest and open, respect for indigenous cultures, intellectual freedom and tolerance • Passion – excellence, enthusiasm and a sense of achievement in students and staff, cultural and social diversity • Commitment to making a difference - to individuals, cities, industries and nations. Through graduates, staff and students 	<p>Culture & Values</p> <ul style="list-style-type: none"> • Advanced quality research • Innovation • Entrepreneurship • Scientific independence and integrity of staff and students • Transparency and integrity in business relationships 	<p>Culture & Values</p> <ul style="list-style-type: none"> • Community - creative community and strong economy • Pioneership - internationally strong scientific profile • Partnership - active partnership and influence

Vision Statement for the South East Technological University (SETU) and Implementation Framework

	University of Strathclyde, Scotland	University of Coventry, England	RMIT University, Melbourne	Eindhoven University of Technology	University of Oulu, Finland
Mission and Vision	<p>Mission</p> <ul style="list-style-type: none"> To be 'a place of useful learning' - to combine academic excellence with social and economic relevance. Committed to the advancement of society through the pursuit of excellence in research, education and knowledge exchange, and through creative engagement with partner organisations at local, national and international levels. <p>Vision</p> <ul style="list-style-type: none"> To be a leading international technological university To be distinctive, characterised by leading research and technology of international standing and with a reputation for excellence across research, education and knowledge exchange. To produce outstanding professional and enterprising graduates for industry, business and the professions. To be modern in outlook, generating new ideas, creating fresh opportunities and engaging in collaborative activities and strategic partnerships that benefit wider society 	<p>Mission/Vision</p> <ul style="list-style-type: none"> To be a dynamic, global, enterprising and sustainable university. To work in partnership with external organisations through research and engage students as partners in a community of learning. To be a Business Facing University in a Globalised World 	<p>Mission</p> <ul style="list-style-type: none"> To be a global university of technology and design focusing on creating solutions that transform the future for the benefit of people and their environments. To collaborate with partners to ensure the global impact of education and research, and reach out through its presence in cities across the world to make a difference. <p>Vision</p> <ul style="list-style-type: none"> To be global - in attitude, action and presence, offering our students a global passport to learning and work; To be urban – in orientation and creativity, shaping sustainable cities and drawing inspiration from the challenges and opportunities they provide; and To be connected - through active partnerships with professions, industries and organisations to support the quality, reach and impact of our education and research 	<p>Mission</p> <ul style="list-style-type: none"> To be the university 'where innovation starts' - a leading international engineering science & technology specialized university. To contribute to the advancement of technical sciences and research to develop technological innovations and the growth of wealth and prosperity both in its own region (technology & innovation hotspot Eindhoven) and beyond. <p>Vision</p> <ul style="list-style-type: none"> To offer education, research and knowledge valorization to contribute to: <ul style="list-style-type: none"> science for society: solving the major societal issues and boosting prosperity and welfare by focusing on the Strategic Areas of Energy, Health and Smart Mobility science for industry: the development of technological innovation in cooperation with industry science for science: progress in engineering sciences through excellence in key research cores and innovation in education 	<p>Mission</p> <ul style="list-style-type: none"> 'Creating Innovation for the Future' Aims to seek, utilize and apply new knowledge. <p>Vision</p> <ul style="list-style-type: none"> To be an international science university which studies humans and culture in a changing environment which creates innovation for the future, well-being, and knowledge through multidisciplinary research and education. To promote internationally high-level free research, education and culture, to strengthen the knowhow that creates well-being, and to assure the availability of highly qualified work force and researcher base in our sphere of influence. To be a multidisciplinary expert in 'Northernness'.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

	University of Strathclyde, Scotland	University of Coventry, England	RMIT University, Melbourne	Eindhoven University of Technology	University of Oulu, Finland
Teaching & Learning Profile	<ul style="list-style-type: none"> • Degrees at levels 8, 9 & 10 • Programmes across range of discipline areas, including Engineering, Humanities and Social Sciences, Business & Science • Cross-departmental and cross-faculty collaboration and a variety of interdisciplinary offerings, particularly CPD programmes • Professionally/vocationally orientated programmes of study • Full time, part time and CPD programme offerings • One of the UK's largest providers of continuing professional development programmes, • Reputation for innovative, flexible learning which is relevant to students and employers. • Students can take elective subjects outwith their discipline, designed to develop employable skills. • Teaching is informed by research into teaching and learning as well as academic scholarship • Focus on innovation in the curriculum and in approaches to teaching and learning 	<ul style="list-style-type: none"> • Degrees at levels 8, 9 & 10 • Shares campus with Coventry University College which offers foundation years and level 6/7 qualifications in the form of HNC & HND qualifications • Programmes across range of discipline areas, including Engineering and Computing, Health & Life Sciences, Art & Design and Business, Environment & Society. • Full time, part-time, short and CPD courses • Employment-related curriculum, making use of research activities, real or 'live' projects (sourced from employers or professional practice), placements and work experience as appropriate. • Students as participants in a community of learning - staff and students, external practising professionals, employers, and alumni work together to learn, create, solve problems and research. • Teaching techniques encourage lively, interactive learning by drawing on relevant research and professional practice. • Teaching supported by appropriate use of virtual environments, technology and specialist facilities. 	<ul style="list-style-type: none"> • Programmes from levels 8– 10 including undergraduate, postgraduate and short and single courses. • Vocational diplomas and certificates (levels 6 & 7) including apprenticeships and traineeships provided by a specific organisation and not distributed widely across RMIT • Programmes are global in focus and practical in application All programs are designed with help from industry leaders and professions • Vocationally orientated – programmes aim to develop in students the deep knowledge and the skills and attributes required for success in their chosen profession or occupation • Commitment to 'Work Integrated Learning'. About half higher education and vocational coursework programs include an assessed element of professional or vocational work in a work context • Focus on specified, chosen fields of learning across 3 colleges— business; design and social context; and science, engineering and health with concentration on the following fields: <ul style="list-style-type: none"> ○ technology ○ design ○ global communities ○ health solutions ○ global business ○ communication ○ urban sustainable futures. 	<ul style="list-style-type: none"> • Programmes from levels 8-10, including undergraduate bachelor degrees, masters, PhD's and PDEng - two-year post-Master's technological designer's programs • Strong, distinctive position in the education market • Focus on engineering, science and design. • Focus on training engineers to possess a sound scientific basis and scientific depth, in addition to the necessary skills to successfully flourish in social sectors and functions. • Students given freedom to choose to follow a broad-based program with society-oriented subjects or opt for a very specialized science program. • Structure being reformed to move towards a Bachelor College and Graduate School respectively. 	<ul style="list-style-type: none"> • Degrees at levels 8, 9 & 10 (5-6 year degree programmes (3 plus 2 model leading to a master's degree) and doctoral training). • Also provide open university studies/lifelong learning programmes in the evenings and weekends and executive training and continuing education options • Faculties of humanities, education, science, medicine, economics and business administration and technology • Graduate school to provide for high-quality, research-driven doctoral education • Multidisciplinary curriculum

Vision Statement for the South East Technological University (SETU) and Implementation Framework

	University of Strathclyde, Scotland	University of Coventry, England	RMIT University, Melbourne	Eindhoven University of Technology	University of Oulu, Finland
Student Profile	<ul style="list-style-type: none"> • 22,000 full and part time students. • Diverse student population • 15,000 or 68% undergraduates, 80% of whom live on or close to campus in the West of Scotland • 7,000 or 32 postgraduate students • Approx. 18% or 4,000 of 'mature' students, starting their studies after gaining experience in the workplace • Approx. 10% international students • Approx. 92% of students are from state schools 	<ul style="list-style-type: none"> • 24,000 full and part time students • 19,700 undergraduate students – 82% • 4, 300 postgraduate students – 18% • International students – 13%. • 19% or 4,600 are on non-degree courses • 47 % of students come from the local area • 34% of students aged over 21 at the start of their course • 97% of students come from state schools, 	<ul style="list-style-type: none"> • 82,000 full and part time students • Diverse student population • 11,600 postgraduate students – 14% • 42,200 undergraduate students – 51% • 5000 sub degree students – 6% • 6000 open university students - 7% • 16,200 enrolled on Vocational Education and Training – 20% • 36% mature age students (24 years old or over) • 28,000 international students – 34% 	<ul style="list-style-type: none"> • 9,230 students in total – 51% undergraduate and 49% postgraduate • 4,740 or 51% undergraduate BSc students (3% of these are international) • 3,070 or 33% postgraduate MSc students (18% international) • 260or 3% technological designers (PDEng) • 1,160 or 13% doctoral candidates (PhD) 	<ul style="list-style-type: none"> • 16,000 full and part time students • International degree students 881 in total – 5.5% • 75% approx. of students come from the two northernmost provinces of Finland: • 66% approx. all graduates eventually find jobs within the region.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

	University of Strathclyde, Scotland	University of Coventry, England	RMIT University, Melbourne	Eindhoven University of Technology	University of Oulu, Finland
Research Involvement	<ul style="list-style-type: none"> • Innovative, applied research with outcomes that have real impact. • Multidisciplinary - crosses the traditional boundaries between disciplines to address the important challenges facing our world today. • Collaborative - pooling of research strategies, expertise and resources across Scotland • Encourage co-location of researchers with external research partners. • £43,000,000 research income • Research conducted across a wide range of discipline areas 	<ul style="list-style-type: none"> • Focus on applied and interdisciplinary research with real world applications and impact on society and improves the way we live. • Focused on research problems which require multidisciplinary perspectives and often a team-based approach. • Each Schools and Faculty has at least one major project focused on a longer term 'grand challenge' that society faces today such as low carbon solutions, an ageing population, sustainable environments, human security, or social inequalities. • Research primarily conducted with, or for, an external organisation or a consortium of public or private sector partners. • Research conducted across a wide range of discipline areas • £43,000,000 applied research income 	<ul style="list-style-type: none"> • Trans-disciplinary approach. • Aim to find solutions to critical problems impacting communities and environment. • Focus on chosen research fields, concentrated by theme and discipline, and aligned to and its global network of partnerships, industries and cities. • Aspire to high quality and high impact research for future benefit through four research institutes in design; global cities; health innovations; and platform technologies • Focus on 'the big questions' and research for future benefit 	<ul style="list-style-type: none"> • Advanced quality, multidisciplinary research • Contributes to the progress of technical sciences and thus the development of technological innovations. • Research focused on three Strategic Areas of societal importance: <ul style="list-style-type: none"> ○ Energy ○ Health ○ Smart Mobility • Research intensive – approx. 3000 publications annually. • Develop R&D institutes in key niches • Aim to give significant impetus to the knowledge-intensive industries and other social sectors with a high or rapidly evolving technology-intensity. 	<ul style="list-style-type: none"> • Focus on new multidisciplinary /cross-disciplinary research knowledge and innovation through the combination of technical sciences, natural sciences and human sciences. • The research areas of strength include four focus areas and four development areas. • Focus areas are biosciences and health; information technology; cultural identity and interaction and environment, natural resources and materials; • Research conducted in close cooperation with sector research institutions and corporations. • The University of Oulu researches people and culture in a changing living environment, as well as opportunities that new technology provides for improving the well-being of people and the environment.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

	University of Strathclyde, Scotland	University of Coventry, England	RMIT University, Melbourne	Eindhoven University of Technology	University of Oulu, Finland
Involvement in Knowledge Exchange	<ul style="list-style-type: none"> Strategic alliances with world-class academic institutions and organisations as a mechanism for transferring knowledge and technologies to leading, international companies. Work with business, industry and the public sector KE activity is focused on driving innovation and increasing business competitiveness by providing access to the expertise, knowledge, skills and information available at the University KE activities include joint research and development, research publications and patenting, new business formation, contracting and consulting, continuing professional development educational and training activities, and internships and secondments. Projects include '<i>Strathclyde Links</i>', <i>Strathclyde Entrepreneurial Network</i>, <i>Strathclyde 100</i>, <i>Strathclyde Enterprise Pathway</i>, and <i>Student Enterprise Society</i> initiatives More than 50 spin-out companies have been created, making annual sales of £80 million and employing more than 700 people. Also created 84 student or alumni companies, employing 200 people. 	<ul style="list-style-type: none"> All forms of knowledge exploitation including patents, licensing deals, company spin-outs, joint ventures are encompassed in applied research projects Also provide consultancies and the provision of authoritative and independent advice. Offer bespoke courses/CPD for individuals and for corporate clients for the purpose of knowledge transfer and advanced skills development. 	<ul style="list-style-type: none"> Work directly with industry on applied research and to disseminate/transfer knowledge and seek commercialisation opportunities. 'Partnership Value Proposition' - partner-centric approach to supports industry partners to commercialise outcomes, share strategies, align principles and resources, and agree on long term mutually beneficial objectives. Commercialisation activities include technology transfer through patents, licensing to partners or starting new companies 	<ul style="list-style-type: none"> Focus on '<i>Knowledge Valorisation</i>' - research results are translated into successful innovations and serve as a basis for creating new products, processes and enterprises. Encourage students and staff to opt for entrepreneurship. Structured R&D cooperation with high-tech industry, regionally, nationally and internationally Knowledge and technology transfer to SMEs Provide business-oriented education and supports for successful start-up companies Activities include 'Innovation Labs' - where science meets business, business incubation centres, technology transfer initiative and advice on intellectual property 6 new start-up companies in 2013 Building a network of scientific excellence in the 'EuroTech Universities - Excellence in Science and Technology' along with 3 other TUs. 	<ul style="list-style-type: none"> Research conducted in close cooperation with sector research institutions and corporations. Multidisciplinary research centres and networks, Centres of Excellence designated by the Finnish Academy of Sciences, Nordic Centres of Excellence, and Internal Centres of Excellence.

Vision Statement for the South East Technological University (SETU) and Implementation Framework

	University of Strathclyde, Scotland	University of Coventry, England	RMIT University, Melbourne	Eindhoven University of Technology	University of Oulu, Finland
International Orientation	<ul style="list-style-type: none"> • Aims to have an international outlook in all activities • Wide range of international collaborative educational partnerships – 200 in total • Approx. 10% of students are overseas students from more than 100 countries around the world. 	<ul style="list-style-type: none"> • Aims to be a global university • International students – 13% of total enrolments • Active partnerships with universities and colleges in all continents through which joint research and teaching programmes, student and staff mobility, dual and double degrees and pathway programmes are pursued. • All students have the opportunity to acquire a new language or deepen competence in an existing second language alongside increased cultural proficiency and knowledge of global issues • UK students offered a range of mobility opportunities to study, do a project, or gain work experience abroad so that they are better equipped to be global leaders and employees of the future. 	<ul style="list-style-type: none"> • RMIT aims to be a global university • 28,000 international students – 34% of total • 17,600 are taught offshore – 21% • Almost 7,000 of these are enrolled at RMIT Vietnam, the largest offshore branch campus in the world • Two offshore campuses in Vietnam and a centre in Barcelona, Spain. • Also offer programs through partners in Singapore, Hong Kong, mainland China, Indonesia, Vietnam, Sri Lanka, Belgium, Spain and Germany. • Engage in research and industry partnerships on every continent. • Students have opportunities to work and study overseas through exchanges, internships or work placements. 	<ul style="list-style-type: none"> • Focus on research in areas where it participates in the international scientific community. • Wide range of international collaborative educational partnerships – 200 in total • Approximately 10% international students • Provides student exchange and mobility opportunities 	<ul style="list-style-type: none"> • International degree students 881 in total – 5.5% • Cooperation agreements with universities around the world providing for a variety of student exchange programmes, etc. • Offers 18 international Master's Programmes, taught in English:

Vision Statement for the South East Technological University (SETU) and Implementation Framework

	University of Strathclyde, Scotland	Coventry University, England	RMIT University, Melbourne	Eindhoven University of Technology	University of Oulu, Finland
Regional Engagement	<ul style="list-style-type: none"> • 80% of undergraduate students live on or close to campus in the West of Scotland • Responsibility to be useful in the world translated into action with impact through engagement • Aim to contribute to the development and quality of life of the City, nation and the international community. • Work with industrial partners including The Weir Group, SSE, Scottish Power, AstraZenica, GSK, Rolls-Royce, NASA, Boeing, Mettis Aerospace, Barnes Aerospace, TIMET, Aubert & Duval, Novartis and British Energy 	<ul style="list-style-type: none"> • Value engagement and sustained partnership with external organisations • Provide industry and SME engagement programmes and opportunities • 47 % of students come from the local area 	<ul style="list-style-type: none"> • Constant dialogue with industry and community • Seeks advice and input from industry leaders, in order to provide value in the many areas of engagement: skill development, work placements, applied research, consultancies and more. • RMIT's partners include sectoral trend-setters such as Siemens, Pacific Brands, Airbus, Volkswagen, Bioproperties Australia, City of Hume, China Power, Guess, Alcoa, Baulderstone Hornibrook and Boeing. • Targeted approach - RMIT identified five broad industry sectors as the focus for advancing strategic partnerships in education and research. They are: <ul style="list-style-type: none"> ○ Aerospace and aviation ○ Automotive ○ Built environment, construction and infrastructure ○ Health and community services ○ Media and communications • Regular industry forums in each sector, where senior University staff can receive detailed feedback from industry executives about trends in skills formation and research priorities. 	<ul style="list-style-type: none"> • Situated in Eindhoven, in the high-tech heart of the Netherlands and home to major corporate headquarters including Philips, ASML, NXP, DAF Trucks and DSM. • Aims to contribute to the growth of wealth and prosperity both in its own region (technology & innovation hotspot Eindhoven) and beyond • Hosts leading Dutch R&D institutes and is the European region with the highest number of patents • The region is part of the Eindhoven-Leuven-Aachen international knowledge triangle. 	<ul style="list-style-type: none"> • Regional engagement is key and is required under Finnish law • Aims to be an expert in 'Northerners' – reference to its region • Close cooperation with the public sector, research institutes and corporate life has created an important innovation centre in the Oulu region, creating many jobs especially in the fields of information and telecommunication technology. • In 2012 Oulu was chosen as the smartest community in Europe. • Business cooperation has made training relevant for the work market and created many training and job openings for students. • Interaction with the University strengthens the functional preconditions of the society, business life and partners. • University seeks to promote the creation of a just welfare society and preservation of the national cultural heritage. • 75% approx. of students come from the two northernmost provinces of Finland: • 66% approx. all graduates eventually find jobs within the region.

APPENDIX 3

Joint IT Carlow / WIT Mapping of Research Complementarity

November 2013

Areas of Internationally-Benchmarked Research Excellence

(i) Telecommunications Software & Systems Group (TSSG) WIT

Key research themes/ interests:

- 3MT (Mobile, Messaging & Middleware) - Full lifecycle of integrated services, Inter-discipline service management research, cognitive mechanisms, federation, virtual infrastructure & cloud computing
- Bio-Inspired Networking – Investigating a number of biological mechanisms and processes for communication networks, infrastructure, smart grids and green systems of the future.
- Data Mining & Social Computing – Researching the full data analysis life cycle data gathering, data cleaning and warehousing through to modelling and presentation of results. Social Computing investigates methods for modelling social behaviour through computational systems.
- Security – Distributed trust and reputation management, access control for secure services, identity, privacy and data protection technologies, service policy continuity, coordination of national/international research and policy aspects of trust and security, protection of critical infrastructures

Commercialisation interests:

TSSG's Innovation & Commercialisation Centre leverages the scientific results of the TSSG to deliver innovative research and commercial solutions to the 'TIME' (Telecommunications, Internet, Media and Entertainment) cluster of companies. These companies include multinationals, large Irish Industry, SME's, and start-ups.

Competitive research income (2006-11):

- Total Programme Funding:€39.5m
- Major Funders: HEA PRTLTI, Science Foundation Ireland (SFI), European Union Framework Programme FP6 & FP7, Enterprise Ireland (EI)

Vision Statement for the South East Technological University (SETU) and Implementation Framework

Research outputs/results (2006 -11):

- 27 book chapters and books edited 275 publications
- 3 patents filed
- 5 high potential start-ups
- 21 invention disclosures
- 8 licence options and assignments
- 61 companies supported using Innovation Vouchers
- 9 PhD Graduates and 2 Masters Graduates

Personnel based at TSSG:

100 staff consisting of:

- 6 Faculty Members;
- 13 Postdoctoral Researchers;
- 17 PhD students;
- Telecommunications and software researchers; engineers; operational and support staff

Collaborations:

- Academic: National University of Ireland Maynooth (NUIM), IVI – Innovation Value Institute (NUIM), Hamilton Institute (NUIM), DERI (NUIG), Galway, 4C (UCC), Rikon (WIT), CTVR, Trinity, Fraunhofer FOKUS, Germany, Queen’s University Belfast (QUB)
- Industrial: Nokia; Ericsson; Siemens Networks; Alcatel-Lucent; Telefónica/O2; T-Mobile, T-Systems (a division of Deutsche Telekom); Telecom Italia; Vodafone; Telenor Group; Portugal Telecom

(ii) BioEnvironmental Technologies (EnviroCore) Research Centre IT Carlow

Key research themes/interests:

- Phyto and Microbial technologies for waste treatment;
- Biomass production and plant biotransformations;
- Biological components for environmental bioindicators/ biosensors;
- Environmental monitoring and risk assessment.

Commercialisation interests:

- Support of regional and national companies in the development and commercialisation of Sustainable BioEnvironmental Technologies;
- Facilitation of new company start-ups/ HPSUs.

Competitive research income:

- Total programme funding: €8,400,000;
- Major funders: HEA, TSR, EPA, DAF (Department of Agriculture and Food), EU FP, IRCSET, EI, SFI.

Research outputs/results (2000-11):

- 70 refereed publications;
- 4 Books Edited;
- 200 conference publications/proceedings/ presentations;
- 2 patent applications;
- 50 deposits to international databases;

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- Companies supported using innovation vouchers: 115;
- 26 confidential industrial reports;
- 25 PhD Graduates and 11 Masters Graduates.

Personnel based at EnviroCORE:

- 8 Principal Investigators;
- 2 Technical staff;
- 20 postgraduate students.

Collaborations:

- Academic: Teagasc National Crops Research Centre, Carlow, BIOMERIT Research Centre (NUI Cork), Institute of Bioengineering & Agroecology (NUI-Maynooth), AFBI Northern Ireland, MGBG Centre (NUI-Galway), University of Peking, Beijing (PR China), the University of British Columbia, Vancouver (Canada), University of Madrid (Spain), the Macaulay Institute (UK), the Institute of Organic Chemistry and Biochemistry Prague (Czech Republic), the Institute of Mediterranean Agricultural Sciences, University of Évora (Portugal), DEC Environmental (Belgium) and the Agricultural University of Athens (Greece). Member of the EU Cost Programme in Phytotechnologies (along with 250 members). Leading a COST action application on the use of nematodes as indicators of environmental change.
- Industrial: Maxol, Ford Motor Company, GES Ltd, Greencore, Irish Skin Care Ltd, Glanbia, DEC (Belgium), Danisco (Denmark), EnviroSurveying Ltd (UK), Ballon Meats (Ireland), Bord na Mona (Ireland), Carl Stuart Ltd (Ireland), Unilever (Ireland), AK Rainbow Ltd (UK), Safe-Stride (Ireland), Boozeberries (Ireland), Glynntown Ltd (Ireland) and Waterford Energy (Ireland).

(iii) Pharmaceutical & Molecular Biotechnology Research Centre (PMBRC) WIT

Key research themes/interests:

- Drug delivery technologies
- Pharmaceutical analysis and characterisation
- Novel process and sensor technologies
- Molecular biotechnology
- Biomedical research

Commercialisation interests:

- Developing innovation-based collaborations with industrial partners in the South East and Southern Region
- Act as a focus for strategic research in support of the pharmaceutical and biopharmaceutical industries
- Stimulate research and innovation, allowing companies to embed R&D into their activities and support the sustainable growth of the sector in the region

Competitive research income:

- Total programme funding: €8.35m
- Major funders: HEA; EI; European Commission Interreg 4A Ireland Wales Programme

Research outputs/results (2006-11):

- 105 publications
- Patents filed
- Invention disclosures
- 6 companies supported using Innovation Vouchers 14 PhD Graduates

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Personnel based at PMBRC:

40 staff consisting of:

- 12 Faculty members;
- 10 postdoctoral researchers,
- 14 Masters/PhD students;
- Research assistants and support staff

Collaborations:

- Academic: Cardiff University, Wales; Bangor University, Wales; The Universities of Greenwich and Kent; University of the Western Cape, SA; University of Kansas, USA; Dublin City University
- Industrial: Teva Pharmaceuticals Ireland; Genzyme Ireland Ltd.; Pinewood Healthcare; EirGen Pharma Ltd.; Bausch & Lomb; Merck, Sharp & Dohme Ltd.; Merrion Pharmaceuticals

Research Facilities:

Over €3 million funding from the Higher Education Authority, the Technological Sector Research Strand III initiative and Enterprise Irelands Capital Equipment Grant for the Institutes of Technology has resulted in the PMBRC 700 m² state-of-the-art facility

(iv) Eco-Innovation Research Centre (EIRC) WIT

Key research themes/interests:

- Estuarine Research: bioremediation of toxic heavy metals using seaweed biomass; environmental bio- monitoring; isolation of bioactive compounds from sustainable marine sources
- Forestry Research: wood energy; vegetation management; invasive species management; traditional & novel control methods, including biological control
- Molecular Ecology Research: development of non-invasive DNA identification techniques for mammals; population analysis of Pine Martins in Ireland
- Sustainable Agriculture Research: agri-environmental management

Commercialisation interests:

- The innovative development of ‘high value-added technologies/products/processes from natural resources’ and ‘low environmental impact processing/growth methods’
- Sustainable solutions for the future development of industries such as the marine, agriculture and forestry sectors

Competitive research income:

- Total programme funding: €4.6m
- Major funders: HEA; EI; Department of Agriculture, Food & Fisheries; Coford; Teagasc; European Commission Interreg 4A.

Research outputs/results (2006-11):

- 1 book
- 82 publications
- 3 invention disclosures

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- 16 companies supported using Innovation Vouchers
- 9 PhD Graduates and 1 Masters Graduate

Personnel based at EIRC:

18 staff consisting of:

- 17 Faculty members;
- 1 postdoctoral researcher;
- 13 PhD students

Collaborations:

- Academic: Bangor University, Wales; Teagasc, Ireland; Vincent Wildlife Trust, UK; Countryside Council for Wales; The Mammal Society, UK; National University of Ireland Galway; Agri-food and Biosciences Institute, Northern Ireland (AFBINI); University College Cork; Trinity College Dublin
- Industrial: Commonwealth Agricultural Bureaux International UK (CABI); Forestry Commission, UK; Coillte Teoranta; National Biodiversity Data Centre.

(v) **Interactive Applications, Software and Networks (GameCORE) Research Centre IT Carlow**

Key research themes/interests:

- Computer games, serious computer games;
- Using computer gaming for learning;
- Software and web development;
- Computer networking;
- IT management;

Commercialisation interests:

- Support of regional and national companies in the development and commercialisation of learning and serious computer games;
- Facilitation of new company start-ups/ HPSUs.

Competitive research income:

- Total programme funding: €1,300,000;
- Major funders: IRCSET, EU (Tempus) EU (AAL-JP) HEA, TSR, EI, SFI.

Research outputs/results (2006-11):

- 3 patent applications;
- Research papers, theses, book chapters : 65
- Companies supported using innovation vouchers: 40 (50 innovation vouchers completed);
- 2 PhD Graduates and 11 Masters Graduates.

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Personnel based at GameCORE:

- 6 Principal Investigators;
- 6 Postgraduate students.

Collaborations:

- Dublin City University, University College Dublin, Trinity College Dublin, University of Limerick, Dublin Institute of Technology, University College Cork, NUI Maynooth, Swinburne University of Technology Australia, Temasek Polytechnic Singapore, Northern Research Institute Tromsø (NORUT), Helmholtz Zentrum München (German Research Centre for Environmental Health)
- UTStar.com, Valentia Technologies, Neurosynergy Games, Cartoon Saloon, Unum, Microsoft, Deycom, GlanBia, Havok, O2, IBM, Xerox, Wyeth Medica, Playfirst, DemonWare, Blue Insurances, Kilkenny County Council, Sage, TATA Consultancy Services, Datapac, ITForce, Google, Intel.