Institiúid Teicneolaíochta Cheatharlach
INSTITUTE of TECHNOLOGY CARLOW
At the Heart of South Leinster

Institute of Technology Carlow

Self-Evaluation Report
Appendices

Submission to the Higher Education Authority
28th June 2016

Institiúid Teicneolaíochta Cheatharlach
INSTITUTE of TECHNOLOGY CARLOW
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APPENDIX 1

OVERVIEW OF INSTITUTE OF TECHNOLOGY CARLOW RESPONSE TO REQUIREMENTS UNDER STRATEGIC DIALOGUE CYCLE 3 (SDC3) AS PER HEA CORRESPONDENCE DATED 23RD MAY 2016

Context

As stated in the President's introduction to this submission to the HEA, in early 2016 the HEA confirmed that Institute of Technology Carlow had been placed in Category 1 for agreed 2014 targets following Strategic Dialogue Cycle 2 (SDC2). Specific aspects of overall performance pertaining to Institute of Technology Carlow were outlined in correspondence from the HEA dated 19th February 2016 (copy included in this Appendix for convenience). Institute of Technology Carlow welcomed these findings and continues to build on the progress made to-date within the context of its strategic planning, review and enhancement processes (summarised in Figure 1.1 in the introduction to this submission).

In correspondence to all HEIs on the 23rd May 2016 the HEA outlined the following four general requirements for SDC3:

- Self-Evaluation Report Year End 2015
- Response to General Feedback to all HEIs following SDC1 and SDC2
- Response to Transition Agenda, Retention Initiatives and Workload Management
- Response to Specific Ongoing and Evolving Policy Priorities

Institute of Technology Carlow's response to these requirements is summarised in Tables 1.1 to 1.4, respectively.

Table 1.1 Self-Evaluation Report Year End 2015 as per SDC3 extract from HEA correspondence dated 23rd May 2016.

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
A self-evaluation report setting out a review of your institution's performance against the second set of interim targets, as at year end 2015.	The Self-Evaluation Report (SER) Year End 2015 for Institute of Technology Carlow has been completed, is presented in the main body of this submission and is supported by additional commentary and evidence-based analyses as follows: • Institute of Technology Carlow response to HEA SDC3 requirements specified in correspondence to HEIs dated 23rd May 2016 (this Appendix 1, Table 1.1 to 1.4). • Trends and Benchmarking of the Learner Profile and Graduate Destinations (Appendix 2). • The Irish Survey of Student Engagement 2014-2016 – Benchmarking with the Irish and UK Higher Education System (Appendix 3). • Higher Education Student Activity and Sport Study Ireland (Appendix 4) • Enhancement of Research and Innovation Capacity (Appendix 5). • Enhanced Internationalisation (Appendix 6). • Resourcing and Environmental Context (Appendix 7).
The self-evaluation should include a description of any departures from the expected/agreed performance as set out in the mission-based performance compact 2014 – 2016 with particular reference to (a) institutional objectives and performance indicators, (b) interim targets set as at end 2015 and having regard to (c) March 2016 data returns to the HEA.	Under SDC2, Institute of Technology Carlow reported that it had achieved or exceeded all of the agreed 2014 targets with the exception of three. The latter were dependant on cooperation from external parties and this was not forthcoming during the period under review. These three objectives were: • To progress the development of a multi-campus Technological University (TU) for the South East in partnership with WIT. • To develop a multi-campus Graduate School in collaboration with WIT as a key component of a South East Technological University. • To further enhance our contribution to the economic, social and cultural development of the region in partnership with WIT through the establishment of a Regional Engagement Forum. Under SDC3, Institute of Technology Carlow now reports that it has achieved or exceeded all of the agreed 2015 targets, including progress on the above three outstanding from 2014. Specifically: • Multi-Campus Technological University for the South East - Following the developments detailed in Section 7 of the SDC3 SER on *Institutional Consolidation*, the Governing Bodies of Waterford and Carlow Institutes of Technology agreed to recommence discussions on the creation of a Technological University of the South East in January 2016. Following a joint proposal for funding to support the creation of a support infrastructure in line with the recommendations of the Kelly report – *Engagement and Consultation Process on a Technological University for the South East* (Report to the Minister for Education and Skills, July 2015), the HEA announced an investment of €1.5m in June 2016 to enable the Institutes to develop and implement an action plan to lead to Technological University. The leadership within the two South East Institutes are committed to delivering a university of international standing for the region in support of economic and social development and this investment by the HEA will help advance this process. • Graduate School - As detailed in Section 5 of the SDC3 SER on *High Quality, Internationally Competitive Research and Innovation*, developments have included an agreement amongst the Southern Cluster Presidents (UCC, CIT, IT Tralee, IT Carlow and WIT) on an initiative to implement shared and joint structured skills training modules for roll-out in 2016/17. The general original objective remains the same i.e., a multi-campus graduate provision including collaboration with WIT in the context of the TU project.

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	• Regional Engagement Forum – As detailed in Section 6 of the SDC3 SER on *Enhanced Engagement with Enterprise and the Community and Embedded Knowledge Exchange*, the original proposal for a Regional Engagement Forum has been subsumed into the national network of Regional Skills Fora (RSF) established by the Department of Education and Skills in 2015 and embedded in the National Skills Strategy to 2025 (DOES 2016). Institute of Technology Carlow has taken a lead role in the South East Regional Skills Forum (SE RSF) in keeping with the South East Action Plan for Jobs (2015). This SE RSF is now being supported by the recent appointment of a SE RSF manager who took up position in May 2016. Prior to this, the Forum's work on mapping, data collection and other initiatives throughout 2015 was facilitated by Institute of Technology Carlow through funding provided by the DES. Regional Cluster - The outcome of SDC2 saw the allocation of €4m across the six regional cluster groupings on an RGAM derived model where 100% would represent full pro-rata cluster allocation. Two clusters, including the Southern Cluster of UCC, CIT, IT Tralee, IT Carlow and WIT, received 82%; one received 100%; two received 105% and one received 148%. Correspondence received from the HEA on the 5th November 2015 detailed the reasons for this (included in Appendix 1). The Institute further notes the HEA consultation document entitled *Discussion Document Regional Clusters: Maximising Collective Impact Strategy 2015-2020* also issued in November 2015, which deals with the larger issue of the future development of regional clusters. This consultation is still underway at the time of this report. Within this context, Institute of Technology Carlow response to this national priority is detailed in Section 1 of the SDC3 SER on *Regional Cluster*. With reference to the March 2016 data returns to the HEA by Institute of Technology Carlow and alignment with the projections presented during SDC2, a comparative analysis is presented in Appendix 2 for Total Learners (Figure 2.1), New Full-time Entrants (Figure 2.6), Total Full-time Learners (Figure 2.7), Lifelong Learners (Figure 2.9 and Figure 2.10), International Learners (Figure 2.12), Award Levels Total Enrolments (Figure 2.15), Field of Study New Entrants (Figure 2.22) and Field of Study Total Enrolments (Figure 2.23). Trend Analysis is also provided in Appendix 2 on Graduates and Award Levels (Figure 2.2 and Figure 2.3), Graduate Destination (Figure 2.5), Presence Rates (Table 2.1), Access Numbers (Table 2.2 and Figure 2.8), Origin of International Learners (Figures 2.13 and 2.14), Postgraduate Learners (Figures 2.16-2.20), Field of Study Full-time Learners (Figure 2.21), Springboard Provision and Learners (Tables 2.3 to 2.5 and Figures 2.24 to 2.27), and ICT Learners (Figures 2.28 and 2.29), As discussed in the President's introduction to this submission, the full-time and part-time learner cohort at Institute of Technology Carlow continues to grow and now exceeds 7000 learners pursuing level 6 to level 10 qualifications on the NFQ (2015/2016). This represents an 11% and 13.6% increase from 2014/15 to 2015/16 for learner headcount and whole time equivalents, respectively. This exceeds the SDC2 projection for 2016, over-shooting the projected full-time learners by 290 and the lifelong learners by 437 (headcount). The latter is partially explained by the significant increase in Springboard places (404) to the Institute for 2015/16 and its success in filling same (Table 2.4). But essentially the increase reflects the increasing demand for higher education opportunities in the Institutes primary catchment area of the South East, Mid-East and GDA regions. This is underpinned by significant demographic changes as represented in published statistics from the DOES and the CSO (Table 7.1 and Figure 7.1, Appendix 7).

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
	Besides the obvious challenges this presents to an Institute already disproportionately challenged by a funding model for the Technological sector with its built-in historical inequities (Figures 7.11 to 7.13), current national TU criteria may necessitate the Institute reducing its level 8 provision in the future and at the point of application for designation in order to reach the criteria for postgraduate researchers (expressed as a proportion of level 8 to 10 provision). However, in the immediate term the Institute will continue to respond to the needs of its regions and national imperatives, provided that it can continue to demonstrate the maintenance and enhancement of its high quality provision (as it continues to do to-date, see Table 2.8, Appendix 2). Mindful of the reduced numbers on offer under Springboard 2016/17, and an anticipated consolidation in collaborative numbers from the Defence Forces as they undergo a staffing refreshment and basic recruitment cycle in 2017, this is reflected in the SDC3 lifelong learning target numbers for 2017 and 2018. One of many positives evident from the HEA Returns March 2016 is the ongoing increase in full-time learners pursuing STEM programmes. There has been an overall 20.6% increase in 2015/16 since 2014/15 (Figure 2.21, Appendix 2). This brings the cumulative increase in STEM to 44.8% since 2011/12 at Institute of Technology Carlow. The increase reflects the strategic focus of the Institute on the technological needs of the economy and again is consistent with national TU criteria. In order to sustain this trajectory, capital investment by the State in additional science, engineering and computing laboratories at Institute of Technology Carlow is now an imperative.
The self-evaluation should, where possible, benchmark your institution's performance, either at institutional level or according to a particular objective, with that of chosen national and/ or international comparators and demonstrate any learnings from the process.	Institute of Technology Carlow has placed considerable emphasis on measuring its impact through benchmarking, thereby learning from the experiences of other institutions. Some of the benchmarking indices referred to throughout this submission are as follows: • Comparison of international higher education systems and performance against other IoTs and against similar sized institutions in competitor countries. • Progression rates measured against published rates for other institutions. • The Irish Survey of Student Engagement 2014-2016, further supplemented by an international comparison with UK Student Engagement survey. • SciVal system from Elsevier to explore the impact and quality of the Institute's research publications. • Data produced by the HEA with regard to Springboard programmes. • Lifelong Learning participation rates compared with other Irish HEIs. • Trends and Benchmarking of the Learner Profile and Graduate Destinations. • Institutional Trend Data published by the HEA 2013. • Criteria for Technological University designation published by the HEA. • Higher Education Student Activity and Sport Study Ireland (SASSI) 2015. • Comparison of resourcing against other IoTs.

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
	In the broader sense, and consistent with 1) Goal 5 of Institute of Technology Carlow's Strategic Plan 2014-2018 and 2) the Institute's quality assurance and enhancement framework for the monitoring, validation and enhancement of Institute wide performance, the Institute continues to engage in robust self-evaluation and peer review as a key component of our quality enhancement culture (see Figure 1.1). This philosophy has served us well in maintaining a high standard of achievement in recent institute-wide formal reviews conducted throughout 2014-2016 and involving both strategic and programmatic reviews across all activities, faculties, centres and campuses (see Table 2.8, Appendix 2). These reviews are based on the involvement of a series of external expert panels, with representation from the academic, corporate and community sectors; learner/graduate cohort; and regional, national and international communities. The expert panels have reviewed detailed SER documentation submitted by the Institute and have also participated in site visits and meetings with stakeholder groups. The feedback from these panels have provided invaluable input into an assessment of the Institute's performance to-date while also sharing a diverse range of perspectives and experience which will greatly assist the Institute in its 2016 mid-term Strategic Review designed to further stretch institutional performance and accelerate progression towards its 2030 vision.

Table 1.2 Response to General Feedback to all HEIs following SDC1 and SDC2 as per SDC3 Extract 2 from HEA correspondence dated 23rd May 2016.

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
Diversity There is good evidence of diversity at a high level and of two distinct sectors from the current and future profiles of institutions, but there is much less evidence of distinctiveness within the sectors. A key overarching aim for the strategic dialogue process was to support the delivery of a coherent but diversified Irish system of higher education where different institutions delivered education and research according to their mission, strengths and priorities and where the sum of the whole would meet student and wider stakeholder needs.	**Diversity** Higher education provision should offer a coherent but diversified range of options for learners. Unnecessary duplication and over-supply can lead to lack of critical mass which can impact on educational quality. This is particularly significant where HEIs operate in close geographical proximity where the issues of access are not a critical factor for learner participation. Institute of Technology Carlow is the primary HEI serving its surrounding regions and as such has a duty and responsibility to offer a wide range of programmes from level 6 to 10 where feasible. Institute of Technology Carlow ensures that all of its programmes are developed, delivered and evaluated through extensive collaboration and consultation with industry and community partners (see Table 1.3, Transitions Agenda, for further detail) thus ensuring that no programmes are offered that are already over-supplied within the HEI landscape. Within this context, Institute of Technology Carlow's programme portfolio spans level 6 to level 10 of the NFQ, in accordance with one of the priorities of the *National Strategy of Higher Education to 2030* (Hunt, 2011) embracing the spectrum of academic disciplines that align with the Institutes commitment to 'knowledge in action' and with regional and national development needs. The Institute has concentrated on 'knowledge in action' to support the future careers of graduates and the economic, social and cultural needs of the region and country. The Institute is not offering programmes in areas such as medicine, veterinary, dentistry, nursing, pharmacy and liberal arts, but does offer a diverse range of programmes to a diverse learner population of which 36% are mature lifelong learners who are already pursuing successful careers across a broad range of sectors (90% in employment across the region). Institute of Technology Carlow strives to provide 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 graduates are equipped for the challenges and opportunities of a dynamic, globalised, technologically-advanced and knowledge-based society. The Institute situates industry-based and practice-based learning in all its programmes in the form of internships, work based learning, research and practice. Central to this approach is a dynamic engagement with external stakeholders, particularly employers and industry groups, to ensure graduates are ready to make an immediate and significant contribution to society, culture and the economy. In order to ensure a high quality educational experience, the Institute has prioritised key areas for development as a cohort or suite of programmes supported by relevant research in the discipline area and ensuring critical mass of teaching and learning across related programmes. For example, in 2016 a new BSc (Hons) Cybercrime and IT Security degree and a new MSc in Data Science (HEA Springboard funded) have been introduced as part of a suite of programmes across software development, computer games and IT management from level 6 to level 9 taught. This integrates with the level 9 and level 10 research and innovation activities of GameCORE, which in 2016/17 will see the first Institute of Technology Carlow and UNUM FinTech researchers commence collaborative projects in locations in Ireland and the United States.

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
	The Institute's research paradigm is also built around "knowledge in action", distinct from traditional research cultures that privilege 'knowledge in print'. The Institutes developing research system involves a dynamic relationship between: learners - postgraduates providing specialist expertise for the future; researchers - specialist research staff driving programmes; infrastructure - support and facilities; partners – regional and national SME and FDI partners. Together, these stakeholders put knowledge in action to generate innovation, create opportunity and build value in the regional economy. Institute of Technology Carlow has a clear recognised international standing in strategic research areas, offering continued focus on areas that have potential for the regional economy and identified for prioritisation at National or European level. The strategy for research takes an integrated approach. It 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 development of the research skills for all learners. It is a core principle of 'knowledge in action' that our research is not an esoteric or reserved activity, peculiar to a small separate group, but rather an open and embracing activity that contributes to a wider teaching and regional engagement agenda. In the context of the Technological University for the South East, the Institute is in a transitional stage where the educational requirements of the entire South East region, and adjacent spheres of influence, are being considered in partnership with WIT to shape and deliver the vision for a new connected and embedded multi-campus Technological University for the South East.

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
Prioritisation There is limited evidence of effective prioritisation in draft compacts. The HEA wishes to emphasise that good prioritisation and focus is a key purpose of this process and will not disadvantage an institution. The overall number of strategic objectives in many cases was excessive. In general, where the number of objectives significantly exceeds c. 10-15 there is a loss of the sense of institutional prioritisation of those areas requiring strategic steering or development focus over the next three years.	**Prioritisation** The Institute has prioritised the following: • Technological University. The Institute remains committed to the creation of a multi-campus Technological University delivering a portfolio of programmes informed by best practice in international higher education (Section 6, *Enhanced Internationalisation*) and to achieving this in partnership with Waterford Institute of Technology as described in Section 7 on *Institutional Consolidation*. • Research and Innovation. As described in Section 4 on High Quality Internationally Competitive Research and Innovation, the research priorities have been set following a review of RDI objectives. The review confirmed that considerable progress has been made and demonstrates the Institute's continued commitment to building significant capacity in enviroCORE (Bioenvironmental technologies); designCORE (Product design and design thinking); gameCORE (Computer gaming and interactive applications); healthCORE (Health, wellbeing and rehabilitative science); engCORE (Engineering systems-applied mechatronics, circuits and systems intelligent built environment). Each of these map to key scientific priority themes identified under the National Research Prioritisation exercise, they address specific Societal Challenges underpinning H2020 and map to key sectors identified in the Innovation 2020 strategy. • Regional Engagement. As described in Section 1 on *Regional Cluster* and Section 5 on Enhanced Engagement, the main focus at regional level is through the Regional Skills Forum (RSF) and the Implementation Committees for the Action Plan for Jobs (APJs). The Institute plays a lead role in achieving the goals of the South East Forum, the South East APJ and the Mid-East APJ. The Institute also plays a central role in the Local Economic and Community Plans (LECPs) for five counties across our catchment area (South East, Mid East and Midlands). • Lifelong Learning and the Extended Campus. As described in Section 2 on Participation, Equal Access and Lifelong Learning, the Institute continues to prioritise the provision of higher education which is readily accessible to those who are not in a position to take on full time study, thereby forging stronger links and alliances and developing an educational portfolio closely aligned to career advancement. The Extended Campus brings this concept of flexible and lifelong learning into the workplace as evidenced through our role in national work based learning (WBL) initiatives.

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
Portfolio of Programmes Much stronger evidence of reflection by the institution on their portfolio of programmes is required, including its relative distinctiveness or strengths in relation to either the overall mission of the institution strategies for teaching, learning, quality of the student experience, or research and innovation. Internal Coherence: There is limited evidence of internal coherence between the different elements of institutions' strategies in many draft compacts. For example, how the access strategy informed the teaching, learning and assessment strategy; how the research strategy informed the international strategy or vice versa.	**Portfolio of Programmes** A complete response to the vision and strategic intent underpinning the portfolio of undergraduate programmes at Institute of Technology Carlow is contained within Table 1.3 (this Appendix) – Transitions Agenda. Throughout this submission Institute of Technology Carlow has highlighted the portfolio of distinctive programmes which are inextricably aligned with its CORE research and enterprise related activities. The Institute's programmes in the areas of product design/ interaction design, health and wellbeing, ICT, bioscience technologies, aero-engineering, leadership and defence studies provides some of this distinctiveness. Specific examples presented in Table 2.7 (Appendix 2) include the following recent developments which add to the ongoing distinctive offering of the Institute which has been evident in both the full-time offering and in response to specific Government initiatives such as Springboard (see Table 2.3-2.4, Appendix 2 also): • **BSc (Hons) Cybercrime and IT Security (CAO 2016)** -This programme has been developed in response to the ongoing demand for computing / IT graduates highlighted in recently published ICT Action Plans and in response to IDA strategy and the Action Plans for Jobs that is promoting Ireland as a Cyber Security Hub. This programme was launched with global companies including CipherTechs, Sun Life Financial and BlackBerry in June 2016 and will make a valuable and distinctive contribution to the rapidly growing cyber security sector regionally and nationally. As described above, this sits alongside full-time level 6 to level 9 (taught) programmes in Games Development, Software Development and IT Management, a new Springboard 2016+-funded MSc in Data Science, and integrates with the level 9 and level 10 research and innovation activities of gameCORE at both a national and international level. • **BSc (Hons) Brewing and Distilling (CAO 2017**) - This programme is the first of its type in Ireland and has been designed to support and drive the major national renaissance in the alcoholic drinks sector with the assistance and input from global companies such as Alltech, to a number of medium sized producers such as Carlow Brewing company, to the rapidly increasing number of microbreweries of varying size including Rye River Brewing in Kildare, Dungarvan Brewing Company in Waterford, 12 Acres in Carlow, Costellos in Kilkenny, Walshe's Distillery in Carlow and Waterford Distillery. In addition, modules from the programme have been validated through our quality processes as stand-alone CPD upskilling programmes for the industry. This sits alongside full-time level 6 to level 8 (taught) programmes in Biosciences, Environmental Science and Analytical Science, a Springboard-funded MSc in Medical Device Regulatory Affairs and a Springboard Funded MSc in Pharmaceutical Regulatory Affairs, and integrates with the level 9 and level 10 research and innovation activities of enviroCORE at both a national and international level.

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
	• The Institute has expanded its postgraduate offering in areas where it has developed a significant academic track record and expertise at level 6 to level 8. A trend analysis is presented in Figure 2.16 to Figure 2.20 (Appendix 2). This expansion in provision has included: - 'Conversion' level 8 postgraduate programmes in areas of Business (Logistics, Financial Services, Tourism Marketing, Digital Media) and ICT (Figure 2.15, Appendix 2), - Level 9 (taught) in areas such as Information Technology Management, Data Science, Medical Devices, Pharmaceutical Regulatory Affairs, Sport Performance Analysis, Strength and Conditioning, Digital Marketing, Interaction Design, Supply Chain Management, Military Engineering (Defence Forces), Weapons, Ordnance, Munition and Explosives Engineering (Defence Forces), Teaching and Learning, Child Youth and Family Studies and- Level 9 (research) across the five priority COREs, business and humanities. - Level 10 (research) across enviroCORE, engCORE and gameCORE. Extension of level 10 (research) provision for designCORE and healthCORE is an institutional priority for the coming year under the new national doctoral framework. This submission highlights the emphasis the Institute places on cross disciplinary activities, particularly in pursuing research and enterprise related activities. This submission also highlights the importance placed on the quality of the student experience and the successes achieved and independently substantiated in this critical area. (Table 2.8, Appendix 2; Appendix 3 and Appendix 4).

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
Objectives, Indicators, Targets It is apparent that in some institutions there is a general need for capacity building to improve the quality of strategic planning. Many objectives were poorly related to the core mission and existing profile of the institution. Many targets were highly aspirational and not well founded on plausible trajectories from a current baseline. Many were not well supported by any realistic analysis of competitive or funding challenges, of institutional management and academic capacity to deliver, or by risk identification and mitigation. Many indicators could not be considered key and were poorly related to the objectives set. In general there is an insufficient focus on outcomes-oriented objectives and on fully verifiable interim and final targets. While the use of some qualitative indicators was to be expected in areas where these were the most appropriate measures, particularly where plans or processes needed to be developed, there has been an over-reliance on qualitative indicators that do not have any clear means of verification. Where a quantitative indicator is used, the data source that will be the means of verification must be specified, unless this metric is included on the current institution profile. In all cases where a qualitative indicator is used, a means of verification with a verifiable timeline must be provided.	**Objectiveness, Indicators, Targets** Institute of Technology Carlow continues to engage in detailed consultative strategic planning processes which has resulted in a clear strategic direction for the Institute supported by clear goals, objectives and targets. For example, the Institute is currently conducting a mid-term strategic review of its 2014-2018 Strategic Plan in consultation with internal and external stakeholders, the outcomes of which will be published in 2016. The Governing Body of Institute of Technology Carlow has monitored progress towards these targets on a regular basis and has embedded strategic prioritisation, supported by sound financial management and strong academic / financial governance, with a learner-centre approach and a focus on high quality outputs. Institute of Technology Carlow, as a result, has experienced strong managed growth across a range of areas and has exceeded its growth targets in strategically prioritised areas. The Institute's strategic focus has enabled it to generate diverse income streams to support its strategic capital development infrastructure plans during the period of the recession and in the absence of State funding. These strategic objectives are informed and shaped by Government policy documents on an on-going basis, including those listed in Table 1.4 (this Appendix) which details the policy instruments and where the institutional response is contained within Institute of Technology Carlow's Strategic Plan.

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
Institution Benchmarking There is relatively weak use of external institutional benchmarking to inform choice of objectives and targets. It is expected that institutions will select national or international benchmarks relating to institutions with a similar mission and profile, whose performance would be a challenge to match, as an aid to setting their own performance targets. External benchmarking is likely to have implicitly influenced targets for quality of research outputs. Institutions should also have regard to drawing out implicit benchmarking involved in ongoing operations, e.g. where extern examiners are drawn from or progression **routes of graduates to other institutions.**	**Institution Benchmarking** As already detailed in Table 1.1, Institute of Technology Carlow has placed considerable emphasis on measuring its impact through benchmarking, thereby learning from the experiences of other institutions. Some of the benchmarking indices referred to throughout this submission are as follows:- • Comparison of international performance against other IoTs and against similar sized institutions in competitor countries. • Progression rates measured against published rates for other institutions. • The Irish Survey of Student Engagement, further supplemented by an international comparison with UK Student Engagement survey 2014. • SciVal system from Elsevier to explore the impact and quality of the Institute's research publications. • Data produced by the HEA with regard to the impact of Springboard programmes. • Lifelong Learning participation rates compared with other Irish HEI's. • Trends and Benchmarking of the Learner Profile and Graduate Destinations. • Institutional Trend Data published by the HEA 2013. • Criteria for Technological University designation published by the HEA. • Higher Education Student Activity and Sport Study Ireland (SASSI) 2015. Institute of Technology Carlow external examiners are drawn from a wide range of national and international academic institutions and senior post holders in industry. An analysis of this is detailed in the Annual Institutional Quality Report to QQI (2015) which can be accessed at www.itcarlow.ie/quality. In addition to this, Institute of Technology Carlow continues to engage in robust self-evaluation and peer review as a key component of our quality assurance and enhancement culture (see Figure 1.1, President's Introduction to this submission). For example, throughout 2014 to 2016 strategic and programmatic reviews were conducted across all activities, faculties, centres and campuses (see Table 2.8, Appendix 2). These reviews are based on the involvement of a series of external expert panels, with representation from the academic, corporate and community sectors; learner/graduate cohort; and regional, national and international communities. The expert panels review detailed SER documentation submitted by the Institute, conduct site visits and meetings with stakeholder groups, and agree a report which is then reviewed by the Academic Council and Governing Body prior to publication by the Institute.

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
General feedback from cycle 2 of strategic dialogue • General context: This round of strategic dialogue has taken place during a period of significant public sector reform. The engagement, and subsequent system level report, provides an opportunity to communicate the strengths of a responsive and well-performing higher education system that continues to provide quality higher education in order to meet Ireland's needs. Overall the level of system performance has been strong and there are some fine examples of good practice such as the benchmarking of performance and the sharpening of indicators at school, departmental and institutional levels. This is being achieved notwithstanding seven years of reducing resources alongside a significant growth in the provision of student places. • Improving the system: The best performing higher education institutions have demonstrated good progress and an ability to move beyond a simple process-driven approach to their strategic intentions. Over time, all HEIs should become more outcome-focused and have clear priorities grounded in a stated institutional strategy such as, for example, stated priorities to serve a particular cohort of students, to advance gender equality, to differentiate the institution, or to make a regional, national or international contribution to education, society, research and/or enterprise. There are, however, some areas of practice which need significant improvement. In some cases the evidence of a focused and strategic approach to institutional direction and management was not strong. In other cases, evidence of a coherent plan to address performance failure or impending performance failure (with reference to the published performance compact) was not clearly articulated. In order to address these concerns institutions should, where there are weaknesses at institutional, faculty or disciplinary level, seek to review their objectives and better incorporate the use of benchmarking (as a means of setting a context for the statement of institutional ambition) to ensure that strategic goals: are appropriately linked to overall institutional strategy; represent a performance stretch in ambition; strike an appropriate balance between process and outcome. Related to this benchmarking process, there is a continuing need for institutions to ensure that they are prioritising between (and across) their chosen compact domains so as to reflect and build on the institution's particular mission and strengths. For those high-performing HEIs there remains a need to continually improve their offer so as to maintain their international standing and relevance. In considering the future development of the strategic dialogue process, the HEA will also reflect on how engagement in the process can foster the setting of higher risk, or stretch, targets while accepting that not meeting such targets may not represent failure. • The HEA is of the view that careful strategic prioritisation alongside the benchmarking of relative performance can act as an assurance to higher education institutions, but also collectively serve as an indicator of overall national performance. Given the competitive international environment in which individual HEIs, regions and indeed Ireland compete, it is also imperative that poor performing HEIs address any deficits. Where institutional performance is sub-optimal this should be a concern for both the management and governance functions of a higher education institution. There is a responsibility and accountability that lies with Governing Bodies where institutional performance is not strong and therefore an onus on Governing Bodies to respond.	**General feedback from cycle 2 of strategic dialogue** • General Context: During the period of significant public sector reform, the Institute faced the challenge of reduced resourcing, increased financial challenges for learners, increased staff workload and reduced conditions of service. The Institute has performed exceptionally well throughout this period through a strategic focus and creating a unity of purpose in a learner-centred and values-driven higher education institution. The Institute has provided 44% more higher education opportunities since 2010/11, broadened its range of educational offerings, extended its research and knowledge transfer activities, increased its level of student support and regional engagement, and is taking an increased leadership role in the economic and social regeneration of its regions. • Improving the system: The Institute has, through its strategic focus, prioritised a greater role in regional economic and social development, while also broadening access to a more diverse range of learners. As part of this strategic focus, and part of the high performance culture within the Institute, the institution has regular reviews of all its activities and has addressed those programmes and activities where performance has not met the benchmark of excellence required by the Institute. As detailed earlier, the Institute is currently conducting a detailed consultative mid-term review of progress on its 2014-2018 Strategic Plan. The focus of this review is on further stretching institutional performance and accelerating progression towards the 2030 vision. Institute of Technology Carlow has benefitted from strong Governing Body and Executive Management leadership with a clear focus on strategic targets and objectives. As a result, the performance of the Institute across all its activities continues to be maximised within the available resources and limitations associated with current national economic circumstances. Due to a culture of accountability and responsibility Institute of Technology Carlow continues to maintain a healthy financial position while producing high quality outputs and enjoying strong managed growth.

Table 1.3 Response to Transition Agenda, Retention Initiatives and Workload Management as per SDC3 Extract 3 from HEA correspondence dated 23rd May 2016.

Transitions Agenda	
HEA SDC3 REQUIREMENT	**RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW**
Implementation of the Transitions agenda Reporting on the vision underpinning the portfolio of undergraduate programmes, how planned provision is aligned to institutional mission, reducing the number of entrance points into higher education.	<u>*Strategic intent informing programme provision*</u> Institute of Technology Carlow programme portfolio is guided by the Strategic Plan 2014-2018 and in particular Goal 1 "Learner Experience and Graduate Attributes" and Goal 2 – "Knowledge Creation, Application and Exchange". Within these goals are two primary ambitions: "*We will ensure that curricula reflect relevant graduate, national, economic and social needs and international standards*" and "*We will expand capacity and develop expertise within specific core domains. We will create, develop, apply and exchange knowledge to ensure highly skilled graduates and ideas to drive enterprise creation and development*". The monitoring of these ambitions includes the review of current programme offerings and provision of new programmes in areas of strategic importance. Our programme provision is informed by economic, social or cultural need analysis, interaction with key stakeholders, and by national reports such as the *Action Plan for Jobs and the Expert Group on Future Skills Needs*. As part of our vision for a Technological University for the South East a series of principles and a framework for academic leadership and provision was articulated. The following extract from Institute of Technology Carlow *Vision Statement for the South East Technological University (SETU) and Implementation Framework* (2015, www.itcarlow.ie/resources.htm) exemplifies the vision underpinning the provision of programmes level 6 to level 10. "*In keeping with the vision for the SETU graduate school, programmes should 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 the region'. This responsiveness to regional and sectoral need shall continue to be a distinguishing feature of graduate education provision by the Technological University across the region*". It is important to state that this is done within the framework of institutional strategic planning requiring consistency between faculty plans and institutional strategies while recognising and respecting academic freedom and the role of the academy as follows: "*The Faculty shall 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.*" The strategy is then operationalised through the quality assurance and enhancement structures of the Institute.

Transitions Agenda	
HEA SDC3 REQUIREMENT	**RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW**
	Policy and procedures underpinning the strategic intent Institute of Technology Carlow Policy and procedures for the design, development, validation and withdrawal of programmes at award levels 6 – 10 in the NFQ govern the management of the institute's portfolio of programmes. A faculty wishing to engage in new programme development must make a submission to the Executive Management Team outlining the strategic rationale for the programme and the needs analysis supporting the application. If this is approved a programme proposal and detailed submission documents are prepared for external validation under Policy and procedures for the design, development, validation and withdrawal of programmes at award levels 6 – 10 in the NFQ. These must address a clear level of learner and employer demand for each planned programme. The process requires surveying of employers and uses information from industrial agencies such as Enterprise Ireland and the IDA. It is now also informed by the Action Plan for Jobs with additional input from the Regional Skills Forum. As part of validation process for all new programmes proposed, the Institute also carefully analyses demand for the programmes proposed in the context of both existing national and regional provision in the area and if known, planned provision. Institute of Technology Carlow is particularly mindful of programme development need required under Springboard and ICT Skills initiatives and has prioritised programme development in STEM areas. The expansion to programme provision to be offered by the Institute must meet required validation standards set by the Institute under its delegated authority from QQI. New programmes are presented on the basis that the outlook for existing funding levels has been taken into account in the decision to develop new programmes. Additions to Institute of Technology Carlow's suite of lifelong learning programmes, including minor and special purpose awards, are also developed and offered on a similar basis. Institute of Technology Carlow also continues to develop its suite of programmes offered in collaboration with other partners, whether national and international or public or private. All new programme proposals are presented on the basis of the Institute's compliance with the Employment Control Framework and on the basis of balanced budgets. Programme teams are required to complete a detailed annual review of programmes under the quality assurance and enhancement policies and procedures of the Institute particularly the Policy and Procedure for On-going Monitoring of Programmes.

Transitions Agenda	
HEA SDC3 REQUIREMENT	**RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW**
	Reducing the number of entrance points into higher education The HEA publication (2013) '*Supporting a Better Transition from Second Level to Higher Education: Key Directions and Next Steps*' detailed commitments to address and to broaden entry routes into higher education. On 29th April 2015, the Minister for Education and Skills, Jan O'Sullivan, T.D., launched the report, *Supporting a Better Transition from Second Level to Higher Education: Implementation and Next Steps* (April 2015) setting out the 4 main components of the reform including an update on the broadening of entry-routes into higher education. The management of the portfolio of programmes offered by Institute of Technology Carlow has been cognisant of these reports and their guiding principles. As a result the data presented in Table 2.7 (Appendix 2), indicates the impact of changes to the portfolio since 2014 (reproduced below for the Institute for convenience). This figure does not demonstrate the amount of programme development work being undertaken by the Institute in developing programmes in response to and in anticipation of stakeholder needs. For instance programmes in Cybercrime and IT Security, Brewing and Distilling, Sustainable Farm Management, Applied Humanities, Culture and Heritage Studies, and TV and Media Production have been introduced while still achieving a reduction in the overall number of entry points.

Level 8	2014	2015	2016	2017
IT Carlow	30	28	25	24
IT Carlow WX	7	7	8	8
IoTs (total)	400	404	422	424

Level 6/7	2014	2015	2016	2017
IT Carlow	34	27	27	28
IT Carlow WX	6	5	8	8
IoTs (total)	414	412	416	408

Transitions Agenda

HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW

To demonstrate the ongoing process used by the Institute to manage the academic portfolio and to reduce the number of entry points the following example from the Faculty of Business and Humanities is offered;

CAO Level 8 Programmes in Business	2008/09	2013	2016
Business - Management	X	X	X
Marketing	X	X	
Supply Chain Management	X		
International Business	X		
Human Resource Management	X	X	

In the current year (2016) the prospectus for entry contains a single entry point for the Bachelor of Business (Honours) with options 1. Common entry (learners do not select a specialisation until end of year 2); 2. Marketing; 3. International Business, 4. Supply Chain Management; 5. Business Management; 6. HRM. This builds the maximum amount of flexibility for learners into the application system. This flexibility is also reflected in the level 7 entry point. Institute of Technology Carlow has been conscious to retain its presence at level 6 and level 7 and has designed the delivery of programmes to maximise flexibility for learners irrespective of the entry route initially chosen. For example, graduates of the Higher Certificate in Business can apply to progress to any of the business options. This process is also used in Built Environment programmes and in the Wexford Campus and the approach has been applied to the Sciences for the 2017 intake, and then to the Health Sciences and ICT programmes from 2018 onwards.

Improving Retention Rates	
HEA SDC3 REQUIREMENT	**RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW**
Efforts to improve retention rates – where data in the HEA's recent publication *A Study of Progression in Irish Higher Education 2012/13 – 2013/14* (2016) www.hea.ie/sites/default/files/hea-progression-irish-higher-education_final.pdf highlights concerns in your HEI, the HEA needs to be assured that a systematic approach is in place, to address the issue of non-progression, drawing on best practice nationally and internationally.	Institute of Technology Carlow, as a central pillar of its learner-centred education, is keenly aware of the issue of progression. As a key metric in determining the success or otherwise of learners' transition to higher education, it is vital that the Institute proactively supports leaners pre- and post-entry to ensure that the transition is optimal for the learner and where this is not the case, enhancement measures are put in place. Institute of Technology Carlow is also mindful of the HEA's recent publication *A Study of Progression in Irish Higher Education 2012/13 – 2013/14*. Table 2.1, Appendix 2, presents the tracked progression rates from 2010/11 to 2015/16 for Institute of Technology Carlow. The years 2014/15 and 2015/16 are subject to HEA audit before being finalised but provisionally highlight an enhanced overall throughput. The Institute has a systematic approach in place to address the issue of non-progression, drawing on best practice nationally and internationally, through ensuring the best possible first year experience. We ensure a positive and supportive transition to third level for the undergraduate learner, promoting engagement, improving retention/success, placing an emphasis on the first-year experience, systematically monitoring and evaluating student achievement and incorporating the learner voice. *FYE and Structured Induction for a Diverse Learner Population*: Transitioning to third level is a year-long process which includes a structured induction process. It is about integrating learners into the Institute, the faculty, campus and the programme of study in order to help them to develop a sense of place and to assist them to maximise their academic performance, their involvement with and enjoyment of the wider third level community and experience. Central to this is a focus on the whole of the first year experience (FYE) because, the more a learner is 'embedded', both from an academic and social aspect, the more likely they are to succeed. Transition into higher education presents challenges for learners, whatever their age or previous educational history. Our faculties and campuses consider the specific challenges of commencing studies in third level for learner cohorts including: those facing the transition from secondary level education; mature learners commencing or recommencing education possibly after a long period of no formal education; part-time or life-long learners who may be in full time employment while undertaking their studies; learners from targeted socioeconomic backgrounds; learners with a language background other than English, ethnic minorities, learners on national labour market activation initiative programmes and international learners. The aim of the induction and orientation of learners at Institute of Technology Carlow is to enhance connectedness to the Institute, the department, and the individual programme. The principles and elements of the programme are as follows: (a) Welcome and connect with all learners prior to entry, on entry and during their entire first year of study, (b) Facilitate the student's transition and integration into the Institute culture and system throughout their first year of study in the Institute,

Improving Retention Rates	
HEA SDC3 REQUIREMENT	**RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW**
	(c) Provide an integrated, Institute-wide programme for all new learners, which combines registration, an introduction to course, staff, facilities and services, (d) Provide the student with ongoing support in developing learning and study skills, (e) Involve each department developing and implementing an orientation program appropriate to its own academic programme, (f) Recognise the key role of tutors and is supported by providing training and guidance for all staff. The programme is timetabled to include all elements, is ongoing throughout the student's first year of study and includes the following: (a) Induction. (b) Academic orientation. (c) Orientation to the Institute's physical environment. (d) Orientation to services and support structures available for learners. (e) Orientation to facilitate student involvement in the Institute community. (f) Support in developing learning and study skills. (g) Evaluation of the orientation programme. (h) Integration of the above, (i) Opportunity to participate for every student. Engaging and dynamic group activities are employed to help learners get to know their classmates, become familiar with the campus and services available. These include ice-breaking activities, programme discussions, etc. Some of the tasks are competitive and require learners to work together to achieve an outcome e.g. department quiz. These activities can introduce learners to the differences in how learners might engage at third level compared to second level, where the traditional teacher-student model is prevalent. In 2015, the Institute also introduced an induction session for parents of first year entrants to advise them on what their child might expect. Over 10% of new entrants' parents attended in 2015 and the sessions were well received. The Institute's Centre for Teaching and Learning provides guidance and information on resources which can be used to plan a successful induction programme for new learners. These resources not only focus on the induction programme itself, but also practical resources for the learners first classes. Furthermore resources and programmes for the continued support of learners during their first few weeks at the Institute are available. It is intended to expand this through a structured virtual induction aimed at all learners and in particular lifelong learners in 2016/2017.

Improving Retention Rates	
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	The Institute organises separate and customised programmes for International learners and mature learners. These programmes help these learners to get to know the Institute and its facilities, go on their first international group activity in Ireland (where applicable) and most importantly create an opportunity for learners to integrate, get to know each other, have some fun and make new friends before classes commence. *First Year Curriculum, Review, Feedback and Supports*: Successful transitioning to Higher Education is about much more than the initial induction and orientation of learners but also the first year curriculum. The main features of the Institute of the Technology Carlow first-year curriculum are as follows: 1. **Orientation and induction of learners**: This is a key stage and is used to increase social and academic engagement, 'connectedness' to the institute, department and programme, sense of direction and future career 2. **Development of learning skills and transferable life skills**. While learners may accept the principle of autonomous learning they need help in becoming autonomous learners and learning to learn should form part of the first year curriculum. In addition, learners' active contribution to their own learning is an important enabler of engagement and a signal of their motivation to learn. Self-regulating behaviours such as preparation of readings ahead of class or the posing of questions in class provide some insights into learners' engagement with learning and the learning environment. Time and structures for reflecting on learning and progressive discipline specific skills development must also be factored in 3. **Student-centred, active learning**: This may be achieved through the use of problem-based, project-based and group learning and the opportunity for collaborative group learning to enhance transferable skills and lend a sense of belonging. This should be incorporated into all first year modules but also emphasised in a specific transferable life skills module. 4. **Early formative assessment and feedback**: Research has shown that where learners receive early formative feedback, they become more aware of how they are progressing and therefore are more able to become informed and self-directed learners. Small-group work, problem-based learning, enquiry-based learning and other experiential forms of learning are critical ways of ensuring that learners become more active in the learning process. 5. **Incorporating student feedback**: Research highlights the importance of considering and incorporating first-year student perspectives into the design of the curriculum so that learners become co-designers of their own learning experiences. This involves providing regular opportunities for the first year voice to be heard and evaluating the learners' satisfaction with their total experience, not just what goes in the classroom. This is evident in the student response to the ISSE (Appendix 3).

Improving Retention Rates	
HEA SDC3 REQUIREMENT	**RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW**
	6. **Communication with peers and staff**: The quality of a learners' engagement with peers in the third level learning environment is a strong predictor of student persistence and retention. Peers play an important role in both social and academic integration in the first year as initiatives such as the Institute's Faculty of Engineering Peer Assisted Learning programme have demonstrated. Opportunities are created for learners to have personal contact with staff, particularly in their first year as the interaction between learners and academic staff has a positive influence on student's perceived satisfaction. 7. **IT skills**: The use of and demand for information and communications technologies (ICT) in all aspects of society have had a powerful impact on higher education curricula and pedagogies and learners' engagement with emerging technologies continues to expand. The increased use of ICT in the first year curriculum is prioritised. Transition into higher education is important; it impacts on retention with the majority of learners who leave within the first year of study citing a 'lack of preparation for and understanding of the type of learning that is required.' The focus in Institute of Technology Carlow is on promoting student success and supporting the provision of a quality learning experience for all learners at Institute of Technology Carlow as opposed to simply an emphasis on retention. Academically all first year learners are assessed in their modules within six-eight weeks of commencement of their studies and a review and feedback of their performance takes place subsequently. This takes the form of a formal single item programme board or stream meeting where each student is considered in terms of attendance, engagement and academic performance. Recommendations for each student are made in terms of at-risk learners and interventions or referrals include: single module subject meetings with lecturers, meetings with tutors, programme directors, head of department, student support services, supplementary tutorial support from the Teaching and Learning centre, programme deferrals and other situations including supports for learners with specific learning difficulties. Supplementary Teaching is an academic support scheme at Institute of Technology Carlow designed to improve the student's academic success and increase retention. It is intended to complement class teaching and is not a substitute for it or a long term intervention. It is set in place, usually after six weeks teaching of a programme, in modules posing difficulty. *Informed Programme Choice and Internal Transfer Process*: Poor programme choice is recognised as a major factor in learners' decisions to withdraw from a programme and so the transition process includes an emphasis on supporting learners who find themselves in this situation and promoting Institute of Technology Carlow internal course transfer process as part of tutor counselling. The development of pre-entry supports such as the Institute's Programme and Module Management Software (launched in 2015), Transition from FE workshops (again run for the first time in 2015), open days and evenings, website, social media, shadowing and prospectus facilitate greater awareness of the impending transition and ameliorate poor programme choice.

Improving Retention Rates	
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	Retention Centre: ICT programmes traditionally had a high attrition rate, in particular, the through-put rate from Y1 to Y2 can be lower than other STEM programmes. Institute of Technology Carlow has addressed this issue through a number of initiatives primarily led by the Retention Centre within the Institute's Computer and Networking Department. First year ICT learners receive feedback within the first three weeks. This is facilitated by having 100% continuous assessment of modules on first year computing programmes and where every laboratory session has some assessed component. Generally learners receive feedback on a weekly basis. Student grades and attendance records are held centrally and available to all academic staff within the department. The retention centre staff are proactive in that they regularly review this data and contact any learners who are showing a weakness in an area/module. At the end of every academic year the facilitators of the Retention Centre produce a report in order to evaluate, reflect on and enhance the quality of service delivered by the centre.

Systems and Workload Management	
HEA SDC3 REQUIREMENT	**RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW**
Systems and workload management – *A Review of Workload Management Models in Irish HEIs* was published in 2014 www.hea.ie/sites/default/files/review_of_workload_allocation_models_in_irish_higher_education_instituti.pdf. HEIs are requested to report on the development of workload management approaches since then, with reference to the effectiveness of the approach, the outputs of same and how this contributes to the objectives of improving both accountability and performance within higher education.	The workload management model for academic staff has, historically, been focused on the management of the contractual lecturing hours. While this remains a central element in the allocation of workload the role of the academic has developed and evolved to meet the more exacting demands of our learner population and other stakeholders. Academic outputs go far beyond class room activity with the academic involved in the wider curriculum development, through embedding enquiry based learning, research methods, research practice, research ethics, principles of knowledge exchange and commercialisation of intellectual property as essential elements integral to the configuration of modules and programmes at all levels. The activities involved in the development of new programmes, the review and re-design of existing programmes arising from strategic reviews, programmatic reviews and the validation processes, remains a continuous and significant piece of work in the academic workload. For example, in the academic year 2015 -16 the Institute's academic community produced 21 Major and a further 56 Minor programmes that were new offerings or required substantial changes arising from programmatic reviews. All academics were also integrally involved in the Stage 1 Quinquennial Review across all Faculties, Centres and Campuses throughout the 2014/15 academic year and the Stage 2 Quinquennial Review throughout the 2015/16 academic year. The Institute's highly integrated Lifelong Learning programmes (see www.itcarlow.ie/study/lifelong-learning.htm) and Extended Campus (www.itcarlow.ie/study/lifelong-learning/part-time-courses-dublin-shannon/news-events-dublin-shannon.htm) activities requires a sophisticated level of cooperative practice and innovation from the academics in the structuring and modes of delivery of programmes in order that the learner receives the same quality of outcome. Core teaching hours are separate from these programmes with core teaching staff fulfilling all of their core teaching hours on the full-time programmes (under ECF). A separate cohort of academic staff deliver the Lifelong Learning and Extended Campus programmes and are remunerated through the Lifelong Learning Centre budget (non-exchequer). When core academic staff are employed to deliver these programmes outside of the standard work day, they are

Systems and Workload Management	
HEA SDC3 REQUIREMENT	**RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW**
	remunerated through the Lifelong Learning Centre budget (non-exchequer), in addition to their full-time contract hours, in accordance with Institute of Technology Carlow's policy and process for approval to work outside the Institute's core commitments. Consequently, the existing staff/student ratio model published by the HEA fails to capture the nature of the allocation model described above. The Institute's focus on becoming a Technological University has generated an increased concentration on the upskilling of academic staff profiles. The Institute's qualifications profile for core academic staff has developed from 83% Level 9/10 in January 2012, to 98% currently (January 2016), and 18% at Level 10 (January 2012) to 31% (January 2016). A further 17% of core academic staff are currently undertaking Level 10 programmes external to Institute of Technology Carlow (up from <3% in January 2012). Academic Staff are also committed to CPD which is promoted and supported by the Institute's Teaching and Learning Centre. This Centre works with colleagues and programme teams, departments and faculties across the Institute to improve the student learning experience, providing academic professional development through the MA in Teaching and Learning, ongoing workshops, seminars and resources (see www.itcarlow.ie/resources/teaching-learning-centre.htm). There has been an equally noteworthy increase in staff workloads in enterprise support and development related activities with academic staff being directly involved supporting over 250 companies in recent years (see www.itcarlow.ie/industry-innovation/sme-entrepreneurial-supports.htm). With specific regard to teaching hours, lecturing staff have the following teaching commitments: • Lecturers and Senior Lecturers are required to deliver a maximum of 560 hours class contact per year with a weekly norm of up to a maximum of 18 hours per week over a 35 week year (This includes 2 additional hours as agreed in the Croke Park agreement). • Assistant Lecturers are required to deliver a maximum of 630 hours class contact per year with a weekly norm of up to a maximum of 20 hours per week (includes 2 additional hours as agreed in the Croke Park agreement). • Work relating to setting and correcting assignments and examinations are compensated separately. • Staff who supervise postgraduate research students as part of their academic workload may receive a 2 hour reduction in their teaching workload. These two hours are generally delivered by research students and are an integral part of their learning outcomes in their programme of study. Timetabling is managed by Heads of Department through a centralised timetabling system and they are responsible for ensuring that staff are allocated the appropriate teaching load. Bi-annual reviews are held with the President, Heads of Faculty, Heads of Department, HR, VP for Academic Affairs and VP for Corporate Affairs to ensure the consistent deployment of resources across institute activities. Heads of Department are also responsible for managing changes to the timetable following agreement, where necessary, with the Heads of Faculty/Campus and/or President. All academic staff are fully timetabled to their weekly contractual commitments. It is also worth noting that the Institute has 31.5 teaching weeks assigned for organised teaching and related examinations; this figure is above the average

Systems and Workload Management	
HEA SDC3 REQUIREMENT	RESPONSE FROM INSTITUTE OF TECHNOLOGY CARLOW
	for the Technological sector. Programme timetables are published online and are accessible to students via a live feed thereby ensuring that they are kept abreast of their timetable and the planned and unexpected changes that might arise. While the nationally agreed system for the allocation of teaching hours brings great clarity and predictability to the teaching commitments of staff it serves the sector less well in setting out the expected commitments of academic staff as to their non-teaching duties and this is particularly relevant in the area of research work and other types of external engagement. While the 2 hour reduction in teaching hours described above gives some impetus toward stimulating a research culture it fails to offer the level of support necessary to drive a strategically targeted research programme, centred on clearly defined areas of expertise. This challenge has become even more apparent in recent years with the consolidation of inequitable ECF targets and core funding allocations across the Technological Sector. Institute of Technology Carlow has borne the impact of the inequities disproportionately as a result of the funding model and historical-based ECF. The Technological Sector has borne the impact of the inequities disproportionately, directly due to the lack of borrowing framework and, indirectly, as a result of a number of contributory factors including structural rigidities, cohort mix and lack of opportunity for income diversification. Notwithstanding the above, in recent years the Institute identified a number of key strategic research areas which are closely aligned to both national research activities and Horizon 2020 and the European Framework for Research & Innovation. RDI activity at the Institute is driven and delivered mainly through the following Research Centres: designCORE - Centre of Research and Enterprise in Industrial Design and Product Innovation gameCORE - Centre of Research and Enterprise in Interactive Applications Software & Networks enviroCORE - Centre of Research and Enterprise in BioEnvironmental Technologies engCORE - Centre of Research and Enterprise in Engineering healthCORE - Centre of Research and Enterprise for Health and Wellbeing In 2015, the Institute appointed leaders to these research groups in order to help drive and steer research activities to meet the Institute's strategic objectives. These appointees, who were appointed through an internal competitive process, have each been granted a 50% reduction in their teaching load. The Institute is anticipating major challenges to its allocation of teaching resources as a result of the recent agreement between the Teachers Union of Ireland (TUI) and the Department of Education and Skills. This agreement states that "*an interim measure will be introduced from January 2017 to re-designate half of the additional flex hours required of each lecturer to wider duties other than teaching, in consultation with the lecturers and in accordance with Institute priorities and needs*". Given that the Institute's teaching resources have been fully deployed to date this additional burden will require further teaching resources if the Institute is to maintain its current commitments.

Table 1.4 Response to specific ongoing and evolving policy priorities by Institute of Technology Carlow including the Action Plan for Jobs (Action 1-20), the National Skills Strategy to 2025 (Action 21-26), National Plan for Equity of Access to Higher Education 2015-2019 (Action 27-31), Innovation 2020 (Action 32-40), Enterprise 2025 (Action 41-45), National Policy Statement on Entrepreneurship (Action 46-49) and the Supporting a better transition from second level to higher education (50-51), as per Extract 4 from HEA correspondence dated 23rd May 2016.

Action Plan(s) for Jobs (APJ) Institute of Technology Carlow is contributing to three regional plans comprised of the South East APJ, the Mid East APJ and the Midlands APJ					
ACTION #	POLICY DOCUMENT	ACTION	ITC STRATEGIC PLAN 2014 - 2018	ITC HEA STRATEGIC DIALOGUE	OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES
1	South East Action Plan for Jobs	Support Enterprise and Entrepreneurship	Goals 2, 3 4	S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5
2	South East Action Plan for Jobs	Enhance tourism potential of the region	Goal 3		
3	South East Action Plan for Jobs	Develop AgTech, Engineering & MedTech	Goals 2, 3 4	S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5
4	South East Action Plan for Jobs	Establish global business services and ICT hubs	Goals 2, 3 4	S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5
5	South East Action Plan for Jobs	Develop centres of excellence in creative industries and design	Goals 2, 3 4	S3, S4, S5	Design +: PPCP

Action Plan(s) for Jobs (APJ) Institute of Technology Carlow is contributing to three regional plans comprised of the South East APJ, the Mid East APJ and the Midlands APJ					
ACTION #	POLICY DOCUMENT	ACTION	ITC STRATEGIC PLAN 2014 - 2018	ITC HEA STRATEGIC DIALOGUE	OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES
6	South East Action Plan for Jobs	Further develop the food sector in the region	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5
7	South East Action Plan for Jobs	Innovation and growth in pharma / biotechnology	Goals 2, 3 4		ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5
8	South East Action Plan for Jobs	Develop the education and skills base	Goals 2, 3 4	S1, S2, S3,S4, S5, S6, S7	ITC TU Vision statement; RSF lead AIQR QQI
9	South East Action Plan for Jobs	Infrastructure access & natural resources	Goal 1, Goal 5	S7	
10	Mid-East Action Plan for Jobs	Driving entrepreneurship	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5
11	Mid-East Action Plan for Jobs	Increasing innovation capability through enhanced engagement	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5

Action Plan(s) for Jobs (APJ) Institute of Technology Carlow is contributing to three regional plans comprised of the South East APJ, the Mid East APJ and the Midlands APJ					
ACTION #	POLICY DOCUMENT	ACTION	ITC STRATEGIC PLAN 2014 - 2018	ITC HEA STRATEGIC DIALOGUE	OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES
12	Mid-East Action Plan for Jobs	Attracting & embedding FDI	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5
13	Mid-East Action Plan for Jobs	Building sectoral opportunities (film, equine & food)	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5
14	Mid-East Action Plan for Jobs	Skills enhancement and labour market activation	Goals 1, 2,3,4,5	S1, S2, S3	ITC TU Vision statement; RSF lead ; Programmatic Reviews 2016
15	Mid-East Action Plan for Jobs	Marketing the region as an attractive place to work, live & visit	Goal 4		
16	Midlands Action Plan for Jobs	Driving entrepreneurship & growing business	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5
17	Midlands Action Plan for Jobs	Fostering innovation	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5

Action Plan(s) for Jobs (APJ) Institute of Technology Carlow is contributing to three regional plans comprised of the South East APJ, the Mid East APJ and the Midlands APJ					
ACTION #	**POLICY DOCUMENT**	**ACTION**	**ITC STRATEGIC PLAN 2014 - 2018**	**ITC HEA STRATEGIC DIALOGUE**	**OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES**
18	Midlands Action Plan for Jobs	Attracting FDI	Goals 2, 3 4	S3, S4, S5	PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5
19	Midlands Action Plan for Jobs	Building sectoral opportunities (Tourism, manufacturing, food, internationally traded services, ICT, energy)	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5
20	Midlands Action Plan for Jobs	Marketing the region as an attractive place to work and live	Goal 4		
National Skills Strategy to 2015 and the South East Regional Skills Forum					
ACTION #	**POLICY DOCUMENT**	**ACTION**	**ITC STRATEGIC PLAN 2014 - 2018**	**ITC HEA STRATEGIC DIALOGUE**	**OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES**
21	National Skills Strategy 2025	Education and training providers will place a stronger focus on providing skills development opportunities that are relevant to the needs of learners, society and the economy	Goals 1, 2,3,4,5	S3, S4, S5	ITC TU Vision statement; RSF lead; AIQR QQI; Programmatic Reviews 2016
22	National Skills Strategy 2025	Employers will participate actively in the development of skills and make effective use of skills in their organisations to improve productivity and competitiveness	Goals 2, 3 4	S3, S4	ITC TU Vision statement; Programmatic Reviews 2016; RSF lead; PPCP

National Skills Strategy to 2015 and the South East Regional Skills Forum					
ACTION #	**POLICY DOCUMENT**	**ACTION**	**ITC STRATEGIC PLAN 2014 - 2018**	**ITC HEA STRATEGIC DIALOGUE**	**OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES**
23	National Skills Strategy 2025	The quality of teaching and learning at all stages of education and training will be continually enhanced and evaluated	Goals 1, 2,3,4,5	S1, S2, S3, S4, S5, S6	ITC TU Vision statement; AIQR QQI; CGAR; CGPIA; Programmatic Reviews 2016
24	National Skills Strategy 2025	People across Ireland will engage more in lifelong learning	Goals 1, 4	S2	ITC TU Vision statement; Programmatic Reviews 2016; RSF lead; PPCP
25	National Skills Strategy 2025	There will be a specific focus on active inclusion to support participation in education and training and the labour market	Goals 1, 4	S2	ITC TU Vision statement; Programmatic Reviews 2016; RSF lead; PPCP
26	National Skills Strategy 2025	We will support an increase in the supply of skills to the labour market	Goals 1, 4	S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; RSF lead; PPCP
National Plan for Equity of Access to Higher Education 2015-2019					
ACTION #	**POLICY DOCUMENT**	**ACTION**	**ITC STRATEGIC PLAN 2014 - 2018**	**ITC HEA STRATEGIC DIALOGUE**	**OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES**
27	National Plan for Equity of Access to Higher Education 2015-2019	To mainstream the delivery of equity of access in HEIs	Goal 1, Goal 4	S2	CGPIA To be reviewed during Professional Services Review of Student Services 2017-18
28	National Plan for Equity of Access to Higher Education 2015-2019	To assess the impact of current initiatives to support equity of access to higher education	Goal 1, Goal 4	S2	CGPIA To be reviewed during Professional Services Review of Student Services 2017-18

National Plan for Equity of Access to Higher Education 2015-2019					
ACTION #	POLICY DOCUMENT	ACTION	ITC STRATEGIC PLAN 2014 - 2018	ITC HEA STRATEGIC DIALOGUE	OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES
29	National Plan for Equity of Access to Higher Education 2015-2019	To gather accurate data and evidence on access and participation and to base policy on what that data tells us	Goal 1, Goal 4	S2	CGPIA To be reviewed during Professional Services Review of Student Services 2017-18
30	National Plan for Equity of Access to Higher Education 2015-2019	To build coherent pathways from further education and to foster other entry routes to higher education	Goal 1, Goal 4	S2	ITC TU Vision statement; Programmatic Reviews 2016; RSF lead; PPCP
31	National Plan for Equity of Access to Higher Education 2015-2019	To develop regional and community partnership strategies for increasing access to higher education with a particular focus on mentoring	Goal 1, Goal 4	S2	Design+; PPCP; New Frontiers
Innovation 2020 (education for innovation)					
ACTION #	POLICY DOCUMENT	ACTION	ITC STRATEGIC PLAN 2014 - 2018	ITC HEA STRATEGIC DIALOGUE	OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES
32	Innovation 2020 (education for innovation)	We will continue to develop the pipeline of talent	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5; RSF lead
33	Innovation 2020 (education for innovation)	We will ensure that the higher education sector drives innovation	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5; RSF lead

Innovation 2020 (education for innovation)					
ACTION #	POLICY DOCUMENT	ACTION	ITC STRATEGIC PLAN 2014 - 2018	ITC HEA STRATEGIC DIALOGUE	OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES
34	Innovation 2020 (education for innovation)	We will increase the pipeline of PhDs, post-doctoral researchers and principal investigators	Goals 2, 3 4	S3, S4, S5	Programmatic Reviews 2016; Design+ ; CORE programme; PIWAM
35	Innovation 2020 (education for innovation)	We will promote 'Frontier Research' across all disciplines	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5; RSF lead
36	Innovation 2020 (education for innovation)	We will create opportunities for world-renowned research professors	Goals 2, 3 4	S4, S5, S6	CGAR, Adjunct faculty policy ITC, CORE programme
37	Innovation 2020 (education for innovation)	We will develop a clear career structure for researchers involved in innovation	Goals 2, 3 4	S4, S5, S6	Design+ ; CORE programme; PIWAM
38	Innovation 2020 (education for innovation)	We will create opportunities for improved researcher mobility	Goals 2, 3 4	S4, S5, S6	Design+ ; CORE programme; PIWAM
39	Innovation 2020 (education for innovation)	We will promote gender equality in researcher careers	Goals 2, 3 4	S4, S5, S6	Design+ ; CORE programme; PIWAM
40	Innovation 2020 (education for innovation)	We will further develop our research infrastructure	Goals 2, 3 4	S3, S4, S5	Design+ ; CORE programme; PIWAM

Enterprise 2025					
ACTION #	POLICY DOCUMENT	ACTION	ITC STRATEGIC PLAN 2014 - 2018	ITC HEA STRATEGIC DIALOGUE	OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES
41	Enterprise 2025	Develop Irish owned enterprises to scale	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5; RSF lead
42	Enterprise 2025	Drive entrepreneurship	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; New Frontiers Design+, CORE programme; TTSI; INTERREG 4 & 5; RSF lead
43	Enterprise 2025	Improve competitiveness (through training and upskilling)	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5; RSF lead
44	Enterprise 2025	Compete effectively to grow, expand and sustain FDI	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5; RSF lead
45	Enterprise 2025	Stimulate greater collaboration between foreign and Irish owned enterprises and between enterprises, HEIs and the research base	Goals 2, 3 4	S3, S4, S5	Programmatic Reviews 2016; New Frontiers Design+, CORE programme; TTSI; INTERREG 4 & 5; RSF lead

National Policy Statement on Entrepreneurship in Ireland					
ACTION #	POLICY DOCUMENT	ACTION	ITC STRATEGIC PLAN 2014 - 2018	ITC HEA STRATEGIC DIALOGUE	OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES
46	National Policy statement on entrepreneurship in Ireland	Make entrepreneurship an integral part of our ambition as a nation	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5; RSF lead
47	National Policy statement on entrepreneurship in Ireland	Celebrate and reward successful entrepreneurs	Goals 2, 3, 4	S4, S5	New Frontiers Design+, TTSI INTERREG 4 & 5
48	National Policy statement on entrepreneurship in Ireland	Ensure that more people have an equal opportunity to start and run their own business	Goals 2, 3 4	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5; RSF lead
49	National Policy statement on entrepreneurship in Ireland	Improve the quality and range of ICT skills domestically to make Ireland a hub for technology start-ups	Goals 1, 2, 3, 4, 5	S3, S4, S5	ITC TU Vision statement; Programmatic Reviews 2016; PPCP; New Frontiers; Design+; TTSI; INTERREG 4 & 5; RSF lead

Supporting a better transition from second level to higher education					
ACTION #	POLICY DOCUMENT	ACTION	ITC STRATEGIC PLAN 2014 - 2018	ITC HEA STRATEGIC DIALOGUE	OTHER IT CARLOW INITIATIVES, POLICIES AND PROGRAMMES
50	Supporting a better transition from second level to higher education	Broader undergraduate entry	Goal 1	S2, S7	Programmatic Reviews 2016
51	Supporting a better transition from second level to higher education	Common points scale	Goal 1	S2, S7	Adopted by ITC Academic Council February 2016

Key to Table 1.4

Goal 1. Learner Experience and Graduate Attributes
We will optimise the learner experience to support the development of graduate attributes that meet the needs of learners and of modern society.

Goal 2. Knowledge Creation, Application and Exchange
We will expand capacity and develop expertise within specific core domains. We will create, develop, apply and exchange knowledge to ensure highly skilled graduates and ideas to drive enterprise creation and development.

Goal 3. Strategic Collaborations and Partnerships
We will build upon our strategic collaborations and partnerships, both nationally and internationally. These enhance our capacity, extend our reach, increase our relevance and maximise our impact.

Goal 4. Societal, Economic and Environmental Impact
We will strengthen our engagement with the regions, communities and sectors we serve. We shall ensure access and progression opportunities. We will share our knowledge and resources and we will learn from stakeholder feedback so that we will continue to enhance our contribution to the development of a creative, sustainable and fair society.

Goal 5. Reputation, Public Confidence and Sustainability
We will continue to develop an internationally-oriented organisation, with a robust self-evaluation, peer review and quality enhancement culture, as we strive to embody the highest international standards of provision, transparency and stewardship of resources.

HEA Compact Development Plans and Objectives
S1 Regional Clusters

S2 Participation equal access and lifelong learning

S3 Excellent teaching and learning and quality of the student experience

S4 High quality, internationally competitive research and innovation

S5 Enhanced engagement with enterprise and the community and embedded knowledge exchange

S6 Enhanced internationalisation

S7 Institutional consolidation

Other
ITC – Institute of Technology Carlow

AIQR - Annual Institutional Quality Reports with QQI

CGAR - Corporate governance annual audits

CGPIA - Corporate governance Programme of Internal Audits

CORE programme - Centres of Research and Enterprise @ IT Carlow

Design + - EI Technology Gateway Centre

PIWAM - Principal Investigator Workload allocation model

PPCP Policy and Procedure for Collaborative Provision

RSF - Regional Skills Forum

TTSI - Technology Strengthening Transfer Initiative

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AN tÚDARÁS um ARD-OIDEACHAS

23rd May 2016

Re: Strategic Dialogue Cycle 3 and Performance Funding

Dear President,

The Higher Education Authority (HEA) will shortly begin the third round of strategic dialogue, encompassing a review of performance, with reference to mission-based performance compacts and institutional level data, to December 2015.

Over the past three years, the HEA and higher education institutions (HEIs) have instigated and continued a process of reform of the structures for governance, funding and performance management of the higher education system. The process began with the publication, by the Minister for Education and Skills, of a System Performance Framework setting out the national priorities of Government for higher education (2014-2016). Through a process of strategic dialogue between the HEA and the HEIs, a well-coordinated system of mission-diverse institutions is held accountable for its performance against the set of clearly defined national priorities and key system objectives in the framework, with public funding aligned to facilitate delivery of agreed outcomes.

Under the inaugural cycle of strategic dialogue, the HEIs worked with the HEA to agree a compact, as part of a strategic framework for the relationship between both parties. The compact sets out how each institution's mission and goals align with national goals for higher education, providing the basis against which institutional performance will be measured and funding allocated.

The second cycle of strategic dialogue saw HEIs submit a self-evaluation of their performance against the metrics they put forward in the compacts agreed with the HEA. The performance reports were reviewed by the HEA (with the benefit of external advisors) with reference to the first set of targets to be achieved by year end 2014. The outcomes were communicated to HEIs and performance funding associated with the 2016 budget was released or withheld on this basis.

As the third cycle of the strategic dialogue process gets underway, your institution is now requested to prepare and submit:

- A self-evaluation report setting out a review of your institution's performance against the second set of interim targets, as at year end 2015. The self-evaluation should include a description of any departures from the expected/agreed performance as set out in the mission-based performance compact 2014 – 2016 with particular reference to (a) institutional objectives and performance indicators, (b) interim targets set as at end 2015 and having regard to (c) March 2016 data returns to the HEA. A template is attached for this purpose. The self-evaluation should, where possible, benchmark your institution's performance, either at institutional level or according to a particular objective, with that of chosen national and/ or international comparators and demonstrate any learnings from the process.
- In preparing their response, institutions should have regard to the general feedback, informed by input from the HEA Board and external advisors to the process, that issued under the first and second cycles. This is reproduced in appendix 1 for reference.
- In addition, under cycle 3 HEIs are requested to report on:
    - Implementation of the Transitions agenda - HEIs are requested to report on the vision underpinning the portfolio of undergraduate programmes, how planned provision is aligned to institutional mission, reducing the number of entrance points into higher education;
    - Efforts to improve retention rates – where data in the HEA's recent publication *A Study of Progression in Irish Higher Education 2012/13 – 2013/14 (2016)* http://www.hea.ie/sites/default/files/hea-progression-irish-higher-education_final.pdf highlights concerns in your HEI, the HEA needs to be assured that a systematic approach is in place, to address the issue of non-progression, drawing on best practice nationally and internationally;
    - Systems and workload management – *A Review of Workload Management Models in Irish HEIs* was published in 2014 http://www.hea.ie/sites/default/files/review_of_workload_allocation_models_in_irish_higher_education_instituti.pdf. HEIs are requested to report on the development of workload management approaches since then, with reference to the effectiveness of the approach, the outputs of same and how this contributes to the objectives of improving both accountability and performance within higher education.

As in the previous cycle of strategic dialogue, institutional submissions will be assessed by the HEA, assisted by external advisors comprised of national and international higher education experts. Feedback on each institutional submission will be provided in advance of meetings with institutions over the course of September/ October 2016. Performance funding allocations will be notified alongside 2017 HEI budget allocations. The HEA has committed to the publication of institutional performance funding allocations and progress towards the national system objectives as part of an annual system performance report for 2016.

The self-evaluation report must be returned to the HEA by **17.30 on Friday 17th June 2016**. HEIs are required to submit the completed returns in electronic format (by email) and also to supply 20 hard copies, including one original signed copy, by the stated deadline.

I will contact you shortly to arrange a more detailed briefing meeting and to address any queries in relation to completing the 2016 submission.

Thank you for your on-going support and participation in this important process.

Yours sincerely,

_____
Tom Boland,
Chief Executive.

Attachments:
- Appendix 1 – copy of general feedback issued under first and second cycle
- Strategic Dialogue Cycle 3 self-evaluation report template

Appendix 1

General feedback from cycle 1 of strategic dialogue

The HEA acknowledges the work done by HEIs in the preparation of their draft compacts. There are many examples of very good practice in many of the submissions, in areas such as regional clusters, research, teaching and the other areas of the compact. The HEA is committed to build upon, and disseminate such good practice in the future development of this process. We also acknowledge that, in the first year of the strategic dialogue process, all actors in the process are on a learning curve. Notwithstanding the many positive elements emerging from the process to-date there is considerable room for further development before the strategic dialogue process can deliver its objective – a coherent, well co-ordinated system of mission specific higher education institutions delivering, in its totality, on national objectives. Set out below are our conclusions as to the key areas where this further development should take place.

Diversity

There is good evidence of diversity at a high level and of two distinct sectors from the current and future profiles of institutions, but there is much less evidence of distinctiveness within the sectors. A key overarching aim for the strategic dialogue process was to support the delivery of a coherent but diversified Irish system of higher education where different institutions delivered education and research according to their mission, strengths and priorities and where the sum of the whole would meet student and wider stakeholder needs.

Quality of Strategic Planning

a) Prioritisation

There is limited evidence of effective prioritisation in draft compacts. The HEA wishes to emphasise that good prioritisation and focus is a key purpose of this process and will not disadvantage an institution. The overall number of strategic objectives in many cases was excessive. In general, where the number of objectives significantly exceeds c. 10-15 there is a loss of the sense of institutional prioritisation of those areas requiring strategic steering or development focus over the next three years.

b) Portfolio of Programmes

Much stronger evidence of reflection by the institution on their portfolio of programmes is required, including its relative distinctiveness or strengths in relation to either the overall mission of the institution strategies for teaching, learning, quality of the student experience, or research and innovation.

c) Internal Coherence

There is limited evidence of internal coherence between the different elements of institutions' strategies in many draft compacts. For example, how the access strategy

informed the teaching, learning and assessment strategy; how the research strategy informed the international strategy or vice versa.

d) Objectives, Indicators, Targets

It is apparent that in some institutions there is a general need for capacity building to improve the quality of strategic planning. Many objectives were poorly related to the core mission and existing profile of the institution. Many targets were highly aspirational and not well founded on plausible trajectories from a current baseline. Many were not well supported by any realistic analysis of competitive or funding challenges, of institutional management and academic capacity to deliver, or by risk identification and mitigation. Many indicators could not be considered key and were poorly related to the objectives set.

In general there is an insufficient focus on outcomes-oriented objectives and on fully verifiable interim and final targets. While the use of some qualitative indicators was to be expected in areas where these were the most appropriate measures, particularly where plans or processes needed to be developed, there has been an over-reliance on qualitative indicators that do not have any clear means of verification. Where a quantitative indicator is used, the data source that will be the means of verification must be specified, unless this metric is included on the current institution profile. In all cases where a qualitative indicator is used, a means of verification with a verifiable timeline must be provided.

e) Institution Benchmarking

There is relatively weak use of external institutional benchmarking to inform choice of objectives and targets. It is expected that institutions will select national or international benchmarks relating to institutions with a similar mission and profile, whose performance would be a challenge to match, as an aid to setting their own performance targets. External benchmarking is likely to have implicitly influenced targets for quality of research outputs. Institutions should also have regard to drawing out implicit benchmarking involved in ongoing operations, e.g. where extern examiners are drawn from or progression routes of graduates to other institutions.

<u>General feedback from cycle 2 of strategic dialogue</u>

General context

- This round of strategic dialogue has taken place during a period of significant public sector reform. The engagement, and subsequent system level report, provides an opportunity to communicate the strengths of a responsive and well-performing higher education system that continues to provide quality higher education in order to meet Ireland's needs.
- Overall the level of system performance has been strong and there are some fine examples of good practice such as the benchmarking of performance and the sharpening of indicators at school, departmental and institutional levels. This is being achieved notwithstanding seven years of reducing resources alongside a significant growth in the provision of student places.

Improving the system

- The best performing higher education institutions have demonstrated good progress and an ability to move beyond a simple process-driven approach to their strategic intentions. Over time, all HEIs should become more outcome-focused and have clear priorities grounded in a stated institutional strategy such as, for example, stated priorities to serve a particular cohort of students, to advance gender equality, to differentiate the institution, or to make a regional, national or international contribution to education, society, research and/or enterprise.
- There are, however, some areas of practice which need significant improvement. In some cases the evidence of a focused and strategic approach to institutional direction and management was not strong. In other cases, evidence of a coherent plan to address performance failure or impending performance failure (with reference to the published performance compact) was not clearly articulated.
- In order to address these concerns institutions should, where there are weaknesses at institutional, faculty or disciplinary level, seek to review their objectives and better incorporate the use of benchmarking (as a means of setting a context for the statement of institutional ambition) to ensure that strategic goals:
    - are appropriately linked to overall institutional strategy;
    - represent a performance stretch in ambition;
    - strike an appropriate balance between process and outcome.
- Related to this benchmarking process, there is a continuing need for institutions to ensure that they are prioritising between (and across) their chosen compact domains so as to reflect and build on the institution's particular mission and strengths.
- For those high-performing HEIs there remains a need to continually improve their offer so as to maintain their international standing and relevance. In considering the future development of the strategic dialogue process, the HEA will also reflect on how engagement in the process can foster the setting of higher risk, or stretch, targets while accepting that not meeting such targets may not represent failure.

The HEA is of the view that careful strategic prioritisation alongside the benchmarking of relative performance can act as an assurance to higher education institutions, but also collectively serve as an indicator of overall national performance. Given the competitive international environment in which individual HEIs, regions and indeed Ireland compete, it is also imperative that poor performing HEIs address any deficits. Where institutional performance is sub-optimal this should be a concern for both the

management and governance functions of a higher education institution. There is a responsibility and accountability that lies with Governing Bodies where institutional performance is not strong and therefore an onus on Governing Bodies to respond.

In HEIs' consideration and development of current and future strategic priorities, the HEA would also emphasise the need for institutions to have regard to ongoing and evolving policy priorities such as:

- Support for the ongoing *Transitions Agenda*;
- The *National Plan for Equity of Access to Higher Education, 2015-2019*;
- The need for flexible, innovative and interdisciplinary skills provision, to meet the changing needs of participants, enterprise and the community as set out in the *Action Plan(s) for Jobs*; the *National Skills Strategy 2025;* and, the *National Policy Statement on Entrepreneurship;*
- Research activity, regional skills fora and the delivery of the ambitious targets as set out in *Innovation 2020* and *Enterprise 2025*.

Institute of Technology Carlow (IT Carlow)

Strategic Dialogue Cycle 2 Assessment of Performance

Background

The *National Strategy for Higher Education to 2030* recommended that a performance-based framework be put in place in higher education. The HEA has used this framework as the vehicle for conducting a process of strategic dialogue with individual institutions, leading to performance compacts with the HEA. These compacts set out institutional KPIs and associated targets, reflecting each institution's mission and contribution to overall national higher education objectives.

The first cycle of strategic dialogue concluded in 2014 with the agreement and publication of institutional compacts, together with a minute of each strategic dialogue meeting. The latter noted areas where progress was expected by the institution in the course of the period covered by the compact.

Performance-based funding was released to all institutions in 2014 on the basis of successful engagement by them with the process. In this the second cycle of strategic dialogue, the focus has shifted towards assessment of performance against agreed outcomes, using the approach set out in the Appendix.

Assessment Process

The process of assessment was initiated with the return of a self-evaluation report by each institution. That assessment reviews performance against objectives and targets agreed for achievement by year end 2014 and set out in the performance compact. The assessment considered progress against own institutional objectives and as benchmarked against peer institutions. It was subject to review by members of the HEA Executive with input from external advisors - Mr. John Randall (former CEO UK Higher Education Quality Assurance Agency), Dr Andree Sursock (EUA) and Dr John Hegarty (former Provost of TCD).

A series of bilateral institutional meetings took place over the course of September and October. In advance of each meeting, each institution received a document entitled "Reflections on Performance". This set out feedback under each compact heading and formed the basis of the meeting agenda. A process auditor was present at all bilateral meetings.

Assessment Findings

In assessing performance, we have relied upon the self-evaluation report submitted by your institution, the "Reflections on Performance" document prepared by the HEA and the discussion at our recent strategic dialogue meeting, a minute of which has now been prepared. The aforementioned documentation is now attached.

The self-evaluation report, and subsequent discussion at the bilateral meeting, have demonstrated good progress at year end 2014. Progress under strategic dialogue feeds into wider institutional planning processes such as the mid-term review of the strategic plan in 2016.

The institution can demonstrate growth in student numbers and delivery of capital projects to meet student demand. The institution indicates that several quality measures are in place to ensure a high quality student experience including an extended academic calendar and recruitment of high-level academics from other institutions, on a part-time basis, to meet teaching requirements. Growth in researcher numbers and income will continue to be a challenge however. The HEA will keep student number growth under review by means of engagement with QQI in relation to the institutional quality reviews they conduct.

Overall this is a very good submission and analysis. This places the institution in category 1 and it is therefore proposed to release performance funding in full in respect of the 2016 budget allocation.

Issues of general application

In addition to the institution specific issues identified above, the HEA identified the following issues of general application over the course of the bilateral meetings.

- The weakness of benchmarking at institutional, faculty or disciplinary level as a means of setting context for the statement of institutional ambition.
- Objectives should be reviewed to ensure that -
    - they are appropriately linked to overall institutional strategy,
    - they represent a performance stretch in ambition, and
    - they have an appropriate balance between process and outcome.
- There is a need to ensure that institutions are prioritising between the domains of the compact in the light of their institution's particular mission and strengths.

Institutions are required to have regard to these when reporting on 2015 performance in 2016 and in future compact preparation and reporting.

In addition, as discussed at the bilateral meetings, the HEA will further reflect on the future development of the strategic dialogue process. In particular, how the process can foster the setting of higher risk or stretch targets while accepting that not meeting such targets may not represent failure.

Next steps

In addition, all HEIs are invited to review the objectives set out in their compacts, in the light of experience of first year reporting. The review should consider whether:

- Any objective should be re-formulated to "stretch" the HEI more, so as to incentivise continuous improvement;
- Any objective related to the development of process should be redefined to place greater emphasis on the outcomes the process is intended to deliver;
- Any objective should be dropped, to enable resources to be better focussed on objectives which are more mission-oriented;
- Any objective should be modified to reflect significant changes in the environment in which the HEI operates.

Appendix: Progress Against Own Objectives

The performance funding consultation paper, circulated in Autumn 2014, set out three categories of performance. Drawing on this, and with further input from External Advisors recruited under cycle 2, performance is classified as follows:

- Category 1 comprises HEIs which, overall, have performed well against their objectives and have demonstrated excellence in some mission-critical domains.
- Category 2 comprises HEIs whose performance against their objectives is satisfactory overall, with some areas of strong performance. The institution's attention, however, is drawn to issue(s) that need to be addressed to ensure release of performance funding in future cycles.
- Category 3 comprises HEIs whose performance is inadequate to justify drawing down of conditional funding and who must submit a revised plan if they are to "win back" the withheld funding.

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HIGHER EDUCATION AUTHORITY

Dr Patricia Mulcahy,
President,
Institute of Technology, Carlow,
Kilkenny Road,
Carlow.

19th February 2016

Subject: Strategic Dialogue Cycle 2 Outcome

Dear President,

Further to my letter of 27th November 2015, I now confirm the outcome of the strategic dialogue cycle 2 process as it pertains to your institution. In respect of the performance funding process, I can confirm that your institution has been placed in Category 1 and performance funding will be released in full in respect of the 2016 budget allocation.

I commend you on your institution's performance but would also draw your attention to the need for continued capacity building in our higher education system through a process of ongoing and further improvement. I would therefore encourage each higher education institution's leadership to carefully consider the actions they might take in order to address both the individual and systemic issues set out later in this letter.

In assessing performance under the second cycle of strategic dialogue we have relied upon the self-evaluation report submitted by your institution, the "Reflections on Performance" document as prepared by the HEA, the discussion at our recent strategic dialogue meeting and any subsequent correspondence from your institution received by the mid-December deadline.

Please now find attached copies of this documentation, along with a final copy of your institution's performance evaluation report. The attached are final versions which have been updated to reflect any amendments provided in accordance with the process as set out last November. It is our intention to publish these documents on the HEA website in the coming days. Finally, I attach a copy of the Process auditors' report setting out their views on the conduct of this round of strategic dialogue.

A summary of specific aspects of overall performance as they pertain to your institution are as follows:

An tÚdarás um Ard-Oideachas | Teach Plasóg an tSrutháin | Ascaill Crampton | Bóthar Shíol Bhroin | Baile Átha Cliath 4
Teil: +353 1 231 7100 | Facs: +353 1 231 7172 | ÍosGhlo: 1890 200 637 | R-phoist: info@hea.ie | Gréasán: www.hea.ie
The Higher Education Authority | Brooklawn House | Crampton Avenue | Shelbourne Road | Dublin 4
Tel: +353 1 231 7100 | Fax: +353 1 231 7172 | LoCall: 1890 200 637 | E-mail: info@hea.ie | Web: www.hea.ie
@HEA_irl | Higher Education Authority

- A strong self-evaluation report demonstrating significant progress in implementing compact objectives and alignment of this process with institution level strategic planning;
- A strategic and coherent review of performance including evidence of self-reflection on past performance and identification of future issues/risks arising;
- The careful use of quality measures and review to ensure a high quality student experience is an important feature of the institution's offer;
- Growing researcher numbers and research income is challenging for all HEIs and should be carefully monitored;
- Further use of benchmarking to demonstrate that the level of institutional ambition is appropriate should be expanded;
- Again, the alignment of the strategic dialogue process with the broader strategic planning and risk management structures of the institution is welcomed.

I should also like to outline the following general feedback from cycle 2 of strategic dialogue which was informed by input from the HEA Board and our external advisors to the process:

General context

- This round of strategic dialogue has taken place during a period of significant public sector reform. The engagement, and subsequent system level report, provides an opportunity to communicate the strengths of a responsive and well-performing higher education system that continues to provide quality higher education in order to meet Ireland's needs.

- Overall the level of system performance has been strong and there are some fine examples of good practice such as the benchmarking of performance and the sharpening of indicators at school, departmental and institutional levels. This is being achieved notwithstanding seven years of reducing resources alongside a significant growth in the provision of student places.

Improving the system

- The best performing higher education institutions have demonstrated good progress and an ability to move beyond a simple process-driven approach to their strategic intentions. Over time, all HEIs should become more outcome-focused and have clear priorities grounded in a stated institutional strategy such as, for example, stated priorities to serve a particular cohort of students, to advance gender equality, to differentiate the institution, or to make a regional, national or international contribution to education, society, research and/or enterprise.

- There are, however, some areas of practice which need significant improvement. In some cases the evidence of a focused and strategic approach to institutional direction and management was not strong. In other cases, evidence of a coherent plan to address performance failure or impending performance failure (with reference to the published performance compact) was not clearly articulated.
- In order to address these concerns institutions should, where there are weaknesses at institutional, faculty or disciplinary level, seek to review their objectives and better incorporate the use of benchmarking (as a means of setting a context for the statement of institutional ambition) to ensure that strategic goals:
    - are appropriately linked to overall institutional strategy;
    - represent a performance stretch in ambition;
    - strike an appropriate balance between process and outcome.
- Related to this benchmarking process, there is a continuing need for institutions to ensure that they are prioritising between (and across) their chosen compact domains so as to reflect and build on the institution's particular mission and strengths.
- For those high-performing HEIs there remains a need to continually improve their offer so as to maintain their international standing and relevance. In considering the future development of the strategic dialogue process, the HEA will also reflect on how engagement in the process can foster the setting of higher risk, or stretch, targets while accepting that not meeting such targets may not represent failure.

The HEA is of the view that careful strategic prioritisation alongside the benchmarking of relative performance can act as an assurance to higher education institutions, but also collectively serve as an indicator of overall national performance. Given the competitive international environment in which individual HEIs, regions and indeed Ireland compete, it is also imperative that poor performing HEIs address any deficits. Where institutional performance is sub-optimal this should be a concern for both the management and governance functions of a higher education institution. There is a responsibility and accountability that lies with Governing Bodies where institutional performance is not strong and therefore an onus on Governing Bodies to respond.

In HEIs' consideration and development of current and future strategic priorities, the HEA would also emphasise the need for institutions to have regard to ongoing and evolving policy priorities such as:

- Support for the ongoing *Transitions Agenda*;
- The *National Plan for Equity of Access to Higher Education, 2015-2019*;
- The need for flexible, innovative and interdisciplinary skills provision, to meet the changing needs of participants, enterprise and the community as set out in the *Action Plan(s) for Jobs*; the *National Skills Strategy 2025;* and, the *National Policy Statement on Entrepreneurship;*
- Research activity, regional skills fora and the delivery of the ambitious targets as set out in *Innovation 2020* and *Enterprise 2025*.

Finally, the need for oversight and accountability (for performance and for public funding), cannot be overstated. The 2015 round of strategic dialogue was the second cycle of a process designed to ensure responsiveness and accountability at an all-institution and system level. The process is, however, at an early stage and the 2% performance funding adjustment applied in 2015 was therefore considered appropriate for this round. In the future, as the process matures, the HEA will continue to use strategic dialogue to recognise good performance but will also use the full performance funding scale (withholding up to 10%) as a means to drive performance and accountability across the system.

Yours sincerely,

Tom Boland

Chief Executive

cc. Chair of IT Carlow Governing Body

HEA | AN tÚDARÁS um ARD-OIDEACHAS
HIGHER EDUCATION AUTHORITY

Dr Patricia Mulcahy,
President,
Institute of Technology, Carlow,
Kilkenny Road,
Carlow.

05th November 2015

Dear President,

The National Strategy for Higher Education has set out an ambitious reform agenda, in tandem with a performance funding model, which balances institutional autonomy and accountability. The establishment of regional clusters, with the aim of improved capacity and services for students and other key stakeholders is a significant feature of the Strategy.

Background
In 2014, in order to drive the implementation of the Strategy and the development of a regional approach by higher education institutions (HEIs), the Minister for Education and Skills requested that the HEA prioritise an early opportunity for institutions to demonstrate initial progress in two specific areas - academic mapping and student pathways. The HEA therefore approved an allocation of €4 million, via a competitive call process, to support early movers and good practice initiatives in the development of clusters with an equal emphasis on the two areas, while also recognising that this mapping and pathways cluster initiative is but one element of a broader national cluster strategy.

Priority areas
The prioritisation of the two specific areas of mapping and pathways was driven by the view that, while there has been large scale and successful collaboration in areas such as research, postgraduate education and/or teaching and learning nationally, collaboration is far less common in regional programme alignment and the development of access and progression pathways. The 2014 call was therefore designed to recognise and encourage collaboration and alignment in 'new' priority areas and to reward cluster performance in accordance with the process as set out in the call (i.e. those clusters making most progress would draw down a larger share of the funding available). A significant number of HEIs have engaged strongly and committed to some fundamental changes in how they conduct their business. Overall the response has been good given that this reorientation of internal (HEI) systems and structures to take greater account of external (regional) forces is both time consuming and challenging at all levels of these organisations.

The guiding principles on shared academic planning included a commitment to a student focused examination of current provision so as to inform a more coherent regional offer, the

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The Higher Education Authority Brooklawn House Cramptor Avenue Shelbourne Road Dublin 4

identification of areas of potential improved system benefit, and an enhanced regional approach as an integral part of future academic planning. On the development of pathways for student transfer between and into regional clusters, the call suggested institutional and cluster level mapping to identify existing pathways supporting non-traditional initial entry to undergraduate programmes of study as well as the identification of any issues arising in current processes for transfer and options to enhance current systems. The call also sought greater engagement between the cluster and further education providers in the region as well as a plan for the development of further progression opportunities, within and to, the members of the regional cluster.

Process for funding allocation
As set out in the original call for reports on performance, the HEA undertook to assess the clusters firstly in terms of undertaking at least initial activity against the priority goals, and secondly, to assess as to whether the cluster had been able to move beyond this to more significant level of progress. The €4 million allocation was divided equally between these goals.

Overview of Cluster reports
The submissions received in response to the call set out a variety of approaches and initiatives to progress the priorities in line with the examples as set out in the call. An HEA analysis of the submissions and actions undertaken by HEIs suggests indicators of good practice below.

Academic Planning (Mapping)

The goal in respect of academic mapping would see an agreed academic plan and associated processes for programme development agreed by the regional cluster partners. Such a coherent regional offering would avoid any costly or non-strategic duplication of provision and yet serves the needs of students, employers and the region, while also enhancing the quality of the programmes that can be provided through e.g. achievement of critical mass, sharing of services, more strategic recruitment of staff etcetera. It also will enhance the ability of the institutions and the system more generally to act proactively to address future skills needs.

In terms of the responses received by HEA, most HEIs have engaged across their regions to compare the range of courses on offer to students while others have progressed beyond that to look at alignment of academic structures, common graduate attributes or even alignment of timetables. Some HEIs have provided detailed evidence to the HEA in terms of the current programme offering, and reported as to whether it shows any evidence of unnecessary duplication, and proposed follow up actions as appropriate. Some HEIs have used this mapping process as a means to collaborate on provision and others have gone further still to instigate a regional approach to new programme development so as to avoid duplication, provide a coherent student centred offer and/or pinpoint opportunity for cooperation and efficiencies into the future.

Student Pathways

Student pathways is concerned with understanding and improving how students access or transit to higher education by means other than the traditional leaving certificate / CAO route. The development of enhanced student pathways also provides opportunities for engagement and collaboration with Further Education providers. As with mapping, the approaches taken to developing better student pathways also vary. The economic and geographic features of each region are one reason for this divergence but there was also evidence of a localised concentration on priorities other than providing clear student pathways.

A best practice example of student pathways might be where HEIs pool their resources and practices to provide a coherent, regional offer to access, non-traditional or mature students. Ideally HEIs within a cluster would develop and implement a plan to set up an enhanced range of progression opportunities on a sequenced basis. This would continually review academic requirements, address capacity issues and review demographic trends in the region with a view to projecting student demand.

The range of actions undertaken differs between regions. The Dublin II (ii) cluster of Athlone Institute of Technology, Dublin City University, Dundalk Institute of Technology and Maynooth University have, in particular, fully extended and activated their academic mapping process from higher education to further education. The routes and articulations from further into higher (e.g. qualifications required, common standards, etc.) have been formally agreed and there is a regional system which offers prospective non-CAO students clarity on their opportunities and options.

Cluster Specific Outcomes

In the case of the Southern Regional Cluster of UCC, Cork IT, Waterford IT, IT Carlow & IT Tralee, the submission sought to leverage progress made since May 2014 but noted that the cluster is one of the two largest in the state and suggested that it is unique in its complexity due to geographical spread, institute trajectories and institutional profiles.

While cluster partners are exploring the development of a shared strategic academic planning framework the progress is less developed than in other similarly if not equally geographically disparate regions. There is a suggestion of consideration being given to resource sharing, the development of joint degrees and enhancing teaching and research support structures but the only progress being reported seemed to be 'a system for management and funding visiting lecturers (within cluster)', the identification of opportunities to enhance retention initiatives, access pathways, and postgraduate training; a pilot collaborative development at a cluster-level within the region (e.g. ICT, food, business and engineering); a shared CPD for staff; and, best-practice workshops for central/support services. This all reads as rather initial and while meaningful is significantly less evidence of progress when compared to that reported elsewhere.

Most of the submission therefore seems to be structured around on-going discussions on a framework for development with a few pockets of good practice and a lot of good intentions. A Mapping and Pathways Group (comprising Registrars of the five institutions) has been established. An initial mapping exercise has been completed but is based on a desk study using website and CAO information and a process of verification by institutions. In some cases the language seems to suggest a continuation of an individualised approach rather than the collective cluster approach sought.

On student pathways the report as submitted references 'the need to articulate principles that map regional demand and regional need to ensure learner migration patterns and regional mobility are addressed in a meaningful way'. However, it then details five separate approaches across institutions or sets of institutions. So while there is a recognition of the 'potential to broaden further the Access routes within the Cluster and to develop further, common, innovative student pathways' this was not adequately demonstrated in practice or in the report. The cluster also reported that 'achieving this (a meaningful regional approach to student pathways) requires institutional flexibility and common agreement on the recognition of awards and credits. The cluster partners already accept and recognise the awards of others in terms of entry requirements for their programmes but this is not yet systemised in a formalised manner'. The five institutions would therefore seem to have established individual access and progression pathways between the FE and HE sectors but have not progressed this sufficiently at cluster level. The Cluster submission again notes 'potential to broaden further the Access routes within the Cluster and to develop further, common, innovative student pathways'. Progress on pathways is therefore slow by any comparison with others. This is regrettable as there are good practice examples here. For example, one IOT has formal links to over 10 FE colleges through 17 FE programmes and a Memorandum of Agreement with ETBs that could be replicated across the cluster if there was a willingness to progress the agenda.

The submission does note that, while the region is dispersed, collaboration has historically emerged within geographical areas (i.e. joint programmes in UCC and CIT) and in thematic areas (e.g. SIF funding where several combinations of partnerships developed with different lead partners). The examples they provide are indicative of how effective frameworks can be developed to allow deeper and more extensive engagement between institutions; it is therefore disappointing that more progress hasn't been made in terms of the cluster as a whole.

Funding allocation

The HEA considers that while there has been some progress within the cluster, overall the progress demonstrated is weaker than of many of the other clusters. Accordingly, funding of €714,000 has been allocated to the cluster (which represents a decrease of about 18% of the funding that would have otherwise been delivered through the RGAM). The exact allocation as between pathways and planning, and in terms of initial activity and more advanced activity, and between institutions is set out below.

Yours sincerely,

Tom Boland
Chief Executive

Table 1 – Southern Regional Cluster - Regional Clusters Call Funding Allocation

Southern Regional Cluster	Academic Planning		Student Pathways		**Total €'000**
HEI	Initial activity	Significant Progress	Initial activity	Significant Progress	
UCC	89.3	57.6	89.3	57.6	**293.7**
Cork IT	52.8	34.0	52.8	34.0	**173.6**
WIT	37.3	24.0	37.3	24.0	**122.6**
Carlow	21.8	14.0	21.8	14.0	**71.6**
Tralee	16.0	10.3	16.0	10.3	**52.6**
Total	**217.0**	**140.0**	**217.0**	**140.0**	**714.0**

APPENDIX 2

TRENDS AND BENCHMARKING OF THE LEARNER PROFILE AND GRADUATE DESTINATIONS AT INSTITUTE OF TECHNOLOGY CARLOW

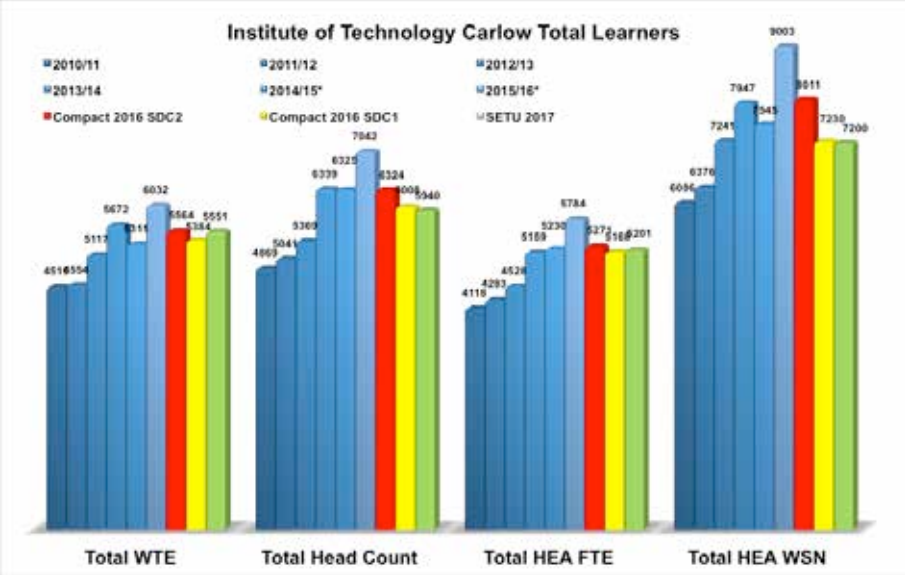


Figure 2.1 Total Learners 2010/11 to 2015/16 at Institute of Technology Carlow. Earlier Institute projections are presented for comparative purposes. These include the HEA/IT Carlow Strategic Dialogue Cycle 2 Compact 2016 (Compact 2016 SDC2), HEA/IT Carlow Strategic Dialogue Cycle 1 Compact 2016 (Compact 2016 SDC1) and the 2017 IT Carlow projections in the 2012 Stage 1 submission for SETU.

*New HEA exclusions and re-categorisations applied.

Outcome over 2010/11-2015/16; +33.50% WTE; +44.6% Headcount; +40.50% HEA FTE; +47.90% HEA WSN.

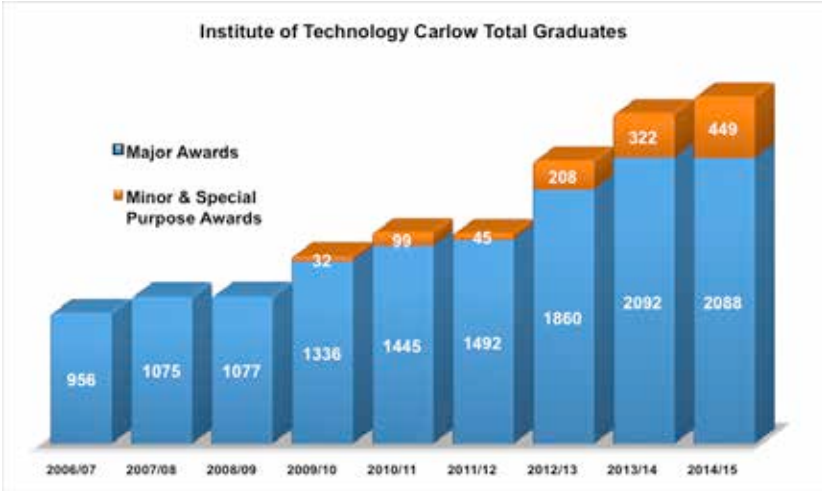


Figure 2.2 Total Graduates 2010/11 to 2014/15 at Institute of Technology Carlow.

Status at 2014/15 using the 2010/11 baseline is +44.5% for major awards and +354% for minor and special purpose awards.

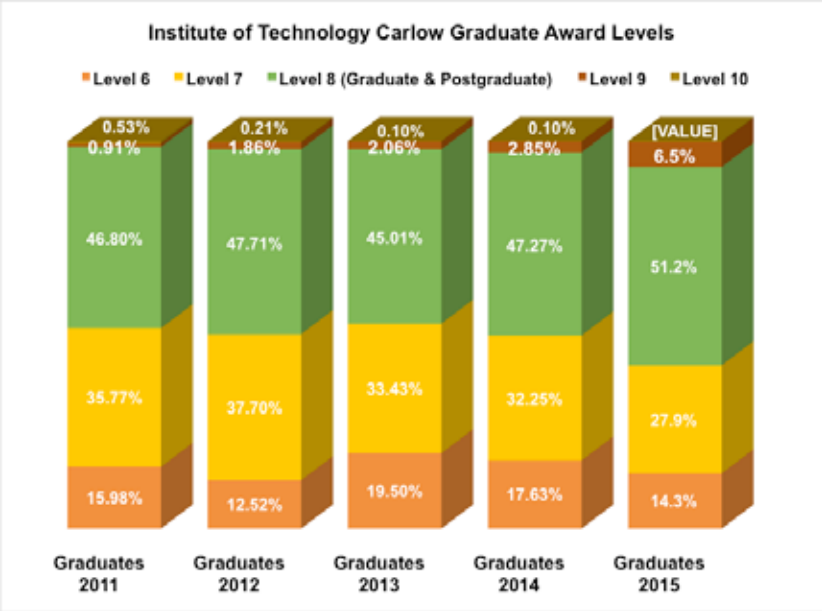


Figure 2.3 Graduate Award Levels 2011 to 2015.

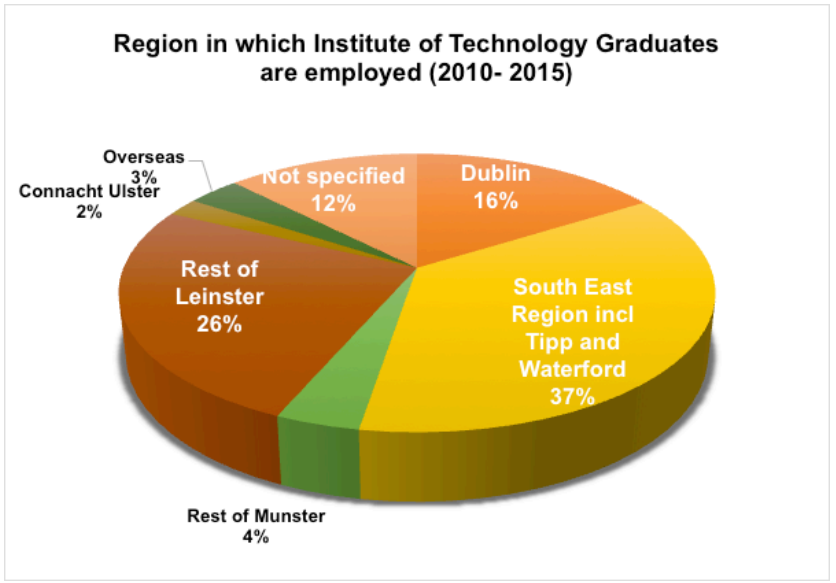


Figure 2.4 Region in which Institute of Technology Graduates are employed (2010- 2015 – Source Institute of Technology Carlow Graduate Survey). Consistently the graduate survey reports that over 50% of graduates are employed in the South East or in Dublin. The UK is the most popular overseas destination for employment.

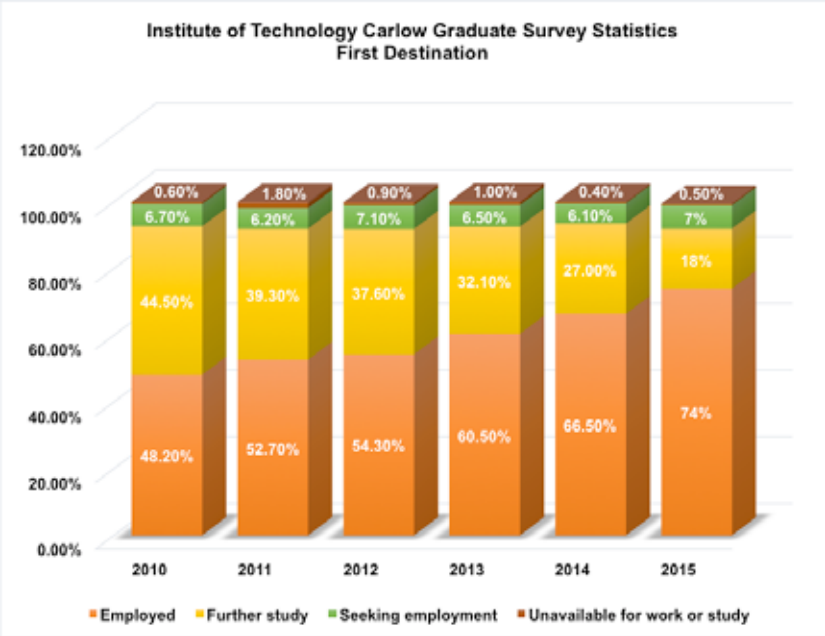


Figure 2.5 Institute of Technology Carlow Graduate First Destination 2010 to 2015. This survey is conducted by Institute of Technology Carlow at Conferring of Awards (4-5 months after completion of examinations). 2015 showed a continuing upward trend in graduates gaining employment. The proportion of graduates seeking employment has remained relatively stable, even during the recession. The reduction in 'further study' reflects the continuing move from level 6 and 7 to ab initio level 8 programmes over the period.

The findings are compared with the ***What Do Graduates Do? The Class of 2014 (HEA 2016***) and ***What Do Graduates Do? The Class of 2015 (UK Higher Education Careers Service Unit)***.

- 83.6% and 93.5% of level 8 and level 9 Institute of Technology Carlow 2015 Graduates, respectively, were in employment at the time of the survey. This compares to 58% and 78% for the equivalent cohorts in the HEA report on all higher education graduates 2014.
- 75% of Institute of Technology Carlow 2015 Graduates had gained full time employment; 17% were in part time employment with 8% availing of internships or work experience programmes. There is little change from 2010. The class of 2010 showed 73% of Institute of Technology Carlow Graduates in full time employment, 19% in part time and 8% in internships or work experience programmes.
- 7% of Institute of Technology Carlow 2015 Graduates are seeking employment approximately 6 months after completion of their studies. The equivalent figure from the HEA report on all higher education graduates 2014 also reports a figure of 7%. Comparing the Irish and UK situation, in 2015 the UK Higher Education Careers Services Unit reported graduate employment at 71.2%, while the graduate unemployment rate was 6.3%, with 17.6% in further study, either full or part time.
- In Institute of Technology Carlow survey the average starting salary reported was €27,000. The equivalent UK figure is GB £20,637 (€27,241), while the HEA report on all higher education graduates 2014 states that over 50% of graduates are earning over €25,000. 22% of Institute of Technology Carlow graduates in 2015 are earning in excess of €33,000 pa.

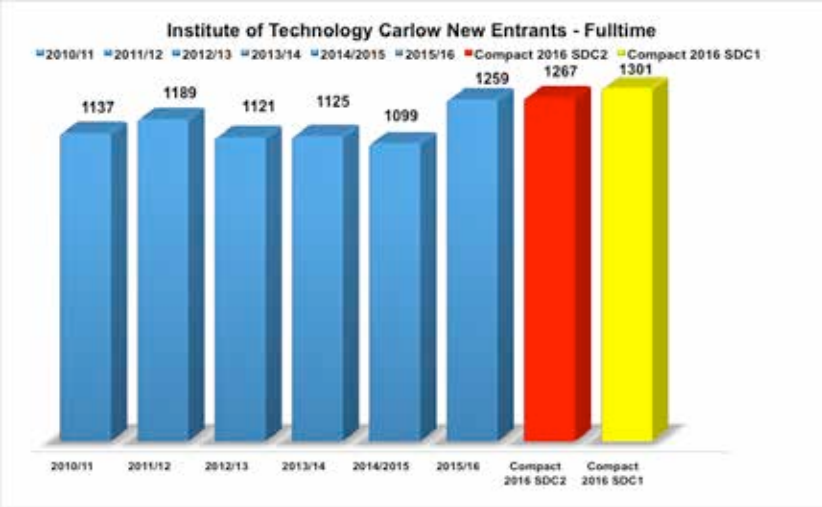


Figure 2.6 New Full-time Entrants 2010/11 to 2015/16 at Institute of Technology Carlow. Earlier Institute projections are presented for comparative purposes. These include the HEA/IT Carlow Strategic Dialogue Cycle 2 Compact 2016 (Compact 2016 SDC2) and HEA/IT Carlow Strategic Dialogue Cycle 1 Compact 2016 (Compact 2016 SDC1).

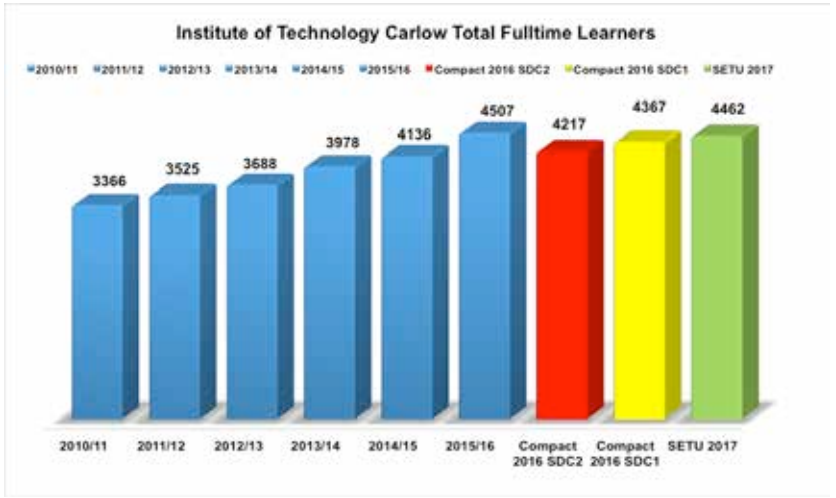


Figure 2.7 Total Full-time Learners 2010/11 to 2015/16 at Institute of Technology Carlow. Earlier Institute projections are presented for comparative purposes. These include the HEA/IT Carlow Strategic Dialogue Cycle 2 Compact 2016 (Compact 2016 SDC2), HEA/IT Carlow Strategic Dialogue Cycle 1 Compact 2016 (Compact 2016 SDC1) and the 2017 IT Carlow projections in the 2012 Stage 1 submission for SETU. Outcome over 2010/11-2015/16; +33.90% WTE.

Table 2.1 Comparative analysis of presence rates by level of award for Institute of Technology Carlow, the Institute of Technology Sector and the National Higher Education System.

PRESENCE RATES (%)						
Institute of Technology Carlow						
	2010/11	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**
Level 8	87	81	82	82	87	89
Level 7	77	74	75	75	80	80
Level 6	71	76	75	76	83	71
All Levels	79	78	79	80	84	84
All Institutes of Technology						
	2010/11	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**
Level 8	83	83	83	83	Not Available	Not Available
Level 7	72	71	72	71	Not Available	Not Available
Level 6	69	70	74	70	Not Available	Not Available
All Levels	76	76	77	Not Available	Not Available	Not Available
National Presence Rate						
	2010/11	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**
Level 8	89	89	88	90	Not Available	Not Available
Level 7	72	71	72	71	Not Available	Not Available
Level 6	69	70	74	70	Not Available	Not Available
All Levels	84	84	84	Not Available	Not Available	Not Available

Table 2.2 Access numbers for the Institute of Technology Sector 2013/2014 and 2014/2015 including mature entrants, target SEG (target socioeconomic groups) and students with disability (SWD). See Figure 2.8 for further analyses. (Source HEA).

ACCESS NUMBERS						
	Mature Entrants 2013/14	Entrants Target SEGs 2013/14	Mature Entrants 2014/15	Entrants Target SEGs 2014/15	SWD 2014/15	Total
AIT	247	353	227	334	360	1,521
CIT	149	491	199	565	838	2,242
DIT	383	956	330	881	1,800	4,351
IADT	73	144	69	149	384	819
DKIT	237	368	197	406	220	1,427
GMIT	327	614	315	503	828	2,586
ITB	225	351	170	293	268	1,307
ITC	268	379	235	428	388	1,699
ITS	178	391	180	359	340	1,448
ITTall.	142	289	126	284	138	979
ITTral.	158	184	200	212	248	1,002
LYIT	198	250	193	321	262	1,224
LIT	357	469	336	436	510	2,107
WIT	334	610	249	524	622	2,339
Total	**3,276**	**5,850**	**3,026**	**5,694**	**7,206**	**25,052**

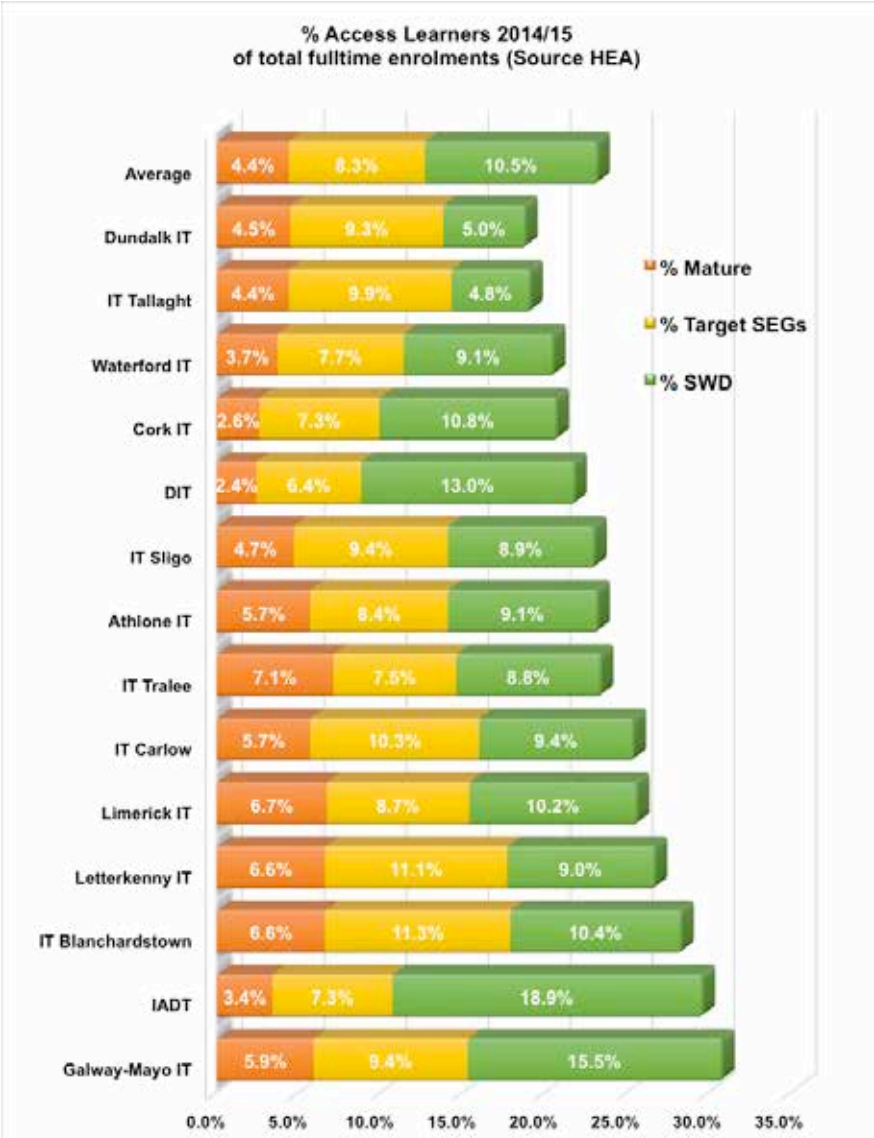


Figure 2.8 % Access numbers (of total full-time enrolments) for the Institute of Technology Sector 2014/2015 including mature entrants, target SEG (target socioeconomic groups) and students with disability (SWD). (Source HEA).

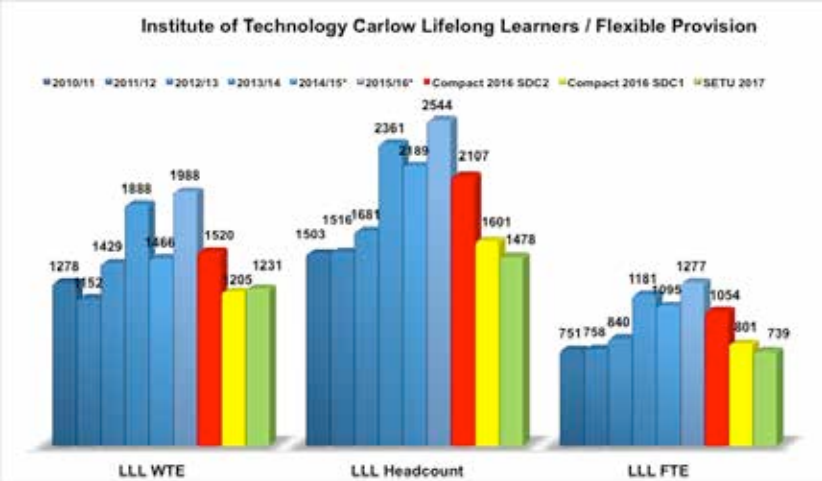


Figure 2.9 Lifelong Learners 2010/11 to 2015/16 at Institute of Technology Carlow. Earlier Institute projections are presented for comparative purposes. These include the HEA/IT Carlow Strategic Dialogue Cycle 2 Compact 2016 (Compact 2016 SDC2), HEA/IT Carlow Strategic Dialogue Cycle 1 Compact 2016 (Compact 2016 SDC1) and the 2017 IT Carlow projections in the 2012 Stage 1 submission for SETU. *New HEA exclusions and re-categorisations applied. **Outcome over 2010/11-2015/16; +55.60% WTE; +69.30% Headcount; +70.00% HEA FTE.**

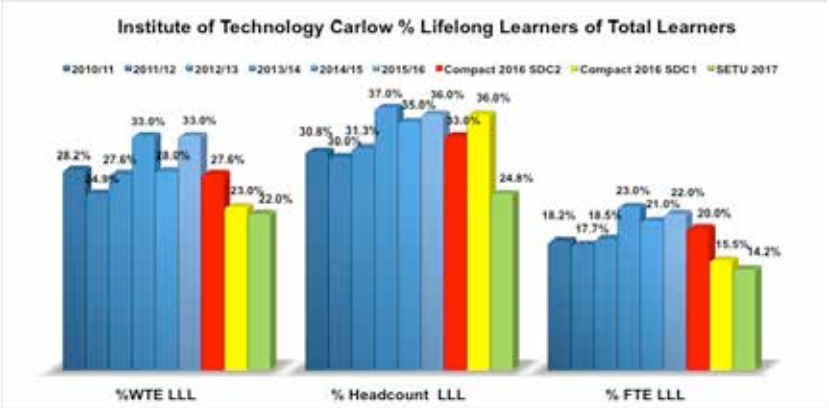


Figure 2.10 Lifelong Learners 2010/11 to 2015/16 expressed as a % of Total Learners at Institute of Technology Carlow. Earlier Institute projections are presented for comparative purposes. These include the HEA/IT Carlow Strategic Dialogue Cycle 2 Compact 2016 (Compact 2016 SDC2), HEA/IT Carlow Strategic Dialogue Cycle 1 Compact 2016 (Compact 2016 SDC1) and the 2017 IT Carlow projections in the 2012 Stage 1 submission for SETU. *New HEA exclusions and re-categorisations applied. **Status at 2015/16; 33% WTE; 36% Headcount; 22% HEA FTE.**

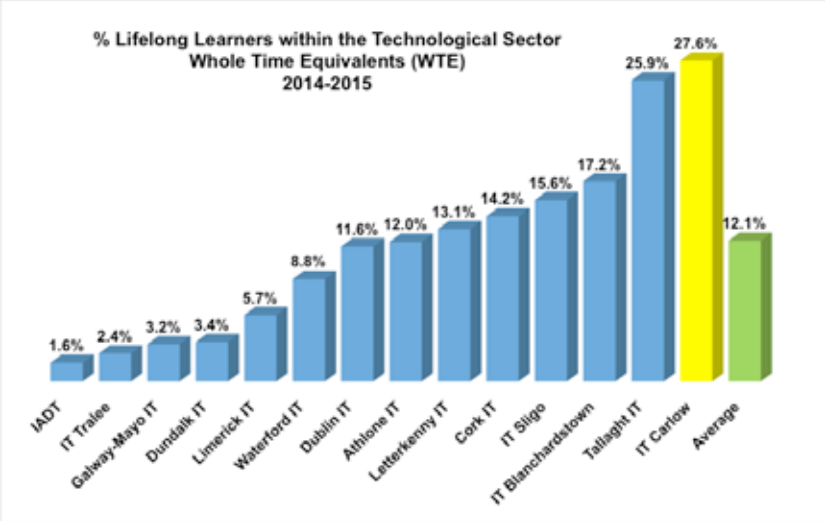


Figure 2.11 % WTE Lifelong Learners (of Total WTE) across the Technological Sector. (Source HEA RGAM)

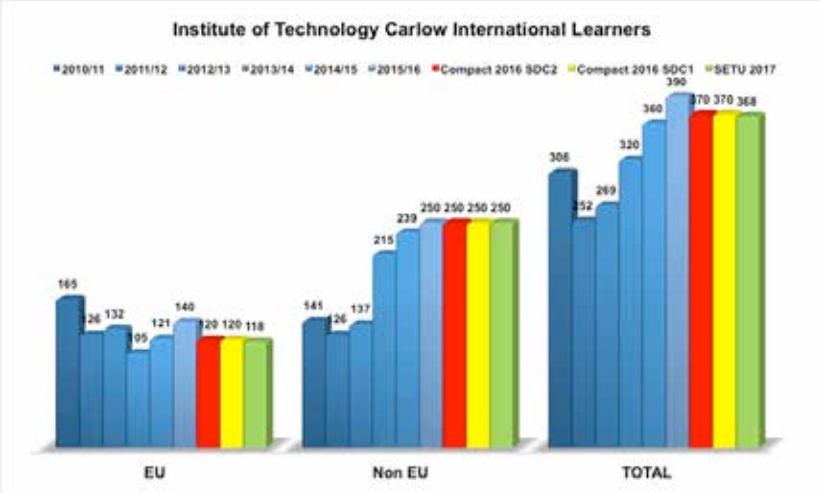


Figure 2.12 International Learners 2010/11 to 2015/16 at Institute of Technology Carlow. Earlier Institute projections are presented for comparative purposes. These include the HEA/IT Carlow Strategic Dialogue Cycle 2 Compact 2016 (Compact 2016 SDC2), HEA/IT Carlow Strategic Dialogue Cycle 1 Compact 2016 (Compact 2016 SDC1) and the 2017 IT Carlow projections in the 2012 Stage 1 submission for SETU.

Status at 2015/16; +77% Non-EU; -15% EU (strategic reduction in view of imbalanced mobility under Erasmus; +27.50 International. This produces a total international full-time learner population of 8.7% consisting of 5.6% Non-EU and 3.1% EU (Erasmus).

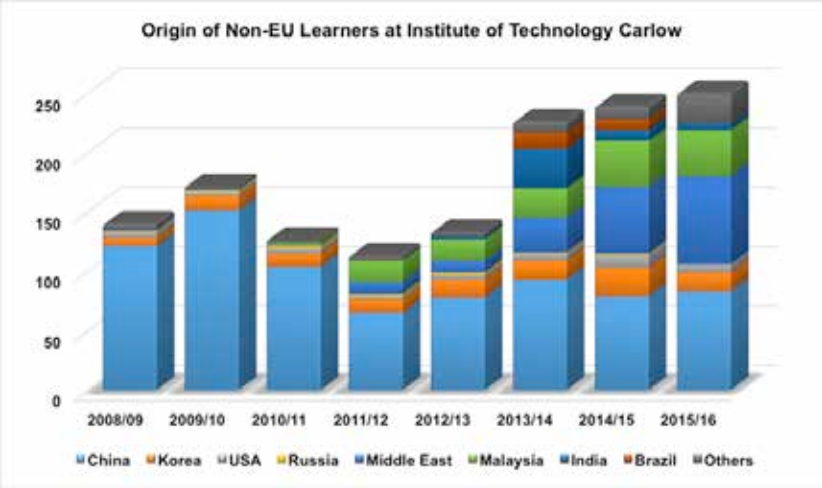


Figure 2.13 Origin of Non-EU Learners 2010/11 to 2015/16 at Institute of Technology Carlow. **Status at 2015/16; +77% Non-EU accounting for 5.6% of the full-time learner population.**

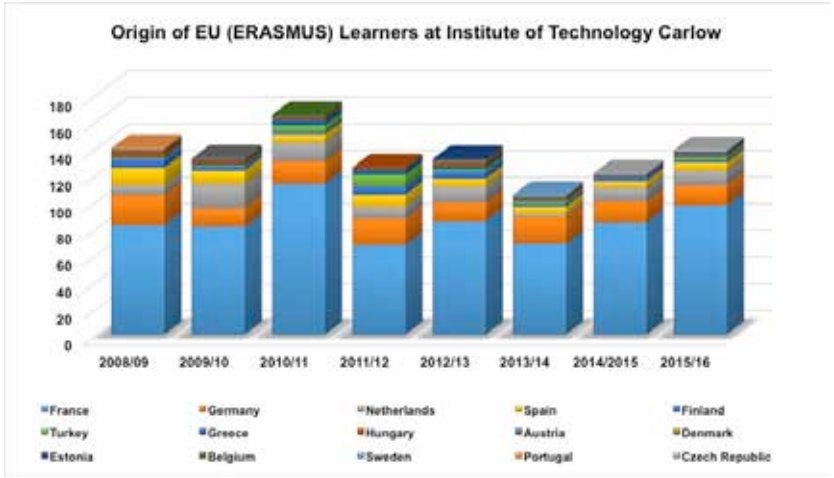


Figure 2.14 Origin of EU Learners 2010/11 to 2015/16 at Institute of Technology Carlow. **Status at 2015/16; +-15% EU (Erasmus) accounting for 3.1% of the full-time learner population. This reduction is within the context of the current strategic approach of the Institute to address imbalanced mobility.**

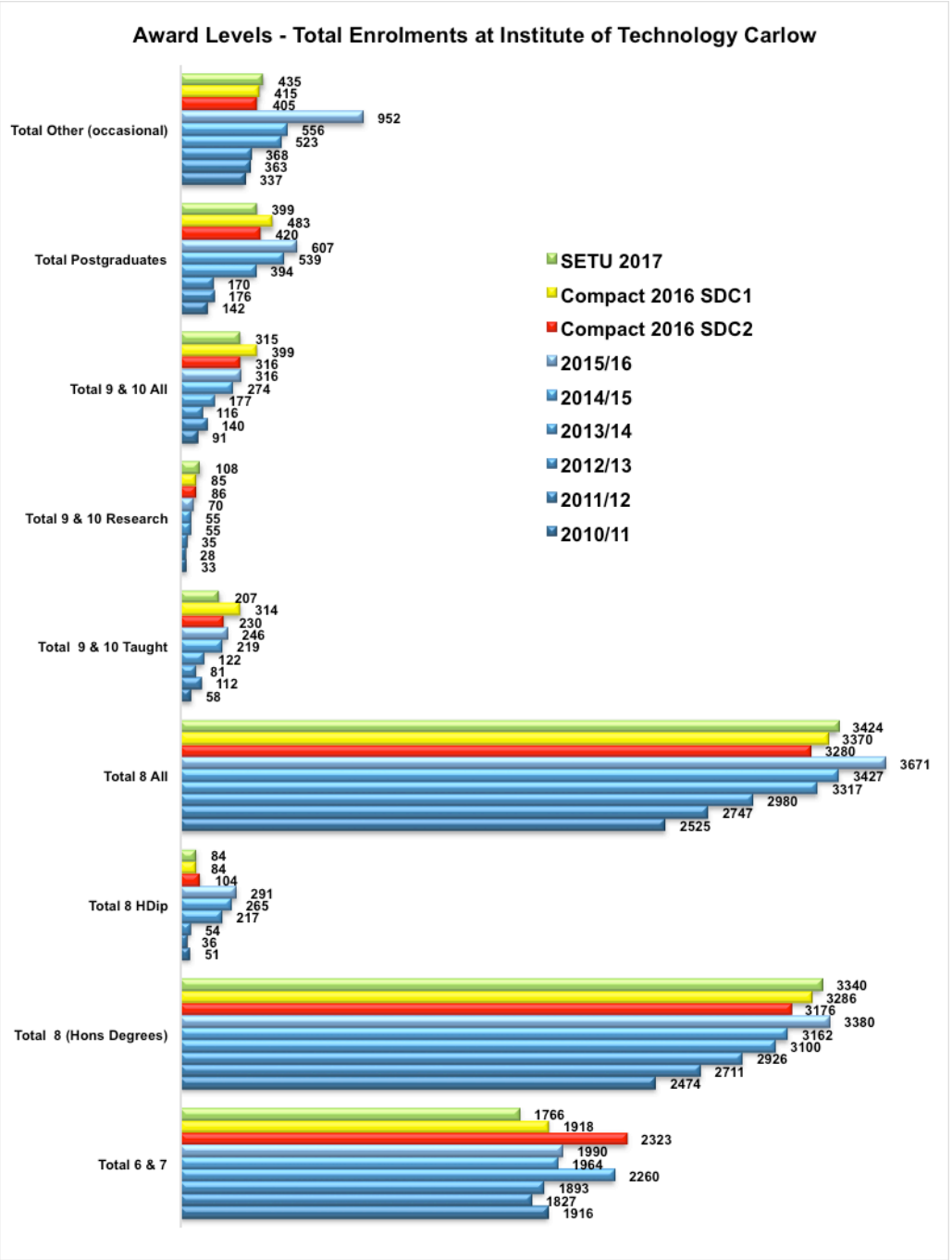


Figure 2.15 Programme Levels of Total Learners 2010/11 to 2015/16 at Institute of Technology Carlow. Earlier Institute projections are presented for comparative purposes. These include the HEA/IT Carlow Strategic Dialogue Cycle 2 Compact 2016 (Compact 2016 SDC2), HEA/IT Carlow Strategic Dialogue Cycle 1 Compact 2016 (Compact 2016 SDC1) and the 2017 IT Carlow projections in the 2012 Stage 1 submission for SETU.

Status at 2015/16; +3.9% NFQ 6&7; +45.4% NFQ 8; +247.3% NFQ 9&10; +327.5 Postgraduate; +182.5% Other.

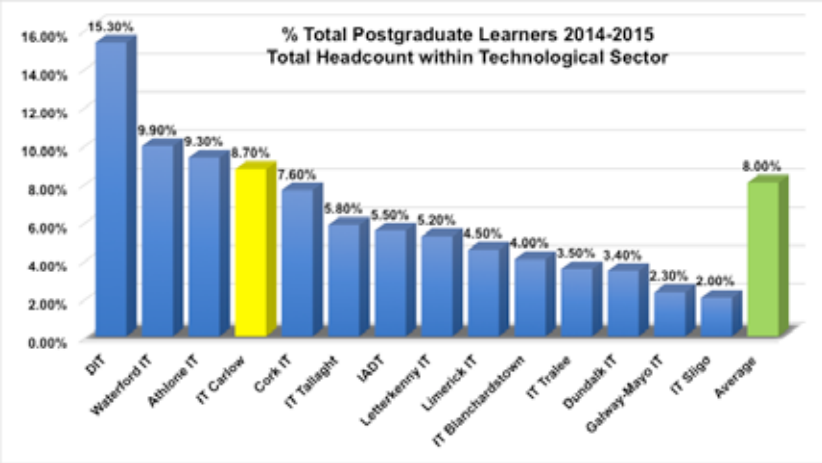


Figure 2.16 % Total Postgraduate Learners (of Total Headcount) across the Technological Sector. Postgraduate Learners include those pursuing L8 (HDip), L9 and L10 programmes, both taught and research, as presented in published HEA statistics (Source HEA). There has been a further 12.6% increase in total postgraduate learners at Institute of Technology Carlow in 2015/16 compared to 2014/15 and resulting in an overall % Total Postgraduate Learners of 8.62% (of total enrolments). Please note that the total enrolments have increased by 11.3% in 2015/16 compared to 2014/15 for Institute of Technology Carlow.

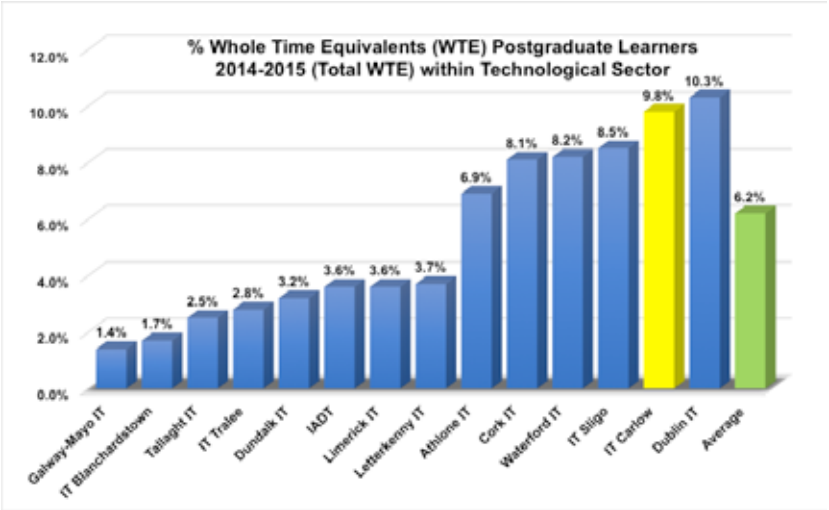


Figure 2.17 % WTE Postgraduate Learners (of Total WTE) across the Technological Sector. Postgraduate Learners include those pursuing L8 (HDip), L9 and L10 programmes, both taught and research, as presented in published HEA statistics.

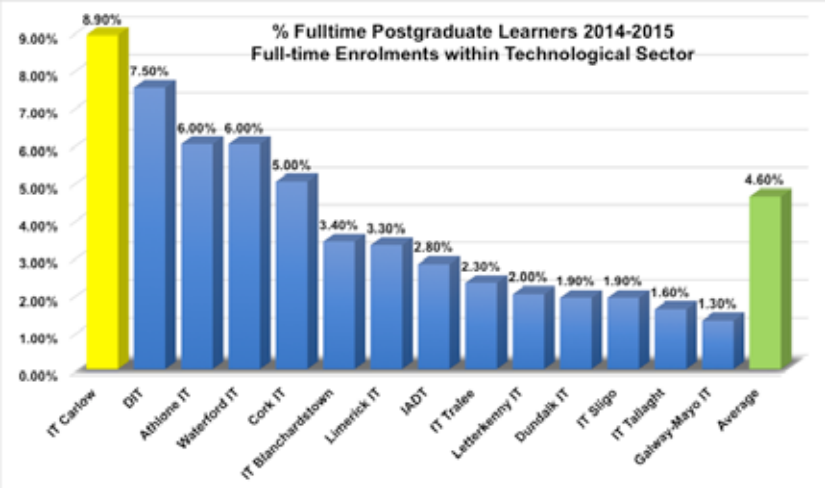


Figure 2.18 % Full-time Postgraduate Learners (of Full-time Enrolments) across the Technological Sector. Postgraduate Learners include those pursuing L8 (HDip), L9 and L10 programmes, both taught and research, as presented in published HEA statistics.

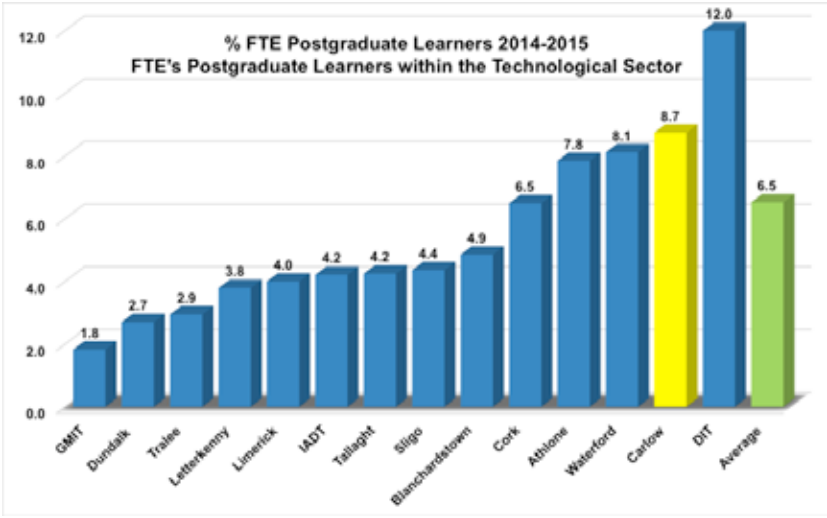


Figure 2.19 % FTE Postgraduate Learners (of Total FTE Learners) across the Technological Sector. Postgraduate Learners include those pursuing L8 (HDip), L9 and L10 programmes, both taught and research, as presented in published HEA statistics.

2010/11 – 2.4% for Institute of Technology Carlow putting it in 12th position of the 14 IoTs and below the 5.8% National Sectoral Average.

2014-2015 (latest published comparative figure) – 8.7% for Institute of Technology Carlow putting it in 2nd position of the 14 IoTs and above the 6.5% National Sectoral Average.

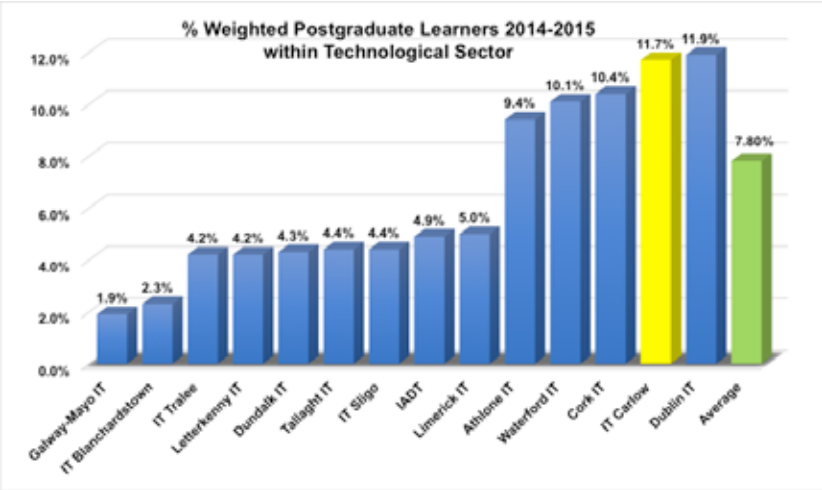


Figure 2.20 % Weighted Postgraduate Learners (of Total Weighted Learners) across the Technological Sector. Postgraduate Learners include those pursuing L8 (HDip), L9 and L10 programmes, both taught and research, as presented in published HEA statistics.

2010/11 – 3.9% for Institute of Technology Carlow putting it in 11th position of the 14 IoTs and below the 7.4% National Sectoral Average.

2014-2015 (latest published comparative figure) – 11.7% for Institute of Technology Carlow putting it in 2nd position of the 14 IoTs and above the 7.8% National Sectoral Average.

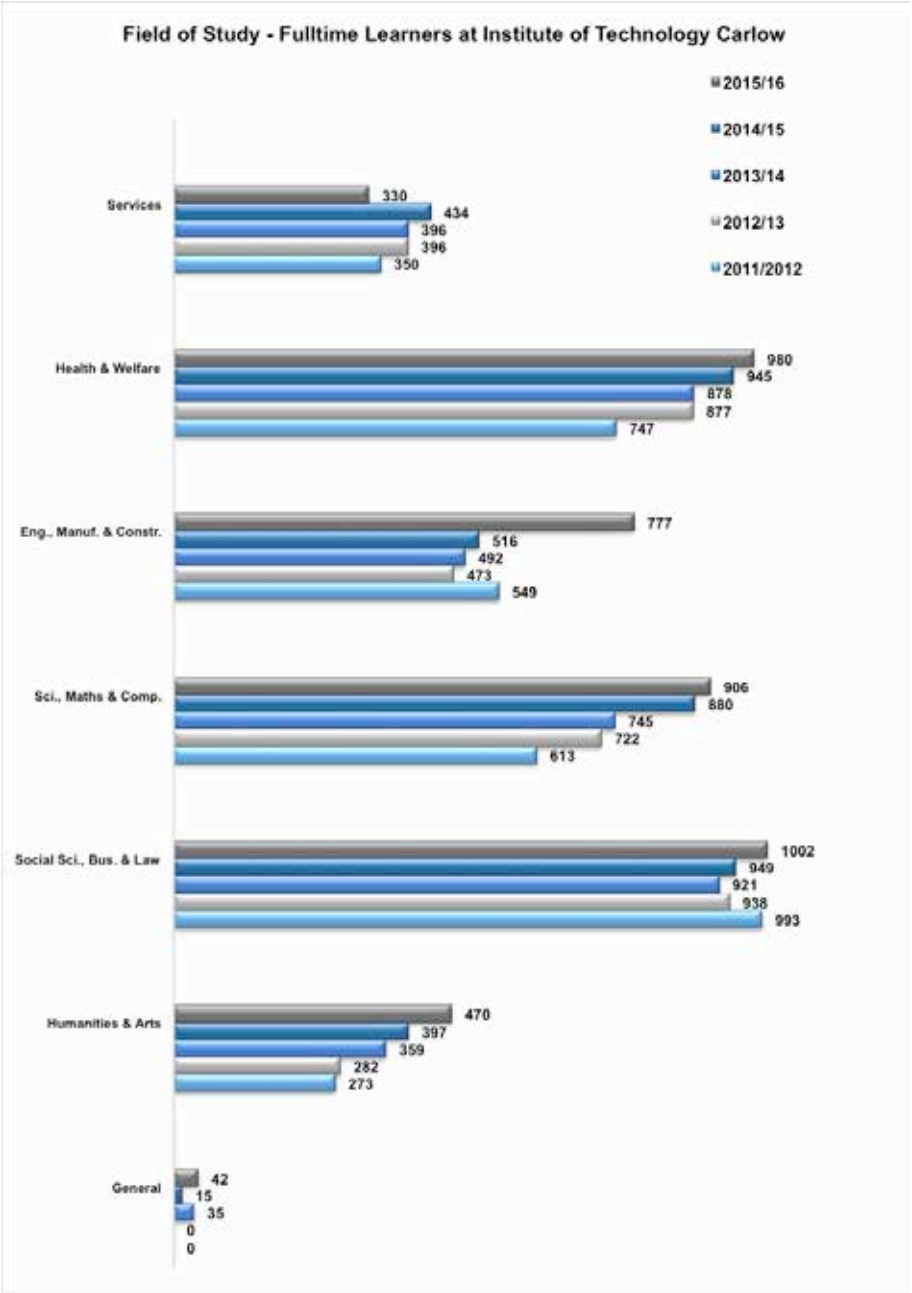


Figure 2.21 Field of Study – Full-time Learners 2010/11 to 2015/16 at Institute of Technology Carlow.

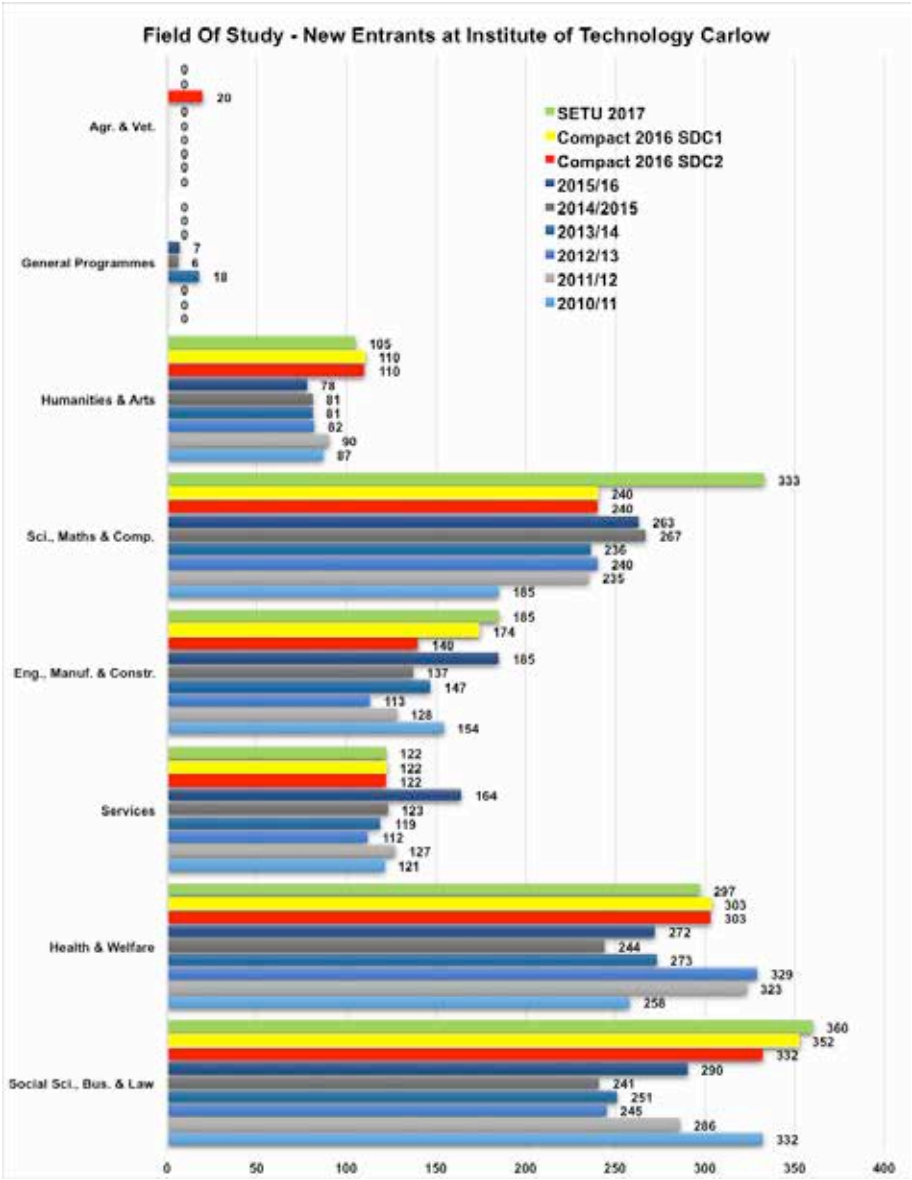


Figure 2.22 Field of Study – New Entrants 2010/11 to 2015/16 at Institute of Technology Carlow. Earlier Institute projections are presented for comparative purposes. These include the HEA/IT Carlow Strategic Dialogue Cycle 2 Compact 2016 (Compact 2016 SDC2), HEA/IT Carlow Strategic Dialogue Cycle 1 Compact 2016 (Compact 2016 SDC1) and the 2017 IT Carlow projections in the 2012 Stage 1 submission for SETU.

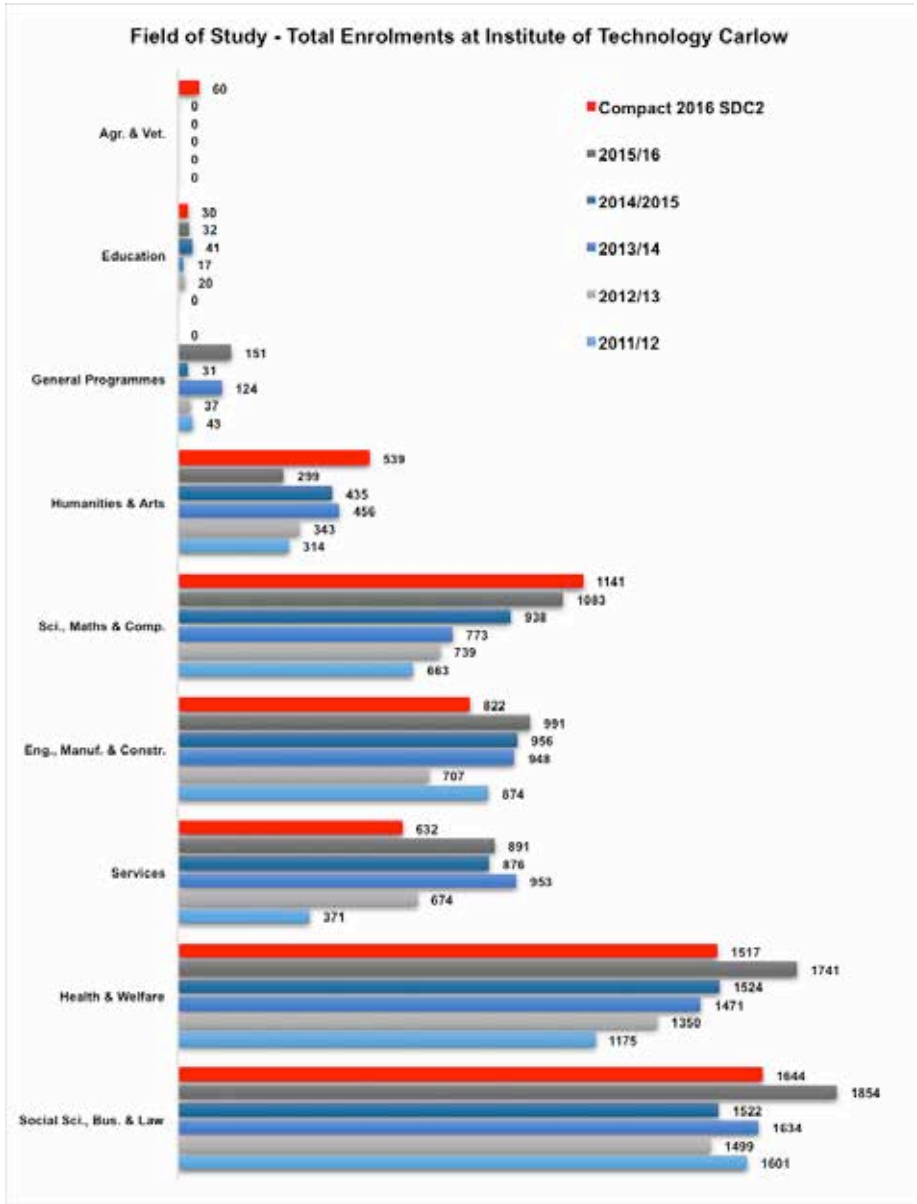


Figure 2.23 Field of Study – Total Learners 2010/11 to 2015/16 at Institute of Technology Carlow. Earlier Institute projections are presented for comparative purposes. This is the HEA/IT Carlow Strategic Dialogue Cycle 2 Compact 2016 (Compact 2016 SDC2).

Table 2.3 SPRINGBOARD 2015-2016 at Institute of Technology Carlow.

Course Name	NFQ Level	ECTS	Initial Allocation	Final Uptake
Certificate in Marketing with Social Media Skills	Level 6	60	20	128
Certificate in Purchasing Strategy, Quality Management and Lean Six Sigma	Level 6	60	25	38
Bachelor of Science in Energy Management (Buildings)	Level 7	60	30	22
Bachelor of Science in Management (Craft)	Level 7	60	24	15
Higher Diploma in International Financial Services	Level 8	60	25	22
Higher Diploma in International Business	Level 8	60	20	10
Higher Diploma in Supply Chain Management	Level 8	60	25	25
Higher Diploma in Business in Tourism Marketing	Level 8	60	25	20
Higher Diploma in Financial Services in Insurance and Risk	Level 8	60	25	0
Higher Diploma in Digital Media Design	Level 8	60	30	37
Higher Diploma in ICT Skills	Level 8	60	25	9
Master of Science in Digital Marketing	Level 9	90	20	13
Master of Science in Interaction Design	Level 9	90	25	23
Master of Science in Medical Device Regulatory Affairs	Level 9	90	20	22
Master of Science in Information Technology Management	Level 9	90	20	17
Postgraduate Diploma in Science in Information Technology Management	Level 9	60	10	3
Total			**369**	**404**

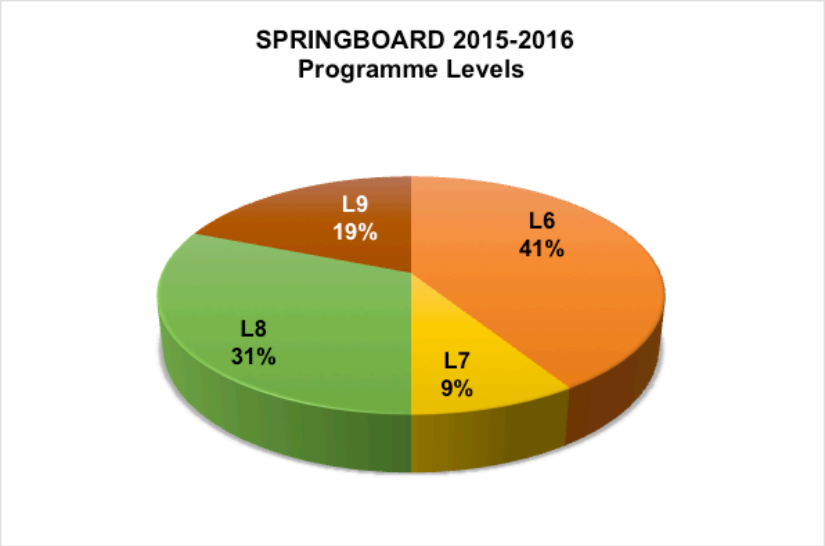


Figure 2.24 Programme levels of the 404 Institute of Technology Carlow learners funded by SPRINGBOARD 2015-2016. Throughput and retention rates will be available from September 2016.

Table 2.4 SPRINGBOARD 2014-2015 at Institute of Technology Carlow.

Course Name	NFQ Level	ECTS	Initial Allocation
Bachelor of Science in Energy Management (Buildings)	Level 7	60	30
Higher Diploma in Fund Accounting and Credit Analysis	Level 8	60	20
Higher Diploma in Supply Chain Management	Level 8	60	32
Master of Science in Digital Marketing	Level 9	90	20
Master of Science in Information Technology Management	Level 9	90	20
Postgraduate Diploma in Science in Information Technology Management	Level 9	60	20
Total			**142**

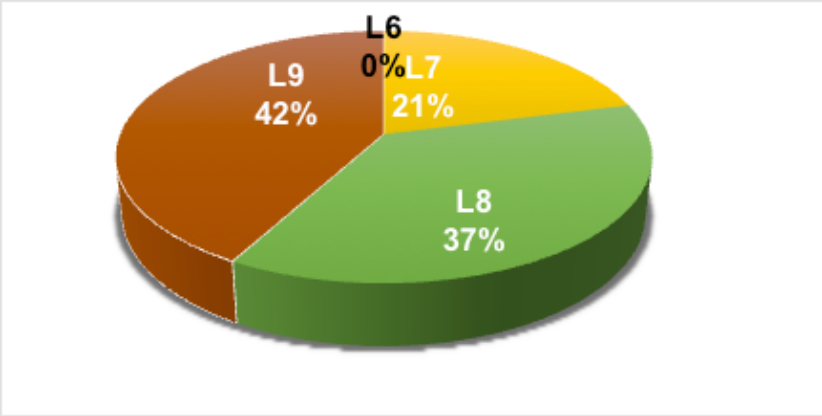


Figure 2.25 Programme levels of the 142 Institute of Technology Carlow learners funded by SPRINGBOARD 2014-2015.

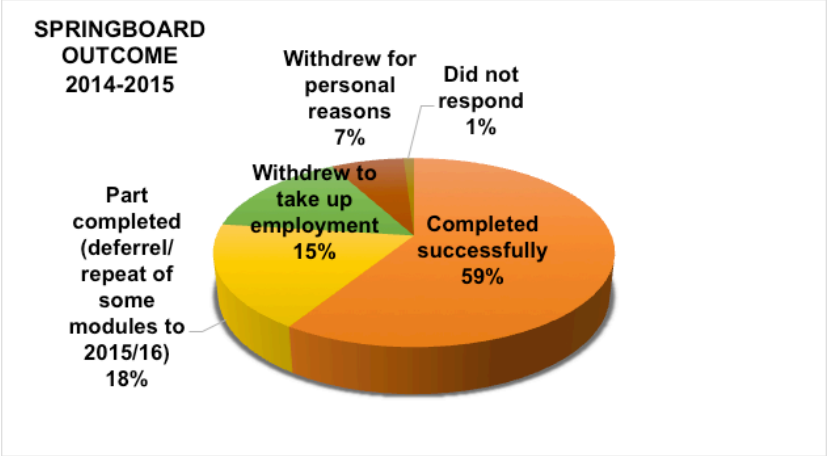


Figure 2.26 Outcome of SPRINGBOARD 2014-2015 at Institute of Technology Carlow.

Table 2.5 SPRINGBOARD+ 2016 at Institute of Technology Carlow.
Recruitment will commence in mid-2016.

Course Name	NFQ Level	ECTS	Initial Allocation
Certificate in Aircraft Acquisition and Finance	Level 6	60	30
Certificate in Purchasing Strategy, Quality Management and Lean Six Sigma	Level 6	60	20
Bachelor of Science in Energy Management (Buildings)	Level 7	60	30
Higher Diploma in Supply Chain Management	Level 8	60	25
Higher Diploma in Digital Media Design	Level 8	60	20
Higher Diploma in Science in Computing (1 year full-time)	Level 8	60	20
Higher Diploma in Science in Computing (2 year part-time)	Level 8	60	20
Master of Science in Data Science	Level 9	90	15
Master of Science in Pharmaceutical Regulatory Affairs	Level 9	90	15
Master of Science in Information Technology Management	Level 9	90	20
Master of Science in Supply Chain Management	Level 9	90	20
Total			**235**

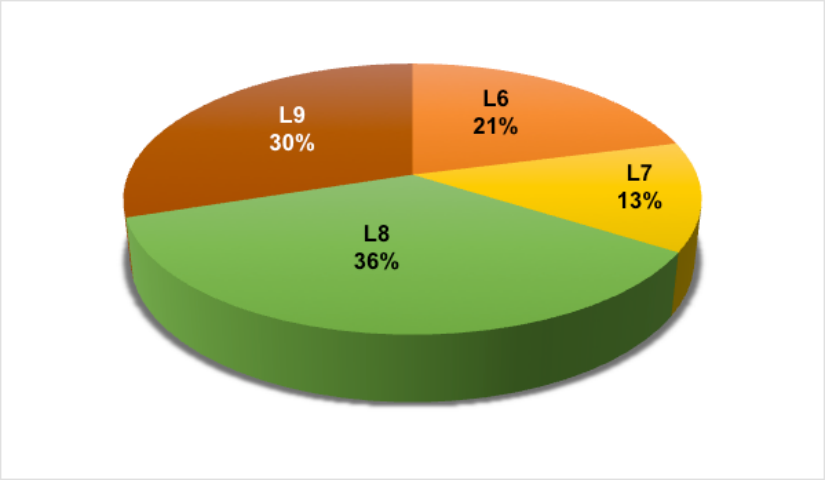


Figure 2.27 Programme levels to be offered by Institute of Technology Carlow under SPRINGBOARD+ 2016 (initial allocation).

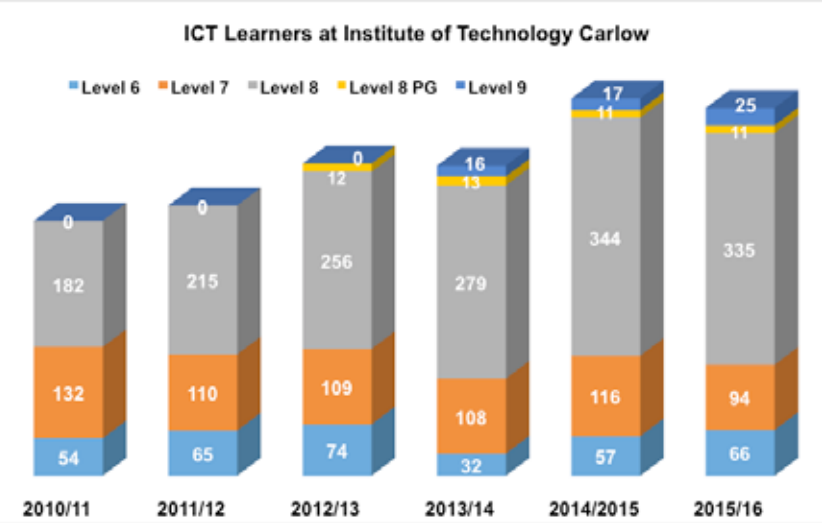


Figure 2.28 ICT Learners at Institute of Technology Carlow. There has been a 44.3% increase in learners from 2010/11 to 2015/16. A HDip was introduced in 2012/13; the MSc in IT Management was introduced in 2013/14; the Higher Certificate was introduced to the Wexford Campus in 2014/15; a BSc (Hons) in Cybercrime and IT Security will commence in 2016/17 and funding has been secured for a new MSc in Data Science under HEA Springboard 2016+.

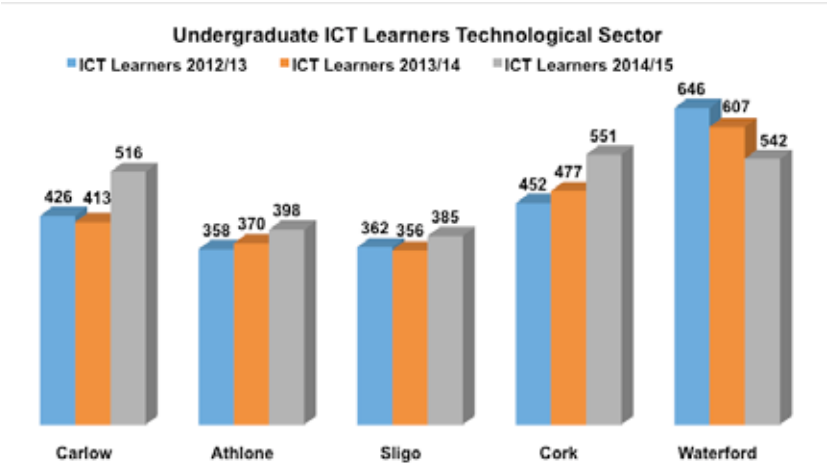


Figure 2.29 Undergraduate ICT Learners at Institute of Technology Carlow (21% increase), Athlone (11% increase), Sligo (6% increase), Cork (22% increase) and Waterford (16% decrease) 2012/13-2014/15 (Source, HEA www.hea.ie/en/statistics/overview ISCED (Field of study) ICT 2013-2015; Computer Science & Computer use 2012-13). When these numbers are considered in conjunction with registered full-time learners in 2014/15, Institute of Technology Carlow has the highest percentage ICT learners at 12.5%. This compares to 10.0% for Athlone and Sligo Institutes of Technology, 7.8% for Waterford Institute of Technology and 7.1% for Cork Institute of Technology.

Table 2.6 A comparison of the Leaving Certificate Points (LC, 250) for Irish HEIs taken from ***The Sunday Times University League Table***, together with the average LC points per entrant for the years 2010/11 to 2014/15 from which this was derived. The Leaving Certificate points for entry for the former was calculated in the following way: The median Leaving Certificate points obtained by honours degree entrants, weighted by the latest data on the number of students on each programme. A maximum score of 600 points is assumed and the percentage of the maximum attained is given a 2.5 times weighting in the league table. Source: Calculated from CAO entry data and HEA/individual Institution's figures on numbers in each programme.

HEI	LC Pts (250) 2015/16	2014: Average LC Points per entrant	LC Pts (250) 2014/15	2013: Average LC Points per entrant	LC Pts (250) 2013/14	2012: Average LC Points per entrant	LC Pts (250) 2012/13	2011: Average LC Points per entrant	LC Pts (250) 2011/12	2010: Average LC Points per entrant
Trinity	215	516	212	509	215	516	209	502	199	477
UCD	201	481	198	475	196	470	190	457	168	402
UCC	194	465	190	456	188	451	185	443	172	412
DCU	190	456	189	454	186	446	181	434	176	423
UL	184	441	184	442	182	437	181	435	165	396
NUI Galway	177	425	176	422	174	418	173	414	163	390
Maynooth	174	418	173	415	179	430	175	421	173	415
Dublin IT	172	412	166	398	164	394	159	382	159	381
Cork IT	161	386	158	379	155	372	156	374	138	331
Athlone IT	154	370	157	377	152	365	144	345	144	345
IT Tralee	153	367	160	384	149	358	155	372	136	326
Waterford IT	153	367	152	365	151	362	150	360	149	357
IT Carlow	152	364	149	358	147	353	148	355	143	343
Dundalk IT	150	360	149	358	150	360	148	355	134	321
Galway Mayo IT	149	357	153	367	154	370	149	357	154	369
Sligo IT	146	351	141	338	143	343	139	333	112	268
IADT	145	348	148	355	152	365	156	374	157	377
Letterkenny IT	143	344	144	346	146	350	150	360	150	361
Limerick IT	143	342	143	343	145	348	145	348	135	324
IT Tallaght	138	330	139	334	140	336	134	321	119	285
IT Blanchardstown	136	327	138	331	137	329	142	340	126	302

Table 2.7 Number of CAO listed programmes, all levels, 2014-2017. (Footnotes on page 68.)

INSTITUTION	Level 8				Level 7				Level 6			
	2014	2015	2016	2017	2014	2015	2016	2017	2014	2015	2016	2017
Dublin IT	76	77	73	76	23	23	23	24	9	9	8	9
Athlone IT	18	17	19	22	16	19	20	21	18	17	15	14
IT Carlow***	30	28	25*	24**	18	18	18	19	10	9	9	9
IT Carlow WX	7	7	8	8	5	4	6	6	1	1	2	2
Cork IT	40	41	41	41	34	34	35	34	2	2	2	2
IADT	14	14	14	15	3	4	4	2				
IT Blanchardstown	14	16	16	17	14	14	14	15	3	3	3	3
IT Tallaght	16	16	16	18	13	14	14	15	7	8	8	6
Dundalk IT	23	27	28	23	19	17	17	17	3	4	4	3
Galway/Mayo IT	27	28	41	47	37	34	41	44	9	10	11	8
Letterkenny IT	19	17	19	16	27	23	22	23	11	11	11	10
Limerick IT	21	21	22	24	15	15	16	15	15	14	14	14
IT Sligo	16	20	22	25	29	28	28	29	5	9	9	10
IT Limerick Tipp Clonmel	3	3	4	4	3	3	2	2				
IT Limerick Tipp Thurles	7	6	6	6	5	4	4	4		1	2	2
IT Tralee	28	28	26	20	26	26	22	15	6	6	5	4
Waterford IT	41	38	42	38	20	20	19	19	8	8	8	8
UCC	66	62	62	58								
DCU	73	61	69	65								
RCSI	4	4	4	4								
Trinity	66	66	66	60	3	3	3	3				
UCD	53	50	49	42								
NUI Galway	56	56	57	54								
UL	72	71	71	42					1	1	1	1
Maynooth	49	43	33	34								
Maynooth (KK)	1	1	1	1								
Carlow College	3	3	3	3	2	2	2	2				

INSTITUTION	Level 8				Level 7				Level 6			
	2014	2015	2016	2017	2014	2015	2016	2017	2014	2015	2016	2017
Griffith College Cork	5	5	4	3	3	3	2	1	3	3		
All Hallows College Dublin	3											
American College Dublin	3	2	2	2								
College of Tech CCT		1	1	1	1	2	2	2	1	1	1	1
Church of Ireland CICE	1	1										
Marino Dublin	3	4	4	4								
Dorset College						2	2	2		3	3	3
Dublin Business School	20	21	20	20	9	9	9	9	6	6	6	6
Grafton College					2	2	2	2	1	1	1	1
Griffith Dublin	15	15	15	16	8	8	8	8	6	6	6	6
Independent Colleges	4	4										
IBAT College Dublin	1	1	1	1	1	1	1	1	1	1	1	1
ICD Business School Dublin	3	3	3	3								
Mater DEI Ins of Education	4											
Nat College of Art & Design	4	4	4	4								
National College of Ireland	8	8	8	8	1				2	2	3	3
Portobello									1	1	1	1
Respond						1	1			1		
St Patricks College Dublin	3	4										
St Nicholas Montessori						1	1	1		1		
Mary Immaculate Limerick	5	5	6	10								
Griffith Limerick	3	3	3	2	4	4	4	3	4	4	4	2
Irish College of Hum & Science (LIM)	4	4	4	4	3	4	4	4	1	3	3	3
Irish College of Hum & Science (DUB)		1	1	1		3	3	3		2	2	2
Pontifical St Pats Maynooth	2	2	2	2								
Shannon Hotel	2	2	2	2								
St Angelas Sligo	11	11	11	9	1	1	1	1				
Galway Business School							1	1				
	947	**922**	**928**	**879**	**345**	**346**	**351**	**347**	**134**	**148**	**143**	**134**

Table 2.7 Number of CAO listed programmes, all levels, 2014-2017.
(**Footnotes**)

***Addition in 2016 - BSc (Hons) Cybercrime and IT Security.**

This programme has been developed in response to the ongoing demand for computing / IT graduates highlighted in recently published ICT Action Plans and in response to IDA strategy and the Action Plans for Jobs that is promoting Ireland as a Cyber Security Hub. This has resulted in many prestigious global IT security companies having operations in Ireland. These IT security companies include, to name a few: Ciphertechs, which established its new EMEA headquarters and Security Operations Centre in Kilkenny in 2015; Intel Security, with its worldwide Centre of Excellence for Enterprise Security Solutions; FireEye, with its leading European Engineering and Security Operations Centre; MasterCard Ireland Labs, developing the next generation of secure payments; Tyco, undertaking IoT service solutions; MCAfee, which expanded in 2009, 2011 and 2013; Symantec, which expanded Irish operations in 2011; Trend Micro, which has over 16 functions at the company's EMEA HQ in Ireland; Espion Group, which provides Managed Security Solutions and Information Governance; Total Defence and Mandiant, which established its Irish division in 2012. The new programme will have a unique CAO code for 2016 but has been designed to be part of a common entry offering with other ICT offerings for 2018 entry as the outcome of the 2016 Programmatic Reviews and ongoing Transitions priorities are implemented in a phased manner.

****Addition in 2017 - BSc (Hons) Brewing and Distilling.**

The alcoholic drinks industry is currently undergoing a major renaissance with developments in both the brewing and distilling sectors. The industry includes everything from long established and world famous brands such as Guinness, Paddy, Baileys, Jameson and Bulmers to a number of medium sized producers such as Carlow Brewing company and Alltech, as well as an increasing number of smaller microbreweries of varying size such as Rye River Brewing in Kildare, Dungarvan Brewing Company in Waterford, 12 acres in Carlow, and Costellos in Kilkenny and distilleries such as Walshe's Distillery in Carlow and Waterford Distillery.

The industry has been identified by the Irish government as a 'key growth sector with the potential to grow exports to over 2 billion over the next 15 years and create and support an additional 13,000 jobs, predominantly in the rural economy. Other reports support this expansion opportunity including Food Wise 2025, Premium Craft Drinks Strategy (An Bord Bia), The future of Irish Whiskey (An Bord Bia) and the South East Action Plan for Jobs (DJEI). The sector are constantly requesting more substantial training and qualification opportunities. According to the recently published Irish National Skills Strategy to 2025, 'Ireland is now in full recovery mode and within striking distance of full employment. As we approach full employment, making sure Irish workers have the skills that enterprise needs matters more than ever'. The objectives of the strategy include a focus on education and training to provide development opportunities that are relevant to the needs of both leaners, society and the economy and this is particularly relevant to new BSc (Hons) in Brewing and Distilling as both the brewing and distilling industries in Ireland are currently undergoing unprecedented levels of growth but, despite this, there are currently no level 8 degree programmes available on the island of Ireland specifically targeting this sector. The strategy goes on to state that employers will participate in the development of skills to improve productivity and competitiveness and expects a national increase in life-long learning. The new BSc (Hons) in Brewing and Distilling addresses an obvious skills gap, has been developed with significant input from the sector and incorporates an extended industry based work placement element. In addition, modules from the programme will be offered as stand-alone CPD upskilling programmes for the industry. Institute of Technology Carlow is ideally positioned both

strategically, academically and geographically to establish itself as a centre for teaching, learning, research and innovation in brewing and distilling and this development has been designed to contribute to this. The programme has been included in the CAO 2017 listing with a common entry to other science level 8 programmes.

*****Strategic Ongoing Retention of the BEng (Hons) in Civil Engineering on the CAO**

A two-year add-on Level 8 BEng (Hons) in Civil Engineering has been accredited by Engineers Ireland since 2008 at Institute of Technology Carlow. During the accreditation process, Engineers Ireland stated their preference to have all two- year Level 8 programmes incorporated into four-year ab initio Level 8 programmes. A four-year ab initio programme [CW478] was subsequently developed and commenced in 2013. The three-year BEng. in Civil Engineering runs concurrent to the ab- initio degree and graduates from the former may progress for entry into the latter.

The level 8 civil engineering ab initio programme was introduced during a particularly challenging economic period for the delivery of engineering programmes aimed at the construction sector nationally. As with all construction related programmes offered by Institute of Technology Carlow and other HEIs nationally, the student intake numbers were impacted as a result of the downturn in the construction industry. This has led to substantial internal discussion concerning the future of the Level 8 programme. Following this review a decision has been made to continue to retain the offering for the 2017 CAO intake for the following reasons:

1. Data recently provided by Engineers Ireland highlights the rate of decline in graduates with level 8 awards in civil engineering in Ireland. For 2014, 2015, 2016 and 2017 the total number of graduates nationally were / will be 605, 153, 70 and 38, respectively. Of the 38 graduates anticipated nationally for 2017, Institute of Technology Carlow will account for 21% of these graduates. To meet the future needs of industry, the sharp decline in civil engineering graduate numbers will need to be addressed. Post the construction downturn, those institutions maintaining level 8 ab initio programme offers into the future will be best positioned to respond quickly to the inevitable renewed interest level in the upturn. This is a view strongly supported by Engineers Ireland.
2. Notwithstanding the national downturn in the construction sector, the Built Environment Department provision at Institute of Technology Carlow enjoys a strong reputation within the industry sector. Given the brand identity and signs of an upturn in the sector, an increase in student numbers can be reasonably expected in the medium term.
3. The maintenance of this programme supports the longer term strategic ambitions of the Institute as it develops towards Technological University designation. The ab initio level 8 civil engineering programme placement within the CAO system creates the potential for attracting higher performing students academically (in a similar manner to the level 8 architectural technology and construction programme streams). Such a trend has also been noted by Department of Aerospace, Mechanical and Electronic Engineering following the introduction of the level 8 stage to the Aerospace Engineering and TV & Media Production programmes.
4. In assessing the future of the programme and the future needs of employers in the region, feedback was sought from Engineers Ireland and a number of employers in the region. There is a shared concern within the construction industry that there will be a significant shortage of qualified Civil Engineers in the coming years and there is strong industry support for the Level 8 offering at Institute of Technology Carlow
5. Additional strategies have been put in place to increase student intake numbers to the level 8 Civil Engineering programmes working with Engineers Ireland.

Table 2.8 Commendations arising from the **Stage 1** Quinquennial Review conducted over September 2014 - June 2015 and from the **Stage 2** Quinquennial Review conducted over September 2015-June 2016 across all Faculties, Centres and Campuses. Further detail on the Stage 1 Reviews outcomes including the reports of the external expert panels can be accessed at www.itcarlow.ie/resources/quality/quality-publications-outcomes.htm. Stage 2 Reviews reports are being finalised and will be published later in 2016. These reviews were conducted under Institute of Technology Carlow's quality assurance and enhancement framework for the monitoring, validation and enhancement of Institute wide performance (www.itcarlow.ie/resources/quality.htm).

ENGINEERING
The panel commend the institute policy on the two stage process of a strategic review in advance of a programmatic review and on the entire institute strategic review process.
The commitment and enthusiasm of the management and staff in the School of Engineering and their dedication to, and support for, their learners is laudable.
The strategic investment in infrastructure, personnel and policy developments to support research in the Institute is admirable.
The School's research plan focusing on the existing staff skill set and supported by recruitment strategy to support this is also commended.
The School of Engineering is increasing its activity on many fronts and presented a very ambitious strategic plan.
The commitment of the School towards achieving external validation and accreditation for the Schools programmes, new niche programme development, flexible access and progression opportunities is impressive.
The School is conscious of the importance of the employer voice in programme development, delivery and monitoring.
The panel were impressed by the professionalism and dedication of the staff to the delivery of the programme and the welfare of the students.
The Institute is to be commended on the high quality and articulateness of the students and their enthusiasm for the Institute and the accessibility of teaching staff and their supportiveness.
Programme is excellent and exemplary and a benchmark for how it should be done.
The panel were very impressed with the quality of finish and breadth of the final year projects, many of which were quite challenging and demonstrated a high degree of novelty.
All laboratories and facilities that support the delivery of the programme are of a high standard and the efficient operation and maintenance of these facilities is to be commended.

BUSINESS AND HUMANITIES

The strategic review document presented a comprehensive, progressive and realistic strategy for the school and details key targets and performance indicators to 2020.

Learners were highly complementary of their lecturers in terms of access and culture of openness, of the institute facilities available, student supports and postgraduate opportunities and industry engagement.

Facilities for the delivery of programmes including teaching space, library, IT and other specialised venues are of a very high standard.

IT Carlow staff development and other support structures are impressive and accessible to all staff.

A suite of new 'industry facing' programmes developed since the 2011 review were highlighted and the ongoing development of progression routes, links to LLL and other campuses and collaborative provision are exceptional.

An increase in the demand for progression opportunities and in the diversity and needs of the learner profile has taken place, and the efforts made by the school in terms of delivery, programme development, the first year experience and transitioning to third level, targeted learner support and pastoral care is evident and laudable.

The excellent student-centred environment and support given to learners undertaking Business Programmes in the faculty.

The programme development activity particularly for those undertaking programmes on a part-time basis.

Progression through the programme and focus on continuous assessment encouraging independent learning through many programmes is impressive.

Mutually beneficial increase in the development of formal and voluntary links with schools and other groups in all sport disciplines since last PR is welcome.

The PRG was impressed with the provision and presentation of documentation. In particular, the level of detail provided with respect to the programmatic review was uniformly excellent and is to be commended.

The PRG found that the programmes were appropriate and well aligned to the professional bodies. In particular the PRG commends the level of co-ordination with professional bodies for exemptions for the students.

The PRG highly commends the high proportion of full time staff available to student, student / staff ratios, the facilities and resources available to students (in particular, the library opening hours and staffing).

The PRG commends the facilitation of support for staff undertaking PhD programmes.

Throughout the visit, the physical facilities and equipment, staff engagement and enthusiasm and documentation provided were particularly impressive.

Certificate in preparation for higher education: This programme 'has its finger on the pulse' in terms of what learners need and is very impressive. Bringing student cohorts on-campus and the focus on how the cultural background of learners impacts on learning is commendable.

Clear, transparent and rigorous communication pathways for learners is very well designed. Excellent feedback has been received from industry.

SCIENCE
The panel thank the staff of the School of Science for the quality of the documentation and the work that went in to both the analysis and the preparation of the review.
The panel also thank the staff, learners and management for their evident engagement with the process and the panel.
The Panel agreed that the School of Science at IT Carlow has grown and made considerable advances over the past 5 years.
The students in particular were key advocates and exemplars of what the School is doing.
The passion of the lecturing staff for the teaching, learning and research was evident and reinforced by the students.
The Panel praises the School of Science on their communication mechanisms between staff and learners and acknowledges the importance placed on the voice of the student.
The panel compliment the School on their international linkages and in encouraging students to undertake international placements.
The panel commend the high standard of teaching, learning, learner support, sports and research facilities in the Institute.
Student centred ethos was very evident.
Institute support for staff CPD is impressive.
Learner feedback from both QA and ISSE surveys as well as learner voice via programme board input etc – highlight how this information is used in informing both the programmatic review process and annual programme review processes.
Ongoing institute supports for staff undertaking doctoral studies and other CPD including financial support, conference support and a menu of support options available to managers as well as schemes for staff to apply for time off to engage in specific grant applications is commendable.
Range of final year project styles from research through to applied industry challenges provides opportunity for diverse final year specialisation. Ongoing assessment, presentations and monitoring of final year projects is commendable
Panel note and commend the planned structured PhD/Masters by research programme but suggest consideration be given to block delivery of the structured element.
The panel commend the rollout out of the Ethics in Research and Integrity policy and procedures across all levels and encourage the ongoing efforts in this domain in line with national guidelines.

Lifelong Learning and Extended Campus

The panel ... note the strong culture of self-reflective and scholarly practice evident in the Life Long Learning (LLL) Centre and the Extended Campus.

The proactive learner centred approach was clearly evident and described glowingly by both ...staff and learners and this is to be commended.

The enthusiasm of the learners and their appreciation for the support that they receive from LLL and extended campus staff was exceptional.

The inclusion of real-world, current workplace experience by staff, many of whom are in employment outside the institute, as a powerful teaching tool, was evident and is extremely valuable. Staff spoke of the progressive atmosphere, the range of programmes and of IT Carlow's 'genuine understanding and appreciation of the adult learner'.

The panel commend and congratulate the LLL centre and the extended campus on their innovation, collaborative provision success, and growth rates and commend both the regional focus of provision and the flexibility and breadth of programmes currently being provided which are clearly benefiting learners and the communities served.

The impact and value of the LLL centre and extended campus on the lives of both learners and staff as well as the wider community, economy, society and region cannot be understated and represents an exponential return on the time and effort which has been and continues to be invested.

IT Carlow staff development and support structures are accessible to all staff including those involved in teaching in the LLL centre and the extended campus.

LLL centre and the extended campus learners have access to other libraries and to electronic databases and a significant investment in library and information support is evident.

Ongoing targeting and development of new niche, flexible and targeted programmes, at levels 6-9, to support industry needs is evident and the LLL centre has been particularly successful in the Springboard programme.

Collaborative provision is particularly well developed and successful in the LLL centre and the extended campus.

Learner supports such as study skills, career guidance and the learner forum etc are provided and the learner induction process is well developed in the LLL centre and includes study skills, library skills and information on programmes.

Communication and publication of evident best practice in teaching in the LLL centre and extended campus should be promoted and supported, highlighting scholarly teaching and reflective practice.

WEXFORD CAMPUS

The panel commend the collegiate nature of the campus and the positive interaction between learners and staff evident in this community of learning and their achievements over 20 years.

Staff were enthusiastic and supportive and sincerely engaged in the pursuit of academic excellence.

The panel further commend team on the quality of documentation and their engagement with the panel during the visit.

The panel congratulate the campus on the enthusiastic and positive learner engagement as evident in the feedback during the session with the learners.

Entrepreneurship was evident across programmes which are applied and relevant as was genuine engagement with local industry and arts and community organisations.

Links to FE providers are being developed and this is to be applauded.

Work placement and community based learning are particularly well established and highly regarded by all stakeholders.

We were particularly impressed with the final year shows – some outstanding work in both design and fine art. This is testament to the good teaching and well used resources of these programs. The overall quality of work is exceptional. We also following detailed discussions with the staff recognise a clear sense of cohesion and development within programs.

The panel would like to commend the twelve week work placement as very strong. It is clear that the students have benefited from this. The panel commends the induction programme. The strong approach to enquiry-based learning is also commended by the panel.

The clear student-centred approach was evident and is to be highly commended.

The panel commend the provision of lifelong learning opportunities across all levels and the flexible pathways provided to learners.

The panel compliment the innovative excellent MBA in Professional Arts Management programme and encourage the use of minor awards from this programme and its delivery via Blended/online learning.

There is a strong evidence base of the good practice e.g. case studies and projects; and ongoing work of staff and the quality underpinning this and the panel feel this should be communicated more widely.

RESEARCH POLICY REVIEW 2015

The panel's overall conclusion was that the Institute had made excellent progress toward achieving its ambitious targets for research

The panel commended the Institute on the following, which the panel highlighted as examples of some of the innovative and creative practice the Institute had adopted:

- *The central support, financial provision and professional advice, available to fund and support research activities*
- *The multiple means used to communicate and roll out policy developments*
- *The genuine and infectious enthusiasm of research staff in the Institute and the pride they take in being research active*
- *Success in increasing the number of research active staff*
- *The CORE Leader release scheme*
- *Evidence of the CORE research centres leading to the development of taught Masters Degree programmes*
- *The comprehensive research student induction programme and the ongoing support available to postgraduate students*
- *The strength and sense of collegiality amongst the postgraduate student community.*
- *The investment in research infrastructure, notably the Dargan Centre.*

APPENDIX 3

IRISH SURVEY OF STUDENT ENGAGEMENT (ISSE) 2014-2016
Benchmarking Institute of Technology Carlow with the Irish and UK Higher Education System

CONTENTS

Introduction

The Irish Survey of Student Engagement (ISSE) 2015 offers an insight into the experiences of students in Irish higher education and more specifically their experiences in Institute of Technology Carlow. This is a student engagement survey as distinct from a satisfaction survey. Student engagement is defined as:

> "*The investment of time, effort and other relevant resources by both students and their institutions intended to optimise the student experience and enhance the learning outcomes and development of students, and the performance and reputation of the institution". (V. Trowler and P. Trowler, Student engagement toolkit for leaders (Leadership Foundation for Higher Education and Higher Education Research and Evaluation, 2011).*"

The survey points to a fairly high level of consistency in responses across the HEI sector with differences between institutions, when they arise, being relatively small. Notwithstanding this, it is evident there are differing characteristics in the nature of the student engagement, some of which reflect popular perceptions of the differences between the Institute of Technology (IoT) and University sectors, but also some difference between how Institute of Technology Carlow is perceived when compared with the IoT and University sectors overall.

Institute of Technology Carlow appears throughout, with some exceptions, to score consistently higher than the University sector and the Institute of Technology sector results. It is this consistency in response, rather than focusing only on a few metrics, which provides the most comprehensive indication of Institute of Technology Carlow's standing in the opinion of our students.

While this 2015 report fails to draw on any international comparators, in this analysis some attempt has been made to identify comparators with UK HEIs, drawing on information from a UK Engagement Survey 2014, produced by The Higher Education Academy.

Response rates and Institute of Technology Carlow respondents characteristics

The report describes Institute of Technology Carlow as having the 2nd highest percentage response rate of all universities and IoTs at 36.6% (1206 students) and Table 3.1 gives a breakdown by year/cohort of study.

Table 3.1 Institute of Technology Carlow Respondents to ISSE 2015.

Institute of Technology Carlow 2015				
	First Year	Final Year	PG Taught	All students
Population				
Survey Population	1,439	1,487	365	3,291
Respondents	513	587	106	1,206
Response Rate	35.6	39.5	29.0	36.6

Over 50% of Institute of Technology Carlow respondents were 24 years and older (Figure 3.1); in the case of the Technological and University sectors, the percentage of respondents over 24 years was 44.3% and 34.9% respectively. There were slightly more female respondents than male in Institute of Technology Carlow (Figure 3.2). Just over 4 % were non-Irish (Figure 3.3) and almost 20% of Institute of Technology Carlow respondents were part - time compared (Figure 3.4) to 12% for all IoTs and 11% for Universities. Figure 3.5 shows that Institute of Technology Carlow students are more likely to have some paid employment, to have caring responsibilities and to be managing personal business (e.g. household budgets etc.).

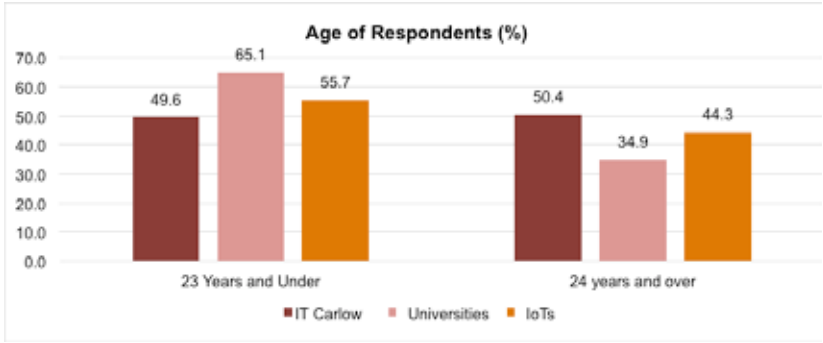


Figure 3.1 Age of Respondents to ISSE 2015.

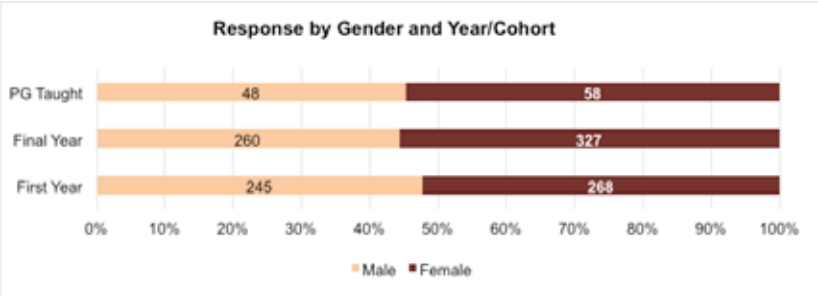


Figure 3.2 Institute of Technology Carlow response to ISSE 2015 by Gender and Year/Cohort.

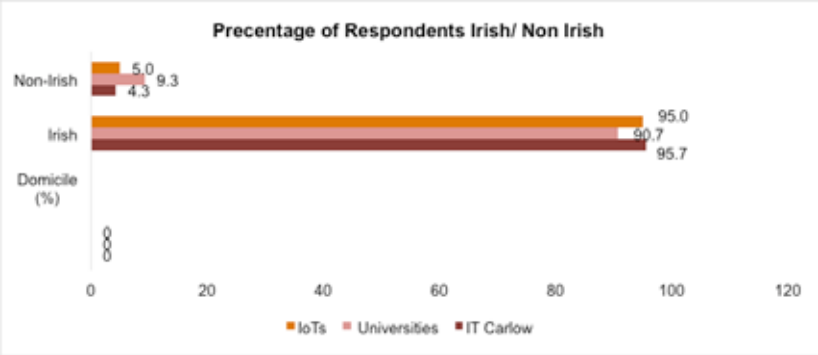


Figure 3.3 Institute of Technology Carlow percentage respondents Irish/ Non-Irish.

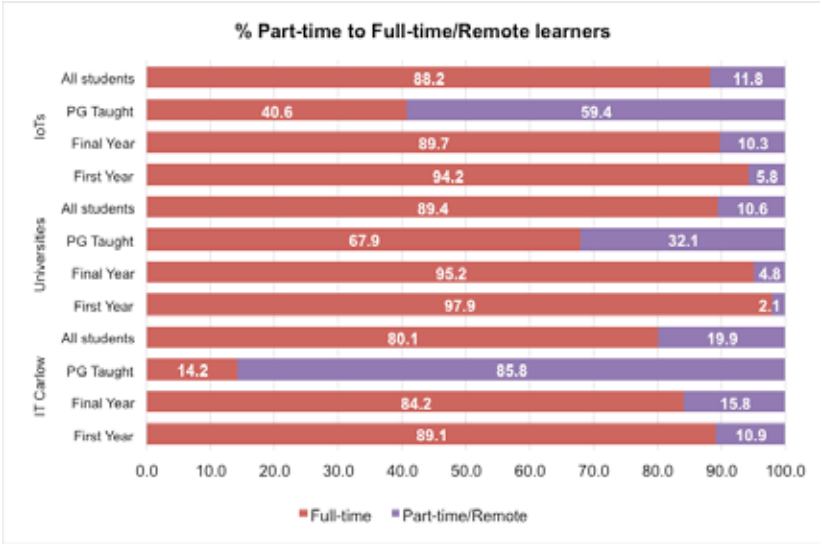


Figure 3.4 % Part-time to Full-time / Remote Learners.

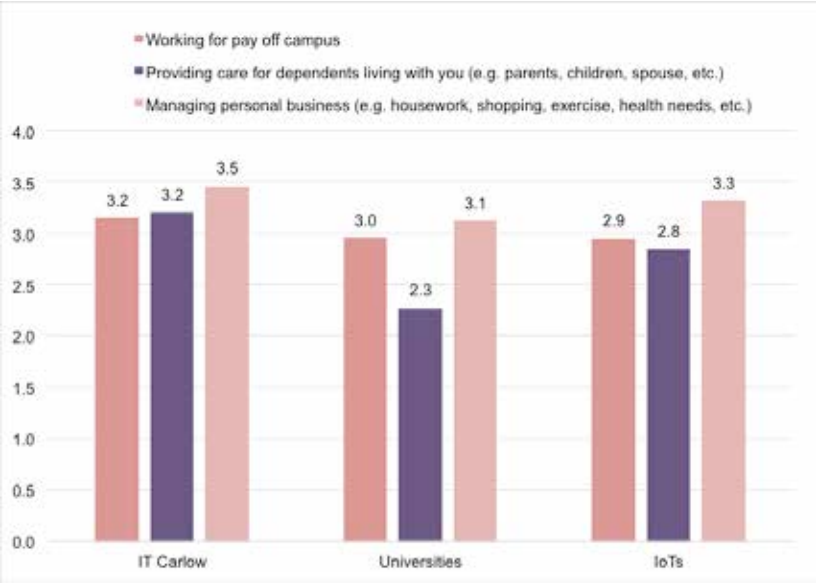


Figure 3.5 Responsibilities of Institute of Technology Carlow respondents.

Overall Analysis of Engagement and Outcomes Indices

The survey report presents an analysis of each question asked of students as well as an overall analysis of all the questions presented under the following two indices; "Engagement Indices" (Figure 3.6), and Outcome Indices (Figure 3.7).

Figure 3.6 shows the results from the "Engagement Indices" for each of the 6 categories listed, from Academic Challenge to Work Integrated Learning. (The scores between categories bear no relation to each other, but the scores in each category highlight the differences between Institute of Technology Carlow's score and that of the IoT and University sectors overall). The results show Institute of Technology Carlow scoring consistently higher than the IoT sector in all but one category, and higher than the University sector in all but 2 categories.

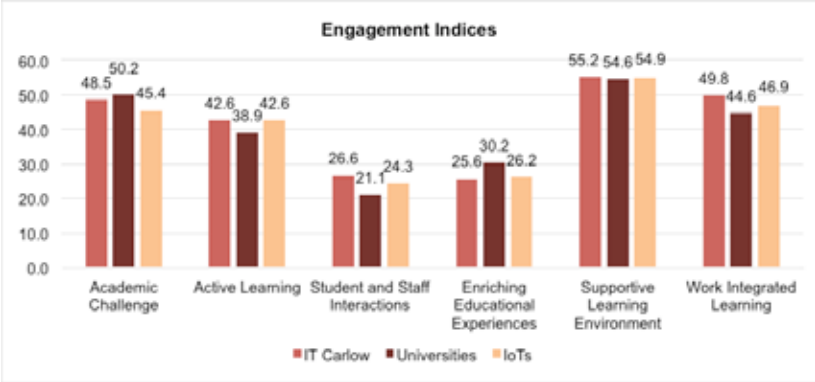


Figure 3.6 A comparison of Engagement Indices for Institute of Technology Carlow, Universities and the Technological sector.

In Figure 3.7 Outcome Indices, Institute of Technology Carlow scores consistently higher than the IoT sector in all categories and higher than the University sector in all but two categories.

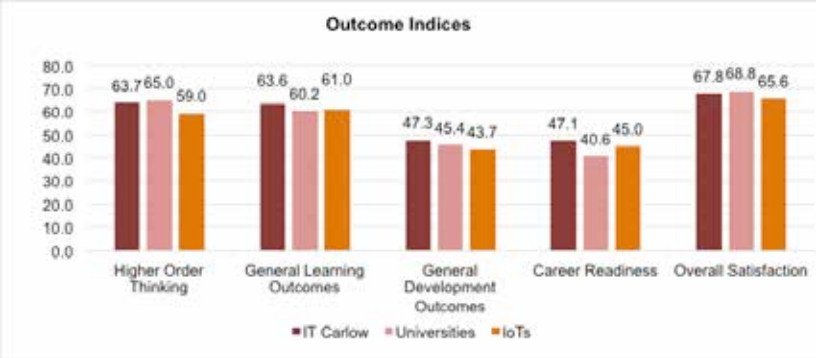


Figure 3.7 A comparison of Outcome Indices for Institute of Technology Carlow, Universities and the Technological sector.

Analysis of Specific Questions

In Figure 3.8 Institute of Technology Carlow scores higher in supporting students outside class, in its timely feedback to students and in how students feel they have been pushed to work harder than they thought they could by the expectations of their lecturers.

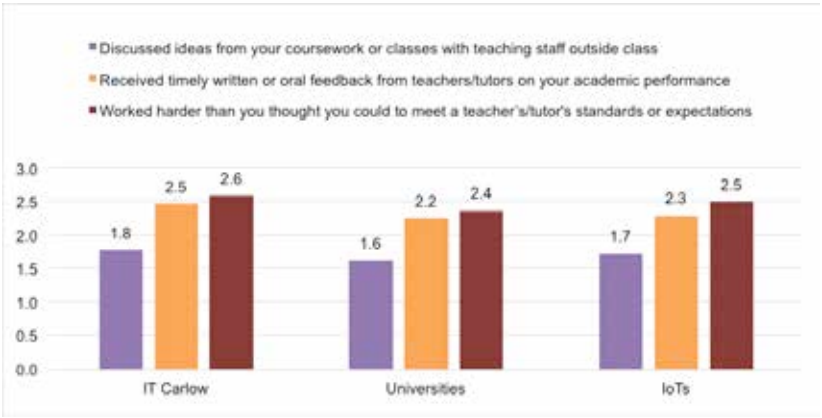


Figure 3.8 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for support outside of class, timely feedback and lecturer expectations.

Figure 3.9 indicates that Institute of Technology Carlow students appear a little less inclined to use online learning systems than their contemporaries elsewhere and email less than university students. However, they are more likely to discuss their academic progress with academic staff.

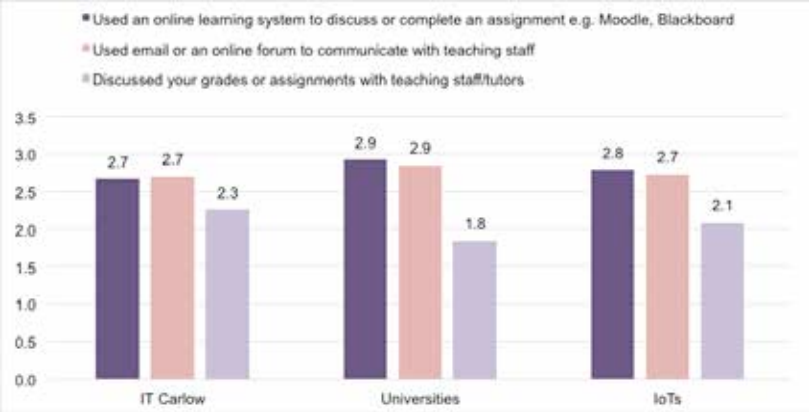


Figure 3.9 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for use of digital technologies for communication with teaching staff.

Figure 3.10 shows that Institute of Technology Carlow students are more likely to use learning support services and to benefit from blended learning with workplace experience.

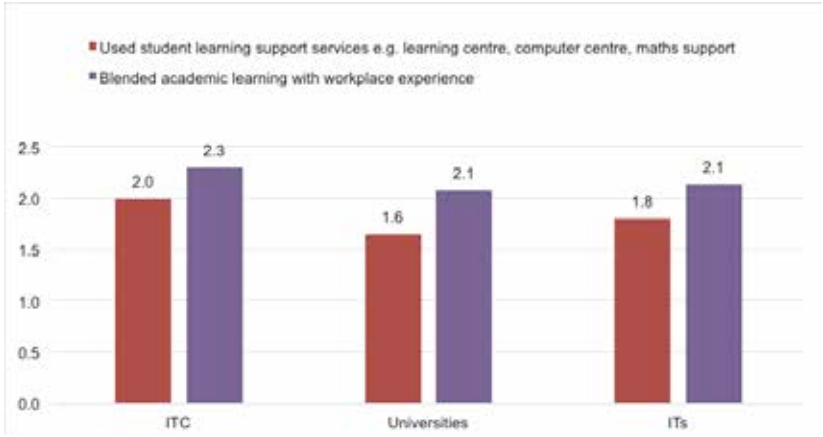


Figure 3.10 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for use of learning supports and blended learning with workplace experience.

Figure 3.11 shows Institute of Technology Carlow students as being more likely to apply their learning to the workplace, to explore where to look for relevant jobs and to network to source information on job opportunities.

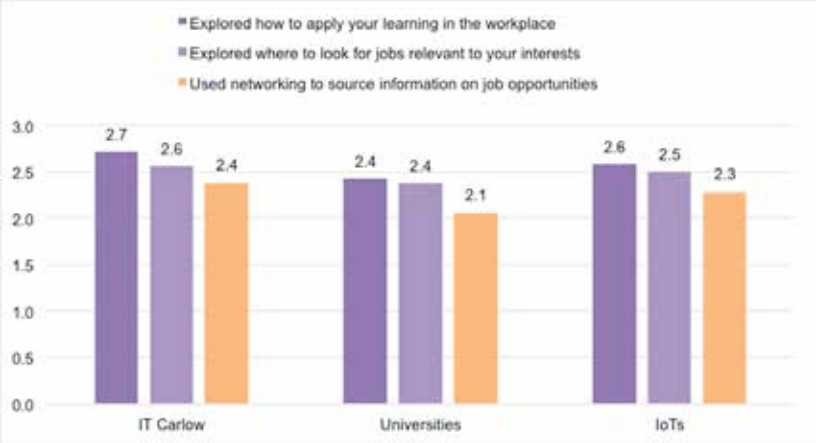


Figure 3.11 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for the application of learning in the workplace, to explore where to look for jobs and to network in source information on employment opportunities.

Figure 3.12 shows Institute of Technology Carlow in line with the University and other IoTs in the numbers of students who ask questions and contribute to discussions in class and in making online presentations.

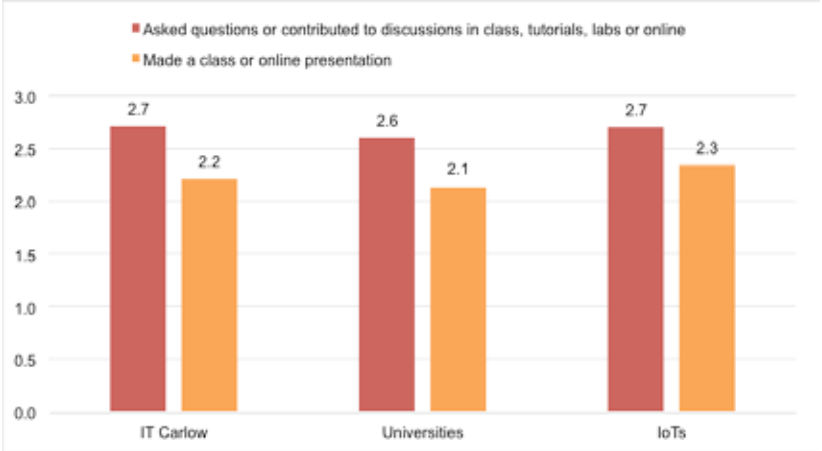


Figure 3.12 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for class discussions and class/online presentations.

Figure 3.13 shows great similarity between Institute of Technology Carlow, the Universities and other IoTs in student perceptions in how hard they have worked and in the preparation of assignments. Institute of Technology Carlow also showed a similar reliance on the use of library services to Universities.

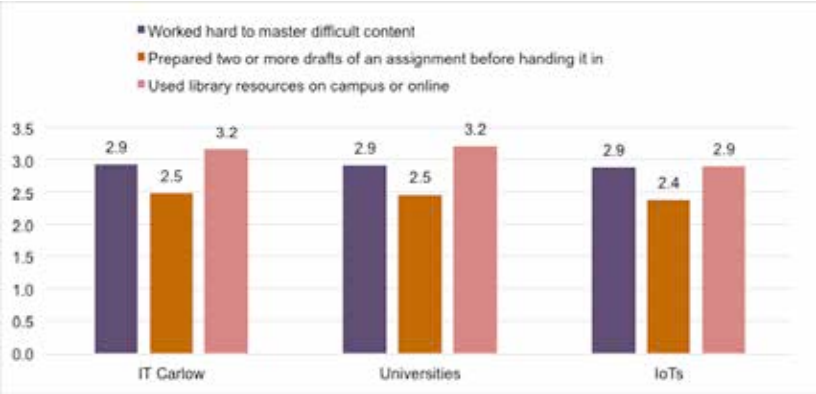


Figure 3.13 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for how they have worked and their use of library services.

Figure 3.14 again shows considerable similarities on the questions relating to diverse perspectives, preparing for class and keeping up to date with studies.

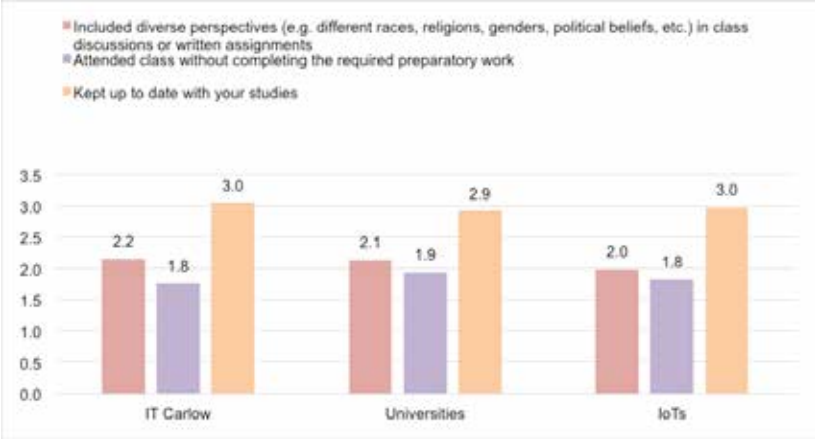


Figure 3.14 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector relating to diverse perspectives, class preparation and keeping current with studies.

Figure 3.15 shows students in Institute of Technology Carlow and IoTs as being more likely to work with other students in preparing assignments, inside and outside the class room.

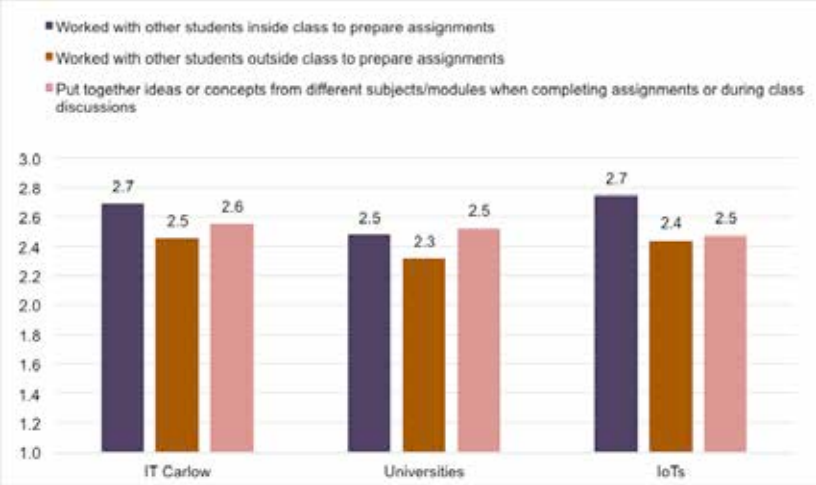


Figure 3.15 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for interaction with other students in the preparation of assignments and combining learning outcomes across different modules in assignments.

Overall Satisfaction Questions

The survey asked 2 overall satisfaction type questions:

1. Overall, how would you evaluate your entire educational experience at your institution?
2. If you could start all over again would you go to the same institution?

The answers are presented by First Year, Final Year and by Taught Postgraduate.

Figure 3.16 shows that 86% of Institute of Technology Carlow 1st Year students considered their entire educational experience to be good or excellent compared with 82% of University students 81% of IoT students.

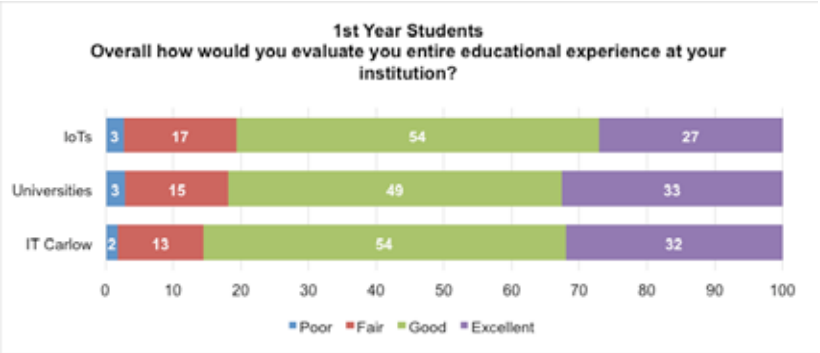


Figure 3.16 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for 1st Year student satisfaction with their educational experience.

Figure 3.17 presents a similar picture to Figure 3.16 with 88% of Institute of Technology Carlow respondents stating they would probably or definitely go to the same institution if they were starting all over again. The answer to the same question from university respondents was 89% and 84% from IoT respondents.

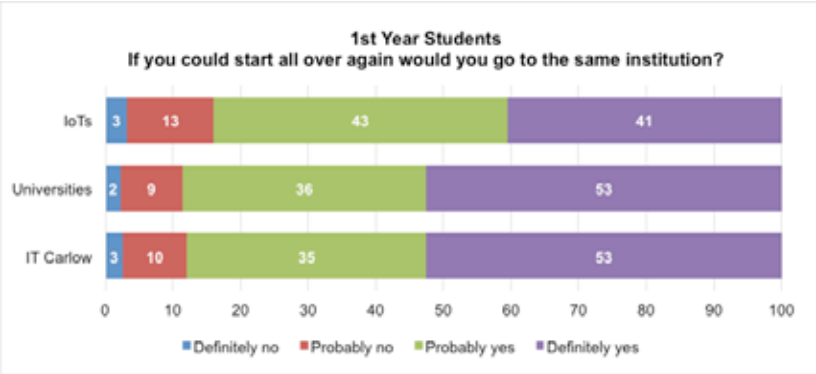


Figure 3.17 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for satisfaction of 1st year students with their institution.

Figure 3.18 shows responses from final year students when asked to evaluate their entire educational experience. 78% of Institute of Technology Carlow students described it as either good or excellent compared to 77% for universities and 75% for IoTs.

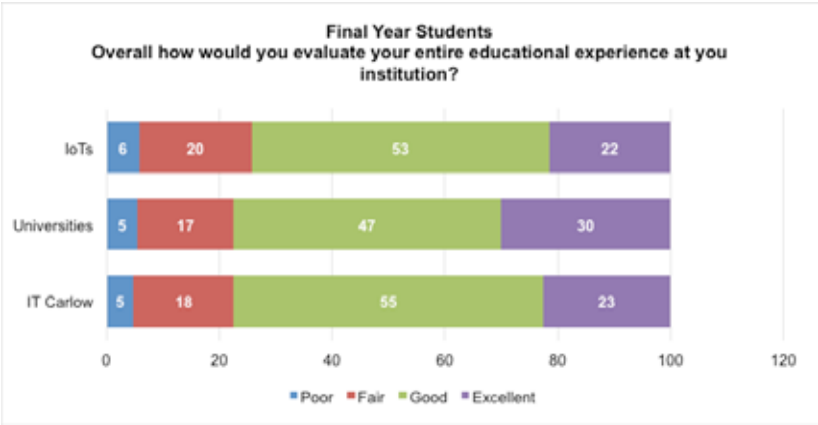


Figure 3.18 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for Final Year Student satisfaction with their educational experience.

Figure 3.19 shows 78% of Institute of Technology Carlow Final Year respondents indicating they would probably, or definitely, go to the same institution if they could start all over again. This compares with a response or 81% for university respondents and 76% for IoT respondents.

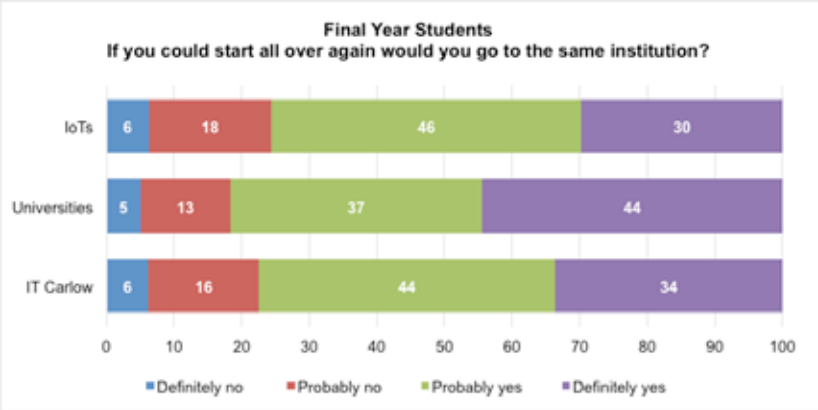


Figure 3.19 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for satisfaction of final year students with their institution.

Figure 3.20 shows 76% of Institute of Technology Carlow respondents evaluating their entire educational experience as either good or excellent. The Universities score 79% and IoTs 77%.

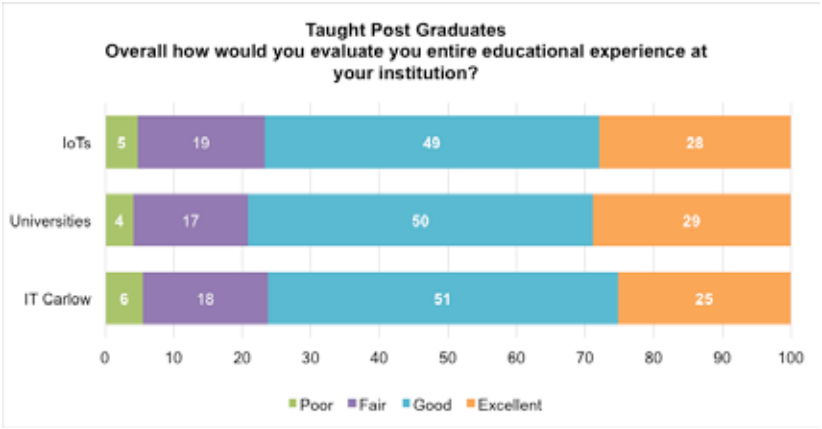


Figure 3.20 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for taught postgraduate satisfaction with their educational experience.

In Figure 3.21, 79% of Institute of Technology Carlow post graduate respondents indicated they would probably or definitely go to the same institution if they were to start over. The corresponding figures were 85% for universities and 82% for IoTs.

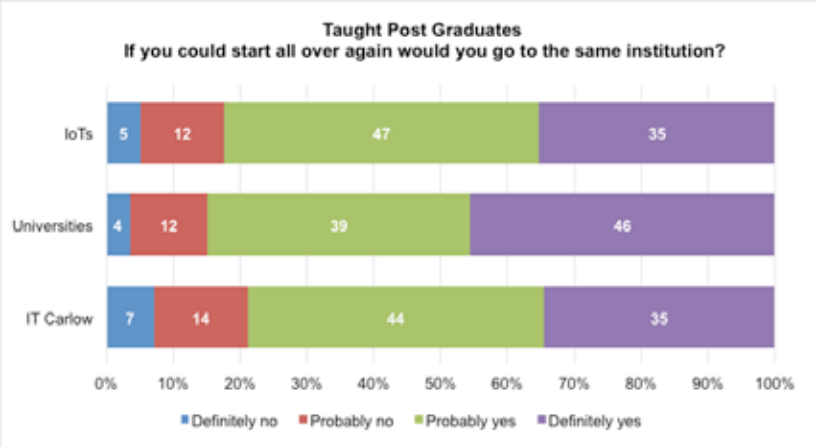


Figure 3.21 A comparison of scores for Institute of Technology Carlow, Universities and the Technological sector for satisfaction of taught postgraduates with their institution.

Student Satisfaction from 2014 to 2016

Earlier data compared the Institute's performance against that of the University and the IoT sector overall. In this section the focus is on Institute of Technology Carlow alone, over a 3 year period, and how it has been viewed by the students on 2 different critical and overarching questions, namely:

1. Overall, how would you evaluate your entire educational experience at your institution?
2. If you could start all over again would you go to the same institution?

The answers to these two questions have been analysed separately to find out how first year, final year and postgraduate students respond.

First Year

Figure 3.22 shows in 2014, 81% of first year students evaluated their educational experience to be good or excellent. The corresponding figure for 2016 was 86%.

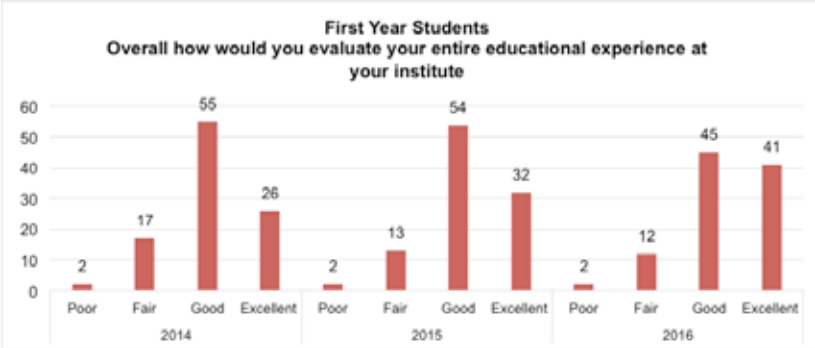


Figure 3.22 Institute of Technology Carlow first year student satisfaction 2014-2016.

Figure 3.23 shows in 2014 81% of Institute of Technology Carlow students said that if they could start over again they would go to the same institution. This figure increased to 88% in the 2016 survey.

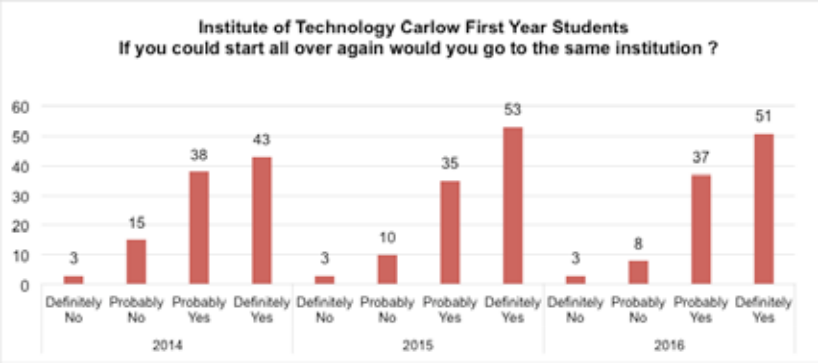


Figure 3.23 Institute of Technology Carlow first year student satisfaction with the Institute 2014-2016.

Final Year

Figure 3.24 shows in 2014, 76% of final year students evaluated their educational experience to be good or excellent. The corresponding figure for 2016 was 83%.

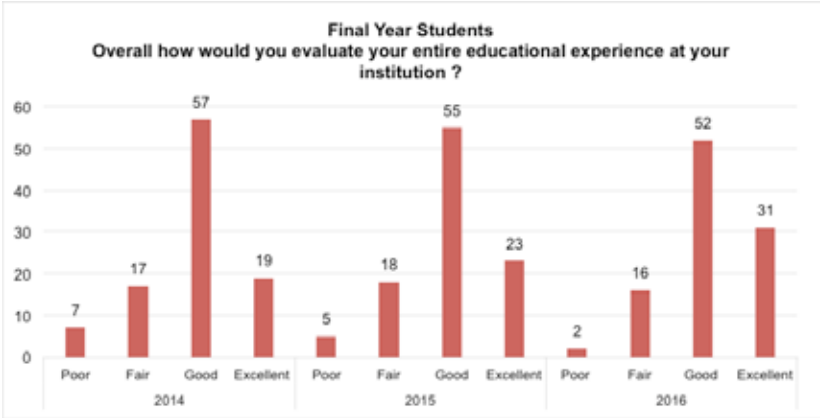


Figure 3.24 Institute of Technology Carlow final year student satisfaction 2014-2016.

Figure 3.25 shows in 2014 73% of Institute of Technology Carlow students said that if they could start over again they would go to the same institution. This figure increased to 83% in the 2016 survey.

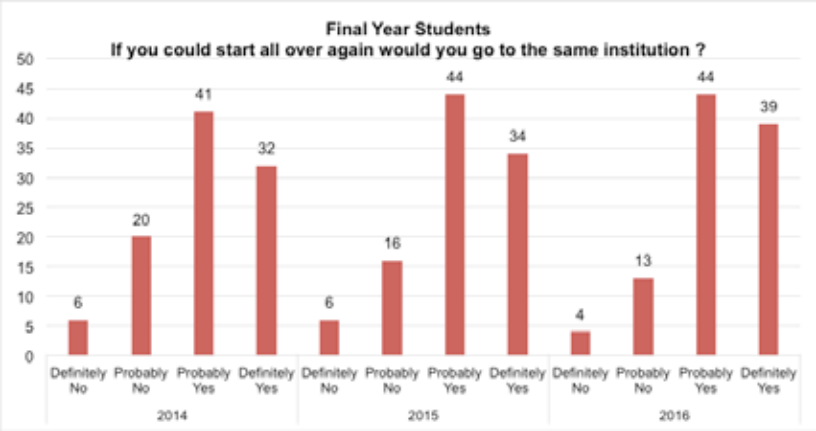


Figure 3.25 Institute of Technology Carlow final year student satisfaction with the Institute 2014-2016.

Postgraduates

Figure 3.26 shows that from 2014 to 2016, 78% of final year students evaluated their educational experience to be good or excellent. The corresponding figure for 2016 was 86%.

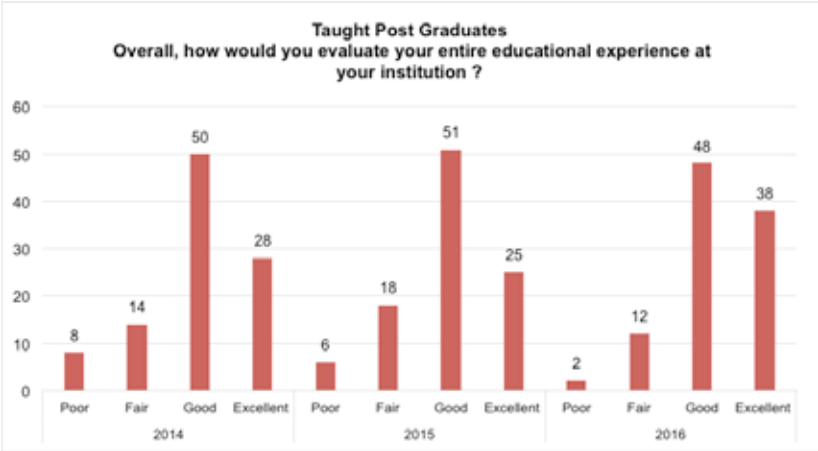


Figure 3.26 Institute of Technology Carlow postgraduates satisfaction 2014-2016.

Figure 3.27 shows in 2014 83% of Institute of Technology Carlow students said that if they could start over again they would go to the same institution. This figure increased to 86% in the 2016 survey.

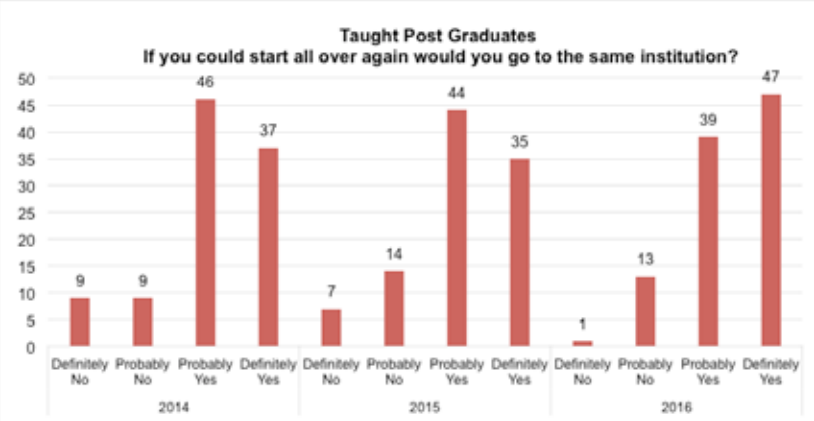


Figure 3.27 Institute of Technology Carlow taught postgraduates satisfaction with the Institute 2014-2016

International Comparisons

In looking beyond Ireland, to find international comparators, the UK Engagement Survey 2014, (authored by Dr Alex Buckley, Higher Education Academy) offers some useful comparators. While there are many differences between the UK and Irish surveys there are some similar questions asked of students in both countries which allow for some comparisons to be made.

Figure 3.28 highlights the importance that Institute of Technology Carlow places on acquiring job related or work related knowledge and skills. 62% of Institute of Technology Carlow respondents felt that they had acquired quite a bit, or a lot of these skills compared to 54% for the Irish universities, 60% for IoTs and 57% for UK universities.

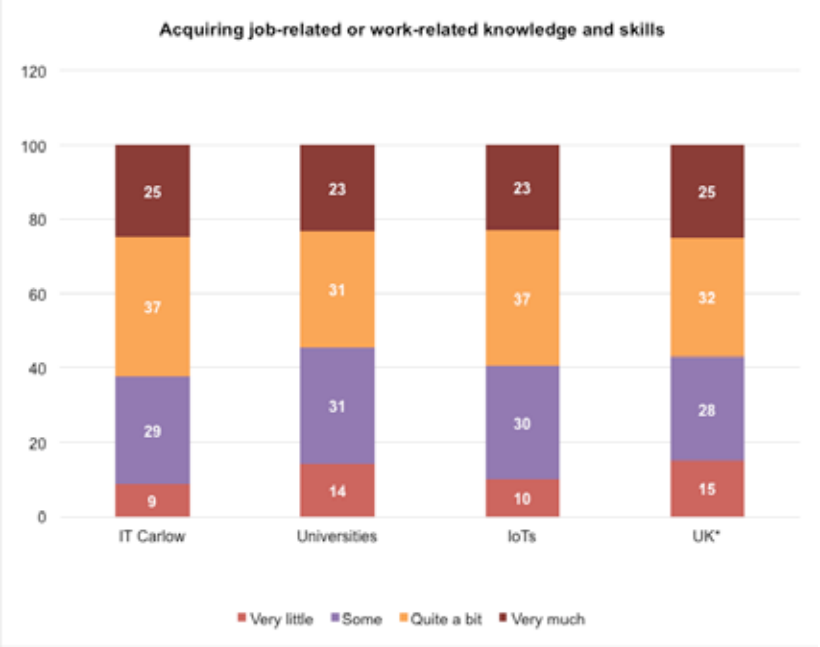


Figure 3.28 A comparison of the importance placed on acquiring job related or work related knowledge and skills by UK and Irish HEIs.

* UK Engagement Survey 2014* Question "How much has your experience at this institution contributed to your knowledge, skills, and personal development in work related skills?"

Figure 3.29 shows 79% of respondents in Institute of Technology Carlow feel that they are required to think critically and analytically; this compares favourably with the Irish and UK universities figures which were 81% and 82% respectfully. IoTs overall recorded 73%.

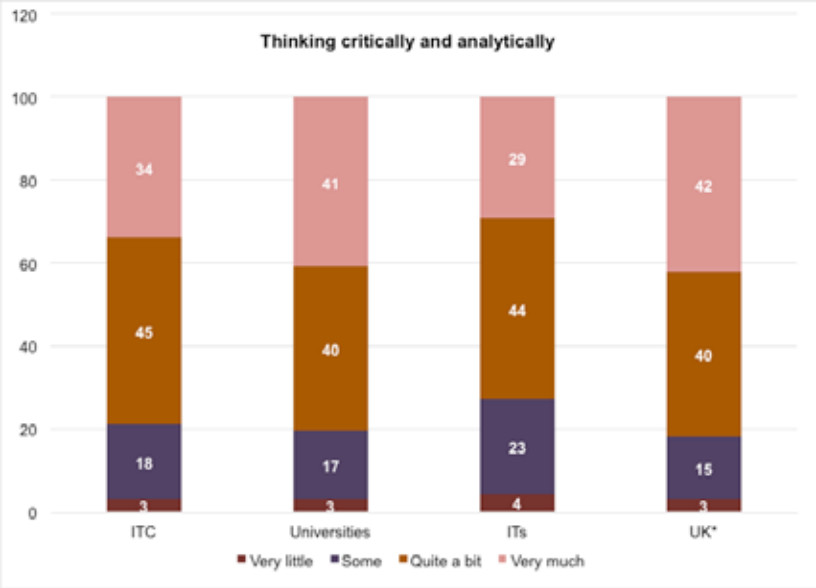


Figure 3.29 A comparison of the importance placed on thinking critically and analytically by UK and Irish HEIs.

* UK Engagement Survey 2014.

Figure 3.30 suggests that the emphasis placed on values and ethics by Institute of Technology Carlow is having an impact on students with 53% of Institute of Technology Carlow respondents seeing their experiences in the Institute having "quite a bit, or very much" influence on them developing a personal code of values and ethics. The figures for Irish universities (49%) and IoTs (47%) are noticeably lower. The UK universities appear to fare better at 59%.

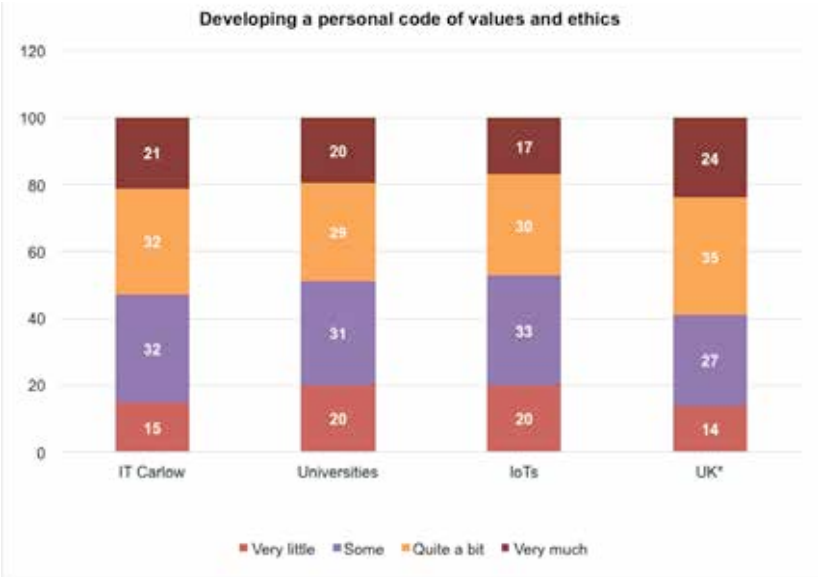


Figure 3.30 A comparison of the emphasis placed on values and ethics by UK and Irish HEIs.

* UK Engagement Survey 2014 (Chart 3). The question asked "How much has your experience at this institution contributed to your knowledge, skills, and personal development ...of personal values?"

Conclusion

While the Irish Student Engagement Survey results show a high degree of similarity across the University and IoT sectors, there are many positive aspects of the student experience noted in Institute of Technology Carlow which re-affirms the progress made and the direction taken through the implementation of the Institute's strategic plan.

In reflecting on what the main messages the Institute may take from this survey, it is worth noting that:

> "*Student engagement cannot be successfully pursued at the level of the individual teacher, school or faculty but must be pursued holistically in a 'whole-of-university' approach and with a common understanding of what it is the institution seeks to achieve*" (Baron, P. and Corbin, L., Student engagement: rhetoric and reality. Higher Education Research and Development vol. 31, no. 66 (2012), pp. 759 – 772: 769)

In identifying key messages the following indicators are worth noting:

- The Overall indices show a consistently positive response from students as to how they view their engagement with the Institute of Technology Carlow. This is, in the great majority of responses, more positive than those reflected in the results published for the University and IoT sectors overall.
- Student satisfaction in Institute of Technology Carlow is most evident by the career inspired nature of much of the learning and its focus on learning in the workplace. This reflects much of what the Institute's strategy sets out to achieve and is a core characteristic of what a Technological University will look like.
- Institute of Technology Carlow students benefit from relatively good access to teaching staff and to timely responses, for example, in terms of marking assessments. There is a positive view held as to the quality of the learning support services and of the overall learning environment.
- Students appear to feel that they are expected to work hard and that they are stretched academically.
- A closer analysis of the data, at discipline/department level, is likely to give further insight into the "overall satisfaction" set of answers in particular.
- In looking specifically at how first year, final year and postgraduates judged the quality of their entire educational experience, across the three annual engagement surveys (2014 -2016) there is a very definite trend showing an increasingly positive response year on year. For example, in 2014 78% of postgraduate students judged their experience to be good or excellent; this figure increased to 86% in 2016. Likewise, when the same groups were asked if "you could start over again would you go to the same institution" the responses showed very positive and an improving assessment. For example, in 2014 81% of first year students said they would probably or definitely repeat the experience; this figure increased to 88% in 2016.

APPENDIX 4

HIGHER EDUCATION STUDENT ACTIVITY AND SPORT STUDY IRELAND 2015

The Student Activity and Sport Study Ireland (SASSI) research was commissioned by Student Sport Ireland (SSI) to investigate sports and physical activity participation, preferences and provision in higher education institutions on the island of Ireland. Thirty six colleges participated in the study which was undertaken in 2014-2015.

Phase 1 the Self - Assessment Review (SAR) provided the context for the student survey. Colleges were identified as small, medium and large and the details of the provision for sport and physical activity were investigated with key personnel in the colleges.

Phase 2, the student survey was to ask a representative sample of the student population on the island of Ireland about their participation in sport and physical activity, what motivated them to participate or not participate, and what motivated them to engage with student sport while they are in college.

This brief section summarises some key findings about Institute of Technology Carlow emerging from Phase 1 (Self-Assessment Review) and Phase 2 (Student Survey) of the SASSI research project and is presented in terms of how Institute of Technology Carlow rank among all other colleges surveyed.

Table 4.1 Summary of performance indicators and ranking of Institute of Technology Carlow SASSI 2015.

Performance Indicator	Institute of Technology Carlow Rank Among Colleges Sampled
Staffing	4/32 Based on Part-time/full-time and Volunteer Staff 2014
Facilities Indoor	5/33 Based on reported indoor facility area space available for physical activity
Investment Indoor Facilities (€000) Investment Outdoor Facilities (€000)	4.5/24 1/20 Based on total reported capital investment in Sports Facilities 1995-Present
Current Investment (€000) Representative Club Sport (€000) Recreational Club Sport (€000) Exercise and Fitness Programmes (€000)	2/31 1/32 5/32 3/32 Based on total reported investment in Physical Activity & Sport between 2009-2014
Sports Club Participation	5/30 Based on total reported numbers of students participating during 1 week in mid Spring 2013
Exercise and Fitness Participation	2/32 Based on total reported numbers of students participating during 1 week in mid Spring 2013
Perceived Provision of Sport	4/33 A rating of the quality provision of Sport based on an assessment by relevant college personnel of the quality of clubs, facilities, staffing and opportunities for participation in sport in the college.
Perceived Provision Physical Activity	3/33 A rating of the quality provision of Physical Activity based on an assessment by relevant college personnel of the quality of clubs, facilities, staffing & opportunities for participation in sport in college.

Table 4.2 Student satisfaction with sports / exercise provision at Institute of Technology Carlow (SASSI 2015). 80% of Institute of Technology Carlow students surveyed indicated very high levels of satisfaction, ranking their satisfaction for sport exercise provision in the college in the highest bracket (between 8-10).

	Institute of Technology Carlow	Overall Sample
Score 8-10 (10= Extremely Satisfied)	80%	61%
Score 4-7	17%	34%
Score 1-3 (1= Extremely Dissatisfied)	3%	5%

Table 4.3 Student exercise participation at Institute of Technology Carlow. Participation in exercise amongst Institute of Technology Carlow students male and female "in college" and "both inside and outside college" are significantly higher than elsewhere (SASSI 2015).

		Institute of Technology Carlow	Overall Sample
Only in College	**All**	52%	37%
	Male	33%	29%
	Female	64%	44%
Only outside College	**All**	37%	35%
	Male	35%	33%
	Female	39%	38%
Both in/outside College	**All**	56%	39%
	Male	58%	36%
	Female	54%	42%

Table 4.4 Level of participation in sport/exercise (SASSI 2015). 7% of Institute of Technology Carlow students sampled compete at an elite level compared to 6% of the overall sample, while the remaining 93% take part at either competitive (33%) or basic/ recreational level (60%).

	Institute of Technology Carlow	Overall Sample
Basic (Recreational Level)	60%	60%
Competitive	33%	34%
Elite	7%	6%

The full report can be accessed at the following link:

www.studentsport.ie/wp-content/uploads/2016/02/SASSI-Full-Report-Without-Appendices.pdf

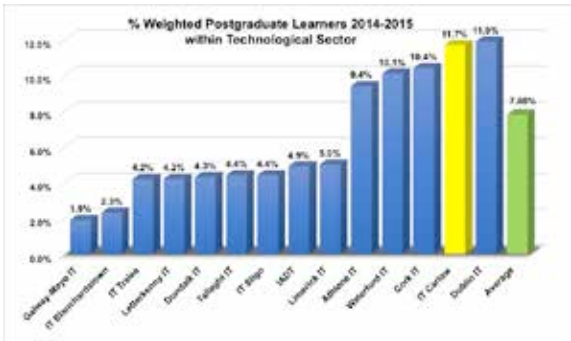
APPENDIX 5

ENHANCEMENT OF RESEARCH AND INNOVATION CAPACITY AT INSTITUTE OF TECHNOLOGY CARLOW

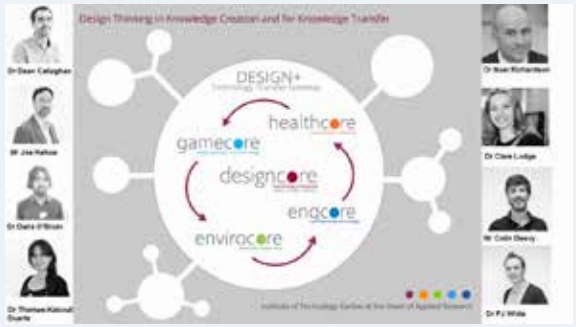
Figure 5.1 RDI Key Initiatives and Milestones 2012 – Present.

2016	New Institutional Research Strategy 2016-2020.	
2016	Validation and implementation of National Doctoral Framework formal structured training programme for supervisors.	
2016	Validation and implementation of National Doctoral Framework Structured modules for PhD Programmes.	
2016	Institute of Technology Carlow Doctoral Postgraduate Researcher Wins World's Largest Agriscience Competition - Alltech Young Scientist Graduate Award 2016.	
2016		International Society for Performance Analysis of Sport (ISPAS) International Workshop organised by and hosted at Institute of Technology Carlow.

2016	Quinquennial Stage 2 Review across all Faculties, Centres and Campuses including review of research programmes.	
2016		Mid-term review of Institutional Strategic Plan including RDI Goals.
2016	New Enterprise Support Programmes focussed on clusters and networks / new product and process development in key sectors.	

2012-2016		Increase in % weighted postgraduate learner numbers across postgraduate programmes. 2012 - 3.9% of learner numbers (Sectoral Average 7.4%) 11th of 14 IoTs. 2015 - 11.7% of learner numbers (Sectoral Average 7.8%) 2nd of 14 IoTs. Overall enrolment increase by ~40%
2016	External review and approval of Policy, Procedures and QA for provision of Joint, Collaborative and Transnational Research Programmes to Level 9 in all areas	
2016	Provision of additional scientific and technical research lab space for EngCORE.	
2015	Microgen Biotech Spin-Out Company by Institute of Technology doctoral graduate.	
2014-2016	Validation of 20 new level 9 programmes in targeted priority areas (Entrepreneurship and Innovation, Medical Devices, Pharmaceuticals, Data Science, Fintech, Weapons Systems and Military Engineering)	

2015		DesignCORE initiation and hosting of the Faultlines 'Bridging Knowledge Spaces' inaugural Irish Design Research Conference as part of ID2015 which had a substantial global reach of hits and activity to the online conference portal.
2015	Design + Technology Gateway Established at Institute of Technology Carlow funded by Enterprise Ireland.	
2015		The Irish Signals and Systems Conference (ISSC 2015) organised and hosted by Institute of Technology Carlow involving world renowned keynote speakers from industry and academia including Intel Ireland, Xilinx Inc. and Liverpool John Moores University.

<table>
<tr><td>2015</td><td>Institute of Technology Carlow Collaborative Provision Conference in Dublin Castle.</td><td>  </td></tr>
<tr><td>2014-2015</td><td> 
</td><td>Appointment of eight CORE (Centres of Research and Enterprise) Leaders across Bioenvironmental Technologies, Product Design, Interactive Application and Networks, Engineering and Health following the approval of strategic plans in all areas.</td></tr>
<tr><td>2015</td><td colspan="2">Quinquennial Stage 1 Review across all Faculties, Centres and Campuses including review of research programmes.</td></tr>
<tr><td>2015</td><td colspan="2">Targeting Research Funding – New Policy Roll-Out on Time Release for Academic Staff.</td></tr>
<tr><td>2015</td><td>
<table>
<tr><th>Institution</th><th>Field – Weighted Citation Impact *</th></tr>
<tr><td>Massachusetts Institute of Technology</td><td>2.45</td></tr>
<tr><td>California Institute of Technology</td><td>2.42</td></tr>
<tr><td>Institute of Technology Carlow</td><td>1.82</td></tr>
<tr><td>Trinity College Dublin</td><td>1.71</td></tr>
<tr><td>University College Cork</td><td>1.42</td></tr>
<tr><td>University of Ulster</td><td>1.38</td></tr>
<tr><td>NUI Maynooth</td><td>1.30</td></tr>
<tr><td>University of Strathclyde</td><td>1.26</td></tr>
<tr><td>Dublin City University</td><td>1.23</td></tr>
<tr><td>Institutes of Technology Ireland (combined)</td><td>1.10</td></tr>
<tr><td colspan="2">*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.</td></tr>
</table>
</td><td>Postgraduate Research Policy Review completed and externally reviewed – quality assurance and enhancement.</td></tr>
</table>

2015	PhD Scholarships in conjunction with key collaborative partners agreed including Defence Forces and UNUM.	
2014		Opening of the newly constructed Dargan Centre for Research and Innovation for the co-location of specialised multidisciplinary research facilities and personnel.
2014	An institute-wide curriculum development strategy to ensure an integrated approach to research activity at all levels of the national framework of qualifications. Strategic reviews conducted across all Faculties and Campuses in 2015 and roll-out via programmatic reviews in 2015/2016.	
2014	Development of new practice-led structured research programmes at Masters and Professional Doctorate level, the first of which will be launched in Jan 2016.	
2014	Development of an adjunct faculty policy for key collaborative partners.	
2014	Institute of Technology Carlow Strategic Plan 2014-2018 developed and launched.	
2013	Establishment of a centralised Postgraduate Studies Support Department and Head of Postgraduate Studies.	

<table>
<tr><td>2013</td><td>Establishment of a dedicated Research and Commercialisation Support Centre and TTSI Cluster.</td><td>
<table>
<tr><th>TTO Metrics for ITC 2015</th><th></th></tr>
<tr><td>On Campus Start-Up Companies</td><td>91</td></tr>
<tr><td>Spin-Out Companies</td><td>2</td></tr>
<tr><td>Research Agreements with Industry</td><td>111</td></tr>
<tr><td>License/Assignments</td><td>4</td></tr>
<tr><td>Invention disclosures</td><td>7</td></tr>
</table>
</td></tr>
<tr><td>2012</td><td>
<table>
<tr><th></th><th>January 2012</th><th>January 2016</th></tr>
<tr><td>Fulltime Academic Staff with PhD qualification</td><td>18.0%</td><td>31.2%</td></tr>
<tr><td>Fulltime Academic Staff pursuing PhD qualification</td><td>2.6%</td><td>16.8%</td></tr>
<tr><td>Total</td><td>20.6%</td><td>48.0%</td></tr>
<tr><td>Fulltime Academic Staff with PhD or Master qualification</td><td>83%</td><td>98%</td></tr>
</table>
</td><td>Recruitment, staff development and mentoring programmes to increase research active academics.</td></tr>
<tr><td>2012</td><td colspan="2">Building research supervisory capacity – Provision of competitive internal research funding programmes including the Presidents Postgraduate Research Fellowship Programme and Conference Support Programme.</td></tr>
</table>

Research Publications Citation Impact 2011-2015

There are many metrics that can be used to help assess the impact and quality of research outputs and, in particular, publications that appear in peer-reviewed journals. One approach is to use tools available from scientific publishers to assess citation rate, impact etc. Each of these present caveats and each will be limited by publishers' data. In order to provide this research snapshot the Elsevier SciVal system was used to give an overview of publication impact.

Three metrics in particular are appropriate to an Institution at the current level of research development achieved by Institute of Technology Carlow.

The Field-Weighted Citation Impact (FWCI). This is the ratio of the total citations actually received by the denominator's output, and the total citations that would be expected based on the average of the subject field.

A Field-Weighted Citation Impact of:

- 1: means that the output performs as expected for the global average
- >1: output cited exceeds global average; e.g. FWCI of 1.25 means 25% more citations than expected
- <1: output achieves less than global average.

Over the time period of this evaluation (2011-2015) the IoTs (as a group) achieved a FWCI of 1.19 indicating that publication citations are 19% higher than expected. The FWCI for Institute of Technology Carlow was also 1.19. This result compares favourably with the FWCI for other similar sized IoTs.

Table 5.1 SciVal Metrics for 2011-2015 period

Institute	Field-Weighted Citation Impact	Pubs in top journal percentiles (SJR)	International collaboration	Outputs in top 10% most cited worldwide	Academic-corporate collaboration
IT Carlow	1.19	28.9	40.7	13.6	0
All IoTs	1.19	20.2	44.2	11.8	2
WIT	1.16	17.4	46.5	10.3	3.6
DKIT	1.15	22.8	48.8	11.1	1.8
AIT	0.98	7.9	26.9	8.6	2.9
LYIT	0.64	6.9	43.9	1.8	3.5
IT Tralee	0.58	4.8	30.3	3	0
Limerick IT	0.47	11.1	30.3	5.3	0
UL	1.37	21.7	46.8	13.5	3
Maynooth	1.49	33.9	50.8	16.1	4.8
DCU	1.3	26.8	50.8	14.4	2.8
TCD	1.63	38.8	48.6	21.6	2.8
Ulster University	1.35	24	45.7	14	0.9
University Strathclyde	1.25	33.3	43	14.5	3
MIT	2.49	60.7	43.5	30.2	6.2

SciVal is based on output and usage data from Scopus, the world's largest abstract and citation database for peer-reviewed publications. The Scopus database covers over 30 million publications from 1996 until the present: 21,000 serials from 5,000 publishers. These include: 20,000 peer-reviewed journals, 390 trade publications, 370 book series,5.5 million conference papers. Additionally SciVal uses usage data from ScienceDirect the world's largest scientific full text database with more than 2,500 journals and 26,000 books.

The other metrics presented in Table 5.1 above include;

Publications in the top world journals: The set of an entity's publications that have been published in the world's top journals. In certain specialist areas, Institute of Technology Carlow publications appear in the top 10% journals worldwide, as measured by SJR. SJR (SCImago Journal Rank) - This measures the prestige of citations received by a journal. The subject field, quality and reputation of the citing journal will all have a direct effect on the value of a citation.

Collaboration: This measures international, national and institutional co-authorship.

Academic-Corporate Collaboration: This measures publications whose affiliation information contains both academic and corporate organisation types.

Field-Weighted Views Impact: The ratio of views relative to the expected world average for the subject field, publication type and publication year.

Figure 5.2 provides a comparative view of Institute of Technology Carlow along with a number of Institutes and Universities for three metrics, FWCI, Field Weighted Views Impact (FWVI), and publications in the top 10% of Journals. Institute of Technology Carlow achieved a high score with respect to FWVI.

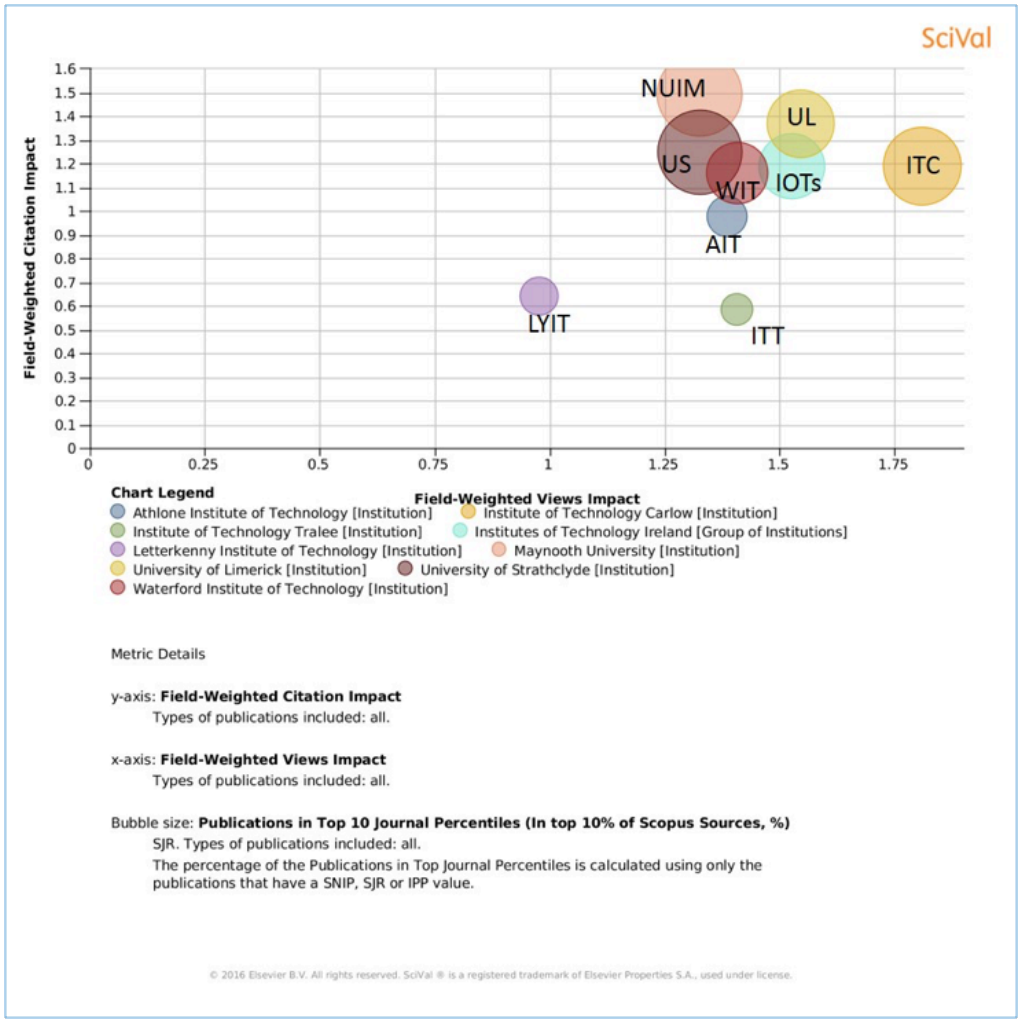


Figure 5.2 Chart showing three key comparator metrics for Institute of Technology Carlow and selected IoTs and Universities.

Metrics will change depending on the time period that is being evaluated. For illustration, Table 5.3 below shows the same metrics on a different time scale (2013-2015)

Table 5.2 SciVal Metrics 2013-15 period.

Institute	Field-Weighted Citation Impact	Pubs in top journal percentiles (SJR)	International collaboration	Outputs in top 10% most cited worldwide	Academic-corporate collaboration
IT Carlow	1.24	32.1	36.4	15.9	0
All IoTs	1.27	19.4	47.2	12.5	2.2
WIT	1.18	15.7	48.9	11.6	3.8
DKIT	1.22	19	50.8	11.2	1.5
AIT	0.95	6.3	32.7	6.5	3.7
LYIT	0.43	5.9	58.1	0	6.5
IT Tralee	0.34	7.7	31.8	4.5	0
Limerick IT	0.45	12.2	29.2	8.3	0
UL	1.45	21.9	47	15.3	2.9
Maynooth	1.59	33	51.3	16.5	6.1
DCU	1.34	25.7	52.9	15	2.8
TCD	1.6	38.5	50.3	21.8	2.8
Ulster University	1.23	25	47.8	15	0.8
University Strathclyde	1.28	33	46.4	15.7	3.4
MIT	2.49	60.7	45.6	30.5	5.9

APPENDIX 6

ENHANCED INTERNATIONALISATION

Part 1 Benchmarking Institute of Technology Carlow international enrolments against Irish Institutes of Technologies and UK universities;

Part 2 Demonstrating Enhanced internationalisation of Modules and Curricula;

Part 3 Collaborations and International Partnerships;

Part 4 Staff and Learner Mobility.

Part 1: Benchmarking Institute of Technology Carlow international enrolments against Irish Institutes of Technologies and UK universities

Table 6.1 Benchmarking Institute of Technology Carlow international enrolments against Irish IoTs and UK universities.

Institute	Number of International Students			% of Full-time or Part-time Enrolments
	EU	Non EU	Total	
IT Carlow (Full Time)	11	136	147	4%
IT Carlow (Part Time)	33	41	74	4%
Athlone IT (Full Time)	41	234	275	8%
Athlone IT (Part Time)	10	68	78	7%
Cork IT (Full Time)	52	67	119	2%
Cork IT (Part Time)	11	14	25	1%
IADT (Full Time)	11	3	14	1%
IADT (Part Time)	2	14	16	14%
Dundalk IT (Full Time)	16	263	279	7%
Dundalk IT (Part Time)	1	1	2	0%
GMIT (Full Time)	26	132	158	3%
GMIT (Part Time)	4	15	19	2%
ITB (Full Time)	4	32	36	1%
ITB (Part Time)	0	0	0	0%

Institute	Number of International Students			% of Full-time or Part-time Enrolments
	EU	Non EU	Total	
IT Sligo (Full Time)	31	28	59	2%
IT Sligo (Part Time)	26	10	36	11%
IT Tallaght (Full Time)	0	78	78	3%
IT Tallaght (Part Time)	0	0	0	0%
IT Tralee (Full Time)	2	183	185	7%
IT Tralee (Part Time)	1	1	2	1%
LYIT (Full Time)	16	0	16	1%
LYIT (Part Time)	17	2	19	4%
LIT (Full Time)	8	5	13	0%
LIT (Part Time)	4	1	5	1%
WIT (Full Time)	66	230	296	4%
WIT (Part Time)	12	5	17	1%
DIT (Full Time)	114	393	507	4%
DIT (Part Time)	27	16	43	1%

Figures based on March 2013 submission to the Student Records System.

***Source:** Higher Education Authority 2015, *Higher Education System Performance – Institutional and Sectoral profiles 2012/13*, Viewed 24th of May, 2016, www.hea.ie/sites/default/files/institutional_profiles_2012-13_pdf_version.pdf

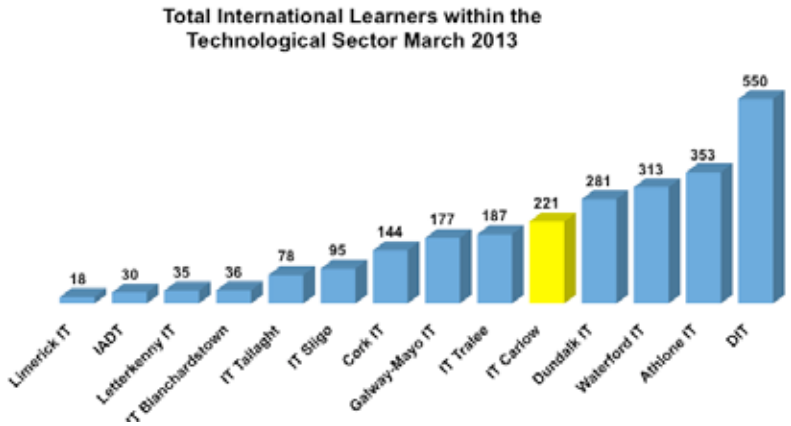


Figure 6.1 Total International (EU and Non EU) Learners within the Technological Sector at March 2013. **Source:** Higher Education Authority 2015, *Higher Education System Performance – Institutional and Sectoral profiles 2012/13*, Viewed 24th of May, 2016, www.hea.ie/sites/default/files/institutional_profiles_2012-13_pdf_version.pdf

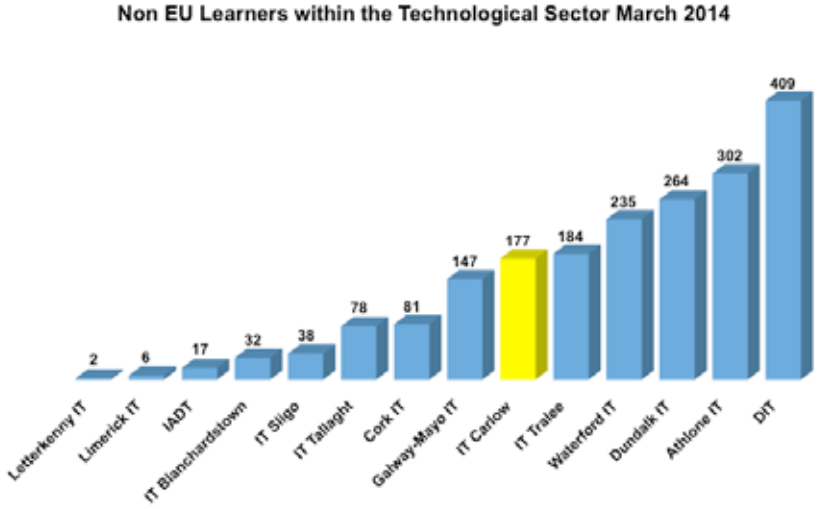


Figure 6.2 Total Non EU Learners within the Technological Sector at March 2013. Source: Higher Education Authority 2015, *Higher Education System Performance – Institutional and Sectoral profiles 2012/13*, Viewed 24th of May, 2016, www.hea.ie/sites/default/files/institutional_profiles_2012-13_pdf_version.pdf

BENCHMARKING AGAINST IoTS

Athlone Institute of Technology

According to the Athlone Institute of Technology strategic plan 2014-18, AIT reports an international student base which proportionately accounts for 11% of their learner population – "*AIT has taken a pioneering approach to internationalisation and over the past decade its ratio of international students has been growing and currently it represents some 11% of the institute's full-time learner cohort.*" AIT have set a KPI to increase their baseline from 11% to 15% by Q4 2018 – "Increase international student intake from baseline 11% to 15% by Q4 2018". AIT used data from their 2008/09 intake as a benchmark which saw an increase in the proportion of international student increase from 7.6% to 10.5%.

Cork Institute of Technology

The most recent annual report available through the Cork Institute of Technology website covers the academic year 2013/14. "*CIT has a strong presence of international students, with reports illustrating that for the academic year 2013/2014, there were 1,361 students born outside of Ireland from over 125 different countries enrolled on full-time degree programmes. The "Rest of World" figure of 525 is not a direct indication of the number of students paying Non-EU fees, as the fee status is determined by country of domicile, tax contributions to the State, Refugee Status, amongst other factors. Following analysis of students actually eligible for the Non-EU fee rate, it was established that in 2013/2014 there were 115 students in this category*." The CIT strategic plan for 2012 to 2016 targeted a KPI to increase international student numbers by 100% - "*International student intake will be increased by 100%*"

Nationality 2013/2014 Count

Albania	1
Bangladesh	1
Belarus	1
Brazil	40
Canada	5
China	4
Congo	1
India	6
Japan	1
Malaysia	2
Nigeria	5
Oman	7
Pakistan	2
Russia	3
South Africa	1
Sudan	1
United Arab Emirates	28
United States of America	5
Uzbekistan	1
Total Non-EU Fee Paying Students	115

Dundalk Institute of Technology

According to their 2016/17 student handbook, Dundalk Institute of Technology has 959 international students out of a total student population of 5124 which equates to 18.7%. It is not possible to reconcile these numbers with the numbers published in the institutional; profiles.

Institute of Technology Sligo

Institute of Technology Sligo's annual report and strategic plan make no reference to their international student numbers. Their website claims that International students make 8% of their overall student population - itsligo.ie/study-at-it-sligo/international-students/students/. According to a Mission based compact that was compiled for the HEA, IT Sligo has committed to a figure of 260 international students by the end of 2016.

www.hea.ie/sites/default/files/it_sligo_final_version_to_be_signed_10th_june_2014.pdf

Institute of Technology Tralee

Institute of Technology Tralee in their most recent strategic plan 2014-16 have identified the following KPI in terms of international student recruitment – "*Grow fee paying student recruitment onto IT, Tralee Award Programmes from a baseline of 110 increasing by 10% year on year.*" They report an international student population that makes up 15% of their overall student base "*Maintain and manage the population of International students at IT, Tralee in line with the percentage of international students attending higher education in the top performing destination countries for internationalised education. Maintain at 15% and grow to 16% by 2016.*"

UK benchmarking data was accessed through the Higher Education Statistics Agency. In 2014/15 Non EU enrolments accounted for 13.7% of total UK higher education enrolments. This subdivided into 7% for postgraduates and 6.7% undergraduates. A sample of universities was selected against which Institute of Technology Carlow can benchmark ourselves. These were selected as appropriate comparators on the basis of their scale, location and range of disciplines.

Bath Spa University

Total Student Population - 7,210
2014/15 International Students – 555
Overall International Student Proportion – 7.7%

The University of Bolton

Total Student Population – 6,835
2014/15 International Students – 275
Overall International Student Proportion – 4%

The University of Chichester

Total Student Population - 5,635
2014/15 International Students – 80
Overall International Student Proportion – 1.4%

University of Cumbria

Total Student Population – 9,625
2014/15 International Students – 75
Overall International Student Proportion – 0.7%

Non EU enrolments for Northern Ireland in 2014/15 represented 5% of enrolments, Wales 14% and Scotland 12.5%. Across the UK postgraduate international enrolments account for approximately 50% of the Non EU learner population. In Wales the Institute of Technology Carlow works closely with the University of Wales Trinity St David. They have a total student population of 10,425 of which Non EU enrolments represent 6.6% of the total, equally divided between undergraduate and postgraduate learners.

Part 2: Demonstrating Enhanced Internationalisation of Modules and Curricula

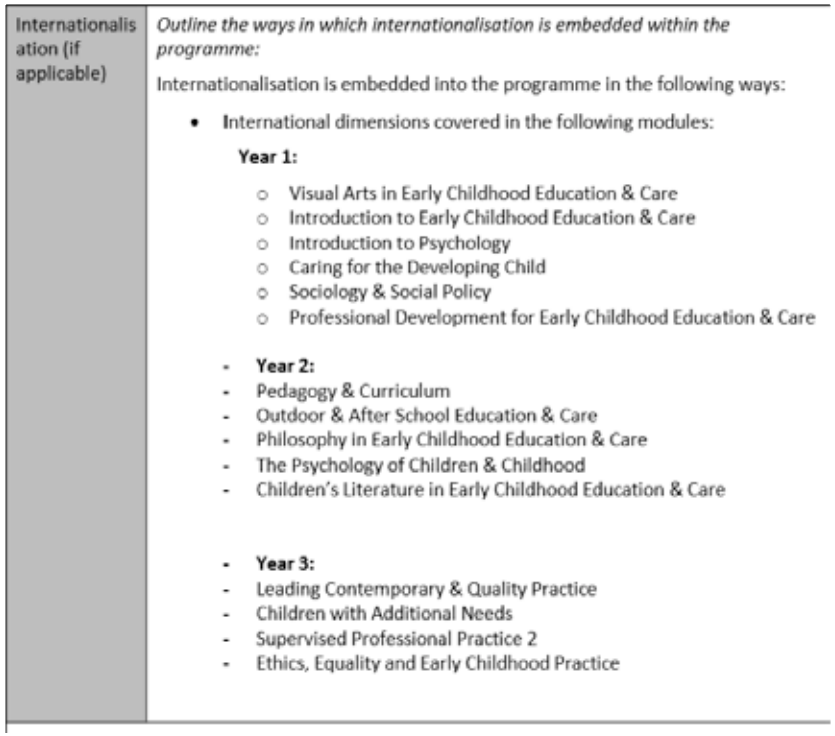
Extract Faculty of Business and Humanities Strategic Review 2015 (pp117)

Section 2.8.3

As part of the Programmatic Review each Programme Board/Stream will review its curricula to incorporate international/global element(s) by considering the ideas below identified by Carroll (2014) as key to embedding internationalisation in the curriculum.

- **Module Outcomes**: What are the Learning Outcomes of this module that indicate internationalisation?
  - What are the knowledge, skills and attitudes that graduates from this module should develop to reflect the learning outcomes above?
  - What assessment tasks could students complete to demonstrate achievement of these knowledge, skills and attitudes?
  - What learning activities and tasks will assist learners to develop these knowledge, skills and attitudes?
- **Syllabus topics** can develop students' international perspectives by including:
  - links to social and economic issues such as social justice, equity, human rights
  - ways of addressing global environmental issues
  - explore knowledge construction from culture to culture in the discipline area
- **Teaching activities** can introduce an international perspective to the content of a programme. These include:
  - case studies, projects, or examples from a range of different cultures and national settings
  - investigation of professional practices in other cultures using a recently published, international textbook or journal article
  - requiring fieldwork with local organisations working on international projects or national projects with an intercultural focus.
  - examining ways in which particular cultural interpretations of social, scientific or technological applications of knowledge may include or exclude, advantage or disadvantage people from different cultural groups
- **Assessment task**s can introduce an international perspective by including the requirement to refer to:
  - problem-solving exercises and/or research assignments with an international or intercultural component
  - specific intercultural issues in professional practice
  - contemporary international and local context
  - group work in heterogeneous and diverse cultural groups
  - reflect critically on what they are learning in relation to their own
  - cultural identity, cultural or geographical context

This process was operationalised through specific reference in each faculty programmatic review. The example below is from the BA (Hons) in Early Childhood Education and Care.



Internationalisation (if applicable)	*Outline the ways in which internationalisation is embedded within the programme:* Internationalisation is embedded into the programme in the following ways: • International dimensions covered in the following modules: **Year 1:** ○ Visual Arts in Early Childhood Education & Care ○ Introduction to Early Childhood Education & Care ○ Introduction to Psychology ○ Caring for the Developing Child ○ Sociology & Social Policy ○ Professional Development for Early Childhood Education & Care - **Year 2:** - Pedagogy & Curriculum - Outdoor & After School Education & Care - Philosophy in Early Childhood Education & Care - The Psychology of Children & Childhood - Children's Literature in Early Childhood Education & Care - **Year 3:** - Leading Contemporary & Quality Practice - Children with Additional Needs - Supervised Professional Practice 2 - Ethics, Equality and Early Childhood Practice

In addition all programmes indicate that "*learners on the programme are also encouraged to avail of the possibility to study abroad as part of the Erasmus programme.*"

Part 3: Collaborations and International Partnerships

Table 6.2 Institute of Technology Carlow Collaborative Provision Agreements. Annual Review October 2013 to March 2016 (see Tables 6.3-6.8 for 2013 and 2016 details).

Agreement Type	Oct 2013	Jun 2014	July 2015	Mar 2016
Collaborative Agreement	4	3	3	2
International Alliances (MoU/Articulation)	35	33	41	47
National Alliances (MoU/Articulation)	8	8	10	11
Concluded Agreements	0	1 Collaborative 4 International 2 National	0	1 Collaborative

Institute of Technology Carlow Mid Term review of Strategic Plan (2014 -2018) for Strategic Partnerships - Goal 3 Strategic Plan 2014-2018

The 2018 Ambition is to strengthen and develop Institute of Technology Carlow's strategic international relationships. This has a measurable goal of increasing the number of international alliances and articulation agreements in place by 10%.

IT Carlow Strategic Plan (2014 – 2018) initiated from December 2013

Agreements in existence – December 2013 (Table 6.7 and 6.8)

3 Collaborative Partnerships (2 National and 1 International)

35 International Alliances

8 National Alliances

Concluded Agreements since December 2013 (Table 6.6)

1 Collaborative Partnerships (Gestair)

6 International Alliances

2 National Alliances

Additional Articulation Agreements since December 2013 – 2nd March 2016 (Table 6.5)

16 International Alliances

4 National Alliances

Therefore the present increase of International Alliances and Articulation agreements in place since December 2013 (including the alliances that have concluded) sits at:

23.4% Increase in International Alliances

27.2% Increase in National Alliances

Table 6.3 Institute of Technology Carlow Register of Collaborative Provision – March 2016.

Dept/Faculty/ Centre	Partner Institution	Country	Programme Involved	Nature of Agreement	Category of Agreement Type
Faculty of Engineering					
Electronic Mechanical and Aerospace	Defence Forces (CIS Corps)	Ireland	MSc in Communications Technology Management PG Dip in Science in Communications Technology Management BEng in Electronic Engineering (Military Communications Systems) Higher Certificate in Engineering in Electronic Engineering	Validated Programme Provision	Collaborative Provision
Electronic Mechanical and Aerospace	Defence Forces (Ordnance Corps)	Ireland	MEng in Weapons, Ordnance, Munitions and Explosive Engineering Certificate in International Counter-Improvised Explosive Device/Device Disposal (10 credit, Level 9)	Validated Programme Provision	Collaborative Provision
Built Environment and Extended Campus	Defence Forces (Engineer Corps)	Ireland	MSc in Military Engineering Management PG Dip in Science in Military Engineering Management	Validated Programme Provision	Collaborative Provision
Faculty of Business and Humanities / Centre for Lifelong Learning					
Humanities	An Cosán	Ireland	BA in Applied Addiction Studies and Community Development Higher Certificate in Applied Addiction Studies and Community Development BA in Leadership and Community Development Higher Certificate in Leadership and Community Development Special Purpose Award Certificate in Transformative Community Education Special Purpose Award Certificate in Citizenship and Social Action (Level 7) Special Purpose Award Certificate in Community Leadership (Level 7) Special Purpose Award Certificate in Learning to Learn – (Level 6) Special Purpose Award Certificate in Technology Enhanced Learning – (Level 7)	Validated Programme Provision	Collaborative Provision
Faculty of Business and Humanities / Centre for Lifelong Learning					
Business	Defence Forces	Ireland	BA in Leadership, Management and Defence Studies BA in Leadership, Management and Defence Studies (Logistics) Certificate in Leadership, Management and Defence Studies (minor award level 7 30 Credits) Higher Certificate in Arts in Leadership, Management and Defence Studies	Validated Programme Provision	Collaborative Provision

Table 6.4 Institute of Technology Carlow Register of Partner Universities & Colleges.

Note: Unless otherwise stated, each agreement is assumed to require review after three years.

Name	City	Province / State	Country	Agreement Type	Academic Area	Date Signed	Duration
Guilin University of Electronic Technology	Guilin	Guanguxi	China	2 yrs in Guilin + 2 yrs in IT Carlow	Business, Design Engineering	2006	
Henan University of Economics and Law	Zhengzhou	Henan	China	1 yr in Henan + 1 IT Carlow + 1yr in Henan	Accounting	13.3.2013	
University of New Hampshire	Durham	New Hampshire	USA	Semester in IT Carlow	Health Science	1.8.2012	5 Years
St. Ambrose University	Davenport	Iowa	USA	Semester in IT Carlow	Health Science	2008	5 Years
Dong – A University	Busan	Busan	S. Korea	2 yrs in Dong + 1 IT Carlow + 1 in Dong Na	Engineering	19.8.2005	3 Years
Nilai International University College	Nilai	Negeri Sembilan Darul Khusus	Malaysia	2 yrs in Nilai + 1 yr in IT Carlow	Aircraft Systems	26.6.2008	
Seton Hall University	South Orange	New Jersey	USA	Semester in IT Carlow	Health Science	1.5.2012 renewed on 23.1.2015 for further 3 yrs	3 Years
Confederation College	Thunder Bay	Ontario	Canada	2 yrs in Con. Coll. + 1 yr in IT Carlow	Aircraft Systems	May 2012	
Nova Scotia Community College	Halifax	Nova Scotia	Canada	Student exchange	Built Environment	8.9.2008	
College of the North Atlantic	Gander	Stephenville Newfoundland and Labrador	Canada	Student exchange	Aircraft Systems	2.4.2015	3 Years
Cranfield University	Cranfield	Bedfordshire	England	Progression Opportunity for IT Carlow graduates	Aircraft Systems (Part 147 Org.)	23.4.2010	3 Years
Corjet Maintenance	Madrid	Madrid	Spain	IT Carlow Student Maintenance Training	Aircraft Systems (Part 147 Org.)	28.7.2010	
University of Tennessee	Chattanooga	Tennessee	USA	Student exchange	Computing	Not Dated	5 Years

Name	City	Province / State	Country	Agreement Type	Academic Area	Date Signed	Duration
Irish Aviation Authority	Dublin	Dublin	Ireland	IT Carlow accredited as Part 147 Organisation	Engineering	14.2.2011 Bi-annual review conducted in 2013 and 2015	
Mages Institute of Excellence	Singapore	Singapore	Singapore	Student progression	Computing	9.3.2012	5 Years
Samara State Aerospace University	Samara	Samara	Russia	Staff exchange	Aircraft Systems (Part 147 Org.)	2.12.2011	5 Years
Samara State Academy of Social Sciences and Humanities	Samara	Samara	Russia	Staff exchange	Social Science and Humanities	22.2.2012	5 Years
Belgorod National Research University	Belgorod	Belgorod	Russia	Staff exchange	Science Computing and IT	21.6.2012	5 Years
Institute of Education	Dublin	Dublin	Ireland	Student progression	Entry from foundation	27.7.2012	
Dorset College	Dublin	Dublin	Ireland	Student progression	Entry from foundation	23.8.2010	
Colleges Ontario Canada	Ontario	Ontario	Canada	Student exchange	IoTI	31.5.2012	
TAR University	Kuala Lumpur	Malaysia	Malaysia	2 yrs in TAR + 1 yr in IT Carlow	Engineering	12.12.2012	
HELP University	Kuala Lumpur	Malaysia	Malaysia	Student progression	Science	5.12.2012	
Globallinks	Westminster	Colorado	USA	Student exchange		17.10.13	3 Years
Tongling University	Tongling	Abhui Province	China	Student exchange		8.3.2013	3 Years
SupBiotech	Villejuif	Villejuif	France	Semester in IT Carlow	Science	25.6.2012	3 Years
Technical and Vocational Training Corporation, Kingdom of Saudi Arabia (TVTC)	Riyadh	Saudi Arabia	Saudi Arabia	Student progression		22.2.2011	4 Years
Aviation Australia	Dublin	Dublin	Ireland	Student progression	Engineering (Part 147 Org.)	22.8.2011	

Name	City	Province / State	Country	Agreement Type	Academic Area	Date Signed	Duration
Malaysian Technical University Network	Malaysia	Malaysia	Malaysia	Student progression	IoTI	18.6.2012	
Quality and Qualifications Ireland (QQI)	Dublin	Dublin	Ireland	Under Section 5 of HETAC Core Validation Policy and Criteria 2010		8.5.2013	
Flight Training Europe	Jerez	Cádiz	Spain	Programme Development	Engineering (Part 147 Org.)	4.9.2013	1 Year
Luoyang Normal University China	Luoyang City	Henan Province	China	Student progression		Not Dated	5 Years
TAFE	Seremban	Negeri Sembilan	Malaysia	TAFE Students to enter 3rd Year of BEng. in aircraft systems	Engineering	12.2.2013	
Wisconsin Technical College System (WTCS)	Wisconsin	Great Lakes Region	USA	Student progression	IoTI	12.9.2012	
Irish Light Aviation Society (ILAS)	Bray	Co. Wicklow	Ireland	Student progression	Engineering (Part 147 Org.)	12.9.2013	3 Years
South East Radio	Custom House Quay	Wexford	Ireland	Student progression	Wexford Campus	12.9.2013	3 Years
Banco de Mexico (Mexican Federal Government)	Guatemala	Mexico	North America	Student progression	IUA and IoTI	21.10.2013	
Wexford Arts Centre	Wexford	Wexford	Ireland	Student progression	Wexford Campus	12.11.2013	3 Years

Table 6.5 Institute of Technology Carlow Collaborations developed since December 2013.

Name	City	Province / State	Country	Agreement Type	Academic Area	Date Signed	Duration
Despark College	Petaling Jaya Selangor	Malaysia	Malaysia	Programme Development	Engineering	20.1.2014	3 Years
DAA International	Dublin	Dublin	Dublin	Programme Development	Engineering	14.5.2014	3 Years
Shanghai Normal University	Shanghai	Shanghai	China	2 yrs in SHNU + 2 yrs in IT Carlow	Engineering	28.5.2014	5 Years
Hochschule Hannover – University of Applied Sciences and Arts	Hannover	Hannover	Germany	Double Degree	Business	8.5.2014	5 Years
Irish Farmers Association	Dublin	Dublin	Ireland	Student progression	Wexford Campus	6.10.2014	3 Years
Ithaca College	New York	New York	USA	Student progression	Science	3.11.2014	3 Years
USCI University	Kuala Lumpur	Malaysia	Malaysia	Year 1 in IT Carlow	Engineering Science Business & Humanities	22.1.2015	3 Years
ALFA International College	Jalan	Malaysia	Malaysia	Year 2 in IT Carlow – BA (Hons) in Early Childhood Education and Care	Faculty of Business & Humanities	27.1.2015	3 Years
TUSLA – Child and Family Agency	Wexford	Wexford	Ireland	Programme Development	Wexford Campus	27.1.2015	3 Years
Institut Teknologi Riam	Sarawak	Malaysia	Malaysia	Year 3 in IT Carlow	Engineering	23.2.2015	3 Years
Admal Aviation College Malaysia	Selangor	Malaysia	Malaysia	Year 3 in IT Carlow	Engineering	23.2.2015	3 Years
Conestoga College Malaysia	Kitchener	Ontario	Canada	Student Exchange Year 4 in IT Carlow Year 3 in Ontario	Faculty of Business & Humanities	6.2.2015	3 Years
ISC Paris Business Faculty	Paris	France	France	Student Progression	Faculty of Business &Humanities	19.2.2015	3 Years
International College of Yayasan Melaka Malaysia	Melaka	Malaysia	Malaysia	Student Progression	Engineering	23.2.2015	3 Years

Name	City	Province / State	Country	Agreement Type	Academic Area	Date Signed	Duration
Shandong Academy of Science	Jinan	China	China	Student Progression	Science	20.3.2015	
Shanghai Finance University	Shanghai	China	China	Student Progression	Faculty of Business & Humanities	1.12.2015	3 Years
University of Maine	Maine	USA	USA	Student Progression	Faculty of Science	7.1.2016	5 Years
Waterford Aero Club	Waterford	Waterford	Ireland	Engineering	Waterford Aero Club	21.2.2016	2 Years
St. Clair College	Windsor	Ontario	Canada	Faculty of Business & Humanities	St. Clair College	8.2.16	3 Years
Conestoga College IoT and Advance Learning	Kitchener	Ontario	Canada	Faculty of Business & Humanities	Conestoga College IoT and Advance Learning	17.2.16	5 Years

Table 6.6 Institute of Technology Carlow Agreements Concluded since December 2013.

Name	City	Province / State	Country	Agreement Type	Academic Area	Date Signed	Action
Nilai International University College	Nilai	Negeri Sembilan Darul Khusus	Malaysia	2 yrs in Nilai + 1 yr in IT Carlow	Aircraft Systems	26.6.2008	Complex Status re renewal and conclusion Donal McAlister
Silla University	Busan	Busan	S. Korea	2 yrs in Silla + 1 yr in IT Carlow		4.6.2012	Letter regarding agreement concluding to be sent to Partner
Edgewater College	Drogheda, Co. Louth	Co. Louth	Ireland	Student progression	Entry from foundation	31.1.2012	No longer in Existence
Eden College	Dublin	Dublin	Ireland	Student progression	Entry from foundation	5.12.2012	No longer in Existence
Temasek Polytechnic	Tampines Avenue	Singapore	Singapore	Student progression	Computing & Networking	1.10.2009	Letter regarding agreement concluding sent to Partner 23/5/14 - Donal McAlister
Informatics Academy	Science Centre Road	Singapore	Singapore	Student progression	Engineering	1.10.2009	Letter regarding agreement concluding sent to Partner 23/5/14 - Donal McAlister
Henan University of Finance and Economics	Zhengzhou	Henan	China	3 yrs in Henan + 1 yr in IT Carlow	Computing	16.12.05	Letter regarding agreement concluding sent to Partner 9/6/14 – David Denieffe
Gestair	Lisbon	Portugal	Portugal	Collaboration	Electronic Mechanical and Aerospace	8.12.12	Letter regarding agreement concluding sent to Partner 1/12/15 David Denieffe

Table 6.7 Institute of Technology Carlow Register of Collaborative Provision – October 2013.

Dept/Faculty/ Centre	Partner Institution	Country	Programme Involved	Nature of Agreement	Category of Agreement Type
Faculty of Science					
Computing and Networking	Henan University of Economics and Law	PR China	BSc in Computer Systems Management	Validated Programme Provision	Transnational Collaboration
Faculty of Engineering					
Electronic Mechanical and Aerospace	Defence Forces (CIS Corps)	Ireland	BEng in Electronic Engineering (Military Communications Systems)	Validated Programme Provision	Collaborative Provision
Electronic Mechanical and Aerospace	Defence Forces (Ordnance Corps)	Ireland	MSc in Ordnance Engineering PG Dip in Ordnance Mechanical Engineering	Validated Programme Provision	Collaborative Provision
Electronic Mechanical and Aerospace	Gestair	Portugal	BSc (Hons) in Pilot Studies	Validated Programme Provision	Collaborative Provision
Faculty of Business and Humanities / Centre for Lifelong Learning					
Humanities	An Cosán	Ireland	BA in Applied Addiction Studies and Community Development	Validated Programme Provision	Collaborative Provision
Humanities	An Cosán	Ireland	BA in Leadership and Community Development	Validated Programme Provision	Collaborative Provision
Faculty of Business and Humanities / Centre for Lifelong Learning					
Business	Defence Forces	Ireland	BA in Leadership, Management and Defence Studies BA in Leadership, Management and Defence Studies (Logistics) Certificate in Leadership, Management and Defence Studies (minor award level 7 30 Credits) Higher Certificate in Arts in Leadership, Management and Defence Studies	Validated Programme Provision	Collaborative Provision

Table 6.8 Institute of Technology Carlow Register of Partner Universities & Colleges International (Non – EU) Articulation Agreements October 2013.

Note: Unless otherwise stated, each agreement is assumed to require review after three years.

Name	City	Province / State	Country	Agreement	Academic Area
Guilin University of Electronic Technology	Guilin	Guanguxi	China	2 yrs in Guilin + 2 yrs in IT Carlow	Business, Design Engineering
Henan University of Finance and Economics	Zhengzhou	Henan	China	3 yrs in Henan + 1 yr in IT Carlow	Computing
Henan University of Economics and Law	Zhengzhou	Henan	China	1 yr in Henan + 1 IT Carlow + 1yr in Henan	Accounting
University of New Hampshire	Durham	New Hampshire	USA	Semester in IT Carlow	Health Science
St. Ambrose University	Davenport	Iowa	USA	Semester in IT Carlow	Health Science
Dong – A University	Busan	Busan	S. Korea	2 yrs in Dong + 1 IT Carlow + 1 in Dong Na	Engineering
Nilai International University College	Nilai	Negeri Sembilan Darul Khusus	Malaysia	2 yrs in Nilai + 1 yr in IT Carlow	Aircraft Systems
Seton Hall University	South Orange	New Jersey	USA	Semester in IT Carlow	Health Science
Confederation College	Thunder Bay	Ontario	Canada	2 yrs in Con. Coll. + 1 yr in IT Carlow	Aircraft Systems
Silla University	Busan	Busan	S. Korea	2 yrs in Silla + 1 yr in IT Carlow	
Nova Scotia Community College	Halifax	Nova Scotia	Canada	Student exchange	Built Environment
College of the North Atlantic	Gander	Stephenville Newfoundland and Labrador	Canada	Student exchange	Aircraft Systems
Cranfield University	Cranfield	Bedfordshire	England	Progression Opportunity for IT Carlow graduates	Aircraft Systems (Part 147 Org.)
Corjet Maintenance	Madrid	Madrid	Spain	IT Carlow Student Maintenance Training	Aircraft Systems (Part 147 Org.)
University of Tennessee	Chattanooga	Tennessee	USA	Student exchange	Computing
Irish Aviation Authority	Dublin	Dublin	Ireland	IT Carlow accredited as Part 147 Organisation	Engineering
Mages Institute of Excellence	Singapore	Singapore	Singapore	Student progression	Computing

Name	City	Province / State	Country	Agreement	Academic Area
Samara State Aerospace University	Samara	Samara	Russia	Staff exchange	Aircraft Systems (Part 147 Org.)
Samara State Academy of Social Sciences and Humanities	Samara	Samara	Russia	Staff exchange	Social Science and Humanities
Belgorod National Research University	Belgorod	Belgorod	Russia	Staff exchange	Science Computing and IT
Institute of Education	Dublin	Dublin	Ireland	Student progression	Entry from foundation
Dorset College	Dublin	Dublin	Ireland	Student progression	Entry from foundation
Colleges Ontario Canada	Ontario	Ontario	Canada	Student exchange	IoTI
TAR University	Kuala Lumpur	Malaysia	Malaysia	2 yrs in TAR + 1 yr in IT Carlow	Engineering
HELP University	Kuala Lumpur	Malaysia	Malaysia	Student progression	Science
Eden College	Dublin	Dublin	Ireland	Student progression	Entry from foundation
Globallinks	Westminster	Colorado	USA	Student exchange	
Tongling University	Tongling	Abhui Province	China	Student exchange	
SupBiotech	Villejuif	Villejuif	France	Semester in IT Carlow	Science
Technical and Vocational Training Corporation, Kingdom of Saudi Arabia (TVTC)	Riyadh	Saudi Arabia	Saudi Arabia	Student progression	
Temasek Polytechnic	Tampines Avenue	Singapore	Singapore	Student progression	Computing & Networking
Temasek Polytechnic	Tampines Avenue	Singapore	Singapore	Student progression	Engineering
Aviation Australia	Brisbane Airport	Brisbane	Australia		Engineering (Part 147 Org.)
Informatics Academy	Science Centre Road	Singapore	Singapore	Student progression	Engineering
Malaysian Technical University Network	Malaysia	Malaysia	Malaysia	Student progression	
Quality and Qualifications Ireland (QQI)	Dublin	Dublin	Ireland	Under Section 5 of HETAC Core Validation Policy and Criteria 2010	
Flight Training Europe	Jerez	Cádiz	Spain	Programme Development	Engineering (Part 147 Org.)
Luoyang Normal University China	Luoyang City	Henan Province	China	Student progression	
TAFE	Seremban	Negeri Sembilan	Malaysia	TAFE Students to enter 3rd Year of BEng. in aircraft systems	Engineering
Wisconsin Technical College System (WTCS)	Wisconsin	Great Lakes Region	USA	Student progression	IoTI
Irish Light Aviation Society (ILAS)	Bray	Co. Wicklow	Ireland	Student progression	Engineering (Part 147 Org.)
South East Radio	Custom House Quay	Wexford	Ireland	Student progression	Wexford Campus

Part 4: Staff and learner mobility

Table 6.9 Staff and Learner Mobility.

	Places allocated
Student Study Mobility	8
Student Placement Mobility	60*
Staff Teaching	8
Staff Training	4

This figure comprises 34 Erasmus placements and 26 Department of Science and Health International placements in US, UK and South Africa.

This equates to staff mobility rate of 5.6% and student mobility of 1.33%.

APPENDIX 7

RESOURCING AND ENVIRONMENTAL CONTEXT

External Environment – Demographics

Table 7.1 Actual and projected population of Regional Authority areas, 2011 and 2031 (CSO).

Please note that 47% of the national learner population at Institute of Technology Carlow originates from the South East, 31% from the Mid-East and GDA, 11% from the Midlands and 11% from other regions.

Regional Authority	Population 2011	Total increase	Population 2031	Average annual increase
THOUSANDS				%
Border	516	18	533	0.2
GDA	1,795	401	2,197	1.0
Dublin	1,262	257	1,519	0.9
Mid-East	534	144	678	1.2
Midland	284	25	309	0.4
Mid-West	378	32	410	0.4
South-East	499	51	550	0.5
South-West	662	71	733	0.5
West	441	15	456	0.2
State	4,575	613	5,188	0.6

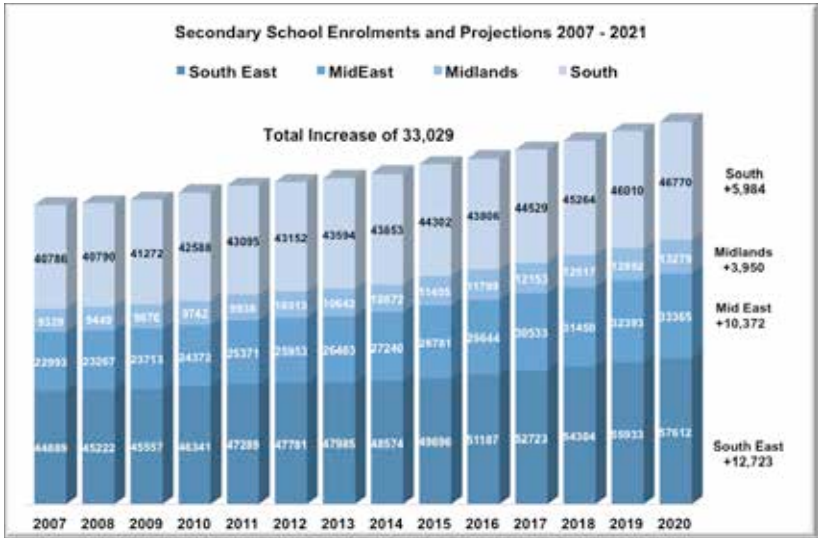


Figure 7.1 Secondary School Enrolments and Projections 2007 – 2021 (Source DOES).

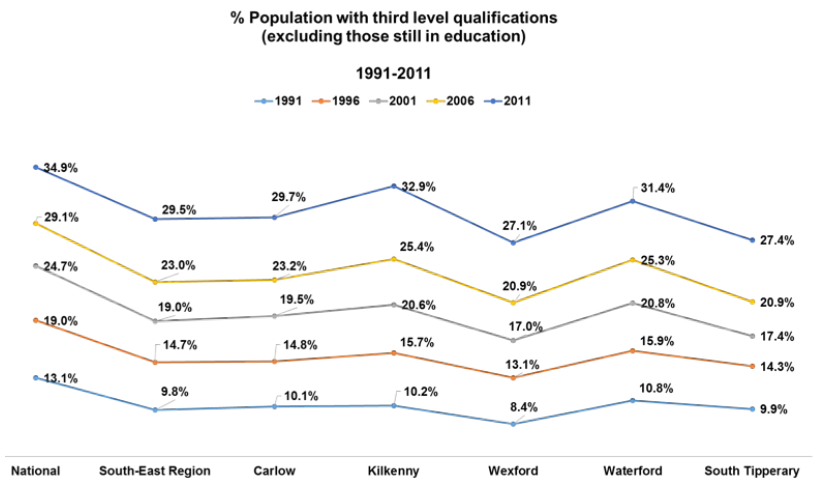


Figure 7.2 % Population with third level qualifications 1991-2011 (Source CSO).

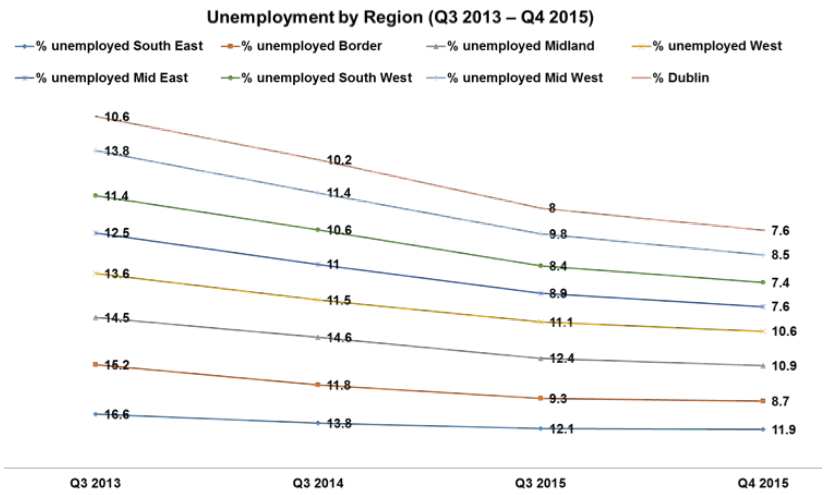


Figure 7.3 Unemployment by Region (Q3 2013 – Q4 2015) (Source CSO).

Capital Development 2012-2016

Figure 7.4 Barrow Centre for Sports, Health and Student Services, 2012.

Figure 7.5
Dargan Centre for Research and Innovation, 2013/2014.

Figure 7.6 Centre for Aerospace Engineering, 2014/15.

Figure 7.7
Haughton Building for Teaching and Learning, 2015/2016 .

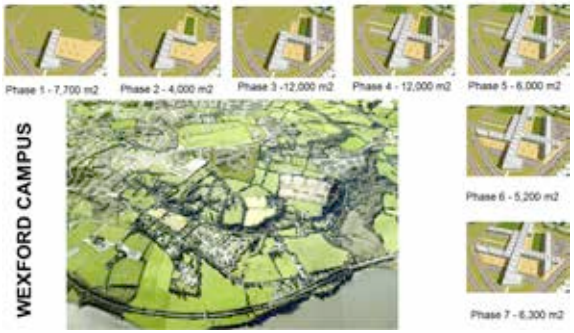


Figure 7.8 Wexford Campus 30 Acre Site, 2015/16.

Figure 7.9
South Sports Campus, 2016+.

Figure 7.10 Land Swap with ETB facilitating North and East Campus Development, 2016+.

State Funding

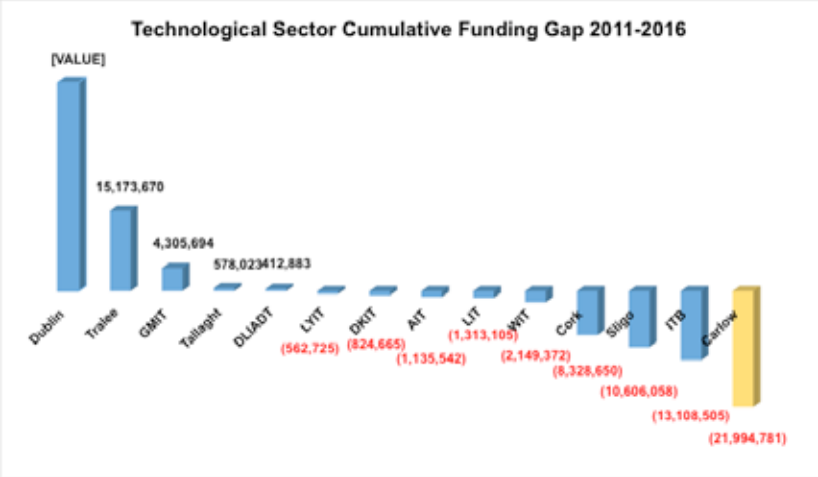


Figure 7.11

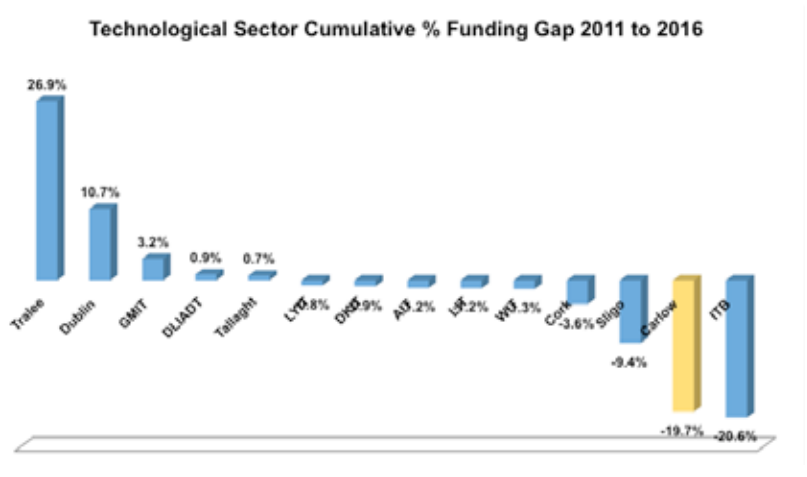


Figure 7.12

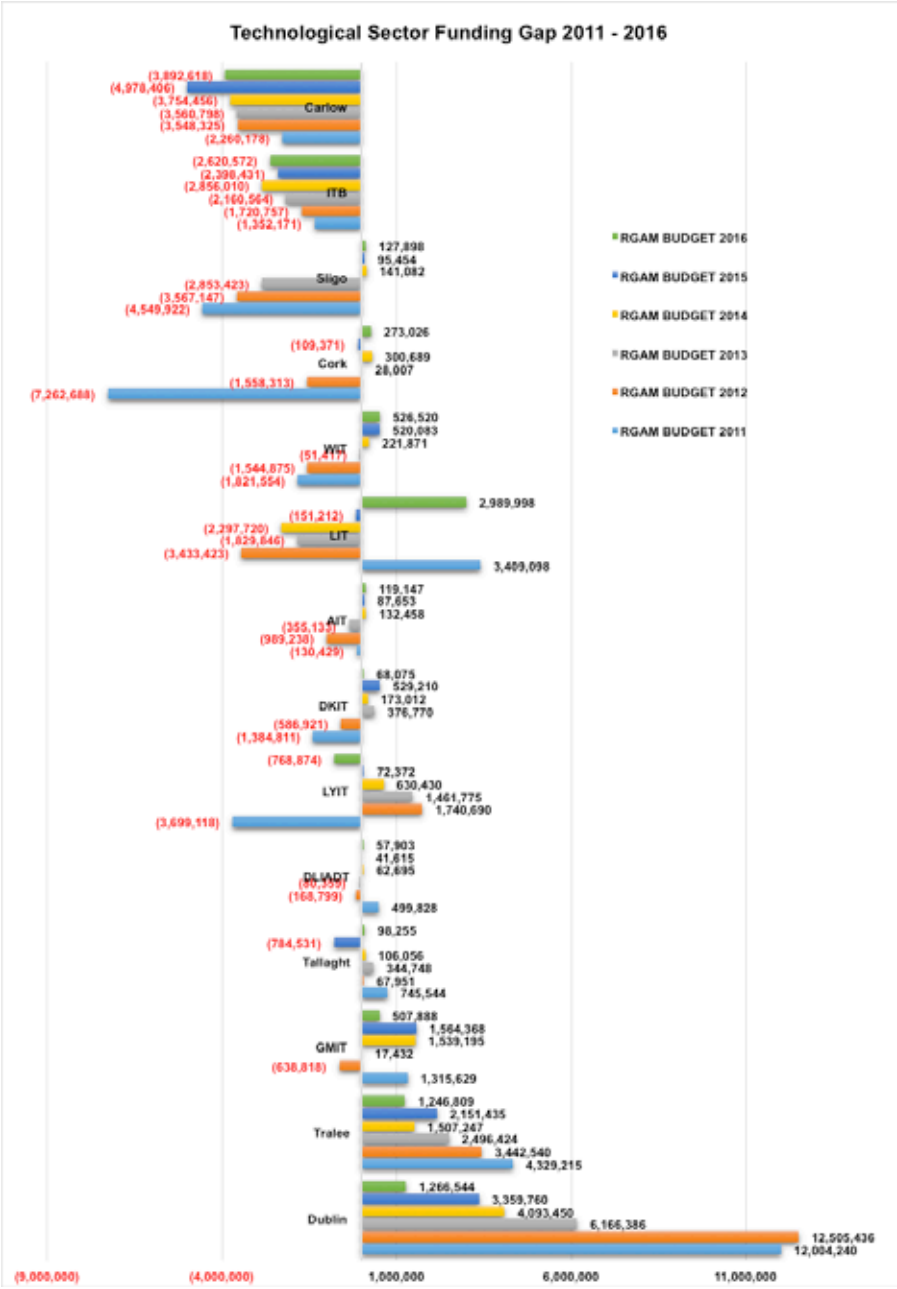


Figure 7.13

Academic Staff/Student Ratio

Academic staff / student ratio is a widely utilised index in the academic world. For the index to have value as a benchmark across institutions, it needs to be on a comparable and consistent basis across all institutions, Much debate has taken place regarding the calculation of student numbers, and in particular WTE concerning LLL students. This is at the outer edge of a spectrum which would have laboratory students in HEIs at one end and final year humanities students further across the same spectrum. This index, despite its inconsistencies, has received much commentary in the media and indeed features prominently in HEI ranking systems.

The HEA, despite representation from the Institute on several occasions, has continued with a model for the calculation of academic staff/ student ratios which mixes student headcount numbers with whole time equivalent staff numbers. For illustrative purposes, the HEA model is applied in Table 7.2 for Institute of Technology Carlow 2010/11 to 2015/16. Using the HEA model a part-time student taking 10 credits per annum is given the same weighting as a full-time student taking 60 or 90 credits per annum. This is best illustrated in Figure 7.14 which presents % lifelong learners as part of the total learner population based on headcount (Source, HEA published statistics for 2014/2015). When the data is normalised to whole time equivalents (Figure 7.15, Source, HEA RGAM workings circulated to IoTs), the proportion can decrease by as much as 60%. There are also clear discrepancies between the two sets of information presented in Figures 7.14 and 7.15 which may suggest adjustments to submitted returns by HEIs between March of the reporting year and the later application of the RGAM calculations for budget allocation purposes. Comparisons across institutions

based on this HEA model are therefore futile at best and misleading at worst, with those institutions with strong Lifelong Learning Programmes being the most discriminated against. Furthermore, this model masks a diverse range of academic staff/ student ratios depending upon discipline mix, delivery mode and specialisation within individual HEIs. For example, much lower academic staff / student ratios prevail in laboratory practical areas, with higher ratios in the traditional humanities areas. There are also significant differences in academic staff/ student ratios between the mature learner-oriented Lifelong Learning educational model and the full-time transition-focussed first year learner cohort.

Table 7.2 HEA Methodology for calculation of academic staff/ student ratios at Institute of Technology Carlow which mixes student headcount numbers with whole time equivalent staff numbers.

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
All Learners (Headcount)	4869	5041	5369	6339	6325	7042
LLL Academic staff (WTE)	16	19	37	33	45	38
Core Academic Staff (WTE)	199	194	194	201	210	214
All Academic Staff (WTE)	215	213	231	234	255	252
All Academic Staff (WTE)/ All Student (Headcount) Ratio	23	24	23	27	25	28

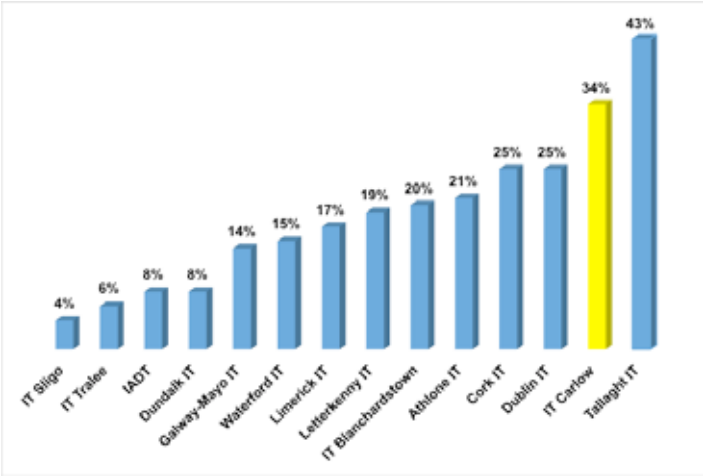


Figure 7.14 % Lifelong Learners Headcount 2014-2015.

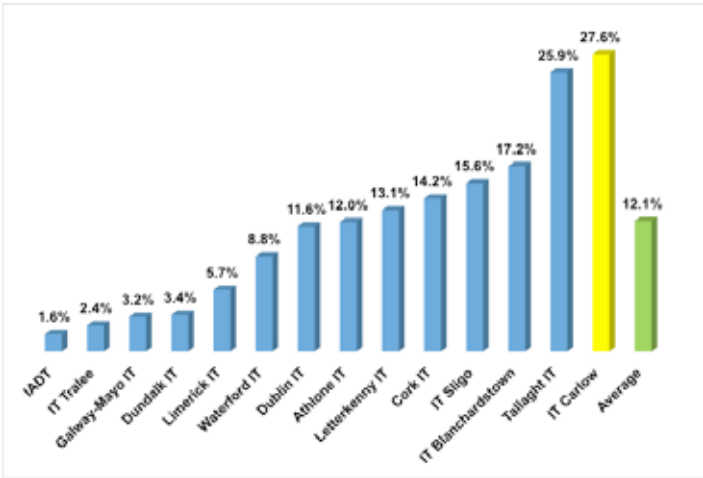


Figure 7.15 % Lifelong Learning Whole Time Equivalents (WTE) 2014-2015.

In Table 7.3, academic staff/student ratios are presented based on full-time student numbers with whole time equivalent (WTE) core academic staff numbers. This model for this cohort of students is more representative given the workload management model at Institute of Technology Carlow (see Appendix 1), but does not necessarily apply to other HEIs with different workload management approaches. Once again comparison across institutions is futile because of different workload management practices across institutions and in view of the fact that no weightings are applied for discipline mix, delivery mode and specialisation.

Table 7.3 Academic staff/student ratios at Institute of Technology Carlow based on full-time student numbers with whole time equivalent core academic staff numbers.

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Full-Time Learners (WTE)	3366	3525	3688	3978	4136	4507
Core Academic Staff (WTE)	199	194	194	201	210	214
Academic Staff/ Student Ratio (WTE F/T Learners/ Core academic staff WTE)	17	18	19	20	20	21

In Table 7.4, academic staff/student ratios are presented based on part-time / lifelong learning student numbers (headcount) with lifelong learning academic staff (headcount) only. This model for this cohort of students is again more representative given the workload management model at Institute of Technology Carlow (see Appendix 1), but does not necessarily apply to other HEIs with different workload management approaches.

However again comparisons across institutions is futile as an adjunct faculty member who contributes three hours/week is weighted the same as an associate lecturer fulfilling a nine hour/week contract. Once again no weightings are applied for discipline mix, delivery mode and specialisation.

Table 7.4 Academic staff/student ratios at Institute of Technology Carlow based on part-time/Lifelong learners numbers (headcount) with lifelong learning academic staff (headcount).

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
LL Learners (Headcount)	1503	1516	1681	2361	2189	2535
LLL Academic staff (Headcount)	123	132	171	161	210	207
Staff/ Student Ratio	12	11	10	15	10	12

In Table 7.5, academic staff/student ratios are presented based on all academic staff (headcount), including those contributing through collaborative partnerships with external organisations and 2) all learners (headcount) including both full-time and part-time/lifelong learners. This approach is also problematic because of the cumulative effect of not weighting the credit-bearing load of individual learners or the contact hours of individual academic staff.

Table 7.5 Academic staff/student ratios at Institute of Technology Carlow based on 1) all academic staff (headcount), including those contributing through collaborative partnerships with external organisations and 2) all learners (headcount) both full-time and part-time /lifelong learners.

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
All Learners	4869	5041	5369	6339	6325	7042
Total Academic Staff	382	385	401	407	486	492
Staff Student Ratio	12.7	13.1	13.4	15.6	13	14.3

From the above examples, academic staff /student ratios for Institute of Technology Carlow can be calculated from 28/1 to 14/1 depending upon the approach. None permit a credible or valid comparison across HEIs. Consideration should be given to development of a new model which provides for the diverse range of academic staff/ student ratios depending upon discipline mix, delivery mode and specialisation within and across Irish HEI's.

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