
Institute of Technology Carlow (ITC)

Strategic Dialogue Cycle 4 Reflections on Performance

Self-evaluation report – institution overview

IT Carlow has demonstrated a strong aptitude for the strategic dialogue process, providing extensive data and information to supplement their self-evaluation reports. They have maintained a strong financial position over the compact period, with very high engagement in lifelong learning as a key factor in achieving that position. They have benefited from and been responsive to strong demand for higher education in their region. Their engagement in the TU process for a new TU for the South East has been difficult, but has not caused them any significant damage reputational or in terms of lost institutional focus. It has resulted in an increased emphasis on growing research activity, which traditionally has not been a particularly strong feature of the institute.

Institution overview:

ITC submitted a detailed cycle 4 self-evaluation report and a 191-page appendix. All sections have been completed and report progress against the 2016 objectives as set out in the published compact. ITC set itself 17 objectives (with many sub-objectives) in its agreed compact with the HEA. As noted in the 2014 report, three objectives were added – section 4 (high-quality research) and section 6 (enhanced internationalisation) that were not in the published compact agreed with the HEA. Of the 20 objectives that are reported on, the 18 of these are indicated to be green (target achieved). Just two KPIs are reported as yellow (develop multi-campus Graduate School with WIT and development multi-campus TU).

The institutional overview is detailed with graphs, figures and tables, and divided into the following sections:

- political and regulatory influences;
- demographic and geographic influences;
- institutional responses to environmental challenges;
- midterm strategic plan review – review of progress to 2016 and priorities for 2017-18;
- institutional response to compact feedback;
- Institutional response to HEA key institutional statistics.

In its overview of institutional progress, ITC considers that it has met or exceed all its agreed 2016 targets except for two related to the merger and TU designation. ITC includes representative five-year development metrics highlights its performance in relation to student numbers, graduates, postgraduate learners, access, retention and student satisfaction, and academic staff qualifications.

In relation to TU designation, ITC states that it has made considerable progress in meeting and exceeding national technological university designation criteria. It notes that despite

challenges with the South-East TU both institutes are committed to making a joint submission for TU designation within three years.

Overall, ITC has demonstrated progress against its objectives through an analytical self-evaluation report. The institute is commended for its continued use and development of benchmarking, particularly for benchmarking its performance against other IOTs and the Irish higher education system.

Finally, while the IT Carlow report is well presented, the institute does have to consider the range of supporting material provided and the accessibility of such volumes of material.

Institute of Technology Carlow response to Part A: Institution overview

The Institute of Technology Carlow has a strong aptitude for the strategic dialogue process as it mirrors and enhances the existing strategic planning processes in the Institute. The engagement in the TU process has provided a continuous focus for the ongoing development of the Institute.

The Institute has always maintained a strong and stable financial position. This has resulted from a student-focussed, learner-centred investment model. The Institute anticipates that the ongoing review of the current funding model and of the overall funding of higher education will address, in the first instance, the significant inequalities in core funding and resources between comparable higher education institutions. The Institute has been unable to document at a detailed level the full extent of the inequalities between institutions due to lack of access to the relevant benchmarking data. One comparative analysis is presented in Figure 9, page 16 of the Institute's *Self-Evaluation Report on Strategic Dialogue Cycle 4*.

The Institute's success in lifelong learning has resulted from its desire to meet the higher education needs of its region. While lifelong learning is a factor in our success in maintaining a strong financial position over the compact period, our focus on strong governance, strategic planning, risk management, resource management, quality enhancement, building research capacity and international profile, and engagement with a broad range of constituencies, have also contributed to the achievement of this position.

In presenting material in reports, the Institute has endeavoured to disclose and account for every aspect of institutional activity in a clear, concise yet complete, transparent and accurate manner that can enable a full assessment of performance to be made.

The Institute welcomes the commendation from the HEA for our use of benchmarking. As an Institute we pride ourselves on our commitment to provide timely, accurate, analysed, considered, and benchmarked data. As the Institute prepares to enter the next cycle of strategic dialogue, timely access to all relevant national data will be important, particularly in terms of accurate benchmarking. Within this context, current RGAM data for the University sector, together with institutional equivalence data for core-funded staff, would greatly assist in continuing to provide high quality benchmarked evidence of Institute performance.

Self-evaluation report - domain level reviews

1. Regional clusters:

Initial commentary:

ITC is part of the Southern cluster with UCC, IT Tralee, Cork IT and Waterford IT. UCC, CIT and IT Tralee have reported these objectives 'partially achieved' and coded them amber whilst ITC and WIT have coded them green. All noted that the southern cluster did not operate as was originally intended. The geographical spread, institutional composition, change in personnel and four of the institutions working towards merger and TU status were cited as challenges. ITC states that the original objectives of the cluster were focused on increasing the responsiveness of the Irish HEI system; deepening partnerships; improving progression pathways and enhancing cooperation. It argues that each of these objectives mirror the objectives of Regional Skills Fora (RSF) and the Action Plan for Jobs (APJ). To note:

- Over the course of the compact 2014-16, 34 new agreements and pathway programmes were developed between ITC and FET providers across the region. ITC states that RSF is a mechanism for maintaining and enhancing relationships between HE and FE providers.
- Shared academic planning has occurred between HE, FE and Skillnets in the south-east region. A mapping of programmes aimed at developing employees for the biopharma sector was undertaken and presented to the biopharma committee of the APJ.

National Policy Context:

ITC highlights its role in the Regional Skills For a (RSF), e.g. it chaired the south-east RSF in 2016; is an active member of the mid-east RSF; the south east APJ Implementation and the mid-east APJ Implementation Group and is leading actions in the midland APJ. ITC notes that the RSF programme and the APJ are facilitating greater collaboration and cooperation between HEIs, and between HEIs and stakeholders. This, it argues, was the intended goal of the regional clusters.

Critical evaluation and feedback:

The Southern cluster has experienced challenges over the period of the compact. It is a complex cluster with four of the five institutions engaged in two consortia working towards merger and TU designation. ITC are of the opinion that the RSF and APJ is providing the mechanism for the southern cluster to operate. It is not clear that this opinion is shared by the other partners. However, it is worth noting that UCC, CIT and IT Tralee have stated that they welcome the opportunity to review the configuration and goals of the cluster in the context of the new compacts and institutional performance framework.

Institute of Technology Carlow response to Part A: Institution overview

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2. Participation, equal access and lifelong learning:

Initial commentary:

ITC provides an overall commentary on performance and have marked all two targets as “achieved”. A new separate target (previously a sub-target) for Springboard has been added and marked “achieved”.

- Mature student entrant numbers – 19.5 per cent in 2015/16 (HEA SRS data 22 per cent in 2015/16 and 17% in 2016/17). This number has declined from 26 per cent in 2011/12 to 17 per cent in 2016/17 (reflecting a national and sectoral decline). The National Access Plan 2015-2019 set a target of 16 per cent for mature student entrants which ITC has met.
- There has been a decrease in SEG new entrants, from 38 per cent in 2014/15 to 33 per cent in 2015/16. HEA data suggests a 3 per cent national increase and a 4 per cent sectoral increase. HEA should discuss this decline with ITC.
- ITC states that it has expanded its non-standard entry route. It has increased its number of flexible learners from 2,085 in 2014/15 to 2,684 in 2016/17 – an increase of 23 per cent.
- Lifelong learners account for 38 per cent of ITC’s registered students. The Institute states that this is the 4th highest percentage among the IoTs and universities.
- Springboard+ 2015/16 – 75 per cent successfully completed the study; 25 per cent withdrew or did not complete. Of those who completed their courses; 69 per cent are employed/self-employed; 18 per cent in further education; 9 per cent looking for employment; 4 per cent no response.
- Springboard+ April 2016 – ITC secured 235 places for 10 programmes across Levels 7-9 and all places were filled. In the introduction to this objective, ITC states that it secured 225 places for 10 programmes for Levels 6-9. This is a likely a typographical error but it would be useful to clarify this.

National Policy Context:

ITC states that it has the highest progression rate for new entrants in the technological sector. Progression rates for:

- Level 6 – 81 per cent
- Level 7 -79 per cent
- Level 8 – 86 per cent

ITC notes that its overall progression rate for all levels combined is 83 per cent – which it states is the highest in the sector and two per cent below the national average for the universities, institutes and colleges.

Critical evaluation and feedback:

ITC has benchmarked itself against the sector and the HE system under this objective. It notes that there was an increase in mature students from 2014/15 to 2015/16, keeping it in line with the National Access Plan target. However, this number has declined from 26 per cent in 2011/12 to 20 per cent in 2015/16. Likewise, its SEG has declined from 38 per cent in 2014/15 to 32 per cent in 2015/16. But the institute didn't analyse this decline in the report. It states that it continues to facilitate increased participation from students from under-represented groups but in its overarching statement there was no discussion about the decline in numbers for mature and SEG students. It emphasised its role in LLL, distance learning and its new courses in psychotherapy. There is a sense that where the numbers are either in keeping with national targets or national/sectoral increases/decreases, that there is no need to discuss these fluctuations in the mature and SEG numbers.

Institute of Technology Carlow response to 2: Participation, equal access and lifelong learning

The absolute numbers of mature fulltime new entrants have remained reasonably steady (265 in 2010/11, to 242 in 2015/16, to 221 in 2016/17) at Institute of Technology Carlow considering the hugely improving circumstances of the economy (14.6% unemployment in 2011 to 6.4% unemployment in Q2 2017). While there has been a national decline in full time mature learner numbers, the Institute of Technology Carlow has actually increased its percentage of the sectoral share for fulltime mature learners from 7.8% in 2014/15 to 9% in 2016/17 (source, HEA March 2017). The decline in mature fulltime new entrants could be a future trend as more mature learners avail of more employment-friendly and cost effective lifelong learning flexible provision towards higher education attainment. Similarly, the improved economic circumstances of the country have affected the classification of students in the SEG categories. The geographic location of the Institute of Technology Carlow's catchment area has meant that its regions are early beneficiaries of the economic recovery. The Institute remains fully committed to access initiatives to further promote and encourage participation in full-time higher education, as well as lifelong learning. The Institute of Technology Carlow welcomes the new access programme recently announced by the Minister for Education and Skills.

The growth of 23% in flexible learner numbers between 2014/15 and 2016/17, as presented in the submission, is correct.

Bullet point 4 of the initial commentary in the HEA reflection text requires amendment. As stated on page 44 of the Institute's *Self-Evaluation Report on Strategic Dialogue Cycle 4*, the Institute's LLL (headcount) enrolments accounted for 38% of all registered students in 2016/17 (SRS data for 2016/17) or 29% for 2015/16 (HEA enrolment statistics 2015/16). As comparative sectoral data was not available for 2016/17 at the time of submission of the self-evaluation report, the reference to the '4th highest % LLL' refers to the 2015/16 HEA

enrolment statistics for HEIs. Comparative sectoral data has since been published for 2016/17 on the HEA website and this indicates that the Institute of Technology Carlow now has the 2nd highest % LLL (headcount) enrolments across the sector (see table below). Furthermore, in terms of absolute numbers of part-time learners, the Institute of Technology Carlow has the 2nd highest number within the Technological Sector (after DIT only), and the 5th highest number across the 21 Universities and IoTs (after DIT, UCD, NUIG and UCC, HEA statistics 2016/17).

Comparative analysis of part-time enrolments expressed as a percentage of total enrolments (headcount) 2016/2017 (source, HEA enrolment data 2016/2017)			
HEI	%PT	HEI	%PT
IT Tallaght	43%	UCD	14%
IT Carlow	38%	UCC	14%
DIT	26%	GMIT	14%
CIT	23%	DCU	12%
Letterkenny IT	23%	Dundalk IT	12%
Athlone IT	20%	IADT	11%
NUIG	17%	TCD	11%
ITB	17%	IT Tralee	9%
MU	16%	UL	7%
WIT	16%	IT Sligo *	1%
Limerick IT	15%		

*The current published data is for part-time learners exclusively and does not include remote learners).

Notwithstanding the above, a more meaningful comparison is WTE (whole time equivalent lifelong learners). Using this metric, the Institute has 28% WTE LLL which is the highest of the 14 IoTs (HEA RGAM Grant Allocation Workbook 2015/16 Student Numbers). Equivalent WTE benchmarking data is not available for the university sector.

The Institute confirms the number of 235 places for Springboard+ 2016 (and not 225). The Institute would welcome further and timely national, regional and sectoral data on the outcomes of participants on Springboard programmes across higher education.

Considering progression rates, the Institute has developed and delivers programmes to enhance the transition from second to third level and as a result of this comprehensive programme the Institute has effected an increase in progression rates to an overall rate of 83% in 2014/15 which is the highest in the sector (source HEA, *A Study of Progression in Irish Higher education 2013/2014 to 2014/2015*, March 2017). Institutional data on more recent

years indicates further improvements at Level 8 to 89% for 2015/16. The Institute continues to dedicate resources and effort to this important aspect of its work.

In terms of the critical evaluation and feedback provided for Section 2, high level observations on the macro level data issued by the HEA are presented on page 32 of Institute's *Self-Evaluation Report on Strategic Dialogue Cycle 4*. More detailed benchmarking relating to these points are provided in Appendix 2, Table 2.2 and Figure 2.22, Figure 2.23, Figure 2.24, Figure 2.25, Figure 2.26 and Figure 2.27 of the Institute's *Self-Evaluation Report on Strategic Dialogue Cycle 4*. The demographic and geographic context is provided in the introduction to the Institute's *Self-Evaluation Report on Strategic Dialogue Cycle 4* with a particular emphasis on:

- the increasing demographics in the Institute's catchment area (Figure 8 page 15 and Figure 12, page 21);
- the rapidly improving employment profile for the Institute's catchment area in the east of Ireland (Figure 11, page 19);
- the significant growth in mature learners participating in lifelong learning programmes which respond better to their needs (Table 1, page 4); and
- the significant growth in student enrolments in the university sector (Figure 5, page 10 and Figure 6, page 11) facilitated by a more favourable regulatory environment than that available to the Technological Sector (including significant differences in access to finance for capital / infrastructural development through a university-only borrowing framework).

Recent access data is limited for the Technological Sector and piecemeal or not available for the University sector. Therefore, any analysis is limited in terms of identifying macro trends across institutions and their catchment areas. Notwithstanding this, the Institute has considered application and offer data from the CAO for non-standard entrants and notes changing patterns in university recruitment for non-standard applicants including mature and further education applicants. The Institute would welcome further clarification and discussion on the feedback from the HEA on this objective

3. Excellent teaching and learning and quality of student experience:

Initial commentary:

ITC notes that it has undertaken a robust self-evaluation and peer review process in 2015/16, with a systematic evaluation of its professional operations and services to be completed by 2018, to ensure that it is ready for the Institutional Review in 2018/19. It reports that QQI has approved its QA procedures.

ITC provides an overall commentary on performance and have marked all three targets as “achieved”.

- 32 per cent of academic staff are now qualified to doctoral level, against a 2016 target of 28 per cent. A further 17.6 per cent are currently pursuing doctoral studies.
- ITC has a comprehensive CPD system, including an MA in Teaching and Learning, in place for new and existing staff. 65 percent of staff have a Level 9 qualification.
- In 2016, the faculties all completed Stage II of Programmatic Reviews. Other reviews include: professional support services (Library and Computing Services in 2016); ITC’s partnerships with An Cosán and the Defence Forces were also reviewed.
- In line with the transitions agenda, ITC has reduced its CAO offerings at Level 8 from 37 to 31 (16 percent reduction). It has reduced its overall CAO offerings from 77 to 68. It notes nationally IoT offerings have increased by 6 percent.
- The Graduate Attributes project is ongoing.

National Policy Context:

ITC refers to Supporting a Better Transition from Second Level to Higher Education.

Critical evaluation and feedback:

ITC has exceeded its targets for the number of academic staff qualified to doctoral level. It has strong emphasis on staff development, evident by the number of staff undertaking doctoral qualifications and its emphasis on CPD for staff. It has a series of self-evaluation and peer review including programmatic reviews since 2012. Are these reviews/evaluations not a necessary quality assurance exercise undertaken by HEIs? Should they be included in a compact – it could be argued that this is core business and not ‘stretching’ the institute? It might be an issue to consider for the next compact.

Institute of Technology Carlow response to 3: Excellent teaching and learning and quality of the student experience

The Institute of Technology Carlow is experiencing the fastest level of growth in its history and the indications are that this will continue. The Institute welcomes the acknowledgment of our achievements in terms of staff development and doctoral qualification levels, our comprehensive CPD supports and our adoption of the transitions agenda, particularly given the substantial and continuing cumulative core funding gap summarised on page 16 of the Institute's *Self-Evaluation Report on Strategic Dialogue Cycle 4*.

The Institute has maintained and indeed expanded its emphasis on quality enhancement across the organisation and this focus is paramount to the Institute. This is best demonstrated by the outcomes of regular detailed peer reviews across all institutional activities, providing both qualitative and quantitative analyses and incorporating national and international perspectives across the public, private and voluntary sectors. The Institute has ensured that quality remains universally prominent, developed synergies across its responses to feedback from the HEA and QQI, completed programmatic, strategic, collaborative and research reviews and initiated the sectors first full quality review of professional support services. The Institute's strategic planning and quality enhancement focus and its reviews are designed to continually challenge and stretch the organisation at all levels and across all institutional activities.

4. High quality, internationally competitive research and innovation:

Initial commentary:

ITC states that RDI activities are underpinned by ongoing strategic investment in institutional infrastructure, personnel and policy. It notes the drive towards meeting the national criteria for TU designation.

ITC provides an overall commentary on performance and have marked two targets as “achieved” and one target as “partially achieved”:

- KTI Metrics are repeated from Section 5.
- Dargan Centre has been open for some time and provides a “focal point” for the researcher population.
- ITC has a SciVal FWCI of 1.59 (IoT's as a group have a SciVal FWCI of 1.19).¹
- The development of a multi-campus Graduate School with WIT has been marked as ‘partially achieved’. ITC states that it has concentrated on developing and enhancing its capacity for research training in line with national protocols, e.g. National Framework for Doctoral Education, in the expectation of meeting TU criteria for research provision. A formal structured PhD programme delivered over 24 months, has been designed, . Most structured PhD programmes are usually four years in duration; 24 months suggest a master’s programme or is it the transfer from the masters to doctoral register? This should be clarified with ITC.
- A specific module in research supervision is available to staff.
- 100 registered students at beginning at AY 2016/17: ITC states that there are currently 85 registered PGS (HEA figures show 81). There has been a 140 per cent increase in PhD/MSc over the lifetime of the compact. ITC notes the CORE programme will assist in increasing this figure and subject to achieving positive funding application outcomes, it will achieve TU targets early in the next HEA compact. HEA SRS 2016/17 data shows that there are 72 Level 9 registered students and 9 Level 10 registered students, a total of 81 (masters and PhD students).

National Policy Context:

No reference is made to Innovation 2020, Enterprise 2025. There is limited reference to Horizon 2020 participation.

ITC has provided an additional review of their research activities and links to the above. (See Appendix 2)

¹ Some care needs to be taken with this number as there may be a very small number of very highly cited papers driving it.

Critical evaluation and feedback:

ITC's research strategy is underpinned by meeting TU criteria and essentially the objective was to grow research significantly and quickly. It's not clear this has happened. ITC Level 10 numbers are static, ranging from 5 in 2011/12 to 7 in 2015/16. Its Level 9 numbers have increased, from 23 in 2011/12 to 58 in 2015/16.

However, its research income (using HEA data) has been decreasing steadily since 2011/12 (€1.1m in 2011/12 to €904 in 2015/16). ITC is putting a lot of effort and resources into developing its research profile – supporting staff as research supervisors, the Dargan Centre, a structured PhD programme (although its' duration of 24 months should be queried) and citations metrics, but the decline in research income and challenging PG numbers, especially at Level 10, suggest there is more to be done.

Institute of Technology Carlow response to 4: High quality, internationally competitive research and innovation

Research and Innovation activity within Institute of Technology Carlow and across the Technological sector as a whole has a strong industry-driven focus and this ensures that all research activity has a strong alignment with the 14 National Research Prioritised Areas. The Institutes of Technology Acts which provide an overarching framework for the operation of the sector specifically mandate that institutional activity should address regional industry needs and economic priorities and this serves to differentiate the focus of research activity from that of the pre-1997 University Sector. The National Strategy for Higher Education 2030 also seeks to differentiate the research focus of any future Technological University from the traditional University sector.

In this context, any assessment of RDI activity within institutions in the Technological sector needs to embrace the broad sweep of "Knowledge in Action", that is activity and projects derived from and building upon research activity within the Institute. As a corollary to this, research funding must be understood in the wider framework of innovation and enterprise development stimulus and agency support funding. Therefore, it is appropriate that KPI metrics should reflect this industry focus.

The Institute is strategically building research capacity and has made significant progress in terms of staff qualifications, infrastructural developments, research supports and research structures and industry engagement. In terms of Innovation 2020, Enterprise 2025 and Horizon 2020, the policy context is explicitly articulated in the Institute of Technology Carlow Research Strategy 2016-2020 referenced throughout the Institute's *Self-Evaluation Report on Strategic Dialogue Cycle 4*. The Dargan Research and Innovation Centre was opened and established during the lifetime of the current HEA compact. It is embedded within the Institute of Technology Carlow RDI function and as research capacity has grown the demand for an expanded facility has become apparent. This has been highlighted in the current capital requirements review by the Department of Education and Skills.

The standard measurement or benchmark for assessing the quality and standard of research output relies upon a number of factors including,

- publication (typically peer review journal);
- Impact factor of journal;
- Rate and place of citation of output

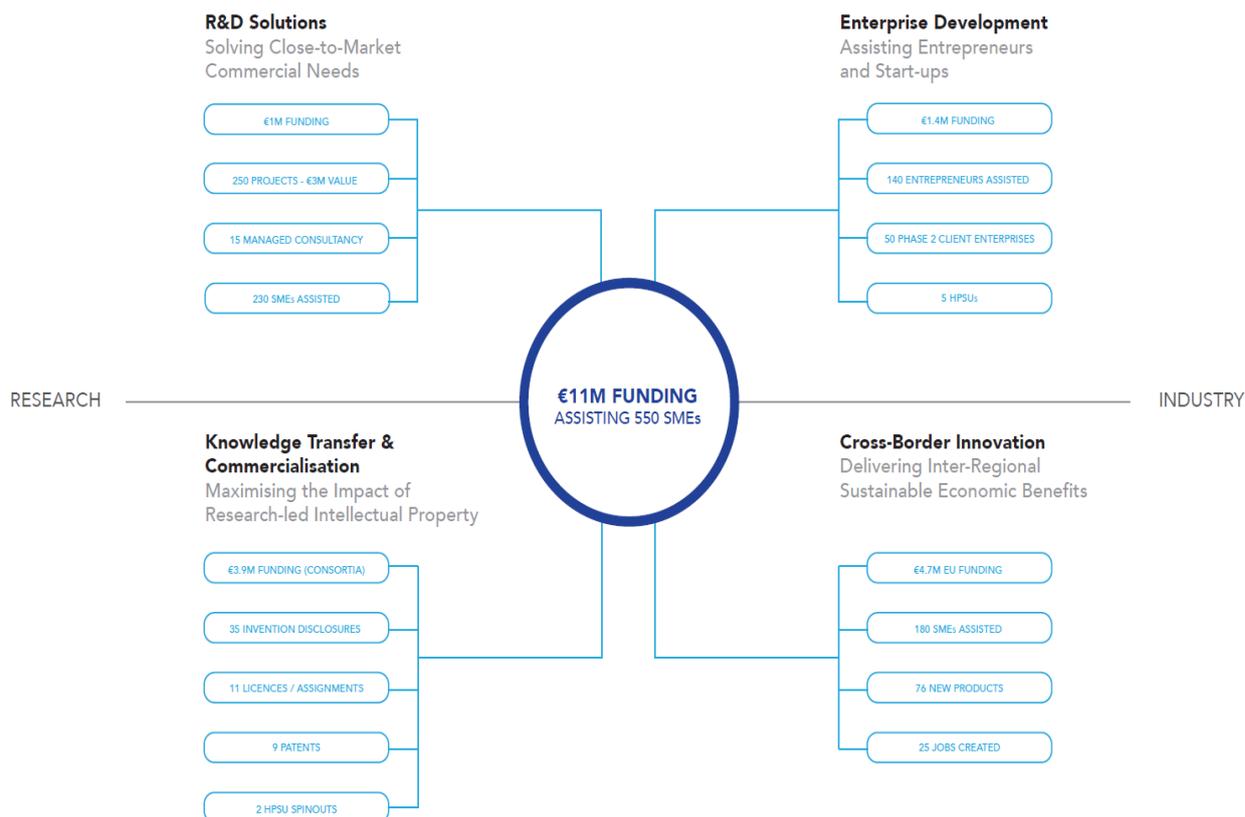
Assessing the impact and quality of peer-reviewed published research (the standard benchmark of ‘excellent science’) has certain limitations and critics point to imbalances inherent in a system that relies on data that has a very specific range or focus. However, the figures offer a reasonably reliable picture of institutional progress. In broad terms research areas are performing within sectoral norms (measured using the same SciVal metrics). The data also gives some initial indication of International and industry collaboration. ‘Within Ireland’ figures in each category are italicised in parentheses. Work is ongoing to ensure that all relevant research outputs are appropriately identified and captured (e.g. using SCOPUS or OrchidID). Future analysis will develop and utilise additional recognised metrics across a broad range of publication dates in order to triangulate the quality and impact of outputs.

Systems such as SciVal can also be calibrated to capture societal impacts by measuring Social Media and Digital footprint. However, it is generally recognised and accepted across the international research community that the capture and analysis of metrics beyond core STEM disciplines needs to embrace both traditional and non-traditional research outputs (NTRO). This approach, taking a broader view of research outputs beyond a defined stable of commercially owned journals with discipline specific academic focus is increasingly used internationally to capture a more complete picture of the research activities in Arts, Humanities, Business and Design disciplines where NTRO have been shown to make a significant contribution. Research output range may include Product or Process Innovation, Exhibit, Policy Report, Monograph or Digital Edition. These represent an important and increasingly central aspect of research activity in these discipline areas but they are effectively ‘invisible’ to SciVal or similar tools which measure citation across a defined range of scientific journals. Capturing and recognising these outputs is a challenge but it will be a critical element in verifying the significance, reach and impact of research effort in discipline areas with significant economic significance and impact and their stature and value needs to be recognised in any complete and meaningful evaluation of research activity, contribution and significance.

Institute of Technology Carlow has been granted Delegated Authority by Quality and Qualifications Ireland to make awards up to Level 9 on the NFQ for taught programmes. In addition, Institute of Technology Carlow has Delegated Authority to make awards up to Level 10 in the research areas of Biological, Molecular and Environmental Science and Approved Provider Status for awards in Engineering, Computing and Information Technology. A key aim of the Institute’s research strategy is to expand the Level 10 offering in the specific areas of Health Sciences, Business, Humanities and Design. A significant number of students who have undertaken Level 9 Research programmes in these areas have progressed to Level 10 in other institutions and this gives some indication of potential in terms of growing student numbers.

The structured PhD programme, incorporates a research programme (typically of 36 to 48-months duration) with a specific output of a written dissertation submitted for viva-voce examination). In addition, the programme incorporates 6 taught “transferrable skills’ modules. The delivery schedule for these specific taught modules takes place within the first 24 months of the 48-month research programme.

The current five-year external funding commitment across the Research and Innovation space is €11 million (see figure overleaf: IT Carlow Innovation Programmes 2017-2021)



In the context of research student recruitment, Institute of Technology Carlow Policy requires all research students to register initially on a Level 9 Programme. Subject to progress and external evaluation students may subsequently transfer to the PhD register. Historically, 40% of Level 9 students have made this transfer. There has been significant growth in Level 9 student numbers, particularly in areas where the Institute is seeking extension of awarding authority or provider status to Level 10 and this will serve to offer progression and sustain growth in student numbers at Level 10. Notwithstanding this, it should also be recognised that the funding environment and recent significant improvement in the graduate employment market present two very significant challenges. Funding for PhD programmes is in many cases specifically excluded from a range of EU and EI funding programmes. With specific reference to the structured PhD programme, the 24-month period refers to the delivery schedule for specific taught modules within the programme (during years 1 and 2 of a 4 year research programme).

5. Enhanced engagement with enterprise and the community and embedded knowledge exchange:

Initial commentary:

ITC provides an overall commentary on performance and have marked all three targets as “achieved”:

- The proposal for a Regional Engagement Forum has been subsumed into the national network of Regional Skills Fora (RSF) established by DES.
- ITC states that a staff engagement audit will be repeated in 2017. It would have been useful to know the outcome of previous audits and how these were used.
- ITC has agreed several EI Technology Transfer Office metrics. It hasn’t fully met some of its 2016 targets, but it has exceeded others:

Metric	2016 target	Achieved
Spinouts	1	1
Licences/options/assignments	3	
Research agreements with industry (>25k)	2	
Research agreements with industry (<25k)	50	68
Invention disclosures	4	8
Priority patent applications	2	
PCT Patent Applications	1	1
Start-ups, spin-ins	15	111 start-ups 89 spin-in

- Other KTI metrics for 2016 included 70 collaborative agreements with industry; 27 consultancy service agreements; 22 companies in On-Campus Incubation.
- TTS13 Target Metrics (2017-22) have been agreed with EI. ITC have secured EI and European funding (€5m) with consortia partners – EI Technology Gateway, Design +, New Frontiers national entrepreneur development programme and the Buccaneer Project. ITC states that these initiatives and others will see it work with 400+ companies in 2018.

National Policy Context:

There is no specific reference to Springboard+.

ITC took an active lead on the South East Regional Skills Forum. Major outputs included a mapping exercise for all providers delivering programmes aimed at the biopharma sector; a series of workshops with seven designated industry sectors experiencing skills shortages in the regions; commissioning and launching a video highlighting education/industry.

ITC is a member of both the Mid-East and Midlands RSF steering groups.

TTSI consortium with AIT, MU and WIT achieved an 'A' rating in performance. It has received increased funding and resources under TTSI 3.

A Design + Technology Gateway launched in 2016 and has engaged with more than 40 companies in 2016. Included the implementation of INTERREG 4 funded Inspire Best Practice Guide to companies in Rathdowney, Co Laois.

Critical evaluation and feedback:

ITC has a proactive role in the various RSF in its regions. It is performing well in the TTSI consortium and the Design+ Technology Gateway is performing well. It would be useful to know what they mean by working with 400 companies – what does this involve? The €5m secured in EI and European funding is welcome but what does this mean for the institute – was it won through H2020? if so, which pillar? Is it through partnership with SMEs? Etc.

Institute of Technology Carlow response to 5: Enhanced engagement with enterprise and the community and embedded knowledge exchange

Institute of Technology Carlow works with companies across a broad spectrum of activities.

- Innovation partnerships
- Innovation vouchers
- Consultancy
- Commercialisation and technology transfer
- Employment based Post graduate programmes
- Applied research projects (PG and UG)
- Placements (national and international)
- Internships (national and international)

Through the IRC employment based post graduate programme and the other post graduate programmes companies actively partner with the RCSC on innovative projects. RCSC activities and Design + also generate company engagements and these projects are graphically illustrated in the previous section. The programmatic review cycle introduced additional placements, internships and research projects in all programmes and levels.

The table presented in bullet point 3 of the initial commentary in the HEA reflection document is correct in terms of 2016 targets which were agreed with KTI. However, the column headed 'achieved' requires clarification. The KTI figures reported in the Institute's *Self-Evaluation Report on Strategic Dialogue Cycle 4 submission* were as follows: 22 companies in on-campus incubation, 1 active spinout and 8 invention disclosures. Please note that the original 70 collaborative agreements with industry is actually 79 and this fully concurs with the recently published *Knowledge Transfer Ireland Annual Review 2016*, with 1 exception. Resulting from a revised definition of consultancy service agreements by KTI since the submission of the report, and in accordance with the *Knowledge Transfer Ireland Annual Review 2016*, our figure for this category is 9. In terms of the 111 start-ups and 89 spin-in companies referenced in the Institute's *Self-Evaluation Report on Strategic Dialogue Cycle 4*, these figures encompass a broad range of supports for these companies. In addition, we have 68 research agreements with industry (<25k); and 1 community design patent.

€5M in EU funding has been secured through INTERREG V and Erasmus + strategic partnership project applications for cross-border innovation projects to deliver inter-regional sustainable economic benefits including BUCANIER and AHEH. These projects include innovation management, arts and humanities, science, health and engineering. EI funding has been approved for New Frontiers, DESIGN+ Technology Gateway and EXPERT-KT Managed Consultancy Pilot Programme to assist entrepreneurs / start-ups and solve close-to-market commercial needs respectively.

Institute of Technology Carlow continues to advance on the *KT Maturity Framework* from a level 2 in 2015 to a level 3 in 2016. The *KT Maturity Framework* captures the experience of the TT staff, the activity of the TTO and the RPO's commitment to and management of KT/TT (full scale is Level 1 to Level 5).

The staff engagement audit set out to answer two overall questions: 1. How does regional engagement fit into the mission of Institute of Technology Carlow? 2. What is the level of employee involvement in engagement initiatives? The Institutes strategic plan contains explicit objectives relating to the region and its development. The purpose of the first audit was to set a benchmark for future audits in terms of external engagement activities and to examine how staff engagement in external bodies can assist the institute in the achievement of engagement objectives set out in our strategic plan. Staff of the Institute self-reported that they are involved in multiple activities relating to external activities. The majority of these activities relate to the teaching and research activities of the Institute. The audit identified specific barriers to engagement as a result of workload allocation and the pressures to engage in other priority projects. As part of the Strategic review stage 2 process, a staff curriculum vitae template was designed and utilised which was specifically aimed at capturing staff industry and community engagement.

Springboard is a highly valued programme and is referred to on eighteen occasions in the Institute's *Self-Evaluation Report on Strategic Dialogue Cycle 4*. As part of Institute of

Technology Carlow's Springboard+ submission to the HEA, the Institute actively engaged with a wide variety of industry partners, enterprise, local, regional and national companies to identify current and future skills deficits so as to develop and deliver programmes providing transferable and generic skills for sustainable employment opportunities for both industry and participants. The fruits of this engagement is evidenced by the successful allocation of 18 Springboard+ programmes to the Institute for 2017.

6. Enhanced internationalisation:

Initial commentary:

ITC states that it remains a leader in international student recruitment among the IoTs. HEA SRS data shows that ITC holds an 8 per cent share of the market amongst IoTs. It states that it exceeds the IoT average for non-EU learners (219 v 254). It notes that it has increased its international student numbers by 13.3% over the period of the compact. ITC has concentrated on the Middle East market and in 2015/16 there were 74 registered students from the Middle East.

ITC provides an overall commentary on performance and have marked all four targets as “achieved”.

- HEA SRS data shows that international enrolments (both EU and non-EU) account for 6 per cent of all enrolments in 2016/17. ITC states that international enrolments are higher, at 9 per cent of total full-time enrolments. A reconciliation between HEA and ITC statistics would be welcome. ITC notes that there was a reduction in the number of scholarship students from Oman and Malaysia due to economic difficulties and changes in Malaysia (visa application process) have affected ITC’s international numbers.
- ITC states that it has increased the number of alliances and collaborations with international HEIs by 10% over the lifetime of the compact. Three due diligence exercises were completed in Malaysia in 2016 and a process is underway in China.
- ITC states that 1.8 per cent of students and 7 per cent of academic staff have participated in overseas mobility programmes (although second objective states that 0.75 per cent of student and 5 per cent of staff have participated in overseas mobility programme – this figure needs to be clarified). HEA International Section data shows that there 38 outgoing Erasmus students in 2015/16 whilst there were 140 incoming Erasmus students, an increase of 33 per cent since 2013/14. ITC states that 30 places are currently provided by Erasmus and an additional 32 placements are facilitated through the Department of Science and Health. All available HEA-funded staff are allocated annually. ITC is facilitating staff mobility through its own resources to develop networks for research and innovation partnership development.

National Policy Context:

There’s reference to the National Strategy for Higher Education to 2030. There is no specific reference to *Irish Educated, Globally Connected: An international education strategy for Ireland, 2016-2020*.

ITC does note that the future national objective of 15 per cent for international students is very challenging for HEIs. It states that UK HEIs of a similar profile to ITC attract c.10 per cent of non-EU students. It notes that Australia has launched a plan to increase

international student recruitment by 760,000 by 2020 and is enhancing immigration policy to assist in achieving this target.

ITC states that graduate placement opportunities under ERASMUS+ are oversubscribed and insufficient places are made available to ITC.

Critical evaluation and feedback:

ITC has paid attention to the international student market, the potential competitors and has benchmarked against similar-sized HEIs in the UK. It acknowledges that the future target of 15 per cent for international students will be challenging. Clarity around its ERASMUS outgoing students should be sought – HEA data for 2015/16 suggest none whilst ITC states it has 30 places. A reconciliation between HEA and ITC figures for international students would be welcome.

Institute of Technology Carlow response to 6: Enhanced Internationalisation

The Institute of Technology Carlow International Office records show:

- 254 Non EU students were registered in 2016/17
- 153 EU students were registered in 2016/17

The HEA SRS data show 4450 full time learners of which 407 are international or 9.14% of the full time cohort. The Institute will adjust our domiciliary data collection field to correctly capture this data and will apply appropriate tagging to reflect the corrected figure in future returns

Please note that the reduction in numbers from Malaysia refers to an economic recession in that country as opposed to changes in the visa application process (Malaysia is a visa exempt country)

The target objectives for student and staff mobility are 0.75% and 5% respectively whilst 1.8% and 7.0% are the outcomes for same

The HEA definition used for Erasmus only refers to HEA funded places for Erasmus mobility exchange whereas the institute of technology Carlow figure refers to placement The Department of Science and Health currently have 32 overseas placements (outside of Europe) which are self-funded in addition to the 30 placements in the EU.

On page 26 of the self-evaluation report specific reference is made to the international education strategy 2016-2020. The Institute is obviously cognisant of the policy changes contained within *Irish Educated, Globally Connected: An international education strategy for Ireland, 2016-2020* and have factored same into our plans for internationalisation

7. Institutional consolidation:

Initial commentary:

ITC provides an overall commentary on performance, noting that it continues to make significant progress on the strategic development institute towards being “technological university-ready” in terms of national progress and criteria. It has marked the target as not achieved. As noted in the 2015 self-evaluation report, both ITC and WIT have completed the preliminary engagement phase as recommended by the Kelly report. The institute notes that the last five years have been a substantial learning experience and lessons will have to be drawn from the experience as the South East Technological University is a much-needed development.

- Up to €1.5 million was awarded to ITC and WIT by the HEA in late 2016 to support collaborative projects across and between all levels of both Institutes.
- A new MoU has been drafted by the Presidents and Chairs of the two institutes and will be brought for approval by the Executives and Governing Bodies following the appointment and agreement of the new Governing Body Chair to WIT.
- The MoU includes: a new governance and management framework; an Independent Chair and a Project Steering Group.

National Policy Context:

ITC notes that the uncertainty regarding the final shape and timing of the Technological Universities Bill. It also notes that there are new drivers such as the collaborative engagement of key regional stakeholders in new regional structures established to implement the South-East Action Plan for Jobs and to better align skills with the economy through the South East Regional Skills Forum.

Critical evaluation and feedback:

IT Carlow and Waterford IT remain committed to progressing to Technological University status. Progress has been somewhat restricted due to external factors previously mentioned. ITC and WIT should however continue to progress together where they can and be prepared to move when the opportunity arises. More details on the planned collaborative projects to achieve TU status would be useful.

Institute of Technology Carlow response to 7: Institutional consolidation

Recent developments announced by Government on planned amendments to the Technological Universities 2015 bill should give new momentum to the South East Technological University project with the promised enactment of the modified legislation by year’s end. The Institute of Technology Carlow and Waterford Institute of Technology plan to accelerate their implementation plans to meet all criteria to deliver a multi-campus

Technological University across the South East incorporating campuses at Carlow, Kilkenny, Wexford and Waterford.

The Institute of Technology Carlow and Waterford Institute of Technology actively collaborate on a number of fronts including New Frontiers, Enterprise supports and Technology Transfer activity. The two Institutes also collaborate at regional level through the RSF, APJ and IBEC Regional Executive. A cross campus collaborative project expression of interest call is currently in preparation which will support peer to peer applied collaborative projects across all aspects of both academic and support services in both Institutions in the coming months.

8. Additional Notes:

There were no major strategic changes or targets or objectives added in or dropped in this cycle of the compact process.

There is reference in the compact to gender equality.

The Institute of Technology Carlow is a member of the Athena Swan Charter and its President is a member of the National Athena Swan Committee charged with oversight and implementation of the Charter. The Institute has commenced preparations for bronze accreditation in 2018/19.