

INSTITUTE OF TECHNOLOGY CARLOW

# ANNUAL REPORT

2019 – 2020

2020 – 2021

# AND ACCOUNTS

2019 – 2020



INSTITUTE *of*  
TECHNOLOGY  
CARLOW

Institiúid Teicneolaíochta Cheatharlach



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## CHAIRPERSON'S STATEMENT



On behalf of the Governing Body, I welcome publication of the Annual Report 2019/2020 and 2020/2021, and the Financial Statements for the year September 2019 to August 2020.

This reporting period has been a unique time for the Institute. COVID-19 disrupted many aspects of our institution, however the pandemic also brought out the very best in our community.

The rapid transition to online education, assessment and supports was remarkable, and thanks to the extraordinary efforts of so many of our academic and professional management and support services staff, our students continued to engage with their studies, progressing and graduating on schedule.

Given the challenges posed by the pandemic, the Institute continued to perform strongly as evidenced by the outcome of the QQI CINNTE Institutional Review 2020, round two of the three-year Compact with the Higher Education Authority, and placement in the top five Irish universities in the 2021 U-Multirank World University Rankings.

In parallel, we continued to make great strides towards achieving our strategic ambitions, culminating in the announcement by the Minister for Further and Higher Education, Research, Innovation and Science of the success of our joint application for merger and technological university designation in May 2022. I congratulate and sincerely thank those

Governing Body members along with the presidents, executive, staff, students, partners, and stakeholders of both Institutes on reaching this important milestone on our journey.

The financial performance of Institute of Technology Carlow remained strong, enabling the Institute to continue to invest strategically as we prepare for technological university designation. In 2019/2020, the Institute grew its income to over €64 million and returned an operating surplus of 8.5%.

On behalf of Governing Body, I commend and thank the staff and our many partners for their continued commitment and valuable contributions to our work on behalf of those we serve.

**Mr John Moore**

Chair of the Governing Body  
Institute of Technology Carlow

## PRESIDENT'S OVERVIEW



Following a uniquely challenging eighteen months prescribed by the global pandemic, together with significant progress on our merger / university designation dual process to establish a unitary multi-campus technological university for South East Ireland, this reporting period has been like no other. It is at times like these that the true character of a community is most apparent, and the character of our community is manifestly one of commitment and resilience, adaptation and innovation, professionalism and compassion. I am enormously proud to be part of a community that not only responded admirably to overcome the difficulties presented by the COVID-19 pandemic, but did so whilst

continuing to seize the opportunities to ensure that we remained on-course across all areas of our strategy and vision.

This reporting period saw the successful completion of our QQI CINNTE Institutional Review with the first 'virtual' Institutional Review in Europe in June 2020. Commendations cited by the CINNTE Institutional Review 2020 Review Team included the authenticity of our values-base, the strong quality and student-centred culture, the excellent support for staff engaging with research, our strong commitment to student support and engagement, our strong commitment to our national and international collaborative and access partners, our sustenance of a strong financial discipline over an extended period of time resulting in surpluses for reinvestment, and robust management and governance structures. Through the broad and inclusive self-evaluation exercise that underpinned this process we have identified additional strategic initiatives across various thematic areas that we are now implementing. These include our new Academic Delivery Framework, which provided the basis for the cross institutional Programmatic Review 2021. Implementation commences in September 2021.

Other noteworthy achievements include our new Research and Innovation Impact Strategy 2020-2025, significant progress on the Institute's €150 million capital development programme, and a high level of new programme development, validation and delivery across CAO, postgraduate studies, HEA Springboard+, the Human Capital Initiative and other national competitive stimulus programmes.

Through these and related developments we are proud to have delivered once again on all our targets under round two (2019/2020) of our three-year Compact with the Higher Education Authority (HEA), whilst also being the recipient of a €1 million HEA award for impact assessment system performance funding for the work of our Faculty of Lifelong Learning with Family Carers Ireland.

Publication of the 2021 U-Multirank World University Rankings brought more good news for all in our community with placement of our Institute in the top five of sixteen Irish Universities for performance. We achieved the highest grade (grade A) across a total of ten performance metrics when benchmarked against almost 2,000 universities from over 90 countries. This is a

very welcome international vote of confidence for our institute and a great endorsement of the incredible work undertaken across our campuses.

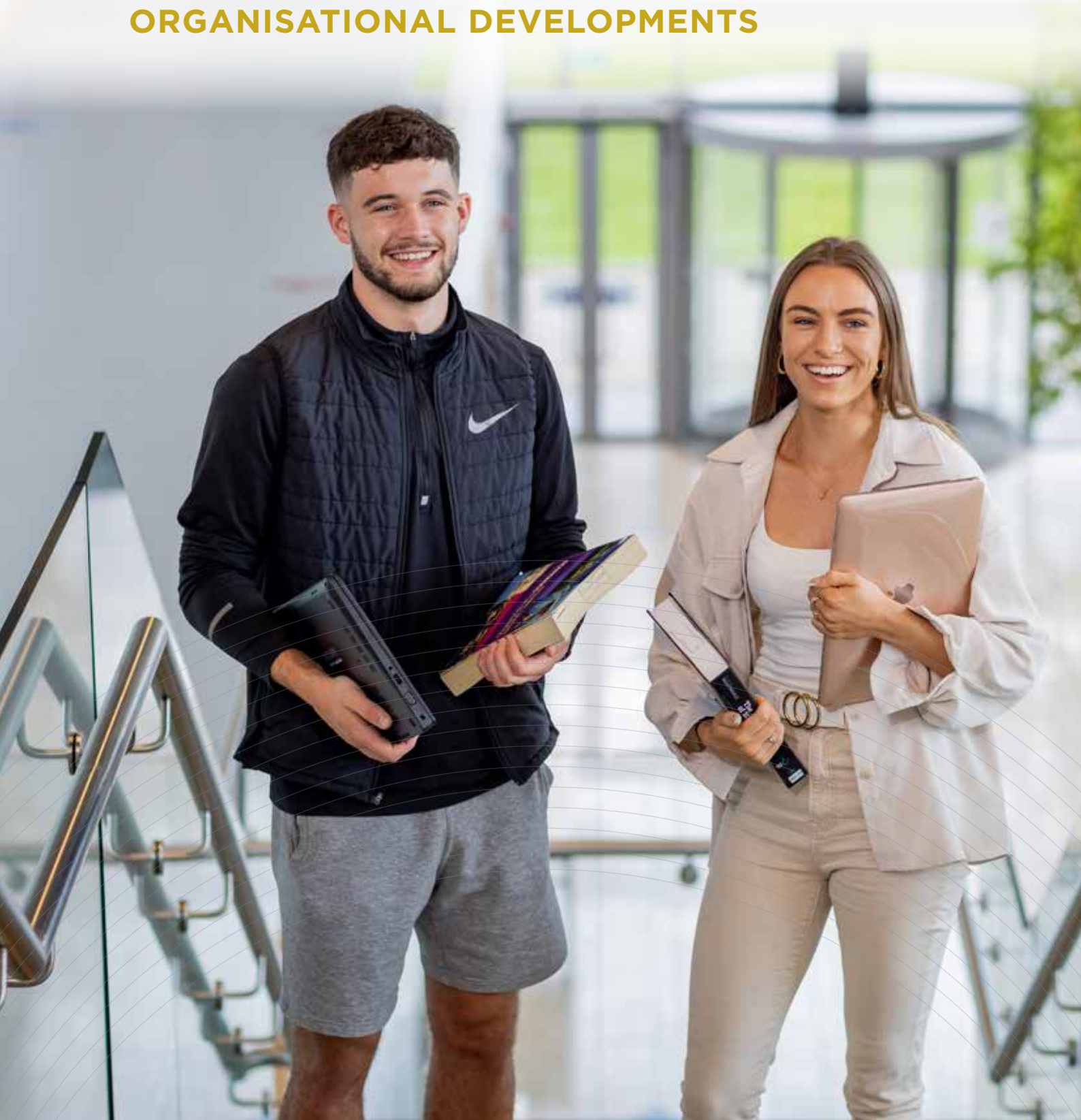
This reporting period also saw significant progress on the technological university project, paving the way for a formal joint application in April 2021 for merger and redesignation as a technological university with our partner Waterford Institute of Technology. Following an evaluation by an International Advisory Group in July 2021, the Minister for Further and Higher Education, Research, Innovation and Science announced the establishment of Ireland's newest university by May 2022. This represents a very positive milestone for the south east – the first university for the region. This success is a further testament to the ambition of all in our communities to bring together two well-established HEIs into a fully unified multi-campus organisation with the scale, breadth, and performance of a university of the highest international standing; a university grounded on impactful connectivity with staff, students, and external stakeholders, while drawing strength from regional and international collaborations. My sincere appreciation to all colleagues and student representatives who led and participated in the many work streams and working groups, those in our Project Office, and those colleagues, student representatives, Governing Body members, collaborative partners and external stakeholders who represented the outcomes of our work throughout the evaluation process. Our new university has strong foundations developed over five decades and we look forward to the new and significant national and international opportunities that lie ahead for us as a unitary multi-campus university. With designation we will be better positioned to leverage these opportunities for the benefit of the people and regions we serve; to meet the challenges that we face as a region and country; to drive social and economic transformation; and ultimately to deliver on the expectations of our stakeholders.

We reached our 50th anniversary in this reporting period and while we were not able to mark the occasion as we would have wished, this in no way detracts from the pride we take in all the successes over the decades that has brought us to this point in our development, and the gratitude we have for all those who have contributed to this throughout the years. The spirit that saw the establishment of our college and the first intake of students in 1970, has continued to sustain and nurture our community and those we serve throughout the decades.

COVID-19, the lockdowns and their after-effects will undoubtedly have a lasting impact on all of us and our world. The vital role of higher education institutions in social and economic recovery will never be more important and I am confident that we will rise to these additional challenges as we emerge from this pandemic stronger, more relevant, and even more determined than before. I gratefully acknowledge and sincerely thank all our academic, professional management and support staff, our students and graduates, and our collaborative partners, for their commitment and contribution to our important work throughout a time that we will never forget.

**Dr Patricia Mulcahy**  
President

## ORGANISATIONAL DEVELOPMENTS





## 1.1 STRATEGIC PLANNING, IMPLEMENTATION AND REVIEW CONTEXT

### 1.1.1 CINNTE INSTITUTIONAL REVIEW 2020

The Institute completed its CINNTE Institutional Review 2020 in this reporting period. This is a QQI external review which is an important element of the broader quality framework for Institutes of Technology in Ireland. CINNTE Reviews evaluate the effectiveness of the quality assurance procedures of institutions, compliance with European standards for quality assurance and adherence to QQI policies and procedures. CINNTE Reviews also explore how institutions have enhanced their teaching, learning and research and their quality assurance systems and how well institutions have aligned their approach to their own mission, quality indicators and benchmarks.

The Institute submitted a comprehensive Institutional Review Self-Evaluation Report (ISER) to QQI in December 2019. The ISER was developed through a broad and inclusive consultative process, building upon a series of peer reviews and consultations conducted since the last institutional review in 2010/2011. These are summarised in Table 1 and include reviews of governance, teaching and learning, research and innovation, encompassing programmatic and academic domains, as well as professional, managerial and support services.

The CINNTE Review was carried out by an Independent Review Team (IRT) selected by QQI and chaired by Dr Elsa M. Núñez, President of Eastern Connecticut State University. The review visit, initially scheduled to take place on site at the Institute in March 2020, was rescheduled to a virtual visit in June 2020 due to the COVID-19 pandemic. This CINNTE Review for Institute of Technology Carlow was the first QQI CINNTE review to be conducted virtually and was one of the first virtual institutional reviews in Europe. Throughout the month of June 2020, the IRT met with students, staff and external stakeholders through twenty-eight different meeting sessions. These sessions, together with a review of a wealth of documentation across all institutional activities, satisfied the IRT that the Institute is aligned with QQI's Statutory QA Guidelines and with ESG 2015.

The IRT report pointed to the fact that the Institute *"has engaged in a transformative process since its last institutional review in 2010. It has had a clear strategic focus since 2012 in preparing for technological university status...IT Carlow's commitment to lifelong learners, its student-centred culture, new innovations in its research capacity, and regional partnerships position IT Carlow well to meet its vision to be a leading technological university, and respond to Ireland's National Strategy*

for Higher Education (2011) to provide students with transitions and career pathways to foster employment, lifelong learning, civic engagement, and regional economic growth."

The self-evaluation review has identified a range of new opportunities and actions for the future to ensure additional positive outcomes for students, staff and stakeholders. These actions together with the recommendations from the IRT have been prioritised for implementation in the coming months and years.

Table 1 **Institute of Technology Carlow Strategic Planning, Review and Quality Enhancement milestones 2012-2021 underpinning CINNTE Institutional Review 2020**

2012	2013	2014	2015	2016
<p>TUSEI MOU I 2012-2014</p> <p>Joint Stage 1 TU Submission</p>	<p>Outcomes Review of ITC Strategic Plan 2009-2013</p>	<p>ITC Strategic Plan 2014-2018</p> <p>ITC/HEA Compact 2014-2017</p>	<p>ITC Vision and Implementation Framework for TU</p>	<p>ITC Strategic Plan 2014-2018</p> <p>Midterm Review</p>
<p>QA/QE Gap Analysis and Work Plan</p> <p>Postgraduate Research Review</p> <p>Collaborative and Transnational Provision Review</p>	<p>Progress Review of Institutional Review Outcomes</p> <p>Delegated Authority extension to all Level 9 Taught Programmes</p>	<p>HEA Performance Funding/SDC1</p> <p>MOA II with Military College – Irish Defence Forces</p> <p>Appointment of CORE Directors</p> <p>Establishment of <i>Research and Commercialisation Support Centre</i> and <i>Postgraduate Studies Support Office</i></p>	<p>HEA Performance Funding/SDC2</p> <p>Stage 1 Quinquennial Review (Strategic) Faculties, Campuses, Centres</p> <p>DA Extension to all Level 9 Research Programmes and Joint Awards</p> <p>Commencement of PMSS Reviews</p>	<p>HEA Performance Funding/SDC3</p> <p>Stage 2 Quinquennial Review (Programmatic) Faculties, Campuses, Centres</p> <p>Research Strategy 2016-2020</p> <p>Strategic Review PMSS: Library and Computing Services</p> <p>Establishment of Design+Technology Gateway</p>

ANNUAL INSTITUTIONAL QUALITY REPORTS (AIQR)

ANNUAL CORPORATE GOVERNANCE PROGRAMME OF INTERNAL AUDITS

The full IRT report is published on the QQI website (QQI (2020) *Institute of Technology Carlow – CINNTE Institutional Review 2020*, [www.qqi.ie/Reviews/Pages/Institute-of-Technology-Carlow-CINNTE-Institutional-Review-2020-.aspx](http://www.qqi.ie/Reviews/Pages/Institute-of-Technology-Carlow-CINNTE-Institutional-Review-2020-.aspx)). Institute of Technology Carlow sincerely thanks all members of the IRT, particularly the Chair of the IRT, Professor Elsa Núñez and the IRT Coordinator, Professor Pádraig Ó Duibhir, for their expert engagement with the process and their highly constructive feedback and report. The Institute also gratefully acknowledges the work of the members of the Institutional Reviews Unit in QQI for guiding and supporting Institute of Technology Carlow in completing this review in unprecedented and extraordinary times.

	2017	2018	2019	2020	2021
	TU MOU II 2017-2020	ITC Strategic Plan 2019-2023 ITC HEA Compact 2018-2021	Institutional Self-Evaluation Report (ISER) 2019	Research and Innovation Impact Strategy 2020-2025 CINNTE Institutional Review 2020	Minister for FHERIS announces establishment of South East Technological University by 1st May 2022
HEA Performance Funding/SDC4		New HEA Compact 2018-2021	HEA Performance Funding/SDC1	Designated Awarding Body Status	Cross-institutional Programmatic Reviews and Implementation of the new Academic Delivery Framework
Graduate Attributes Framework		Institutional Application for Athena SWAN Bronze Accreditation	Athena SWAN Bronze Award	New Academic Delivery Framework Design	
Establishment of the Office for Institutional Planning and Research		Extension Level 10 Provision - Health Sciences	Joint Application for TUSEI	HEA Performance Funding / SDC2	Approval by the Chinese Ministry for Education for the establishment of the Carlow International College of Technology with Chinese University partner HUAHE
Establishment of the Office for Equality, Diversity and Inclusiveness		Blended Learning Framework: Pilot Implementation	Carlow College MOA	Student Success Strategy – LEAP (Learner Engagement and Progression)	
Strategic Review PMSS: Student Services, Academic Admin., Estates		MOA with Irish Gestalt Institute and Tivoli Institute	Strategic Review PMSS: Development & Research; Sport	Academic Council Effectiveness Review	HEA-SALI Engineering and Innovation
		Establishment of socialCORE	Establishment of Insurtech DAC and C4D DAC	Governing Body Effectiveness Review	Cross-institutional modification of delivery, assessment and support associated with COVID-19 Pandemic
			MOA III Military College – Irish DF	Cross-institutional modification of delivery, assessment and support associated with COVID-19 Pandemic	Placement in the top 5 Irish universities in U-Multirank World Rankings 2021
			Establishment of eduCORE		

## ANNUAL CORPORATE GOVERNANCE FINANCIAL AUDITS

## ANNUAL INSTITUTIONAL REPORTS AND FINANCIAL STATEMENTS

## 1.1.2 HEA COMPACT 2018-2021

This reporting period (2019-2020) saw the second annual performance review of the Institute's Mission-based Performance Compact 2018-2021 with the Higher Education Authority (HEA). This Compact details a series of twelve institutional priorities and associated sets of multi-annual targets that are designed to ensure that the Institute, as part of the broader higher education sector, contributes towards the successful delivery of six Key System Objectives and Key System Targets (full details can be found at <https://hea.ie/assets/uploads/2017/04/Institute-of-Technology-Carlow-Mission-Based-Performance-Compact-2018-2021.pdf>).

The detailed Compact Self-Evaluation Report (SER) for 2019/2020 profiled an Institute that had not only made significant progress on its strategic goals and objectives, but also an institute-wide response to an array of unprecedented challenges arising from the global pandemic from early 2020 onwards. Notwithstanding the abrupt pivot to remote learning, assessment and student/staff supports for the second half of the reporting period, the Institute was pleased to provide evidence for meeting all its 2019/2020 Compact targets. These are synthesised in Table 2.

As part of the annual performance compact process, the Institute submitted an impact case study. In September 2021, the Institute received a funding award of €1 million for the work of the Faculty of Lifelong Learning with Family Carers Ireland. This was one of five such awards that the HEA made in 2021 as part of the Strategy and Performance Dialogue process involving Irish higher education institutions.

Table 2 **HEA Performance Compact – Key Systems Objectives, Institutional Strategic Priorities and 2019/2020 Progress and Targets Achieved**

Key System Objective (KSO)	Institutional Priority Compact 2018-2021	2019/2020 Progress and Targets Achieved
<p><b>KSO 1:</b> Providing a strong talent pipeline combining knowledge, skills and employability which responds effectively to the needs of our enterprise, public service and community sectors, both nationally and regionally, and maintains Irish leadership in Europe for skill availability.</p>	<p><i>Institutional Strategic Priority 1a</i> Institute of Technology Carlow will maintain its position as market leader of lifelong learning WTE student numbers to 2020 through our continued effective response to the needs of our enterprise, public service and community sectors. We will continually enhance the skill base of the workforce and extend our opportunities for Springboard participants through the provision of a strong talent pipeline combining knowledge, skills and employability, which responds to the skills deficit and upskilling requirements of 2020 and beyond.</p> <p><i>Institutional Priority 1b</i> Institute of Technology Carlow will optimise the learner experience and prioritise the development of Graduate Attributes that meet the needs of learners, social innovation, public and private enterprise, nationally and globally. We will continuously improve the learning experience so that all learners acquire skills and develop as independent learners. All programmes will provide students with a range of opportunities to develop, practice and be assessed on an agreed range of key employability skills and graduate attributes.</p>	<p>5.1% increase in full-time learners (exceeding the original Compact target of a 2% increase for 2019/2020 compared to 2018/2019).</p> <p>10.9% increase in lifelong learners (exceeding the original Compact target of a 2% increase for 2019/2020 compared to 2018/2019). Lifelong learners accounted for 46.8% of total enrolments.</p> <p>340 Springboard+ places allocated across 12 programmes.</p> <p>7.0% increase in apprentices (exceeding the original Compact target of a 2% increase for 2019/2020 compared to 2018/2019). This arises from the increased demand for electrical instrumentation apprenticeships.</p> <p>Employability statements developed for the Faculties of Science, Engineering, Business and Humanities, Lifelong Learning, and the Wexford Campus.</p> <p>All full-time honours degree programmes incorporate work based/experiential learning (54 programmes with work placements).</p> <p>Ongoing embedding of Institute of Technology Carlow Graduate Attributes across all programmes.</p>

Key System Objective (KSO)	Institutional Priority Compact 2018-2021	2019/2020 Progress and Targets Achieved
<p><b>KSO 2:</b> Creating rich opportunities for national and international engagement which enhances the learning environment and delivers a strong bridge to enterprise and the wider community.</p>	<p><i>Institutional Strategic Priority 2a</i> Institute of Technology Carlow will develop and implement an effective internationalisation strategy informed by Irish Educated Globally Connected, An International Education Strategy for Ireland 2016-2020. This strategy will enhance institutional collaboration, student recruitment and international mobility activities focusing on strategically identified key markets.</p> <p><i>Institutional Priority 2b</i> Institute of Technology Carlow will increase the output of economically relevant knowledge, know-how and patents through strengthening institutional outputs delivered through our technology transfer and enterprise support activities and among researchers.</p>	<p>105% increase in gross international student fee revenue from 2014/2015 baseline (exceeding the original Compact target of a 25% increase).</p> <p>13% fulltime international students (exceeding the original Compact target of 12.5%).</p> <p>New programme with Jilin Normal University, China approved and new programme with Henan University of Animal Husbandry and Economy, China at an advanced stage of the review and validation processes.</p> <p>CINNTE Institutional Review Report 2020 outcomes which commended the strong level of engagement with industry and enterprise partners, concluding that the Institute is a driver of regional development for the region.</p> <p>89 innovation vouchers (Compact target 62); 52 sin-in/spin out companies (Compact target 44); 21 collaborative research agreements with industry.</p> <p>Number of commercially relevant technologies (licenses, options, assignments) = 215 (Compact target 187).</p> <p>Secured Enterprise Ireland funding to establish Engineering the South East Cluster.</p>

Key System Objective (KSO)	Institutional Priority Compact 2018-2021	2019/2020 Progress and Targets Achieved
<p><b>KSO 3:</b> Excellent research, development and innovation that has relevance, growing engagement with external partners and impact for the economy and society and strengthens our standing to become an Innovation Leader in Europe.</p>	<p><i>Institutional Priority 3a</i> Institute of Technology Carlow will continue to increase postgraduate research enrolments in disciplines aligned to enterprise and other national needs in line with Technological University criteria and informed by the goals of Innovation 2020.</p> <p><i>Institutional Priority 3b</i> Institute of Technology Carlow will develop and implement its engagement strategies with industry to provide opportunities for knowledge transfer and to achieve increased industry funding of applied research at the Institute.</p>	<p>Publication of Research and Innovation Impact Strategy in March 2020.</p> <p>CINNTE Institutional Review Report 2020 outcomes which commended the excellent support for staff engaging with research.</p> <p>14% increase in postgraduate research enrolments (above the Compact target of a 10% increase). This is the highest % WTE postgraduate researcher cohort in 2019/2020 in the technological sector at 4.8%, compared to a mean of 2.2% for the sector (source, HEA RFAM). This also supports over 300 organisations annually from the regions broad-based enterprise sector RDI.</p> <p>69 industry funded projects.</p> <p>25 research projects with direct industry funding element.</p>

Key System Objective (KSO)	Institutional Priority Compact 2018-2021	2019/2020 Progress and Targets Achieved
<p><b>KSO 4:</b> Significantly improves the equality of opportunity through Education and Training and recruits a student body that reflects the diversity and social mix of Ireland's population.</p>	<p><i>Institutional Priority 4a</i> Institute of Technology Carlow will maintain its <i>National Access Plan for Equity of Access to Higher Education</i> new entrant numbers by further developing, implementing and maintaining non-standard entry routes aimed at the six target groups, lone parents and first-generation learners.</p> <p><i>Institutional Priority 4b</i> Institute of Technology Carlow will develop and implement its formal Learner Engagement Framework to further embed an Institute-wide approach to access strategies for those from the six target groups, lone parents and first-generation learners.</p>	<p>150 mature new entrants (14.4% of new entrants, which is the highest % in the technological sector).</p> <p>In the latest HEA socio-economic analysis, 17% of Institute of Technology Carlow learners are classified as disadvantaged and the Institute has a mean deprivation index score of -2.3.</p> <p>Operation of CAP (Carlow Access Programme), CRP (Carlow Revision Programme) and the Enabling Transitions Programme.</p> <p>51 Further Education linked providers.</p> <p>A lead partner in the Southern Cluster with 2 of 3 projects co-led by Institute of Technology Carlow.</p> <p>1916 Bursaries.</p> <p>Institute of Technology Carlow Cluster co-lead in Traveller in Education workstream (engagement with NTRIS tin-smithing initiative) and the Enabling Transitions project.</p> <p>Institute's Student Success Strategy or 'LEAP' framework developed and completed.</p>



Key System Objective (KSO)	Institutional Priority Compact 2018-2021	2019/2020 Progress and Targets Achieved
<p><b>KSO 5:</b> Demonstrates consistent improvement in the quality of the learning environment with a close eye to international best practice through a strong focus on quality and academic excellence.</p>	<p><i>Institutional Priority 5a</i> Institute of Technology Carlow will continue to prioritise the Continuous Professional Development of all staff.</p> <p><i>Institutional Priority 5b</i> Building on our ICT infrastructure and virtual learning environment, we will implement strategic pilot projects within existing programmes and cross-campus and develop an integrated institutional strategic plan for blended, flexible and distributed learning.</p>	<p>CINNTE Institutional Review Report 2020 outcomes which confirmed alignment with QQI's Statutory QA Guidelines and with ESG 2015.</p> <p>ISER (Institutional Self-Evaluation Report 2020) which identified additional strategic initiatives for implementation. These include a new Academic Delivery Framework, which will be implemented through Programmatic Review 2021.</p> <p>A comprehensive range of CPD opportunities for staff via the Teaching and Learning Centre and support for staff in pursuing higher degrees external to the Institute.</p> <p>48% of all full-time academic staff qualified to level 10 (equating to 53% of full-time staff delivering Level 8 to L10 programmes as per the TU Act 2018 definition).</p> <p>Improved U-Multirank performance with the highest rank (grade A) achieved in five performance metrics.</p> <p>Due to COVID-19 restrictions, all modules across all disciplines were delivered through blended learning from March to May 2020. Hybrid learning was adopted across all programmes in 2020/2021. (This exceeded the pre-pandemic Compact target of 6 blended learning additional programmes).</p>

Key System Objective (KSO)	Institutional Priority Compact 2018-2021	2019/2020 Progress and Targets Achieved
<p><b>KSO 6:</b> Demonstrates consistent improvement in governance, leadership and operational excellence.</p>	<p><i>Institutional Priority 6a</i></p> <p>We will develop and implement a strategy to support and develop members of our Governing Body, Executive and Management Teams in fulfilling their roles to the highest standard.</p> <p><i>Institutional Priority 6b</i></p> <p>We will develop a strategy and plan for the implementation of the 2018 Higher Education Gender Equality Task Force and the attainment of Athena SWAN Bronze Institutional Award by 2019.</p>	<p>Significant progress made on joint application for designation as a Technological University (application submitted in April 2021).</p> <p>CINNTE Institutional Review Report 2020 outcomes which commended the governance, leadership and operations of the Institute.</p> <p>Effectiveness reviews of Governing Body and Academic Council.</p> <p>Compliance with all governance requirements.</p> <p>Athena SWAN Institutional Bronze Award in May 2019.</p> <p>Appointment of a Director for People and EDI, who is a member of the Senior Management team.</p> <p>Adoption and implementation of a Gender Expression Policy and a Returning to Work Policy.</p> <p>Adoption of a new policy on the cross-institutional EDI Committee.</p> <p>Commencement of Departmental applications for Athena SWAN Bronze Awards in the Department of Humanities, Department of Computing, Department of Built Environment; Department of Aerospace, Mechanical and Electronic Engineering and the Faculty of Engineering Extended Campus.</p> <p>LGBTQ+ training for staff by ShoutOut.</p> <p>Successful application for a Director of Engineering Research and Innovation under the HEA Senior Academic Leadership initiative.</p>

### 1.1.3 RESEARCH AND INNOVATION IMPACT STRATEGIC PLAN 2020-2025

Institute of Technology Carlow's Research and Innovation Impact Strategy 2020-2025 was launched in spring 2020 and was a result of in-depth engagement with researchers, enterprise development and research commercialisation personnel, and regional, national and international collaborative partners (<https://www.itcarlow.ie/resources/ri-impact-strategic-plan.htm>).

The strategy prioritises the further development of critical mass in impactful research and innovation, whilst also capitalising on the opportunity to develop a uniquely transdisciplinary interconnected community of researchers and innovators. The latter arises from the integrated research and innovation institutional ecosystem developed to date and the potential for further innovations to nurture new and emerging areas of enquiry at the interstices between disciplinary boundaries. This will involve the strategic linking of knowledge, specialism and capacity across the disciplinary spaces to create impact. Through integrated infrastructure and interdisciplinary culture, the Institute seeks to lead in addressing complexity and global problems in cross-cutting themes relevant to 21st century contexts.

The strategy is shaped by the Institute's stated commitment to the United Nations Sustainable Development Goals, and as researchers and educationalists, a particular responsibility to engage, educate and lead on climate action and sustainable development. The strategy is informed by Institute of Technology Carlow's Strategic Plan 2019-23, CINNTE Institutional Review 2020, Technological Universities Act 2018, and the Technological Universities Research Network (TURN) Report 2019.

The strategy focuses on impact across four key strategic cross-cutting themes which are: strategic direction, strengthening capacity, actively engaging, and creating change.

The plan sets out an ambitious and pragmatic cross-institutional roadmap to increase productivity and innovation in connected and collaborative research, scholarship and creative activities for societal, economic and environmental development, supporting the realisation of the Institute of Technology Carlow vision to be a leading European Technological University.

The strategy strongly signals how intensive collaboration with industry and close engagement with international researchers can act as major catalysts for further regional, national and international investment, research, innovation and employment growth.

Research and Innovation IMPACT was launched on 5th March 2020 with special guest, Professor Dame Jocelyn Bell Burnell. The renowned astrophysicist and researcher from Northern Ireland co-discovered the first radio pulsars in 1967 as a postgraduate student and is credited with one of the most significant scientific achievements of the 20th century. In August 2021 she became only the second woman to be awarded the world's oldest scientific prize, the Copley Medal, the Royal Society's highest prize. The medal is awarded for outstanding achievements in scientific research. In 1967, when she was a 24-year-old student, she was part of a team that discovered pulsars. In her speech encouraging our research community she said "Research and Innovation strategies are very important. They give an overall sense of direction, but research and real life will always insert something unexpected; so always challenge and question." Guest speakers at the launch also included Dr Richard Lally, Dr Clare Lodge, and Mr Dean Klatt.



*Pictured at the launch of Research and Innovation IMPACT are, from left: Dr David Ryan, Dr Clare Lodge, Dr Richard Lally, Professor Dame Jocelyn Bell Burnell, Dr Patricia Mulcahy, Mr Dean Klatt and Mr Declan Doyle*

#### 1.1.4 TECHNOLOGICAL UNIVERSITY OF SOUTH EAST IRELAND PROJECT

The Technological University for the South East of Ireland initiative had its origins in the *National Strategy for Higher Education to 2030* (2011) and the *Programme for Government (2011-2016)*. Following an initial engagement of the two Institutes of Technology in Carlow and Waterford throughout 2012-2014, work on the project recommenced in December 2017, just prior to the enactment of the Technological Universities Act 2018. The later confirmed the broad range of academic, research, engagement, fiscal, leadership, management and governance criteria that is required for a successful designation as a technological university by the merger of two or more institutes of technology.

Immediately prior to the current reporting period, significant progress had been made across a range of areas including the establishment of a joint TU Project Steering Group; the compilation of an Economic Impact Assessment; independent Risk Assessment / Mitigation Strategies and Financial Modelling; scoping and design of a change management programme; definitions, datasets and trajectory targets aligned with national criteria; international benchmarking; cross-institute collaborative projects; consultations with students, staff, external stakeholders and staff representative groups; and a joint application proposal for merger and designation.

In the current reporting period, the project was awarded €2m funding in October 2019 under the competitive HEA Landscape Programme which was designed to support higher education landscape restructuring and consolidation. A further €5.1 m was allocated to the project in October 2020 under the new HEA Technological University Transformation Fund (TUTF). The latter followed from publication of the TURN (Technological University Research Network) Report and the announcement of the competitive multi-annual €90m Technological University Transformation Fund (TUTF) in November 2019.

The additional resources provided an opportunity to the consortium to strengthen its application through mobilisation of an increased number of staff across the institutes and stakeholders across the region. These developments accelerated progress on the initiative resulting in a formal joint application in April 2021 for merger and redesignation as a technological university, followed by an evaluation by an International Advisory Group in July 2021. On 2nd November 2021, the Minister for Further and Higher Education, Research, Innovation and Science announced the establishment of the South East Technological University by 1st May 2022. Work continues on a range of transitional imperatives to ensure that the new organisation will function effectively from

the start, while progressing to a fully unified multicampus university that will be one of the highest international standing formed from the combined strengths of Institute of Technology Carlow and Waterford Institute of Technology. Through the quality of our teaching, research and engagement, the new University will contribute to resolving complex societal challenges, meet the needs of future work, rise to the challenges and opportunities of the digital world and act in support of economic, social and environmental sustainability.

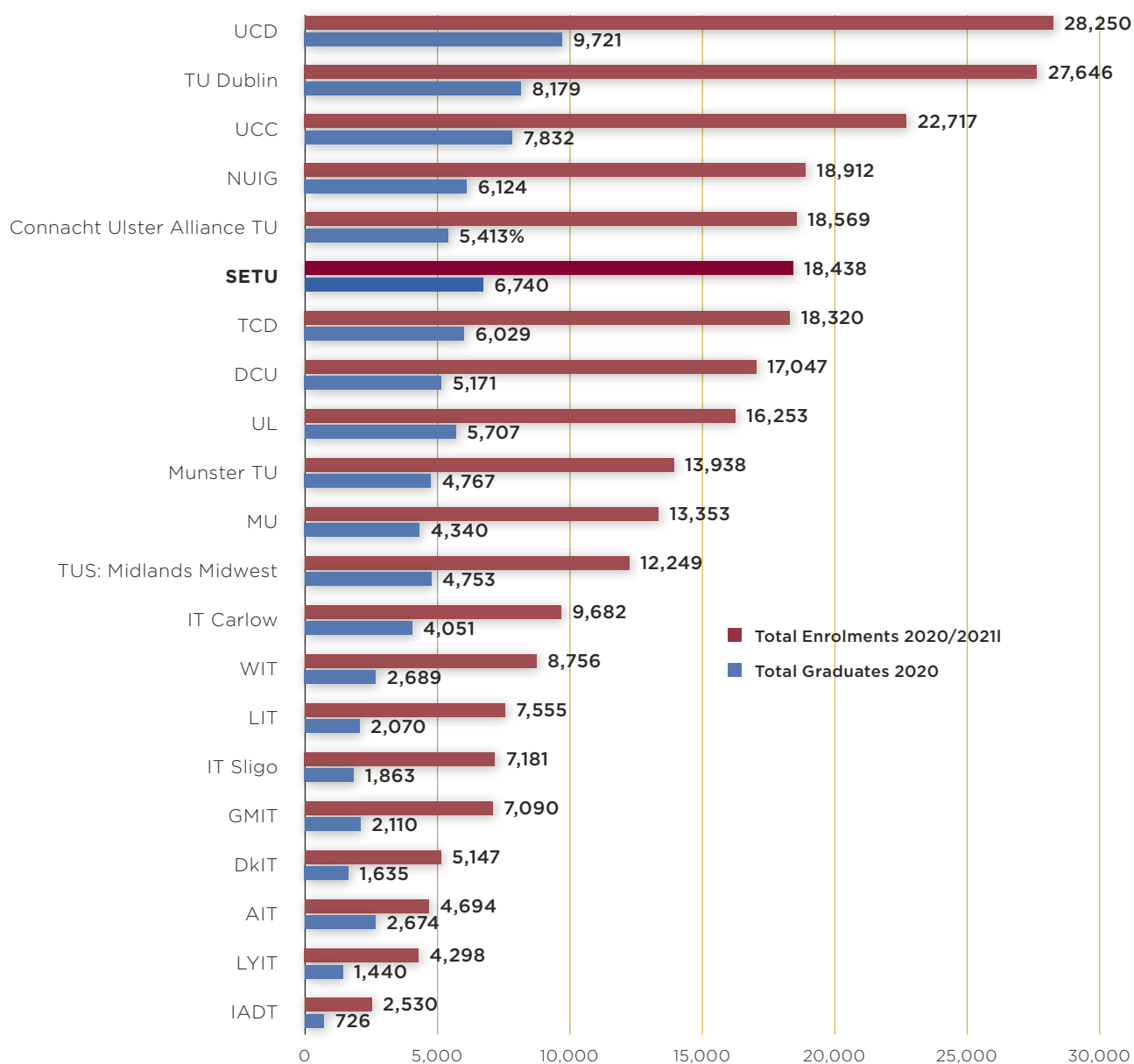


Figure 1

**Total student enrolments 2020/2021 and total graduates 2020 across the technological and university sectors including planned technological universities and their constituent institutes of technology** (Source: HEA.ie <https://hea.ie/statistics/data-for-download-and-visualisations/data-for-download/2020-21-enrolment-data-for-download/> and <https://hea.ie/statistics/data-for-download-and-visualisations/data-for-download/2018-graduates-by-award-type-course-level-field-of-study-broad-and-detailed-institute-and-gender/>). **Note:** HEA enrolment and graduate data excludes certain categories of students including apprentices and incoming Erasmus students.

### 1.1.5 U-MULTIRANK

In September 2021, Institute of Technology Carlow ranked in the five top performing universities in Ireland by U-Multirank World University Rankings 2021.

U-Multirank ([www.umultirank.org](http://www.umultirank.org)) is a multidimensional and international ranking of higher education institutions. It compares university performance across teaching and learning, research, knowledge transfer, international orientation and regional engagement. It is the largest and most inclusive ranking showcasing the diversity in higher education around the world. It is not a league table and does not use composite indicators, nor reputation weights. Therefore, there is no one best university in U-Multirank. The performance of a university is presented with individual scores – graded from 'A' (very good) to 'E' (weak) across the different indicators. Almost 2,000 higher education institutions from 97 countries participated in U-Multirank in 2021.

Institute of Technology Carlow received nine top A grades in U-Multirank 2021, which was up four from 2020. The A grades were awarded for: Bachelor graduation rate; graduating on time (bachelors); interdisciplinary publications; co-publications with industrial partners; publications cited in patents; international academic staff; bachelor graduates working in the region; and, master graduates working in the region. The Institute also received a tenth A grade for the gender balance indicator.

Table 3 **The highest performing Irish higher education institutions in U-Multirank 2021**  
(Source: *U-Multirank 2021 Irish Universities in Global Comparison*).

Rank	Irish universities with the highest number of overall top scores in 2021	Total 'A' scores 2021	Total 'A' scores 2020
1	University College Cork	16 ↑	9
2	University of Limerick	12 ↑	7
3	Technological University Dublin	11 =	11
4	Dublin City University	9 ↓	10
5	Institute of Technology Carlow	9 ↑	5
6	Trinity College Dublin	9 ↑	7



Ranked in the  
**TOP 5**  
Performing  
Universities  
in Ireland 2021



## 1.2 A YEAR IN REVIEW 2019/2020

The 2019/2020 academic year had many highlights including the completion of the CINNTE Institutional Review, launch of the first geo drilling apprenticeship in Ireland and Institute of Technology Carlow football and hurling teams reaching the Sigerson and Fitzgibbon Cup finals. From March 2020 onwards, the Institute's response to the COVID-19 pandemic was given precedence as can be seen from the Year in Review summary below.

### THE YEAR IN REVIEW 2019-2020

September 2019	October 2019	November 2019	December 2019
<p>Completion of Phase 1 works on the South Sports Campus.</p> <p>ETB movement to Mortarstown, opening the way for demolition and site work on the acquired site by the Institute.</p> <p>Launch of the online Employment and Employability Guide.</p> <p>National Ploughing Championship participation.</p> <p>Launch of new ISHA Student Health Matters App. and Interactive eBook.</p> <p>Samantha Morris wins award at the Irish Academy of Management Conference 2019.</p> <p>Launch of a collaborative programme in Building Control Management in partnership with the National Building Control Office (NBCO).</p> <p>Culture Night 2019.</p> <p>Dr Theresa Lowry-Lehnen wins two awards at the Irish Practice Nurses Association Conference (IPNA) 2019.</p>	<p>Institutional Athena SWAN Bronze Award under the Expanded Charter.</p> <p>Conferring of awards and prizes on over 3,000 graduates over eleven ceremonies in Carlow and Wexford.</p> <p>A+ Rating from Enterprise Ireland for Technology Transfer Strengthening Initiative 3 (TTSI3) Review.</p> <p>South East Research Sparks Event.</p> <p>Student Sport Ireland 20X20 Charter.</p> <p>STEP Start Programme</p> <p>Eric Tai awarded the Rising Star in Architectural Technology Award at the RIAI Student Awards.</p> <p>HEA Landscape funding announced for the TU project.</p> <p>HEA Landscape funding announced for the Carlow College St Patricks' Collaboration.</p>	<p>Establishment of eduCORE.</p> <p>Commencement of Phase 2 works on the South Sports Campus.</p> <p>SFI-funded Eureka Science and Technology Festival in association with Science Week 2019.</p> <p>Hosting of the MIDAS 2019 Conference.</p> <p>Mark Gaughran winner of the MIDAS third level electronics project competition.</p> <p>Launch of the first Geo Drilling Apprenticeship programme by Minister of State for Housing and Urban Development.</p> <p>Research Week 2019.</p> <p>Amplitude Conference 2019.</p> <p>Launch of a collaborative programme in Family Caring in partnership with Family Carers Ireland.</p> <p>Launch of a collaborative programme Prevention, Partnership and Family Support in partnership with TUSLA.</p>	<p>Institutional Self Evaluation Report (ISER) 2019 submitted to QQI.</p> <p>New Academic Delivery Framework agreed.</p> <p>Student Success Strategy – LEAP (Learner Engagement and Progression) published.</p> <p>Commencement of demolition works on the former ETB site, adjacent to the Carlow Campus.</p> <p>Almost 120 Academic and Sports Scholarship Awards 2019/2020.</p> <p>Funding announced for Engineering the South East under the Enterprise Ireland Regional Technology Clustering Fund.</p> <p>Funding awarded under the Human Capital Initiative Pillar 2</p> <p>Launch of a new Erasmus+ training resource under Sports Students as Mentors for Boys and Young Men (SSaMs) project by healthCORE.</p> <p>Catching the Light Exhibition, Wexford Campus.</p> <p>Planning application lodged for the new Advanced Science and Technology Building.</p> <p>Graduation of participants in the collaborative programme on Road Programme Management with LASNTG by the Minister of State at the Department of Housing, Planning and Local Government.</p>

January 2020	February 2020	March 2020	April 2020
Designated Awarding Body Status.	Establishment of the Coronavirus Emergency Response Team (5th Feb.).	Launch of Research and Innovation Impact Strategy 2020-2025.	Publication of Institutional Statement on Equity of Assessment.
Funding awarded under the Enterprise Ireland REDF (third cycle) to support rural entrepreneurship.	Fitzgibbon Cup finalists 2020.	VEX IQ Robotics Competition.	Publication of alternate remote cross-institutional assessments and supports necessitated by COVID-19 Pandemic.
Funding awarded under the Enterprise Ireland Capital Programme for engCORE.	Men's Basketball National League Division 1 Presidents Cup finalists 2020.	Games Fleadh 2020 Student Awards.	Continued closure of Irish HEIs due to COVID-19 Pandemic.
Institute awarded a new senior post, Director for Engineering Research and Innovation under the national HEA SAL (Senior Academic Leadership) initiative.		Seachtain na Gaeilge 2020.	Online alternate examinations for the Faculty of Lifelong Learning.
Inaugural Healthy Campus Week.		Institute records its highest number of enrolments for 2019/2020 at 9,102.	
Sigerson Cup finalists 2020.		Closure of Irish HEIs to students from 12th March 2020 due to COVID-19 Pandemic.	Institute of Technology Carlow spinout MicroGen Biotech raised \$3.8 million (€3.47 million) in a funding round led by a number of top US and European agtech investors.
Tyndall Schools Lecture 2020.		Cross-institutional remote delivery of the academic programme and supports to over 9,000 students necessitated by COVID-19 Pandemic restrictions.	
		Designers and scientists at the Institute produce face shields and hand sanitisers for frontline workers in the COVID-19 Pandemic.	
		Launch of the Institute of Technology Carlow 'Together, Apart' Campaign.	

## THE YEAR IN REVIEW 2019-2020

May 2020	June 2020	July 2020	August 2020
<p>Online alternate examinations for all Faculties and Campuses.</p> <p>Institute hold its virtual Clubs and Societies Awards 2020 over a five-day period.</p> <p>First institutional Virtual Open Day.</p> <p>Publication of alternative arrangements for the State Leaving Certificate Examinations.</p> <p>Publication of the Return to Work Safely Protocol: COVID-19 Specific National Protocol for Employers and Workers.</p> <p>Publication of the National Roadmap for Reopening Society and Business (Phase 1 commenced 18th May).</p> <p>Establishment of cross institutional COVID Response Teams (CRTs) in the areas of: National Protocols; PPE Procurement; Hybrid Learning, Student Experience and Support; Remote Working, Researchers; Wexford Campus; Operations and Communications.</p> <p>Institute survey of students and staff – Wellbeing and Education During COVID-19.</p> <p>Student Sport Ireland names Institute of Technology Carlow as the top performing institute of technology in the country when it comes to sports for the second year in a row.</p> <p>Provision of fully funded online masterclasses in Change Management and Positive Wellbeing to assist businesses and individuals during the COVID-19 pandemic.</p> <p>Joseph Fuller wins New York Film Awards - the Grand Jury Award for Best Student Film.</p>	<p>Announcement of a new independent Department of Further and Higher Education, Research, Innovation and Science.</p> <p>Examination Boards and Publication of Examination Results for Summer 2020.</p> <p>CINNTE Institutional Review 2020 – Independent Panel Review from the 10th to the 30th June.</p> <p>Institutional COVID-19 Response Plan and COVID-19 Risk Assessment of environments and activities.</p> <p>Phase 2 of the National Roadmap for Reopening Society and Business commencing 8th June.</p> <p>Revised Roadmap for Reopening Society and Business published 19th June.</p> <p>Phase 3 of the National Roadmap for Reopening Society and Business commencing 29th June.</p> <p>Over 500 funded places awarded to Institute of Technology Carlow (€2mn) across 21 academic programmes up to Masters Degree level, under HEA Springboard+ 2020.</p> <p>240 funded postgraduate places awarded to Institute of Technology Carlow (€1.5mn), across 5 academic programmes, under the Human Capital Initiative Pillar 1.</p> <p>Completion of demolition works on the former ETB site.</p>	<p>Announcement of the appointment of Mr Tom Boland as Programme Executive Director for the TU project.</p> <p>Strategic Dialogue with QQI.</p> <p>Launch of the Return-to-Campus 2020 website.</p> <p>Further 100 funded places awarded to Institute of Technology Carlow under HEA Springboard+ 2020.</p> <p>July Stimulus Package Announced.</p>	<p>Joint application for TU funding support under the Technological University Transformation Fund 2020.</p> <p>Launch of the Hybrid Learning website.</p> <p>Autumn Assessments.</p> <p>Validation of the first major award programme with Carlow College St Patricks-HDip in Journalism.</p> <p>Delay in introducing Phase 4 of the Roadmap for Reopening Society and Business announced 4th August and additional measures introduced.</p> <p>Introduction of additional public health measures for Kildare, Laois and Offaly 7th August.</p> <p>Introduction of new national measures to limit the spread of COVID-19 18th August.</p> <p>Implementation Guidelines for Public Health Measures in HEIs published.</p> <p>International Student COVID-19 Protocol published.</p>

### 1.3 A YEAR IN REVIEW 2020/2021

The 2020/2021 academic year was again dominated by the COVID-19 pandemic with most learning eventually moved online as required by the Public Health response. The highlight of the year was the work of Institute of Technology Carlow and Waterford Institute of Technology on the technological university project with the submission of a joint application in April to the Minister for Further and Higher Education, Research, Innovation and Science seeking technological university designation and the virtual visit of an International Advisory Panel in July.

#### THE YEAR IN REVIEW 2020-2021

September 2020	October 2020	November 2020	December 2020
<p>Hybrid learning model introduced and return of students to campus in smaller numbers with COVID-19 safety precautions implemented.</p> <p>Government's Resilience and Recovery 2020-2021: Plan for Living with COVID-19 published 15th September.</p> <p>Laptop loan scheme to assist students with hybrid learning launched.</p> <p>Institute of Technology Carlow Student Info 101 mobile app launched.</p> <p>Carlow County Council grant planning permission for the Advanced Science and Technology Building.</p>	<p>Institute receives €13million funding for 4 projects under the Human Capital Initiative.</p> <p>€5.1m funding for the TU project announced under the Technological University Transformation Fund (TUTF).</p> <p>Carlow County Council grant planning permission for the Corporate Support Services Building.</p> <p>€644,504 HEA Support for COVID-19 Related Research Costed Extensions announced for researchers whose work has been affected by COVID-19.</p> <p>Level 5 restrictions announced nationally from 21st October to 1st December. Lectures moved online.</p> <p>Institute staff and students win three of the top honours at the Smarter Campus Travel Awards.</p>	<p>Over 3,000 graduands conferred over eleven virtual conferring ceremonies.</p> <p>QQI publishes the Institute's CINNTE 2020 Institutional Review Report on 18th November.</p> <p>Virtual Open Day held 26th November.</p> <p>Beth Villis, a fourth year bioscience student, selected for a place on the prestigious two-year Research, Development and Applications (RDA) graduate programme for Kerry Group.</p> <p>Institute spinout company, Aerial Agritech, awarded Phase 1 Small Business Innovation Research (SBIR) funding by the Marine Institute and Enterprise Ireland.</p>	<p>Level 3 restrictions (with some modifications) introduced nationally from 1st December. Increased face-to-face engagement with students on campus.</p> <p>Dr Theresa Lowry-Lehnen awarded Practice Nurse of the Year 2020 at the Irish Healthcare Awards.</p> <p>New fully funded Level 7 Certificate programme in People Management and Strategy launched.</p> <p>Seven students awarded 1916 Bursaries by the Institute.</p> <p>Revised student charter launched.</p> <p>Level 5 restrictions reintroduced from Christmas Eve until 12th January.</p>

## THE YEAR IN REVIEW 2020-2021

January 2021	February 2021	March 2021	April 2021
<p>Taoiseach announces additional measures to existing Level 5 restrictions on 6th January. All lectures and most other activities move online.</p> <p>Institute awarded €121,000 under the HEA Strategic Alignment of Teaching and Learning Enhancement (SATLE) Funding 2020.</p> <p>Institute of Technology Carlow receives funding for a number of strategic initiatives to provide greater access and engagement for students with a disability.</p> <p>Funding of over €52,000 announced for the provision of a sensory room and accessibility software for students with disabilities and other initiatives.</p> <p>Virtual Open Evening held 20th January.</p> <p>Extension of current Level 5 lockdown restrictions to 5th March.</p> <p>Inaugural meeting of the TU Regional Engagement Advisory Group.</p>	<p>Students' Union and Student Services host the Lift Your Spirits campaign.</p> <p>Department of Humanities Athena SWAN Committee host two days of special online guest talks.</p> <p>Fifty-nine academic scholarships and eight Claddagh Scholarships awarded 2020/2021. Six students received the President's Volunteers Award.</p> <p>Extension of Level 5 lockdown restrictions to 5th April and Living with COVID-19 Plan published 23rd February.</p> <p>HEA Compact Self-Evaluation Report 2019/2020 submitted.</p> <p>Inaugural meeting of reconfigured cross-institutional EDI Committee held on 26th February.</p>	<p>Institute of Technology Carlow and Waterford Institute of Technology announce details of €4.5 million cross-institutional PhD scholarship initiative.</p> <p>South East Engineering Festival 1st-5th March.</p> <p>Institute of Technology Carlow and Carlow College St. Patrick's collaborate on a digital art exhibition, IAMINTHIS, to celebrate International Women's Day.</p> <p>Return of essential and time-critical activities to campus including practical based learning essential to progression and programme completion for 2021 graduates (including apprentices).</p> <p>The biennial seminar on Pivot in a Pandemic – Linking Education, Challenges and Opportunities, took place online 23rd March.</p> <p>Twelve Research Brown Bag Lunchtime Sessions from Institute of Technology Carlow and Waterford Institute of Technology researchers from February-May 2021.</p>	<p>International Student Showcase 2021 held online from 14th to 20th April.</p> <p>Twenty-two Institute lecturers receive Teaching Hero Awards 2020 from the National Forum for the Enhancement of Teaching and Learning.</p> <p>Online examinations for the Faculty of Lifelong Learning.</p> <p>Phased easing of Level 5 restrictions from 12th April.</p> <p>New research initiative launched by healthCORE, FASTr - Female Athlete Science Translated.</p> <p>Submission of a joint application to the Minister for Further and Higher Education, Research, Innovation and Science to establish a TU in the South East (30th April).</p>

May 2021	June 2021	July 2021	August 2021
<p>Online examinations for all Faculties and Campuses.</p> <p>The Institute becomes the first Irish institute of technology to receive approval from the Chinese Ministry of Education to establish a joint institute in China. The Carlow International College of Technology will run in partnership with Henan University of Animal Husbandry and Economy (HUAHE).</p> <p>Inaugural Institute of Technology Carlow and Waterford Institute of Technology Clubs and Societies Week.</p> <p>Virtual Open Day held 15th May.</p> <p>Ending Sexual Violence, Prevention and Support Committee (ESP) established.</p> <p>Tenth annual computing showcase sponsored by Netwatch launched.</p> <p>Institute of Technology Carlow and Carlow College St. Patrick's host a symposium on Gender and Race in Higher Education on 25th May.</p> <p>Programmatic review of all programmes across all campuses and faculties, aligned with the new Academic Delivery Framework, completed in 2021. Virtual peer review/evaluation panels from 24th May to 4th June.</p>	<p>Meeting with HEA and Advisory Group in relation to the Compact Self-Evaluation Report 2019/2020.</p> <p>500 funded places awarded to Institute of Technology Carlow across 17 academic programmes up to Masters Degree level, under HEA Springboard+ 2021.</p> <p>New degree course, Bachelor of Science in Pharmacy Technician Studies, announced.</p> <p>Progression agreement between Institute of Technology Carlow and Longford Women's Link established.</p> <p>Institute secures funding from Enterprise Ireland to deliver New Frontiers programme for emerging entrepreneurs across the south-east region.</p> <p>DesignCarlow.ie website launched to mark 50 years of design education at the Institute.</p> <p>Digital Hustle - Ireland's first school for influencers launched.</p> <p>Further phased easing of COVID-19 restrictions in June and July.</p>	<p>TU Advisory Panel meetings 12th to 22nd July.</p> <p>Lifelong Learning Online Open Week.</p> <p>Institute receives funding support from the National Forum for the Enhancement of Teaching and Learning for 7 seminars as part of the 2021/2022 annual National Seminar Series.</p> <p>Institute awarded funding by the HEA for 320 places on 11 programmes as part of the second round of modular skills provision funding for 2021.</p> <p>Postgraduate scholarship initiative for players and ex-players launched by the Institute, FAI and PFAL.</p> <p>Advanced Science and Technology Building project issued for tender.</p> <p>South Sports Campus hosts Athletics Leinster Championships with elite athletes training</p>	<p>Higher education institutions represented by IUA, THEA and RCSI announce their plans for a safe return to campuses in September 2021 with maximum on-site presence.</p> <p>Defence Forces engineering project, DISARM, awarded funding under Public Service Innovation Fund.</p> <p>Institute of Technology Carlow and Dublin City University partner in a new level 9 Certificate in Innovative Materials for Industry 4.0.</p> <p>Autumn Assessments.</p>

## 1.4 RESPONSE TO COVID-19 PANDEMIC

The Institute's initial response to the developing COVID-19 pandemic was the establishment of an Emergency Response Group on 5th February 2020, which started the process of contingency planning for various scenarios including campus closure. On the 12th March 2020, the Taoiseach announced that HEIs would close to students until the 29th March. This closure was subsequently extended for the remainder of the 2019/2020 academic year. Contingency plans, underpinned by the appropriate quality assurance processes overseen by Academic Council, allowed for the completion of all academic programmes.

In May 2020, the Senior Executive Team established eight cross-institutional COVID Response Teams (CRT) to develop detailed responses to COVID-19 across all areas impacting the Institute's community. These were as follows: PPE Procurement CRT; National Protocols CRT; Operations and Communications CRT; Hybrid Learning CRT; Student Experience and Support CRT; Remote Working CRT; Research CRT; Wexford Campus CRT. The goals of the COVID Response Teams were to minimise the detrimental impact of the pandemic on students and staff, to protect the health, safety and wellbeing of all, and to enhance opportunities for engagement and learning. Membership of each COVID Response Team reflected the skills and experience required to produce an agile and appropriate response within the area of focus. The Student Experience and Support CRT and the Hybrid Learning CRT focused on aspects of learner engagement and progression. The Research CRT established guidelines and implementation plans for the return of researchers to campus, which allowed for a phased and safe return of researchers to campus in summer and autumn of 2020.

Significant planning, infrastructural investment, training and support took place from March 2020 with examples of initiatives listed in Table 4.

The work of the Emergency Response Group and the CRTs led to the creation of the Institute's COVID-19 Response Plan, which formally articulates the Institute's plan, including risks, roles and responsibilities. This plan is published on the Institute's website and is updated regularly in light of new government guidelines and scientific evidence.

The appropriateness of the Institute's response to the COVID-19 pandemic in 2019/2020 was highlighted by the QQI Director of Quality Assurance in November 2020 following completion of the CINNTE Institutional Review 2020. He said, '*The pandemic has shown us just how important it*



*is that higher education institutions can respond quickly to changing circumstances. In order to do so safely while serving students well and maintaining academic standards they must have robust internal quality assurance procedures. The panel's findings in this CINNTE review confirms that IT Carlow has such procedures in place and they are working effectively. They rely on clear aims, clear governance and consultation structures, and a commitment to continuous improvement, equality and diversity.'*

Institute of Technology Carlow engaged a hybrid learning model from September 2020 (Figure 2). Hybrid learning has clear definitions and is described as a learner-centred process that blends the digital, printed, recorded and traditional face-to-face structured classes to achieve learning outcomes. It is grounded in best pedagogical practice and is informed by feedback from staff and student surveys. Institute of Technology Carlow's Hybrid Learning Framework and the principles underpinning it have been established and are supported by clearly defined protocols. The Teaching and Learning Centre, library and computer services undertook a significant amount of work in the area in order to facilitate the rollout of hybrid learning through design and delivery.

In early September 2020, Institute of Technology Carlow undertook an intensive quality assurance exercise in which it considered all of its programmes and modules and looked at the alternative teaching, learning and assessment (TLA) strategies proposed for each. In preparation for this process, it set out guiding principles for TLA in a hybrid teaching environment. Learning from this, Institute of Technology Carlow put in place enhanced guidelines on group work, ethics, group discussion, academic integrity and assessment guidelines. These were underpinned by continual CPD activity. The importance the Institute places on academic integrity is reflected in its involvement and engagement in the National Academic Integrity Network (NAIN).

Mindful of institutional capacities and capabilities, the Institute set guidelines on timetabling and supporting students. Alongside these, additional supports were made available through library and information services, which were accessible to students both on and off-campus.

Throughout the 2020/2021 academic year, the numbers of students on campus were limited in accordance with the COVID-19 restrictions at the time. Due to the impact of COVID-19 and the delay in the issuing of Leaving Certificate results, students returned later to campus than normal with the expectation that all students would have some on campus presence each week. In late September 2020, daily student numbers on campus were approximately 22% of full-time registered students. Level 5 restrictions were introduced nationally from 21st October 2020 to

1st December and as lectures moved online, daily student numbers on campus in November were reduced to 13%. In January 2021 as the COVID-19 situation worsened nationally, further lockdown restrictions were introduced, and daily student numbers were down to 1.2% in February. In March, there was an increase in students on campus with 6.7% present as essential and time-critical activities, including practical based learning essential to progression and programme completion for 2021 graduates, were prioritised. In April, daily student numbers were maintained below 5% of full-time registered students as Level 5 restrictions began to ease and students completed their programmes.

Item	Purpose	Contribution
<b>ACADEMIC, STUDENT SERVICES, ADMINISTRATION AND OTHER SUPPORTS</b>		
On-campus bespoke orientation for all new learners including COVID-19 awareness training	To provide an on-campus experience to new learners, introduce new learners to the physical environment and foster a sense of belonging and engagement.	In groups of less than 20, over 1,300 new learners were provided with the opportunity to meet staff, fellow classmates, academic staff and Students' Union representatives in person fostering a sense of belonging and engagement which the Institute prioritises particularly in light of the socioeconomic profile and number of target group students enrolling each year.
Creation of COVID-19 student training module	To support all students in awareness of preventative measures and Institutional protocols.	All students enrolled on the Institute's COVID-19 Student Training module in the VLE with tracking of student completion.
Embedding student self-declaration forms as a mandatory activity during registration process	To create a mandatory Health and Safety self-declaration and to ensure that 'at risk' categories of students were signposted to appropriate supports and protocols.	All registered students completed the Health and Safety self-declaration measures prior to presenting on campus, ensuring their health and safety and the health and safety of the campus community. 'At Risk' students were provided with a first point of contact to commence a co-ordinated process of on campus risk assessment and/or possible reasonable accommodations.
Articulation of Policy and Procedure for Learners in COVID-19 High Risk groups	To formally articulate and agree with the senior executive, the Policy and Procedure for Learners in COVID-19 'at risk' categories.	Ensuring a planned, considered, and comparable Institutional response to learners in 'at risk' categories with roles and responsibilities, requirements, possibilities, and limitations clearly outlined.
Articulation of Protocol for Learner Absenteeism related to COVID-19	To formally articulate and agree with the senior executive, the Protocol for Learners' COVID-19 related absences.	Ensuring a planned, considered, and comparable Institutional response to learners' absences when they relate to COVID-19, whether through illness or associated with close contacts - responsibilities, requirements, possibilities, and limitations clearly outlined.

Item	Purpose	Contribution
Agreed protocol to support contact tracing	To formally determine a procedure to support COVID-19 contact tracing if required.	Facilitated formal discussions and clear delineation of role and responsibility of the Institute, including privacy and public health, and established an agreed procedure to support contact tracing by public health authorities if required.
Design and development of a student mobile app to support new channels of communication between students and Institute staff and to provide easily accessible information to students 24/7	To support students with immediate information typically provided through personal face to face contact with Institute Staff.	Created an easy to follow source of information for students 24/7-365 enabling them to access information quickly and independently whilst on or off campus, with a dual benefit of reducing footfall into offices and supporting the health and safety of students and the campus community.
Migration of paper based activities to electronic to lower transmission risk	To provide students with means of submitting documentation other than in person, whilst on campus or off campus 24/7-365.	Created an easy to follow means for students 24/7-365 enabling them to submit documentation or request documentation whilst on or off campus, with a dual benefit of reducing footfall into offices and supporting the health and safety of students and the campus community.
Dedicated webpage on supports available during COVID-19	To provide students with information and supports available to them during the pandemic.	Provided students with one clear institutional information source on all COVID-19 related matters, including orientation, health and safety, return to campus and senior executive communications.
Inclusion of a specific section in the Student Handbook for COVID-19	To provide students with information on the measures introduced to support them during the pandemic.	Provided students with an overview of the various institutional measures introduced to mitigate the impact of the pandemic including policy, procedure, health, safety and access to information.
Laptop loan scheme implementation	Implementation of the Laptop Loan Scheme funded by the HEA.	Created a clear-cut means of application and prompt dispense to students in need of devices.
Creation of screencasts on free assistive technological supports available to students	To create quick and straightforward video demonstrations on how to use free assistive technology.	Recorded a series of three screencasts on how to use free assistive technology to assist in course work, e.g. text to speech. These are freely available for all students on the Institute's website with a view to helping all students and in particular students returning to learning, students with various learning styles, and students with disabilities.
Agreed procedure for implementation of reasonable accommodations for students with disabilities during formal examinations	To determine a formal arrangement for exam accommodation procedures for students with disabilities where required.	Planned, agreed and coordinated provision of reasonable accommodations for students for examinations held off campus.

Item	Purpose	Contribution
Detailed student support programme for incoming International students	To assist the safe arrival and support of international students from abroad.	Creation of a full plan for the support of international students upon arrival in Ireland and during self-isolation / restricted movement period, including dedicated staff and student leaders, specified engagement plan, scheduled activities and communication of how to access supports.
Provision of medical supports to students and referral to GP services	To create a protocol for students to access institutional medical supports during the pandemic.	Provided students with access to the Institute Nurse throughout the week, whether on or off campus with an agreed referral pathway to GP services where necessary. Particularly important for international students and students living away from home.
Enhanced peer led mentor programme for first year students	To enhance student engagement and sense of belonging within higher education.	Participated in the national 3Set programme to develop institutional peer led mentor programme with 53 peer mentors volunteering in the inaugural year. All first year students were provided with a number of opportunities to avail of peer mentoring to enhance their engagement and their sense of belonging.
Online Clubs and Societies Awards with VIP guests recognising student engagement and achievement in this area	To celebrate the sport, societies and voluntary activities of Institute of Technology Carlow students.	An extremely successful event that engaged thousands of students and wider community in the recognition of student engagement in sport, societies and volunteering.
Recording of Lectures Policy	Articulation of the policy for recording lectures during the pandemic.	Enabling students to access lectures asynchronous, in particular supporting students with caring responsibilities, students with poor broadband, students who are unwell, students with varying learning styles, or students living in study adverse environments.
First Sitting and Repeat Exam Fee Waivers	To formally agree institutional measures to waive fees accrued due to exams being missed or needing to be repeated as a result of the pandemic.	Provided students with measures to counteract disadvantage on examination outcomes caused by COVID-19.
<b>TEACHING AND LEARNING CENTRE INITIATIVES</b>		
Development of online support resources and learning modules specific to Collaborate	To provide support for staff due to the increase in online teaching.	Ensuring that staff have access to the necessary support in terms of online pedagogical knowledge and skills.
Roll-out of Blended Learning Support Workshops/Bootcamps	To support pilot initiative to embed blended learning across all Faculties.	Ensure that staff have the necessary skills and knowledge to facilitate remote teaching.
One-on-one consultation clinics with staff to support staff to move online	To respond to individual staff members' needs in moving instruction online.	Providing ongoing support for all staff and addressing specific needs in relation to their practice.

Item	Purpose	Contribution
<p>Scheduled Staff Workshops and CPD Sessions (non-accredited - 2019/2020)</p> <ul style="list-style-type: none"> <li>• 2 full weeks of CPD offered (June 2020)</li> <li>• 809 registrations (a total of 96 hours of support offered)</li> </ul>	To support staff professional development with a range of pedagogical and technological-related support sessions.	Ensuring that a community of learners and practitioners was created during the move to online learning.
<p>Scheduled Staff Workshops and CPD Sessions (non-accredited - 2020/2021)</p> <ul style="list-style-type: none"> <li>• 3 CPD weeks offered (Sep. and Nov. 2020 and Feb. 2021)</li> <li>• 827 registrations (a total of 78.5 hours of structured support offered over the three weeks) <ul style="list-style-type: none"> <li>- Sep. 2020 - 31 hours</li> <li>- Nov. 2020 - 18.5 hours</li> <li>- Feb. 2021 - 29 hours</li> </ul> </li> </ul> <p>Bespoke CPD sessions for LLL staff - 55 registrations (a total of 5.5 hours of support)</p>	To support staff professional development with a range of pedagogical and technological-related support sessions.	Ensuring that a community of learners and practitioners was created during the move to online learning.
<p>Scheduled bespoke workshops offered to Carlow College (June 2021)</p> <ul style="list-style-type: none"> <li>• 123 registrations (a total of 13 hours of support offered)</li> </ul>	To provide specialised professional support for all collaborative partners on pedagogies and online engagement.	Ensuring quality standards in terms of pedagogical practice amongst our collaborative partners.
<p>Development of guidelines and supports for staff on managing the pivot to remote learning. Further development of our TLC Staff Hub with the curation and creation of resources</p>	To provide online, user-friendly and accessible support material for all staff.	Establishing a consistent approach to our support offerings and creating and curating quality resources available to all staff.
<p>Blackboard Support Sessions for 36 PMSS staff (April 2020)</p>	To support PMSS staff with the management of alternative remote assessments.	Ensuring that PMSS staff were cognisant of the processes involved in the administration and management of alternative remote assessments.
<p>Design and roll-out of a staff survey on experiences of teaching remotely in conjunction with eduCORE</p>	To capture the lived experience of staff in the pivot to online teaching.	To research and disseminate findings in the area of emergency remote teaching by adding to the body of knowledge in this area and further informing future practice.
<p>Design and roll-out of two student surveys on experiences of remote learning in conjunction with Student Services and Students' Union</p>	To capture the experiences of students and to ascertain their support needs for the new term/academic year.	Ensuring that supports were identified and implemented for students in advance of the new term/year.

Item	Purpose	Contribution
<b>LIBRARY INITIATIVES</b>		
Increased ebook procurement to assist students and staff with assignments, theses, research and online examinations	To support students and staff with their learning and research.	Providing access to vital electronic versions of print books that were no longer accessible due to the closure of the Institute's Libraries and COVID-19 travel restrictions. 53 ebook titles were procured from April to mid-July 2020.
Provided temporary access to 13 different databases for the end of 2019/2020 academic year	To support students and staff with their learning and research.	Provided access to 13 different databases on a temporary basis from vendors / publishers offering free or trial access via the Library's A-Z database list.
Provided access to four new databases for the start of the 2020/2021 academic year	To support students and staff with their learning and research.	Provided access to Bloomsbury Professional, Irish Medicines Formulary, Nexis Uni, and Siren Films.
Developed additional guides for accessing Library resources online and restructured the Library website with quick links	To support students and staff in accessing Library resources.	Ensuring students and staff could access ebooks, ejournals, databases and other Library resources as easily as possible. In comparison with 2019, usage of ejournals increased by 12%, ebooks increased by 95%, and LibGuides ( <a href="https://libguides.itcarlow.ie/">https://libguides.itcarlow.ie/</a> ) increased by 190% in 2020.
Developed an online seat booking system for the Carlow and Wexford Campus Libraries	To allow students and staff to use the Carlow and Wexford Campus Libraries with social distancing and other COVID-19 mitigation measures in place.	Ensuring students and staff could continue to access the Carlow and Wexford Campus Libraries safely for study purposes while also recording users names for contact tracing purposes, if required.
Introduced a Click and Collect system for students and staff to obtain the print books they required	To allow students and staff access print book titles that were not available as ebooks.	Ensuring students and staff could access the print books they required for their studies or research, when restrictions allowed controlled on campus access.
Provided support to students via email, phone and online tools such as Microsoft Teams and Blackboard Collaborate	To support students with their queries.	Ensuring students were supported and had their queries answered while the physical Libraries were closed.
Delivered online workshops for researchers in effective searching, EndNote, maximising research impact and choosing an appropriate journal	To support postgraduate researchers and academic staff in their research.	Assisting postgraduate researchers and academic staff to have the skills and knowledge to search effectively, use EndNote for reference management, maximise the impact of their research publications and choose an appropriate journal to publish their research in. Additionally, facilitated a bespoke webinar for Institute of Technology Carlow researchers by Elsevier in June 2020 entitled "How to Write a Great Research Paper, and Get it Accepted by a Scholarly Journal".

Item	Purpose	Contribution
<b>ICT INFRASTRUCTURE AND VIRTUAL LEARNING ENVIRONMENT ENHANCEMENTS</b>		
Move VLE (Blackboard) from on premise to Cloud SAS platform	To better facilitate a guaranteed performance and maintenance SLA on this critical service.	Continuous development in the performance and reliability of core computing infrastructure that provides the backbone to the online learning environment.
Increase capacity of online teaching/learning platform (Blackboard Collaborate) 100 fold	To provide adequate capacity for the massive rise in concurrent online classroom activity.	Continuous development in the performance and reliability of core computing infrastructure that provides the backbone to the online learning environment.
Implement Blackboard Ally	To ensure online environment is highly accessible	Ensuring that inclusivity is an integral part of the development strategy for digital infrastructure.
Implement Turnitin Authorship Tool	To bring an added layer of integrity checking to student submissions.	Ensuring that a high level of academic integrity is maintained in the digital workspace.
Distribute 300 PCs/laptops/ Webcams/Headsets to staff	To facilitate remote working.	Ensuring flexible staff engagement with the digital workplace is undertaken using appropriate, secure and supported technologies.
Distribute 350+ Laptops to Students	To facilitate student access.	Ensuring equity of access for all students to appropriate ICT equipment to allow them engage fully with the online teaching and learning environment.
Distribute 100 Wacom digitisers to Academic staff	To facilitate the online teaching of concepts requiring analogue inputs and the annotation of PDF submissions.	Ensuring appropriate technologies are available to support a broad range of teaching styles, such as free hand input for maths, drawing, design, etc.
Upgrade 100 classrooms with WebCams	To facilitate use of on campus facilities for online classes.	Providing multiple options to staff and students for class delivery i.e. physical, virtual or a mix of both.
Installation of 10 Video Capture enabled classrooms	Allow demonstration of physical activities such as Lab Techniques, Correct usage of Machinery or Equipment.	Ensuring online delivery systems can facilitate a broad range of teaching requirements.
Installation of SplashTop and VMWare remote access solutions for Computer Labs	Allows remote access to computing lab PCs.	Ensuring the Institutes investment in high performance computers and software is fully exploited by making these resources available remotely 24x7 to students and staff.
Upgrading of existing HCI (Hyperconverged Computing Infrastructure)	Allows remote access for undergraduate, postgraduate and research computing students and staff to the Institute's High Performance Computing Cluster.	Ensuring the Institute's investment in high performance computing is fully exploited by making this infrastructure available remotely 24x7 to students and staff.

Item	Purpose	Contribution
Upgrade of VMWare software on Flexpod (converged computing infrastructure) to provide 150 Windows 10 Virtual PCs	Upgrading of Virtual PC infrastructure from Windows 7 to Windows 10.	Ensuring staff can access the Institute's Business Computing Environment remotely using highly secure VMWare Virtual PC technology.
Implementation of Microsoft Teams/PBX integration	To allow remote users have full access to campus phone facilities through Microsoft Teams.	Ensuring staff working remotely can have access to the full suite of on campus ICT facilities including phone services.

### ESTATES INITIATIVES

Developed and implemented a COVID-19 Control Measure Assessment strategy for common areas, classrooms and offices	To align with national protocol guidelines and to allow access to Institute buildings during the pandemic.	Ensuring that all staff and students can access and use facilities safely.
Developed Response Plan and implemented actions set out in the plan	To align with national protocol guidelines and to allow access to Institute buildings during the pandemic.	Ensuring that all staff and students can access and use facilities safely.
Coordinated the development of Return to Campus declarations and inductions documentation	To align with national protocol guidelines and to allow access to Institute buildings during the pandemic.	Ensuring that all staff and students can access and use facilities safely.
Installation of signage, pedestrian systems, classroom seating arrangements, screens, mobile wash stations and hand sanitation stations	To ensure that COVID control measures were implemented for Return to Campus.	Ensuring that the risk of spread of COVID is minimised while staff and students were on campus.
Introduction of COVID Compliance Officers on campuses	To manage compliance of COVID control measures across campuses.	Ensuring that the risk of spread of COVID is minimised while staff and students were on campus.
Introduced additional cleaning measures across campuses particularly in common access high touch areas and toilets	To ensure that COVID control measures are implemented.	Ensuring that the risk of spread of COVID is minimised while staff and students were on campus.



Item	Purpose	Contribution
<b>HUMAN RESOURCES</b>		
Employee Assistance Service (EAP)	To support managers and make them aware of the resources available to them and their staff in this new working environment during COVID-19.	Greater awareness of tools and resources available to managers to support their staff working remotely.
Transitioned recruitment process to online	To ensure continuity of recruitment in a safe environment.	No disruption in maintaining appropriate staffing levels throughout the COVID-19 pandemic.
Transitioned staff induction online and increased frequency of inductions	To ensure all new hires were onboarded, welcomed and given an overview of the Institutes' policies and procedures and have the opportunity to meet a large cohort of the management team who presented to them.	Assist new hires in settling into Institute of Technology Carlow and providing them with the tools, resources and contact points to assist them in navigating their way in a new working environment.
Remote working policies during and following COVID-19	To facilitate staff members working remotely both during and after the pandemic.	Providing new flexible working options for staff members.

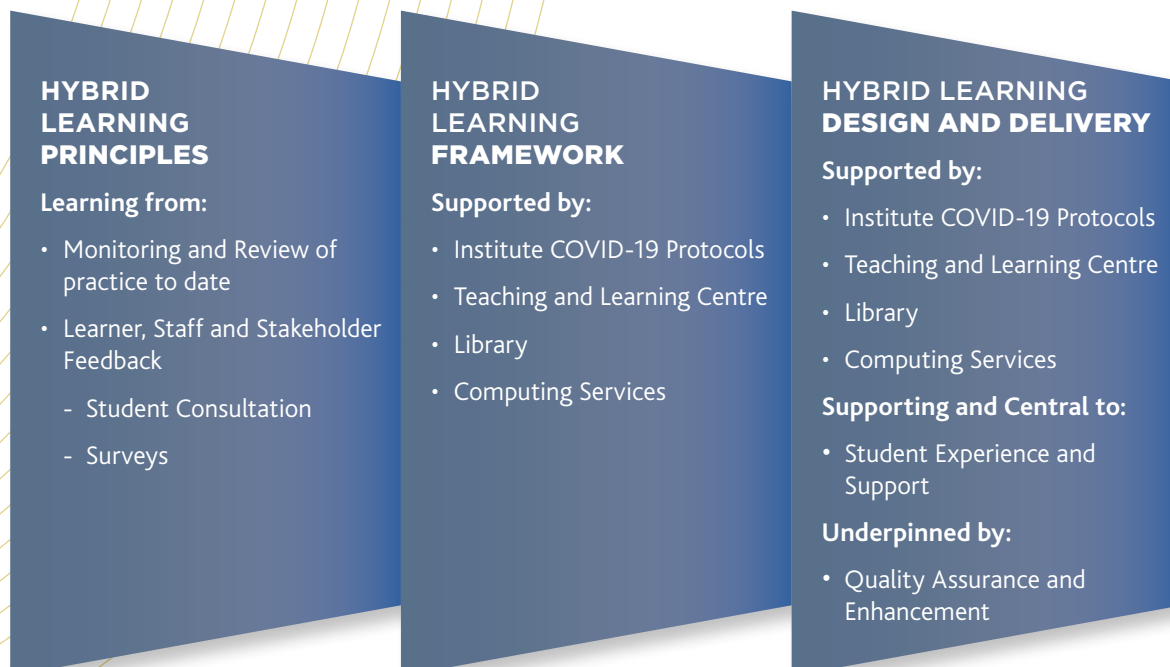


Figure 2 **Hybrid learning structure in Institute of Technology Carlow in 2020/2021.**

**A new chapter for  
academic libraries led by  
Institute of Technology Carlow's  
Dr Delaney**



Academic libraries were faced with an unprecedented challenge when COVID-19 closed their doors mid-March 2020. In an initiative led by Dr Mary Delaney, Head of Library and Information Services Institute of Technology Carlow, eight Technological Higher Education Association (THEA) libraries prepared an article describing their response to COVID-19 challenges from March-August 2020. The article outlines how library services were delivered online, how libraries supported staff and students, planned their reopening and prepared for the academic year 2020-2021. The article presents a snapshot of THEA's experience over this six-month period, how it responded to the pandemic, and discusses both the value of collaboration across the sector and the benefits of this collaborative approach in a time of crisis.

The article is available at: Delaney *et al.* (2020) Delivering library services in a time of crisis: Technological Higher Education Association libraries responding to COVID-19 from March-August 2020, *All Ireland Journal of Teaching and Learning in Higher Education (AISHE-J)*, 12 (3), 1-16, available at <https://ojs.aishe.org/index.php/aishe-j/article/view/531/827>.

## 1.5 LEARNER PROFILE AND ACADEMIC DEVELOPMENTS

### 1.5.1 LEARNER GROWTH AND PROFILE

Institute of Technology Carlow is dedicated to the creation of an environment where our learners can achieve their full potential, and one in which our graduates are fully equipped to achieve the highest personal and professional standards. We engage with industry and communities, identify gaps in the graduate stream and co-design our programmes and curricula with our stakeholders. Our graduate attributes are the ultimate learning outcomes for all our students, and they represent the values that we engender in our graduates. The growth trajectory in learner numbers continued in 2019/2020 and 2020/2021. The changing learner and graduate profile are presented in Figures 3 to 21. This confirms the following:

- An increase in total enrolments of 8% in 2019/2020 compared to 2018/2019, and a significant increase of 17% in 2020/2021 compared to 2019/2020. Overall growth is 96% since 2011/2012. The Institute had over 9,000 total learner enrolments in 2019/2020 for the first time and in 2020/2021 numbers surpassed 10,500 enrolments. The latter equates to 7,475 Whole Time Equivalent (WTE) reflecting the Institutes response to the demand for life-long learning programmes.
- The Institute had the second highest absolute number of life-long learning enrolments across the technological and university sectors in 2020/2021. The Institute had the second highest percentage of life-long learners across the technological and university sectors at 52%, compared to the national average of 19.9%. This translates into 26.5% WTE for life-long learners in 2019/2020, exceeding the national average for the technological sector at 14.0% WTE.
- An increase in total postgraduate enrolments of 18% in 2020/2021 compared to 2018/2019.
- The highest percentage of postgraduate research students (weighted WTE) in the technological sector at 4.8% in 2019/2020.
- A growth of 138% in apprentice numbers since 2015/2016 reflecting national and regional strategy in promoting apprenticeships. These figures exclude the new geo drilling apprenticeship which had 16 enrolled in 2019/2020 and 23 in 2020/2021.

- In 2020/2021, over 69% of the Institute's Irish learners were from seven counties: Dublin, Wexford, Kildare, Carlow, Wicklow, Laois and Kilkenny.
- The Institute has a market share of 10% or more of the total HEI student population for five counties: Carlow (34.1%), Wexford (17.6%), Laois (15.6%), Kilkenny (11.5%) and Kildare (10.0%).
- An increase in international learners of 8% in 2019/2020 compared to 2018/2019, with 12.9% of all full-time students being international students. In 2020/2021, students at Institute of Technology Carlow represented 103 different nationalities, including Irish resident and incoming international students.
- The impact of the COVID-19 pandemic has seen international student numbers decrease by 38% in 2020/2021 compared to 2019/2020.
- The Institute had the highest proportion of mature students (24 years old and over) based on total enrolments across the technological and university sectors in 2020/2021 at 63%.
- The Institute has the second lowest mean deprivation index score of all Irish higher education institutions in the latest HEA socio-economic analysis based on 2018/2019 enrolments, with 17% of the Institute's learners being classified as disadvantaged and 7% as affluent.
- Continued growth in the numbers of graduates with over 3,500 in 2019, over 4,000 in 2020 and over 6,000 in 2021.
- The Institute was the largest contributor to the increase of 20,961 graduates across the technological and university sectors in graduation year 2020 compared to graduation year 2011, with 2,705 additional graduates.

With reference to the latter two points, the Institute continues to support access initiatives aimed at offering mature students, entrants from target socio-economic groups (SEG) and those with disabilities opportunities to progress to higher education. This builds on work undertaken with local Education and Training Boards, further education colleges and other bodies. The Institute plays a lead role in the South Cluster's rollout of HEA PATH II and PATH III initiatives.

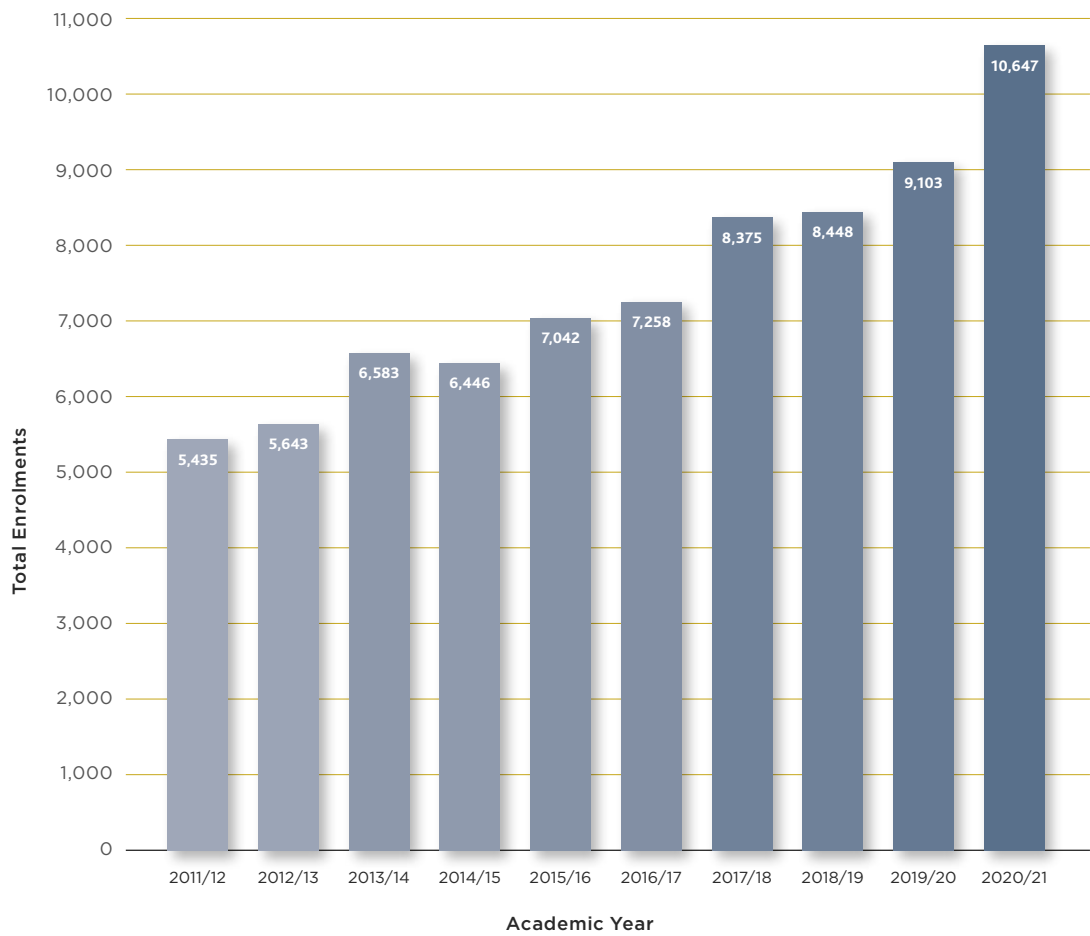


Figure 3 **Institute of Technology Carlow total enrolments 2011/2012 - 2020/2021**  
 (Source: SRS and July Stimulus programme)

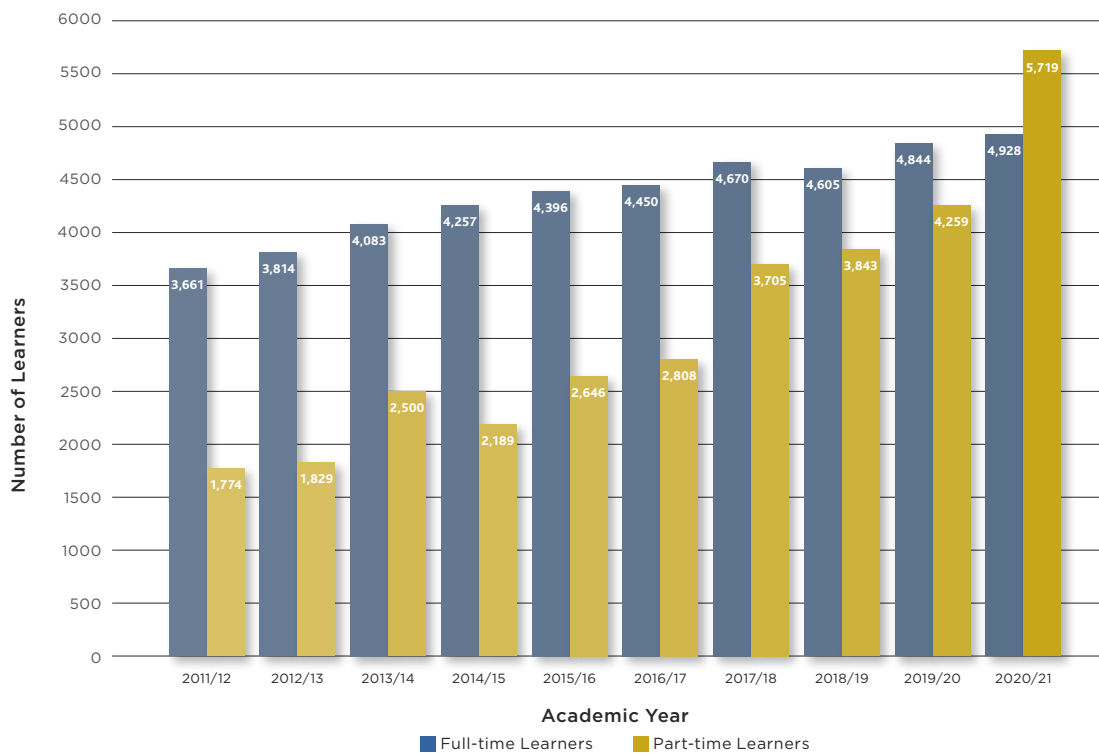


Figure 4 **Institute of Technology Carlow full-time and lifelong learning enrolments 2011/2012-2020/2021** (Source: SRS and July Stimulus programme)

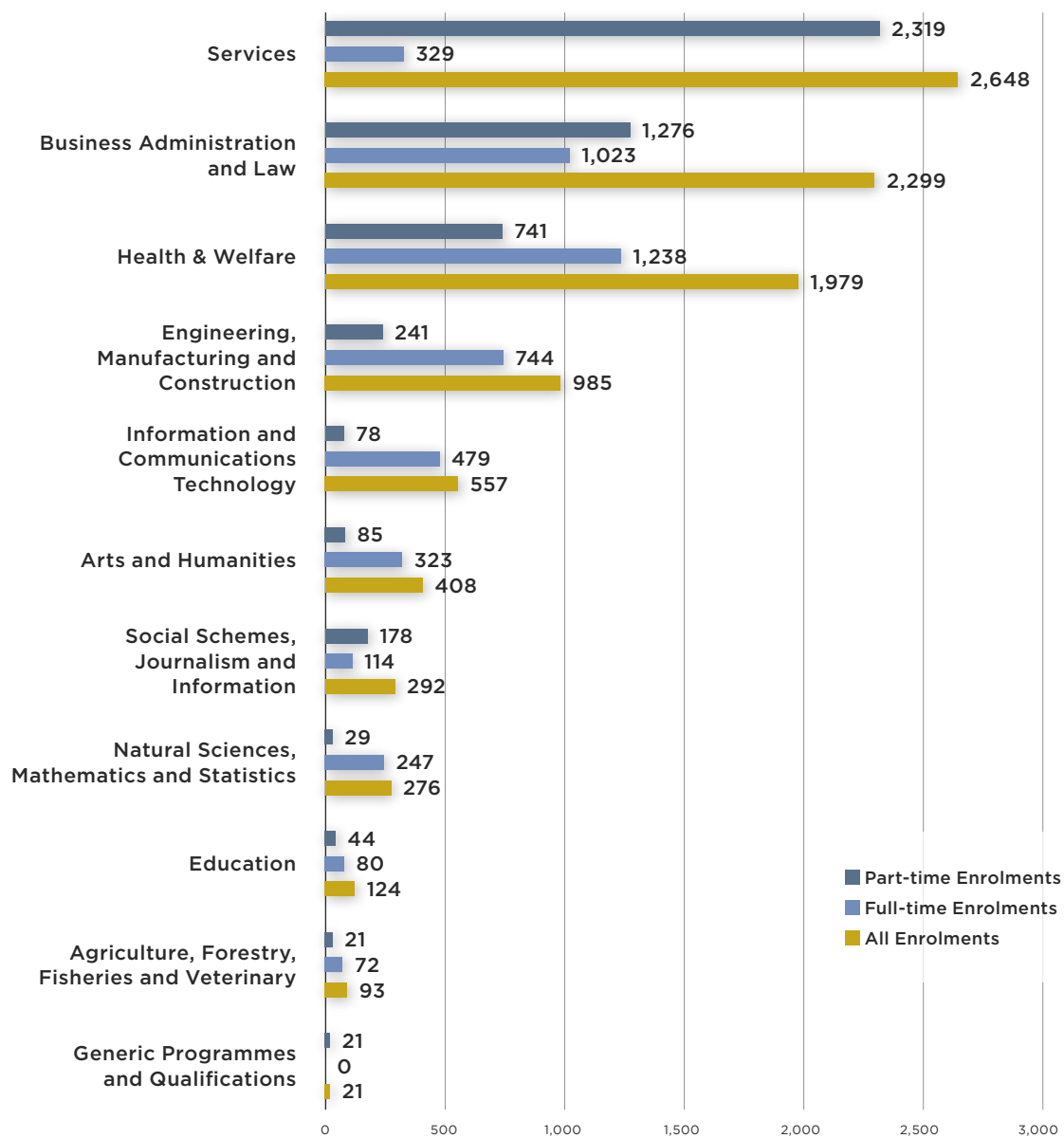


Figure 5 **Institute of Technology Carlow full-time and lifelong learning enrolments 2020/2021 by ISCED broad field of study** (Source: hea.ie). HEA enrolment data excludes incoming Erasmus students and apprentices

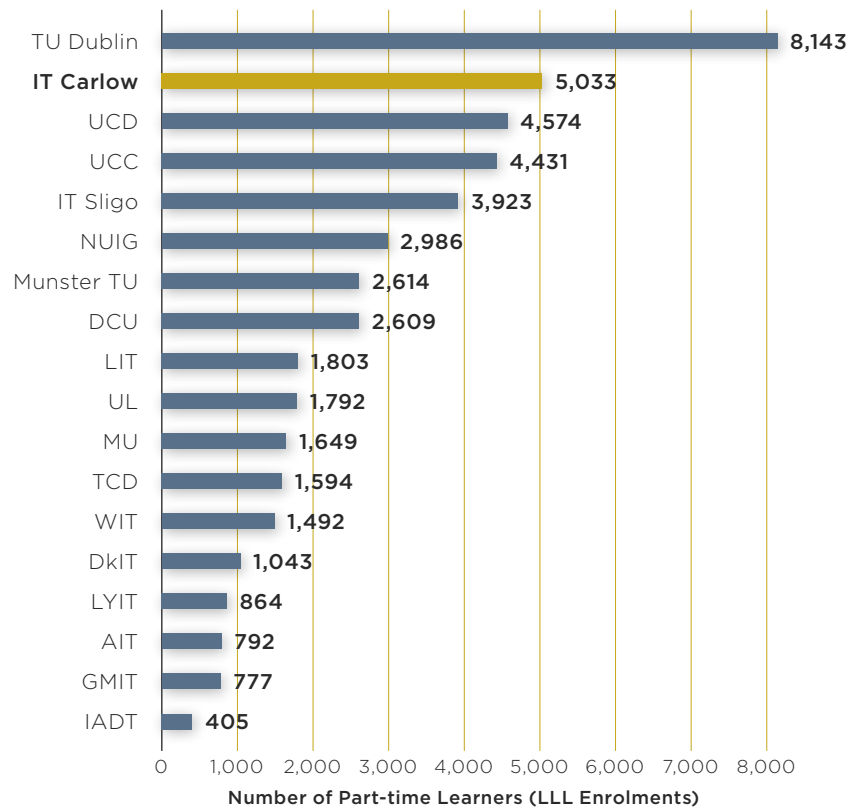


Figure 6 **Lifelong learning (i.e. part-time) enrolments (head count) 2020/2021 across the technological and university sectors** (Source: hea.ie)



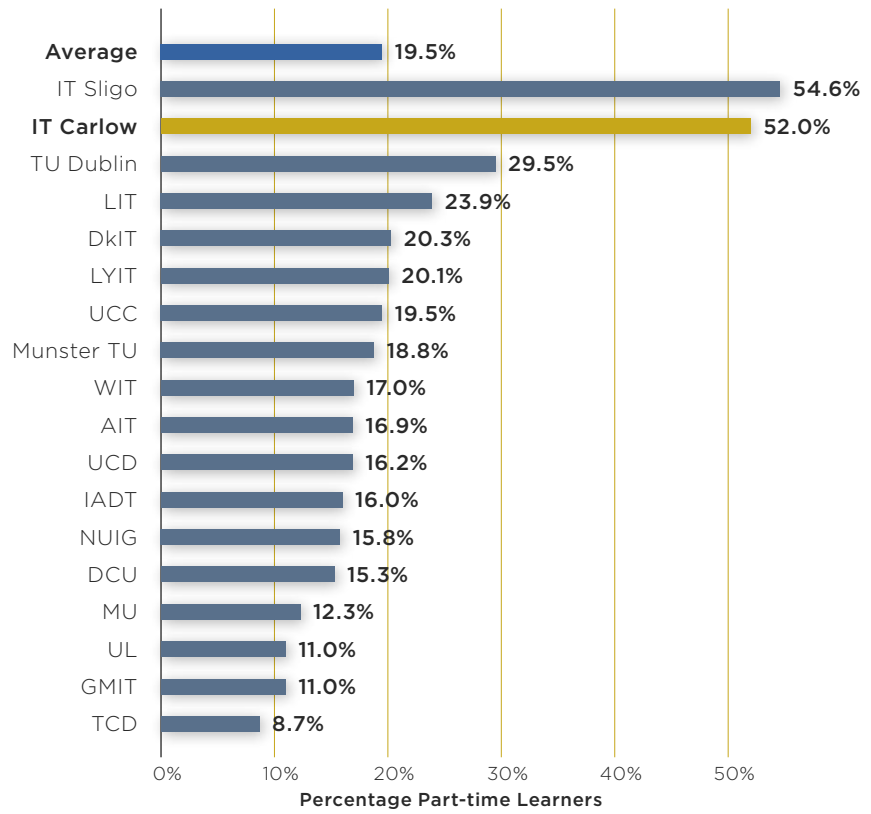


Figure 7 **Percentage lifelong learning enrolments (head count) 2020/2021 across the technological and university sectors** (Source: hea.ie)

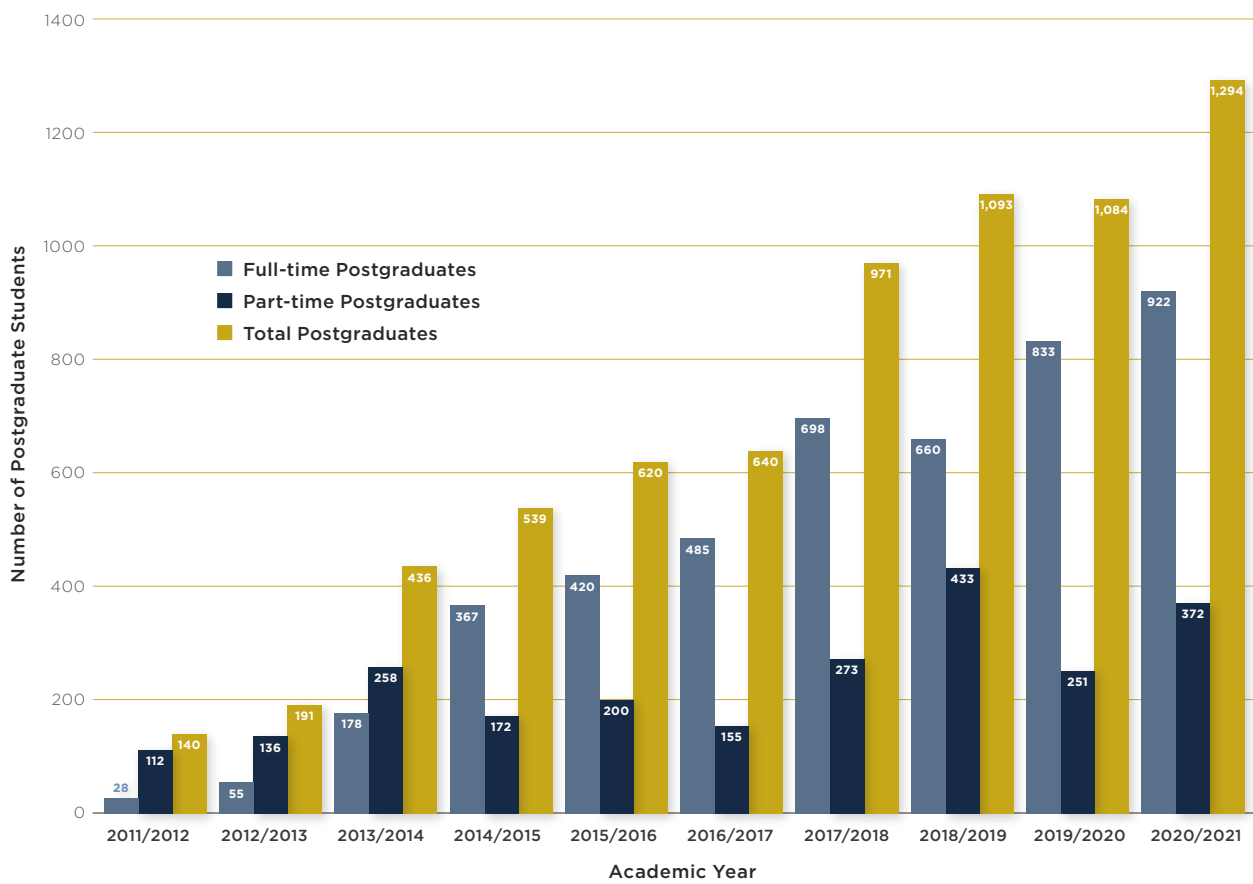


Figure 8 **Institute of Technology Carlow Postgraduate Learners 2011/2012 - 2020/2021** (Source: SRS)

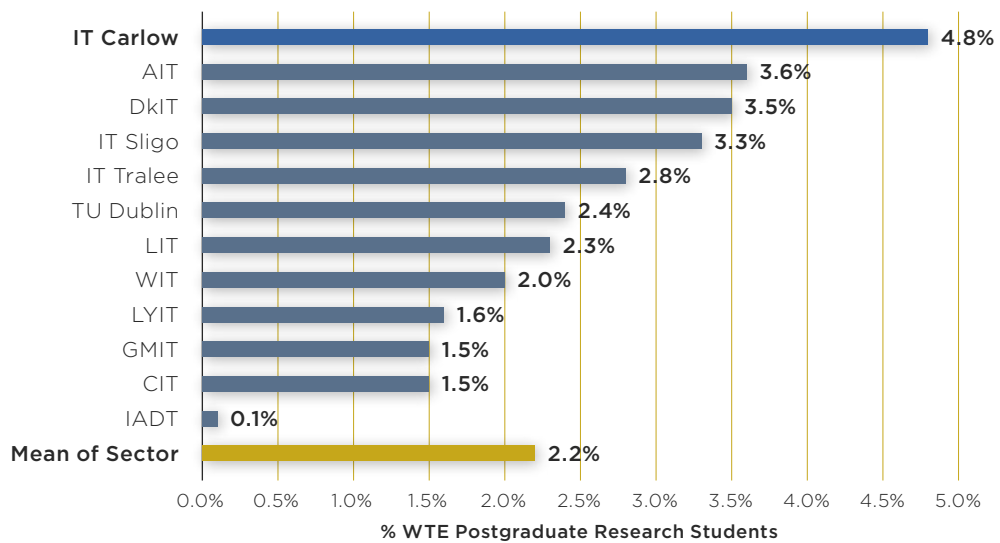


Figure 9 **The percentage of WTE research students in the technological higher education sector in 2019/2020** (Source: HEA RFAM 2021)

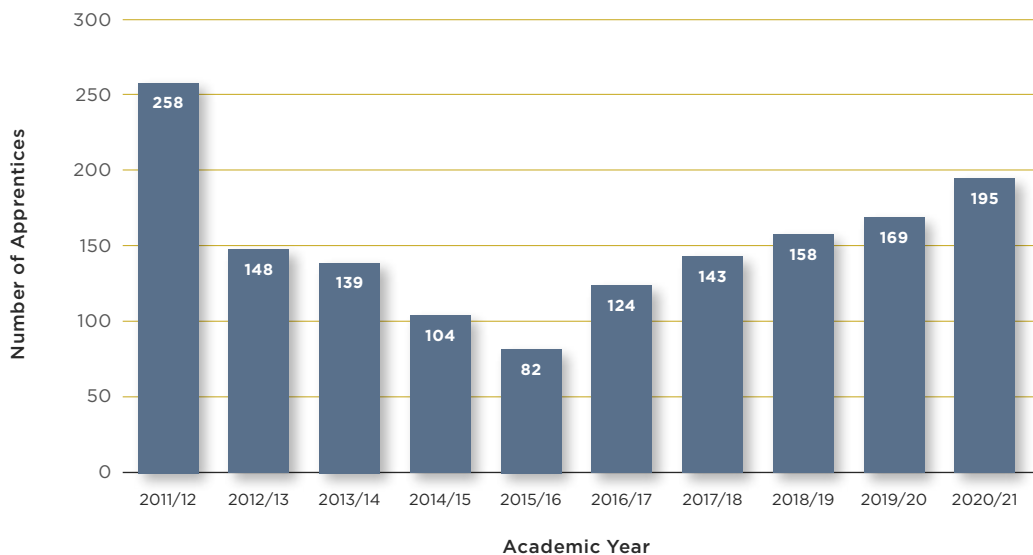


Figure 10 **Institute of Technology Carlow apprenticeship figures 2011/2012 – 2020/2021.**  
**Note:** These figures include the four traditional craft trades (electrical installation, electrical instrumentation, instrumentation, and carpentry and joinery) and excludes the new geo drilling apprenticeship (Source: SRS)

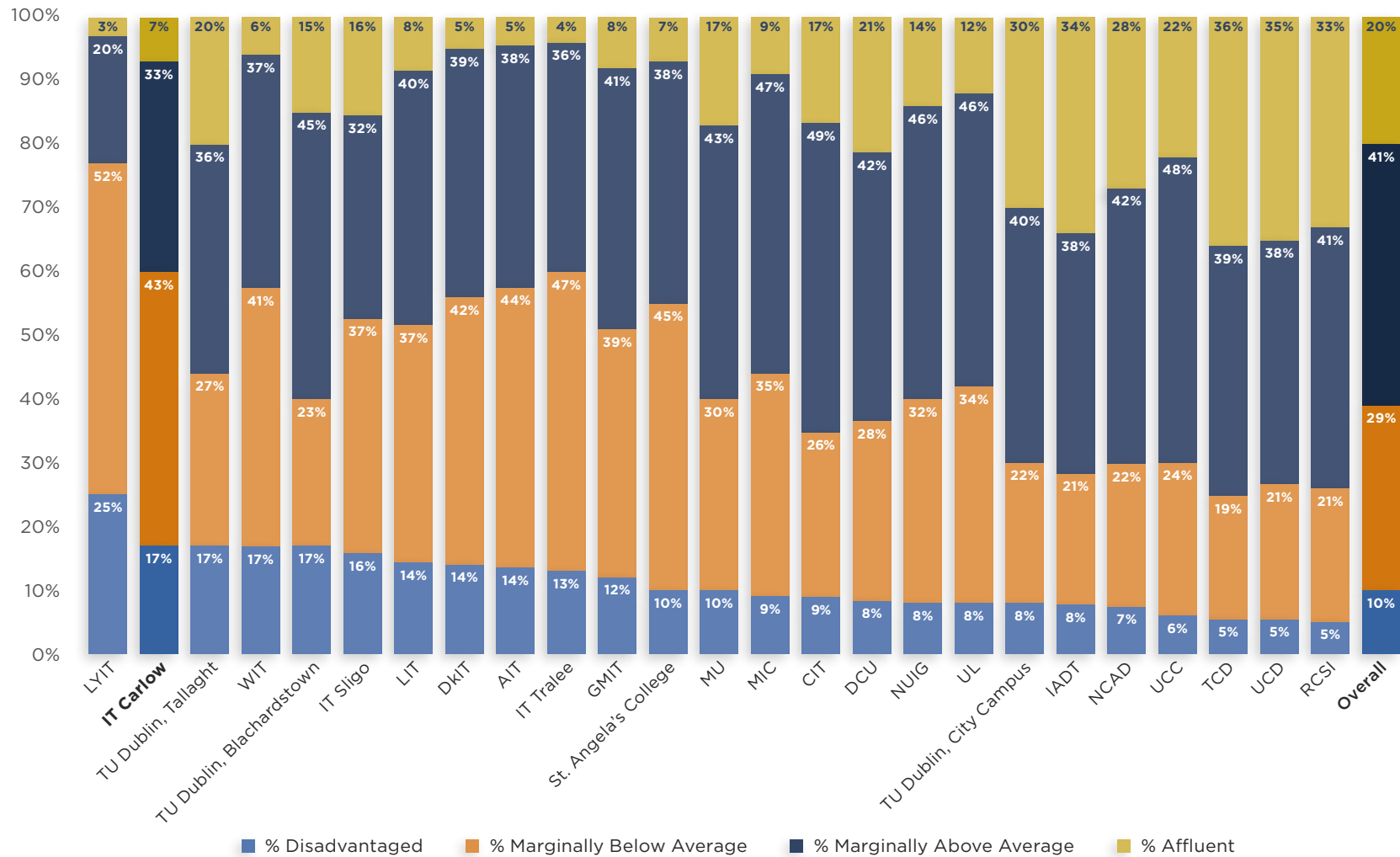


Figure 11 **Socio-economic profile of HEI student populations for 2018/2019** (Source: [HEA.ie](http://HEA.ie))  
 HEIs ordered by % disadvantaged, largest to smallest, left to right.



### **LAUNCH OF IRELAND'S FIRST APPRENTICESHIP IN GEO DRILLING**

The first ever Geo Drilling Apprenticeship Programme, developed by Institute of Technology Carlow in conjunction with Geoscience Ireland, was officially launched in November 2019 by Minister of State for Housing and Urban Development, Damien English, TD at Boliden Tara Mines, Co. Meath.

Geo drilling, the skilled use of a drill rig to advance holes for subsurface investigation work, is critically important to various sectors of the Irish economy, including quarrying; mining; groundwater research and abstraction; mineral exploration; geothermal energy development; site investigation for housing and infrastructure projects; and directional drilling for utilities. However, no formal qualification existed until now.

The Level 6 Higher Certificate qualification was developed by the Faculty of Engineering in partnership with an industry consortium. The Irish Mining and Quarrying Society (IMQS), Geological Survey Ireland, the Federation of Group Water Schemes, SIPTU and Geoscience Ireland support the initiative.

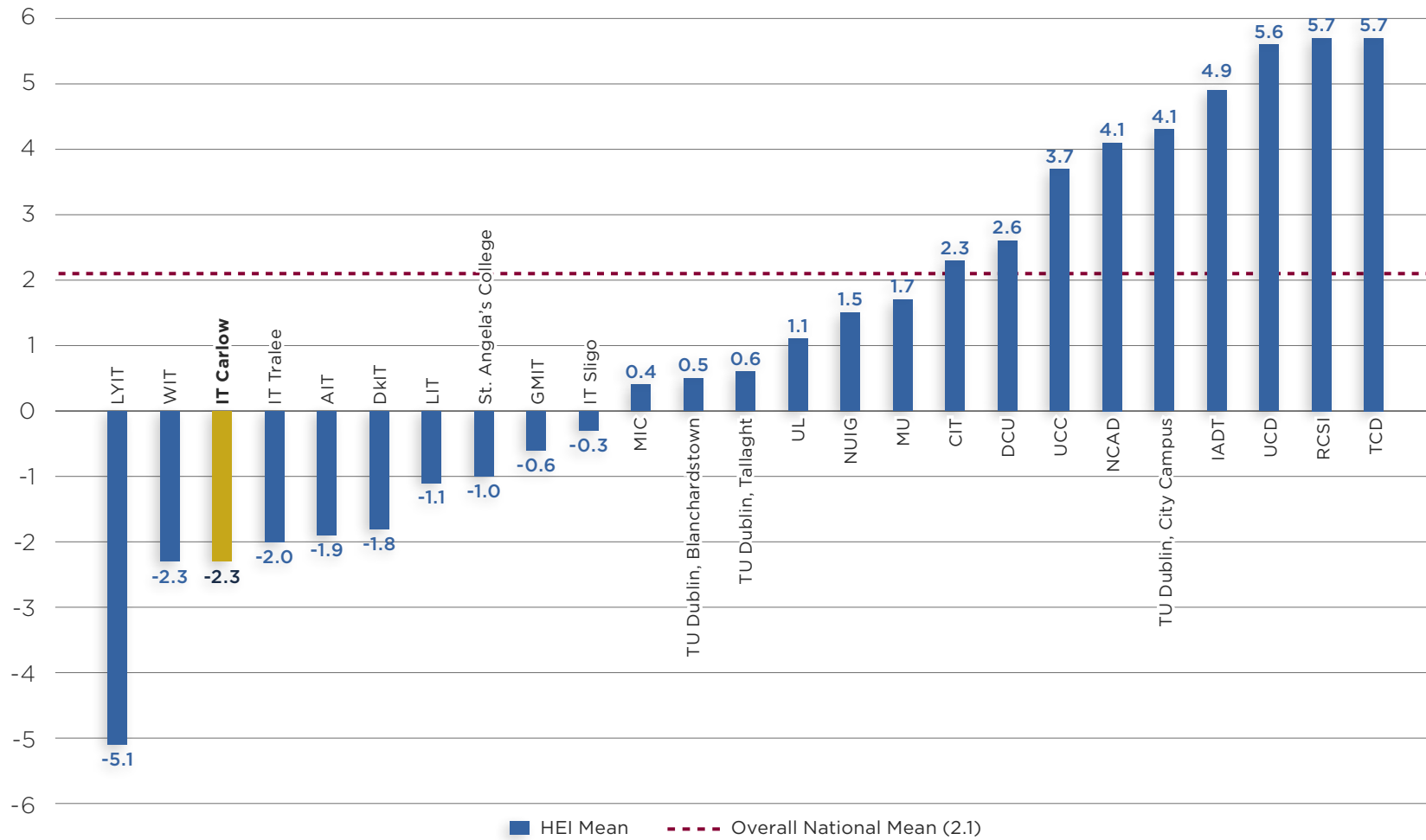


Figure 12 **Mean deprivation index score by HEI for 2018/2019 enrolments** (Source: [HEA.ie](https://hea.ie))  
**Note:** Data include all 2018/19 ROI enrolments - full-time, part-time, undergraduate and postgraduate, all course years, where geocoded data are available (94% coverage).

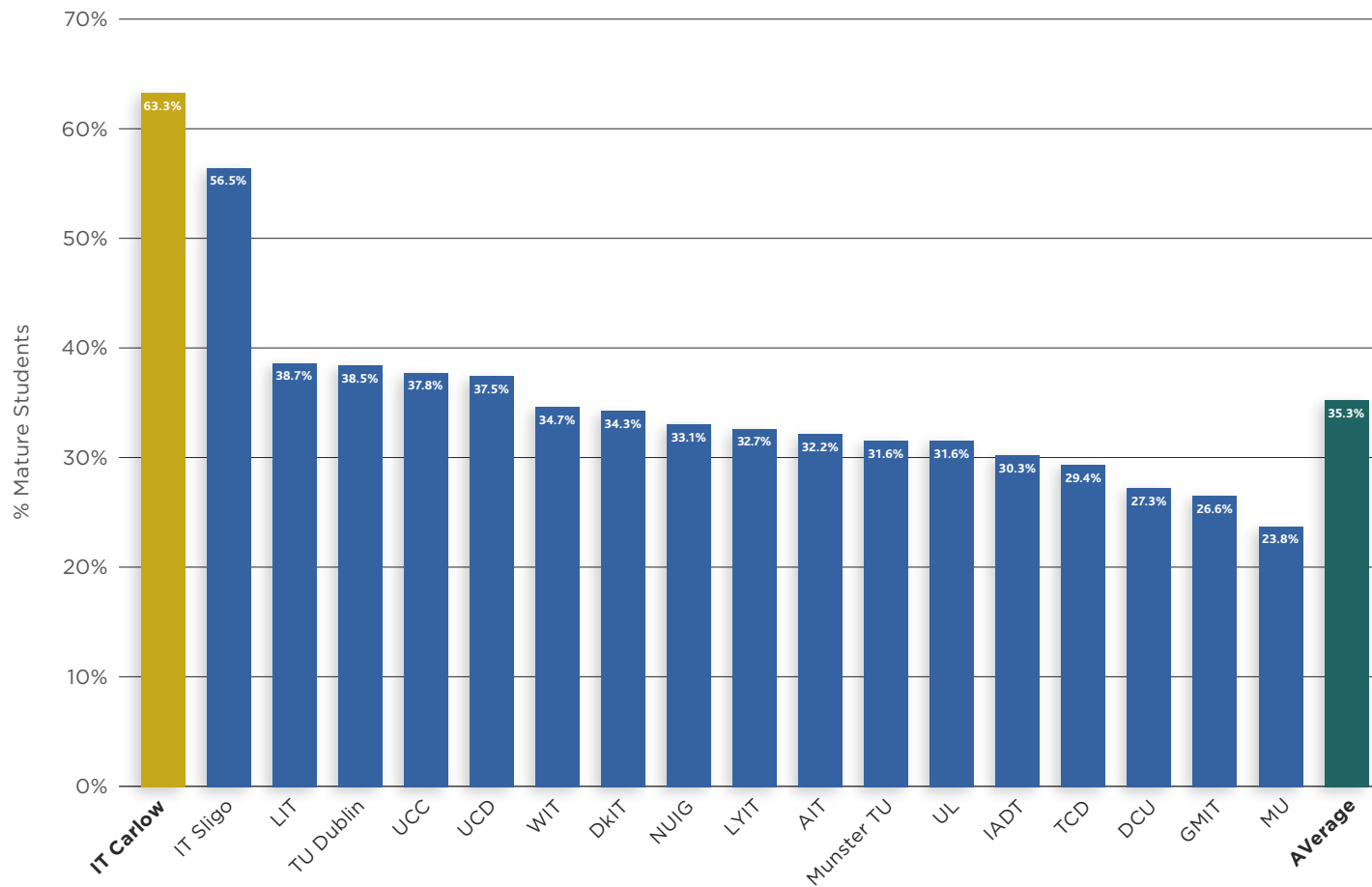


Figure 13 **The proportion of mature students (24 years old and over) of the total student population based on headcount 2020/2021 across the technological and university sectors**  
 (Source: [HEA.ie](https://www.heai.ie))

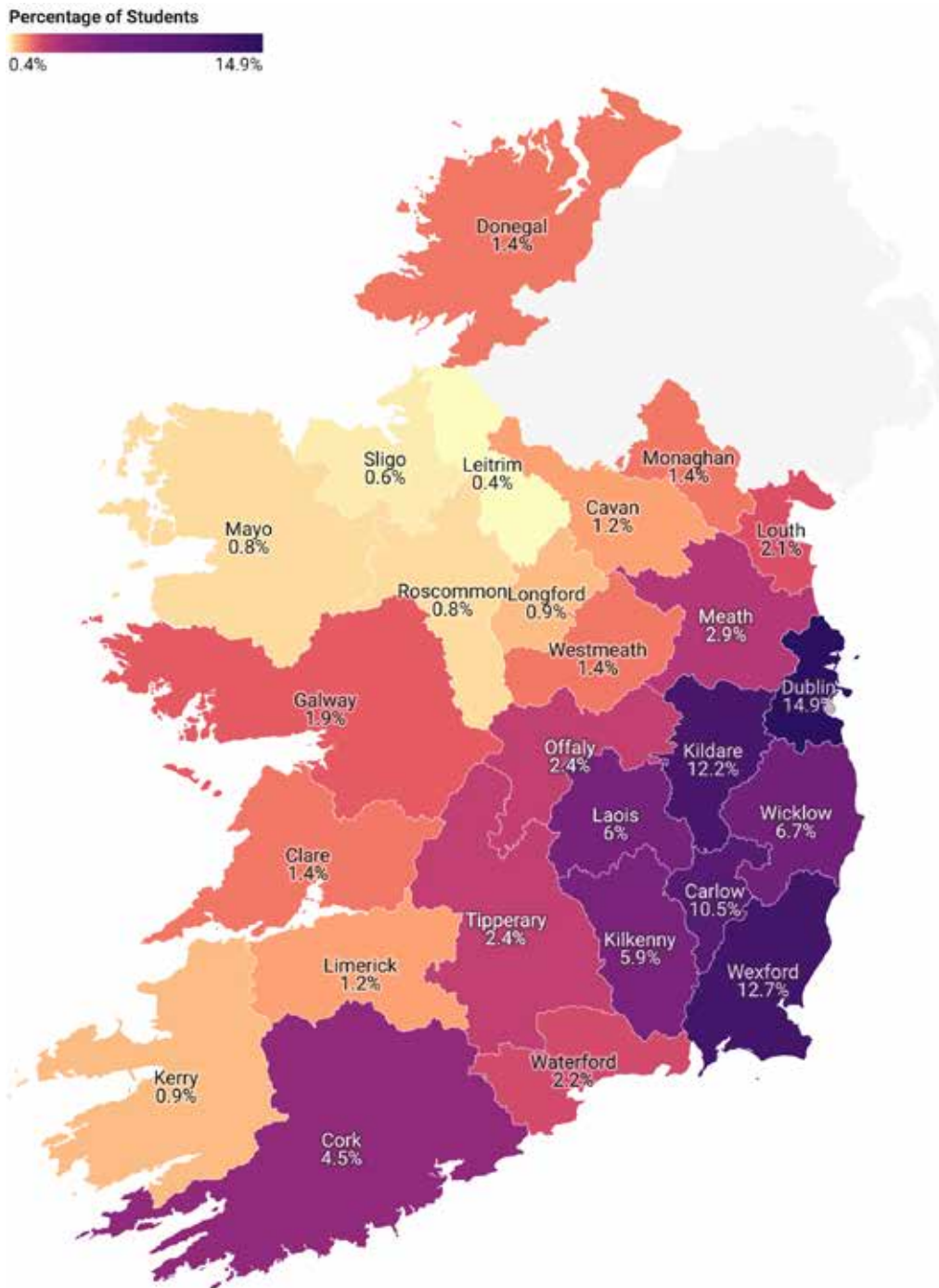


Figure 14 **Domiciliary origin of Irish learners at Institute of Technology Carlow 2020/2021** (Created with Datawrapper. Source: HEA.ie)



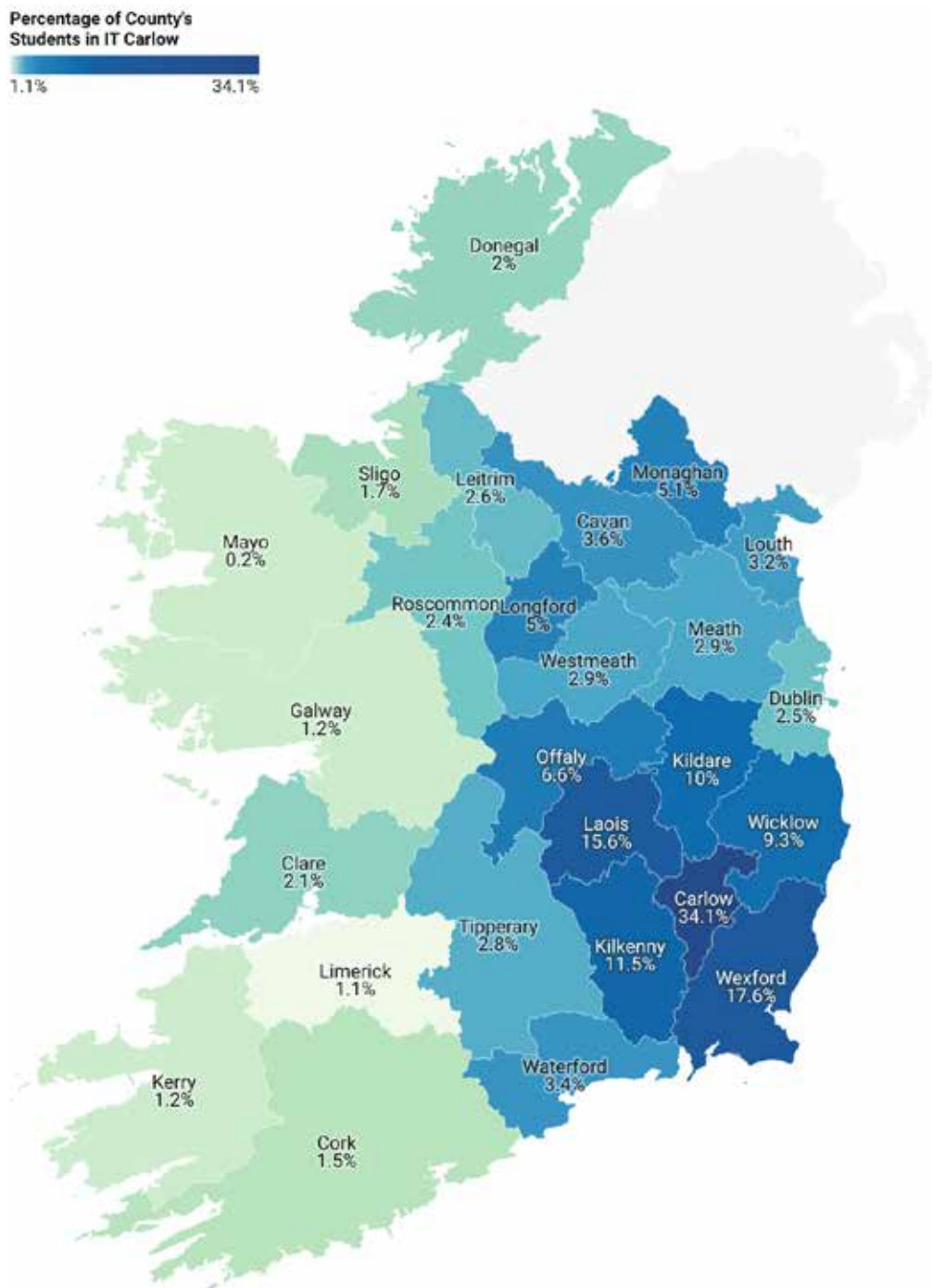


Figure 15 **Institute of Technology Carlow's share of each county's HEI student population based on domiciliary origin of students from the Republic of Ireland in 2020/2021** (Created with Datawrapper. Source: HEA.ie)

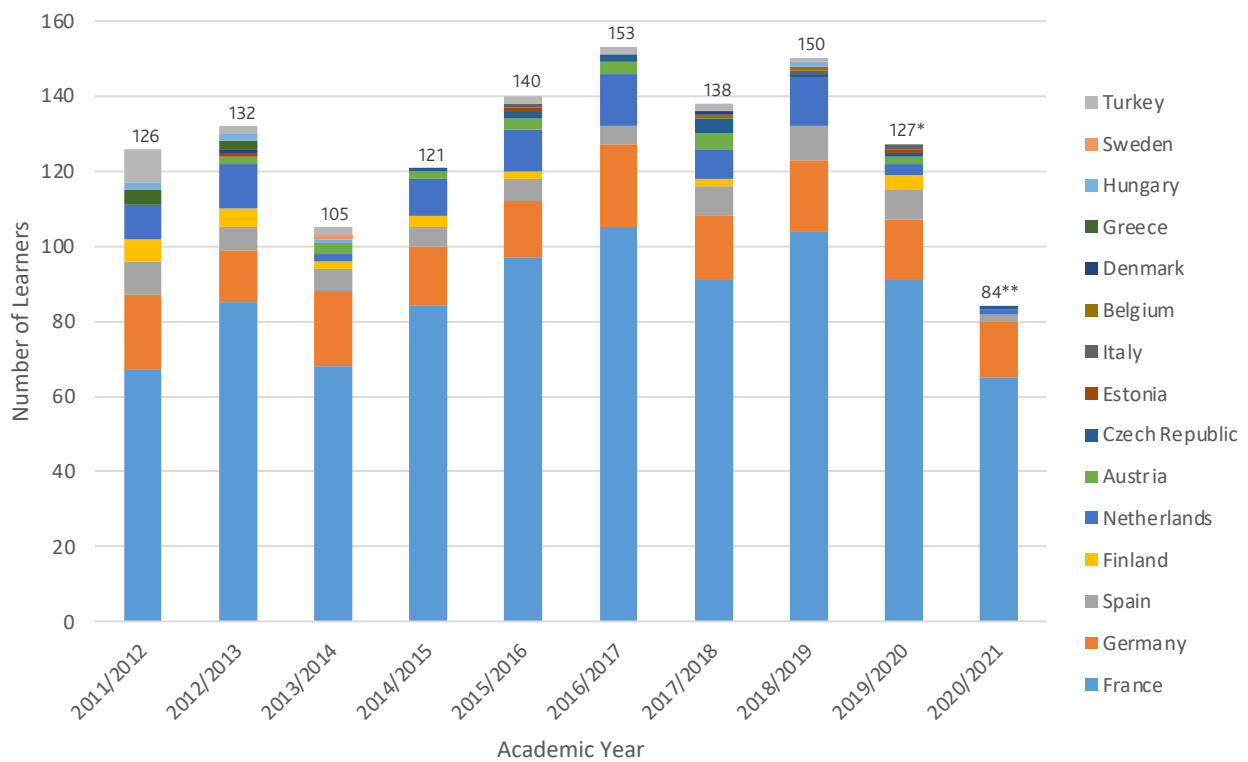


Figure 16 **Origin of incoming Erasmus+ students at Institute of Technology Carlow 2011/2012 - 2020/2021** (Source: SRS). The decrease in numbers in 2019/2020 and 2020/2021 was due to the COVID-19 pandemic. **\*Note:** 5 additional students came through the Erasmus Office in 2019/2020 from partner institutes with no Erasmus status: 3 from ZHAW (Switzerland) and 2 from SupBiotech (France). **\*\***In 2020/2021, 2 additional students came from ZHAW (Switzerland)

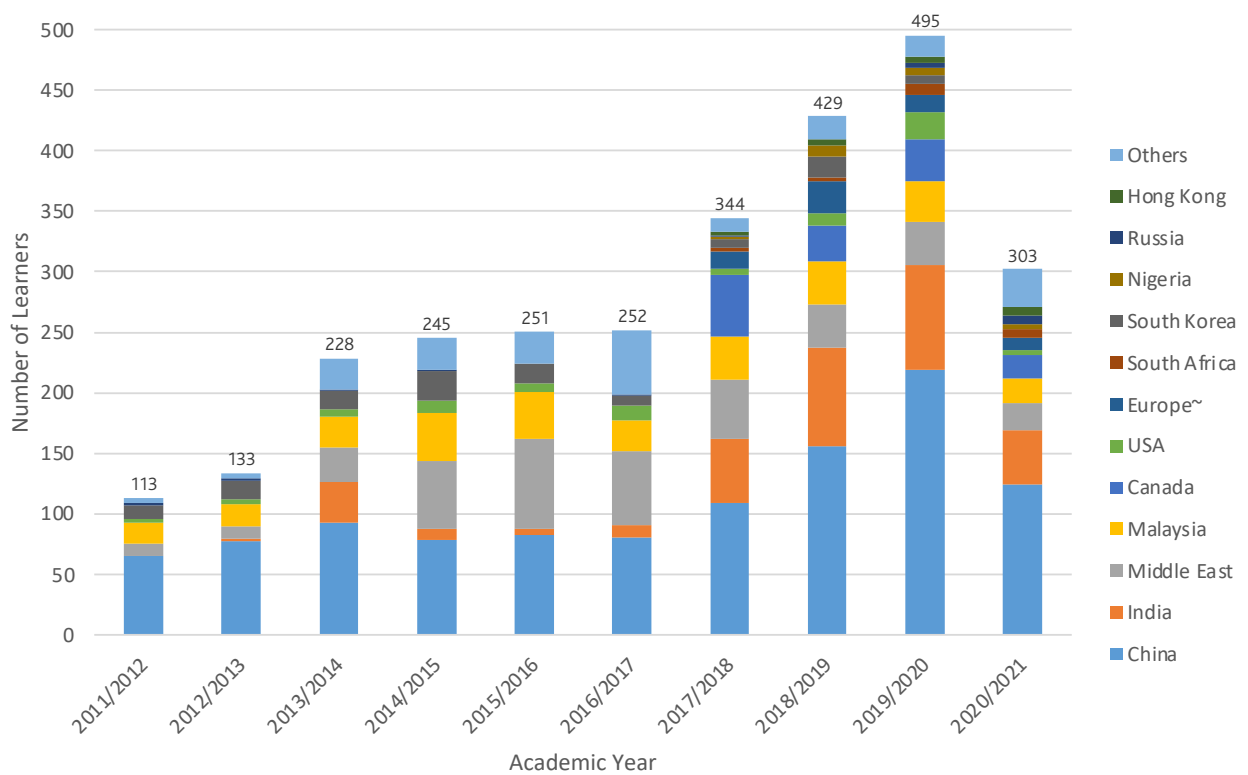


Figure 17 **Origin of Non-EU international students at Institute of Technology Carlow 2011/2012 - 2020/2021** (Source: SRS). The decrease in numbers in 2020/2021 was due to the COVID-19 pandemic.



Figure 18 **Map showing nationalities of all learners at Institute of Technology Carlow in 2020/2021 including Irish resident and incoming international learners** (Created with Datawrapper. Source: SRS)

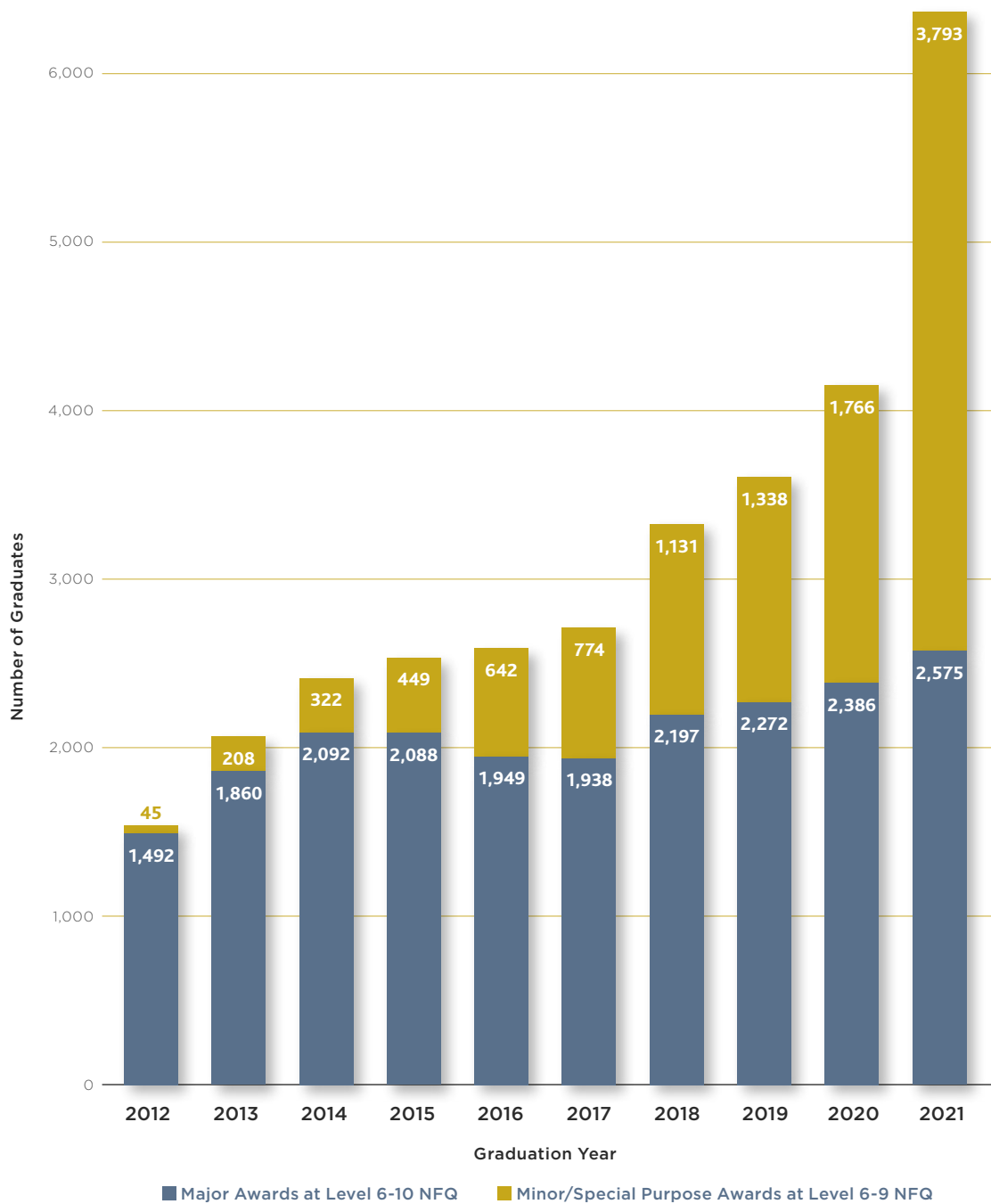


Figure 19 **Graduates 2012 to 2021 of Institute of Technology Carlow** (Source: SRS) \*Large increase in Special Purpose Awards in 2021 is due to July Stimulus 2020 programmes and Brexit-related programmes. 2021 graduate numbers correct as at 9/11/2021.

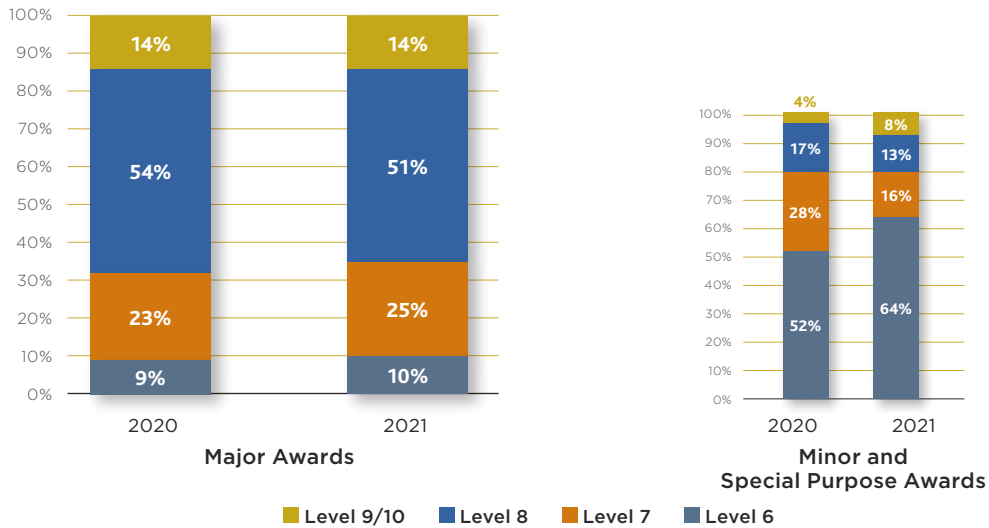


Figure 20 **Award levels of 2020 and 2021 graduates of Institute of Technology Carlow**  
 (Source: SRS) \*2021 graduate numbers correct as at 15/10/2021. Minor changes to 2021 graduation numbers are expected before conferring dates in late 2021 / early 2022 due to individual students choosing to obtain exit awards.

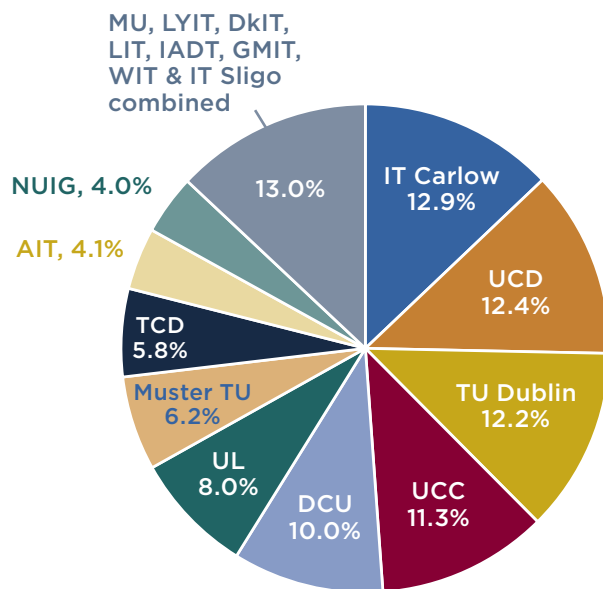


Figure 21 **Percentage contribution by each institution to the overall increase of 20,961 graduates across the technological and university sectors for the 2020 graduation year compared to the 2011 graduation year** (Source: HEA.ie)



*Beth Villiers from Calverstown, Co. Kildare. The fourth year Institute of Technology Carlow bioscience student has been selected for Kerry Group's two-year graduate programme.*

## **BIOSCIENCE STUDENT SELECTED FOR KERRY GROUP GRADUATE PROGRAMME**

In November 2020, a fourth year bioscience student, Beth Villis, beat off competition from a thousand applicants to land herself a place on the prestigious two-year Research, Development and Applications (RDA) graduate programme for Kerry Group, during which she will be groomed for success to work within the global food technology sector. During her time at Institute of Technology Carlow, Beth was selected for a 16-months internship with Kerry Group at its global technology innovation centre in Naas. Beth was one of just four selected for the RDA graduate programme and will start work in September 2021 at Kerry Group's primary dairy factory in Charleville, Co. Cork.

## 1.5.2 ACADEMIC DEVELOPMENTS

In the time period of this 2019/2020 and 2020/2021 Annual Report, Institute of Technology Carlow has:

- Further developed its academic portfolio in terms of discipline depth, breadth and diversity with more than 80 full-time CAO programmes to honours degree level; over 30 taught postgraduate programmes to Masters degree level; almost 200 lifelong learning programmes; and Masters and Doctoral research programmes with specialisms in ICT, Bioenvironmental Technologies, Product Design, Business, Engineering Technologies, Sport and Health Sciences, Social Sciences and Education.
- Reviewed all its programmes as part of a full external programmatic review process in 2020/2021, which included incorporating the new semesterised academic delivery framework (ADF) into all programmes.
- Successfully concluded international peer reviews of its linked provision arrangements with the Gestalt Institute of Ireland and the Tivoli Institute.
- Established new linked provision arrangements with the Irish National Stud to deliver the Certificate in Thoroughbred Breeding Management
- Expanded its international and educational partnerships, including a new partnership with Henan University of Animal Husbandry and Economy (HUAHE) to establish a joint institute in China – the Carlow International College of Technology.
- Expanded its formal links with an additional eight further education providers, including a new progression agreement with Longford Women's Link.
- Established a seventh Centre of Research and Enterprise (CORE) in Education.
- Successfully completed the QQI CINNTE Institutional Review with the submission of its progress reports in June 2021.
- Conferred over 4,000 awards to the class of 2020 over eleven virtual conferring ceremonies in November 2020, bringing its alumni to over 60,000 since its establishment 50 years ago.



In terms of its academic portfolio, new programmes validated in 2019/2020 include (major awards only):

- Master of Engineering in Flight Test Engineering
- Postgraduate Diploma in Engineering in Flight Test Engineering
- Master of Science in Digital Media with Business Analytics
- Postgraduate Diploma in Science in Digital Media with Business Analytics
- Bachelor of Arts (Honours) in Counselling
- Bachelor of Science in Industrial Measurement and Control
- Higher Diploma in Arts in Digital Media Design
- Higher Certificate in Business in Logistics and Supply Chain Management.

New programmes validated in 2020/2021 include (major awards only):

- Master of Science in Industrial Networks and Cybersecurity
- Postgraduate Diploma in Science in Industrial Networks and Cybersecurity
- Master of Engineering in Applied Materials
- Postgraduate Diploma in Engineering in Applied Materials
- Master of Science in Applied Artificial Intelligence
- Postgraduate Diploma in Science in Applied Artificial Intelligence
- Master of Science in Cyber Security, Privacy and Trust
- Postgraduate Diploma in Science in Cyber Security, Privacy and Trust
- Master of Arts in Irish Regional History
- Postgraduate Diploma in Arts in Irish Regional History
- Postgraduate Diploma in Science in Advanced Pharmaceutical Analysis
- Postgraduate Diploma in Science in Contaminated Land Management
- Postgraduate Diploma in Science in Information Design with Business Analytics
- Bachelor of Arts (Honours) in Sport, Business and Coaching
- Higher Diploma in Arts in Journalism and New Media.

## New progression agreement with Longford Women's Link



In June 2021, the Institute established a formal progression agreement with community organisation and social enterprise Longford Women's Link (LWL) to facilitate the pathway to higher education for women exposed to inequality and disadvantage. The Minister for Further and Higher Education, Research, Innovation and Science Simon Harris TD warmly welcomed the initiative, describing it as "an example of the importance of transition pathways

between further and higher education". Under the agreement, the Institute will consider graduates of Longford Women's Link programmes for admission to designated Institute of Technology Carlow courses. The offer is open to LWL graduates who satisfy the criteria; specifically those who have successfully completed a full QQI FET award (level 5 or 6) at Longford Women's Link.

## New Engineering Masters Takes Flight

In June 2021, the Faculty of Engineering announced a new programme commencing in September – the Masters and Postgraduate Diploma of Engineering in Flight Test Engineering. The programme will be the only type in Ireland in the specialist area of flight test engineering and successful graduates will have a unique skillset as engineers in the performance and evaluation of a range of different types of aerial vehicles. The programme was developed by staff at the Department of Aerospace, Mechanical and Electronic Engineering, which is a founding member of the Air Transport and Aeronautics Education and Research Association (ATAERA), an international network of aviation universities. Institute of Technology Carlow has collaborated with Waterford Aero Club to develop the flight test module within the programme. Students will acquire flight time as part of their laboratory work to carry out performance and evaluation techniques on aircraft.



*Pictured at Waterford Aero Club to announce details of the new Masters of Engineering in Flight Test Engineering at Institute of Technology Carlow are Gerard Gibbs (right), Programme Director, MEng in Flight Test Engineering, Institute of Technology Carlow and David Timpson, Chairman, Waterford Aero Club.*

## Human Capital Initiative and Springboard+

In 2019 and 2020, the Institute received funding under the Human Capital Initiative and Springboard+.

In December 2019, the Institute received €723,000 for 77 additional places across seven of its newest courses under Pillar 2 of the Human Capital Initiative. In June 2020, the Institute was awarded Springboard+ funding across 21 industry-focussed programmes ranging from Certificates, Diplomas, Degrees, Higher Diplomas, Postgraduates Certificates and Masters from levels 6-9 on the National Framework of Qualifications. In addition five programmes were funded through Human Capital Initiative Pillar 1. In total, almost 750 places were to be made available to prospective learners looking to upskill, change career or return to employment.

In October 2020, it was announced that Institute of Technology was to receive more than €13 million funding for projects under the Human Capital Initiative Pillar 3, Innovation and Agility. The Institute was directly awarded funding for three projects. The first is to realise the potential of recognition of prior learning and lifelong learning in Irish higher education; the second is for the Centre for Insurance, Risk and Data Analytics Studies (CIRDAS), and the final project is for the development of a Postgraduate Certificate in Innovative Materials for Industry 4.0. Separately, the Institute is a collaborator on a Waterford Institute of Technology project on additive manufacturing that is to receive €2.1million in funding. All of the projects involve collaboration with other institutions. The projects approved under HCI Pillar 3 were selected by a panel of experts with national and international expertise following a competitive tendering process.

## Institute of Technology Carlow and Family Carers Ireland deliver Certificate in Family Caring

Institute of Technology Carlow partnered with Family Carers Ireland (FCI) in 2018 to develop and deliver a Certificate in Family Caring for family carers throughout Ireland. Family Carers Ireland supports the more than 500,000 family carers who care for loved ones such as children or adults with disabilities, frail older people, the terminally ill or those suffering from chronic illnesses or addiction.



The programme provides access to a third-level programme to family carers who are often from low-income backgrounds. In addition, family carers in receipt of the Carer's Allowance are only allowed work a maximum of 18.5 hours per week, which limits their potential income. Therefore, funded part-time third-level opportunities, such as the Certificate in Family Caring, are the only viable higher education options for most family carers. This funded six-week programme was delivered in nine different regions around the country in 2019/2020 through the Faculty of Lifelong Learning. The Level 6 special purpose award helps participants develop practical care skills, design a person-centred care plan and enhance their skills in communicating effectively with other professionals to meet the needs of their family member or friend. The initiative is funded through the Dormant Accounts Fund, administered by Pobal.

In September 2021, Institute of Technology Carlow was awarded a special €1 million funding award by the HEA following the submission of a case study detailing the impact of the Certificate in Family Caring on participants. With 94% of the 162 students entering third level education for the first time, the course gave learners a renewed confidence in themselves, their skills and knowledge. Minister for Further and Higher Education, Research, Innovation and Science Simon Harris T.D. announced the Performance Funding as part of dedicated investment by Government for higher education institutions in recognition of innovative programmes to help create a better society. Institute of Technology Carlow was one of five institutions to be awarded funding alongside MTU, NUIG, UCC and LIT/AIT.

## Joint institute established in China

In June 2021, the Institute became the first Irish institute of technology to receive approval from the Chinese Ministry of Education to establish a joint institute in China. Carlow International College of Technology, located in the city of Zhengzhou in Henan province, has been approved for an annual intake of 280 students and a total learner population of 1,120 from September 2022.

The new college will initially deliver three degree programmes: a BSc (Honours) in Brewing and Distilling; a BSc (Honours) in Sustainable Farm Management and Agribusiness and a BSc (Honours) in Software Development.

Carlow International College of Technology will run in partnership with Henan University of Animal Husbandry and Economy (HUAHE). Its establishment, with the backing of the Chinese Ministry of Education, is the first ever endorsement given by the Chinese government to an Irish institute of technology; currently, only UCD and Maynooth University have a similar approval.

Henan province, home to Carlow International College of Technology, is China's most populous province with over 112 million residents, where Institute of Technology Carlow has been working with university partners for almost 20 years.

Carlow International College of Technology is the culmination of a three-year due diligence process that saw a series of site visits by senior academics between HUAHE and the Institute. The application process included meetings with a validation panel nominated by the Chinese ministry prior to application approval.

In a separate initiative, the Institute is currently collaborating with another Chinese education partner regarding the Bachelor of Arts (Honours) Visual Communications and Design taught at its Wexford Campus School of Art and Design (WCSAD). Some 200 students are enrolled at this course in North East China, while approval is also pending from the National Accreditation Board in Ghana of a collaboration with the Institute's Department of Computing.



By the academic year 2025/2026, Institute of Technology Carlow will have 2,000 learners based overseas making it the largest Irish provider of transnational education programmes.

*Declan Doyle, Vice President for Development and Research, Institute of Technology Carlow (5th from right) and Donal McAlister, International Manager, Institute of Technology Carlow (4th from right) are pictured with associates in China. Also pictured are: Giles O'Neill, Head of Education in Ireland (4th from left); President Lui of HUAHE University (5th from left); former Minister for Education and Skills Joe McHugh TD (8th from left) and former Irish Ambassador to China Eoin O'Leary (9th from left).*

## Micro-credentials

In 2020, significant European and national focus shifted to the area of micro-credentials.

Micro-credentials are similar to minor, special purpose or supplemental award-types but can be significantly smaller in volume and, in contrast with minor awards, don't necessarily need to be part of a larger volume qualification though they can be aggregated and potentially used in Recognition of Prior Learning (RPL) processes to gain exemptions from parts of, and advanced entry to, programmes leading to NFQ qualifications. They are especially useful to record the acquisition of specific skills needed by individuals, e.g. for work. With the Institute focus on Lifelong Learning, our scope of provision has for many years incorporated these type of programmes and awards reflecting our foci on industry engagement, work integrated learning and RPL.

An analysis of micro-credentials was published in September 2021 (*QQI early exploration into Micro-credentials in Higher Education, 2014-2020*) and showed that the Institute had the highest number of micro-credential programmes in Ireland (Figure 22). For the study, QQI classified education qualifications as micro-credentials if they were a maximum of 30 ECTS credits and were a NFQ Levels 6 to 9 award. The Institute had 469 micro-credentials, which was more than the next seven highest ranked awarding bodies combined, and almost as many as the rest of the technological sector combined (Figure 22).

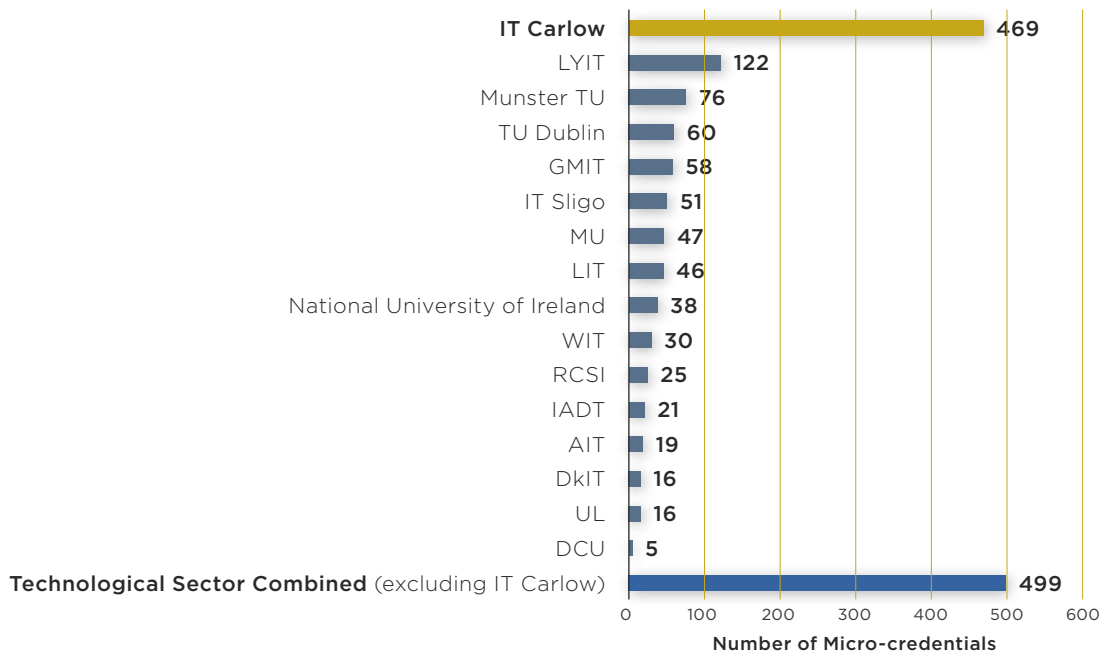


Figure 22 **Numbers of micro-credentials contained in the Irish Register of Qualifications (IRQ) portal on 20th May 2021 for the Irish higher education awarding bodies** (Source: *QQI early exploration into Micro-credentials in Higher Education, 2014-2020*). Note: TCD, UCD, UCC, NUIG and their linked providers are not currently included in the IRQ.

### 1.5.3 SPORT AND CLUBS

As a learner-centred institution dedicated to the creation of an inclusive and positive environment where all of our learners can achieve their full potential, the portfolio of over 65 Clubs and Societies on campus ensures Institute of Technology Carlow are in a position to promote the holistic development of our learners by meeting their educational, personal and social needs. Involvement with the Clubs and Societies programme at both competitive and recreational level enables our students to develop their life skills in tandem with education, ensuring our graduates possess the key attributes of being knowledgeable, creative, connected, confident, reflective, global and integrous.

Within this context, Institute of Technology Carlow has established itself as a centre of sporting excellence within the South-East region. This is a result of consistent investment by the Institute in the development of state-of-the-art sports facilities, pioneering new undergraduate and postgraduate courses, and a sports scholarship programme that affords talented sports men and women the opportunity to compete at the highest level while pursuing their academic course at the Institute.

Like many areas student sport at Institute of Technology Carlow was affected by the impact of the COVID-19 pandemic, however the 2019/2020 academic year, although cut short, was still a very successful one for the Institute's sports teams and athletes. One of the major highlights of the year saw Institute of Technology Carlow reach the finals of both the



*Athletics athletes who represented the Institute of Technology Carlow during the 2019/2020 academic year. (L-R) John Fitzsimons, Cliodhna Manning, Molly Scott and Adam Murphy.*



Fitzgibbon and Sigerson Cups. Institute of Technology Carlow had only ever reached the Fitzgibbon Cup final once before in 2017, while the Sigerson Cup final appearance was the college's maiden voyage at this level. Reaching both finals in the same year, is an accolade that not many higher education institutions can say they have achieved. This success as well as other successes in rugby, camogie, pool and badminton (Table 6) ensured Institute of Technology Carlow ranked first out of a total of 10 Institutes of Technology (Table 5), and 8th overall out of 31 Universities and IoTs, at the Student Sport Ireland (SSI) Sports College of the Year Awards. The Sports College of the Year Competition rewards colleges for their participation and achievement in all cups, leagues and competitions run by the organisation.

Table 5 **2019/2020 Student Sport Ireland Sport College of the Year Institute of Technology  
Leaderboard**

College Name	League	Cups	Teams	Individual	Total Points
<b>Institute of Technology Carlow</b>	<b>539</b>	<b>494</b>	<b>1013</b>	<b>20</b>	<b>364</b>
Galway Mayo IT	512	313	825	0	266
Cork IT	328	440	768	0	224
Athlone IT	484	257	741	0	195
Waterford IT	291	383	643	31	188
Dundalk IT	328	317	608	37	157
IT Sligo	228	274	502	0	157
IT Tralee	218	252	470	0	154
Letterkenny IT	176	224	380	30	149
Limerick IT	247	145	392	0	16

While normal student life was put on hold because of the pandemic, it did not stop the annual Clubs and Societies Awards going ahead for 2019/2020, as the organising committee found a novel way of celebrating the success of students, representing Institute of Technology Carlow across 70

Clubs and Societies. A number of high profile sports people, leaders and celebrities from across the island of Ireland appeared virtually to present awards to very deserving student leaders. With over 28,696 views across all videos uploaded, and hundreds of thousands of impressions on social media, the Clubs and Societies Awards Ball, remained one of the highlights of the year.

**Men's Soccer CFAI Perpetual Cup Winners 2019/2020**



**Fitzgibbon Cup Hurling finalists 2019/2020**



Brendan Johnston Cup Final  
2019/2020



Sigerson Cup Finalists  
2019/2020



Women's Soccer CUFL Premier Division  
Semi-finalists 2019/2020



Table 6 **Institute of Technology Carlow sporting success 2019/2020**

### **Athletics**

IUAA Indoor Intervarsity Championships 2020  
Gold Medal- Men's 16kg WfD - (Thomas Bouchair)  
Gold Medal- Men's 60m Hurdles - (Shane Aston)  
Silver Medal- Women's 60m - (Molly Scott)  
Bronze Medal- Men's 1500m - (John Fitzsimmons)  
Bronze Medal- Men's 4x200m Relay - (Shane Aston, David Murphy, Adam Murphy, Leon Chinaka)  
IUAA Outdoor Intervarsity Championships 2020 (Cancelled due to COVID-19)

### **Archery**

ISAAA League Intermediate Recurve –Male, 3rd place. Kieran Keogh  
ISAAA League Intermediate Recurve –Male, top 10 placing. Liam O'Brien

### **Badminton**

Student Sport Ireland League Semi Finalists  
Student Sport Ireland/Badminton Ireland Open Singles Shield Winner – Ciara Worrell

### **Basketball**

#### **NBCC College Team**

NBCC Men's Division 1 League 5th Place Finish  
NBCC Women Division 1 League 5th Place Finish  
NBCC Men's and Women's Intervarsities (Cancelled due to COVID-19)

#### **Women's Super League Club**

Women's Super League 9th Place Finish  
Kaitlyn Slagus Super League First Team All Star

#### **Men's National League Club**

Men's National League 3rd Place Finish  
Men's National League Division 1 Presidents Cup Runners Up  
Duane Harper Third Team All Star

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## Boxing

IABA Colleges Intervarsity Championship  
Female Junior Novice 85kg- Gold Medal, Taryn Tanton  
Junior Novice 69kg- Silver Medal, Isamel Ada  
Senior 85kg- Silver Medal, Conleth Kennedy  
Senior 91kg- Silver Medal, Marcin Lis

## Camogie

CCAO Women's Division 2 League Winners 2019/2020  
CCAO Purcell Cup Quarter Finalists

## Cricket

Institute of Technology Carlow 4 Team Indoor Cricket Tournament Winners 2019

## Hurling

Higher Education GAA Men's Division 1 Semi-Finalist 2019/2020  
Higher Education GAA Fitzgibbon Cup Runner Up 2019/2020

## Men's Gaelic Football

Higher Education GAA Men's Division 1 League Group Stages 2019  
Higher Education GAA Men's Sigerson Cup finalists 2019/2020

## Women's Gaelic Football

LGFA Division 2 Semi-finalists  
LGFA Giles Cup Football Championship group stages

## Karting

Student Sport Ireland Karting Championship 3rd place

## Powerlifting

Powerlifting Intervarsity Championship (Cancelled due to COVID-19)

## Pool

Student Sport Ireland Division 1 Pool League Winners 2019/2020  
UPC Irish Intervarsity 8 Ball Pool Championship Winners 2019/2020  
UPC Perpetual Cup Winners 2019/2020 (B Team)  
UPC Men's Singles Champion - Adam Maher  
UPC Men's Singles Shield Champion – Frank Tighe

## Rugby (Men)

IRFU Student Sport Ireland (SSI) Division 1 League Winners 2019.  
Student Sport Ireland (SSI) Fresher U20 O'Boyle Cup Winners.  
SSI/IRFU Brendan Johnston Cup finalists (postponed due to COVID-19)  
Student Sport Ireland (SSI) Tier 2 Cup Semi finalists

## Rugby (Women)

Student Sport Ireland Women's League Division 1 League 3rd Place  
Student Sport Ireland Women's Tier 1 Cup Group Stages

## Soccer (Men)

CFAI Perpetual Cup Winners (8TH TITLE IN 10 SEASONS)  
CUFL Premier Division Semi-Finalists  
CFAI Eustace Shield Runners Up (C Team)

## Soccer (Women)

CUFL Premier Division Semi-finalists  
WSCAI Intervarsities (Cancelled due to COVID-19)

## Volleyball

### Women

Student Sport Ireland Women's Tier 1 Cup - Semi Finalists  
Student Sport Ireland Women's Division 1 League – Group Stage Finish

### Men

Student Sport Ireland Men's Division 1 Volleyball League Semi Finalists

### National League Club

Men's National Volleyball League Premier Division - 5th place finish

A further highlight of 2019/2020 saw Institute of Technology Carlow proudly sign a charter to pledge to take part in the first national women in sport initiative undertaken by third-level institutions on the island of Ireland. The initiative, designed to raise the profile of women's sport by increasing media coverage, increasing attendance at women's sporting events and increasing participation in women's sport was developed to create a cultural shift in society's perception surrounding girls and women in sport and to change the subliminal bias in the Irish psyche that exists around girls and boys, or women and men, when it comes to sport.



President of Institute of Technology Carlow Dr Patricia Mulcahy, Institute of Technology Carlow Director of Sport Donal McNally, Student Sport Ireland 20x20 Student Champion, Molly Scott and Student Union President Thomas Drury came together for a photo and pledged to support the initiative by signing the 20x20 Charter.

Student Sport at Institute of Technology Carlow was again affected by the impact of the COVID-19

pandemic during the 2020/2021 academic year, and unfortunately our student athletes did not have the same opportunities to represent Institute of Technology Carlow on playing pitches, courts, tracks, gyms, and sports halls as previous years. Indoor and outdoor events were replaced with online training, and challenges with hundreds of students and staff engaging with virtual wellbeing campaigns and exercise and fitness classes.

In December, as the government eased restrictions, and the country moved to a phased return to Level 3 restrictions nationally, student athletes at the Institute, registered with clubs and societies, were permitted to train outdoors in pods of 15 on a non-contact basis. Pilates, yoga and other gym classes continued online with up to 1,000 students engaging in permitted virtual and outdoor activities.



Academic year 2020/2021 marked the 22nd year of the Sports Scholarships at the Institute of Technology Carlow. The programme offers a support package and bursaries to students of exceptional sporting ability. In 2020/2021 Institute of Technology acknowledged the talented student athletes currently studying at Institute of Technology Carlow offering 87 Elite and Gold Sports Scholarships with nationally recognised elite sport scholars, Molly Scott and John Fitzsimmons (both athletics), Greg McGrath (Connacht Rugby), Eoin Cody (Kilkenny hurling) and Eimear Loughman (Tipperary camogie) among the talented group of recipients.



*Elite Sports Scholar Eoin Cody*



*John Fitzsimmons and Molly Scott*

In May, sports clubs and societies in conjunction with the Students' Union and Students Services in Institute of Technology Carlow and Waterford Institute of Technology collaborated on a hugely successful week-long online celebration of sports clubs and societies.

Sports clubs and societies play a pivotal

role in the development of students during their time at third level. The online event provided an opportunity to look back on the development of sports clubs and societies through the years. The celebration coincided with the time in the academic calendar which is normally attributed to celebrating the success of club and society leaders at our annual awards ball.

Clubs and Societies Week kicked off with symbolic opening ceremonies from the WIT Arena and Institute of Technology Carlow's South Sports Campus featuring student members and, at which, a ceremonial flame was lit to mark "a new spark" between both institutes as we work together towards building a technological university for the South-East. Online content scheduled for the week included the clubs and societies awards ceremonies in Institute of Technology Carlow, a



selection of video memories, including Marcus Lawler's record-breaking performance, podcasts on the history of the clubs and societies of each campus, and a reflection on how clubs and societies have continued to operate through COVID-19 with students interviewed about how they have adapted during these times. Over the week there was a combined 40,000+ views of Clubs and Societies Week videos and over 200,000 engagements on Institute of Technology Carlow and Waterford Institute of Technology social media platforms. The week-long celebration was one the largest collaborations between the two Institutes and helped foster connections and relationships



between the staff and students of both, as well as demonstrating how vital participation in sports clubs and societies is to the holistic student experience.

Institute of Technology Carlow was represented on the biggest sporting stage of all in July and August as

MSc Strength and Conditioning graduate and Institute of Technology Carlow athletics ambassador Marcus Lawler and recent MSc Data Science graduate Clíodhna Manning travelled to Tokyo to compete at the Olympic Games. Clíodhna was a member of the 4x400 mixed relay squad who went on to reach the Olympic final, while Marcus Lawler competed in the Men's 200m, registering a season's best time of 20.73.



In July 2021 Institute of Technology Carlow, the Football Association of Ireland (FAI) and the Professional Footballers Association of Ireland (PFA Ireland) teamed up on a new scholarship initiative for players and ex-players by launching a new annual postgraduate scholarship open to players and former players with the aim of encouraging and supporting the pursuit of postgraduate study among international, League of Ireland and Women's National League players and ex-players. The innovative postgraduate scholarship, funded by Institute of Technology Carlow and PFA Ireland/FAI, is the first of its kind in the country and is available across 28 different programmes of study at Institute of Technology Carlow, from higher certificate to masters, across six academic departments: engineering; science; computing and data science; business; digital marketing and design; humanities and social sciences.



*Pictured at the announcement of the inaugural Institute of Technology Carlow Postgraduate PFA Ireland/FAI Scholarship, from left: Declan Doyle, Vice-President for Development and Research, Institute of Technology Carlow ; Barry Ferguson, FAI Regional Manager; Paul O'Reilly, FAI Institute of Technology Carlow Football Programme Manager; Lauryn O'Callaghan, Institute of Technology Carlow sports scholar and player with Peamount United; Ollie Cahill, PFA Ireland Player Executive; Republic of Ireland U21 Head Coach and ex-professional Jim Crawford; Will Clarke, FAI League of Ireland Academy Development Manager; Donal McNally, Head of Sport, Institute of Technology Carlow.*

## 1.6 PEOPLE AND EDI

### 1.6.1 EQUALITY, DIVERSITY AND INCLUSION

The Institute works continuously to embed its key values of Equality, Diversity and Inclusion (EDI) through its leadership, governance, structures and operations. As the first *Athena SWAN Bronze Award* holders under the Expanded Charter in the Irish technological higher education sector, the Institute is to the forefront of many initiatives designed to advance gender equality, representation, progression and success for all. This will enable the Institute to continue to attract, develop and retain the very best staff that are representative of our society as a whole, and to provide an inclusive and diverse learning environment in which all of our students are supported in reaching their full potential.

In this reporting period the Institute continued to implement its *Gender Equality Action Plan 2018-2022*. This plan is underpinned by 68 targeted, specific and measurable actions designed to systematically advance gender equality in the Institute. The actions focus on establishing the necessary structures, policies, procedures, supports and training required to further embed a values-led culture of Equality, Diversity and Inclusion in the Institute. Key deliverables under the plan in this reporting period include the introduction of *Core Hours for Meetings Policy*, the provision of LGBTQ+ training to staff, the development, along with our Students' Union, of an

Institute *Gender Identity and Expression Policy* and the development of *Return to Work and Remote Working* policies.

In addition, 2019/2020 saw the launch of Athena SWAN in the Faculty of Engineering, the Department of Computing and the Department of Humanities in the Institute. This involves an extensive self-assessment process in each of the areas, which is being supported by the Office for Equality Diversity and Inclusion. Each of the three areas made Athena SWAN Bronze Award applications in the 2020/2021 academic year.



*Staff and Students from the Department of Humanities at its Athena SWAN launch*

This reporting period also saw the establishment of a new senior executive role in the Institute entitled Director for People and EDI. The Director for People and EDI is charged with leading the development and implementation of a progressive and effective People and EDI strategy and structure in consultation with the wider community. This includes workforce design and planning; EDI policy development and implementation for staff, learners and leaders; organisational leadership and talent development; human resource systems and policies; and employee relations. The Director for People and EDI will provide an invaluable support to our leaders and teams across the organisation regarding people-related activities. The Institute was delighted to welcome Colette Lane to this new role in 2020. Colette brings over 20 years international experience as a senior HR executive in the IT industry, which included the establishment of the HR function of the educational software technology company, Riverdeep, in Bangalore India, a member of the senior executive team responsible for setting up Unum's technology centre in Carlow, and was HR Business Partner for Unum's global IT workforce across five international locations. She is also actively involved with a range of local and international charities, serving on boards in a voluntary capacity.



Colette Lane, Director for People and EDI

In January 2020, Institute of Technology Carlow was one of just four HEIs in the technological higher education sector to secure a new Senior Academic Leadership post for Engineering Research and Innovation under Phase 1 of the *National Senior Academic Leadership Initiative (SALI)*. SALI is an innovative and transformational positive action initiative being implemented across higher education alongside the *Gender Action Task Force* launched in 2019. Analysis carried out by the Gender Taskforce suggested that with the continuation of current recruitment and promotion practices, it could take up to 20 years to achieve an average of 40% females at professor level in the university sector. The SALI initiative aims to accelerate progress in achieving the goal of gender balance at the senior academic level in Higher Education Institutions. Welcoming the announcement, Dr Patricia Mulcahy, President of Institute of Technology Carlow, said: *"This is very welcome and will further strengthen our strategic approach to engineering research and education encapsulated in our new Strategic Plan for Research and Innovation Impact and is rooted in our steadfast commitment to equality, diversity and inclusion in all our endeavours. This achievement*



*Dr Sarah O'Connell was appointed in April 2021 to the role of Director of Engineering Research and Innovation. This position was funded under Phase 1 of the Senior Academic Leadership Initiative (SALI).*

*builds upon the excellent work of our Faculty of Engineering to-date, the considerable achievements of our Centre for Research and Enterprise in Engineering (engCORE) and the success of our cross-institutional team whose work recently secured the international Athena SWAN Bronze Award for our Institute under the Athena SWAN extended charter. I acknowledge and commend all colleagues for this. I also thank the Minister for this farsighted initiative and look forward to working with the new HEA Centre of Excellence for Gender Equality on this and related developments."*

The Institute has continued to fund a number of important Equality, Diversity and Inclusion (EDI) projects under its annual EDI Fund, including a number of seminars, workshops and research projects. In March 2020, the Institute welcomed world renowned Professor Dame Jocelyn Bell Burnell, a champion of women in science and one of the founders of Athena SWAN to speak to staff and students from local secondary schools, hoping to inspire a new generation of young women to choose careers in science.



*Professor Dame Jocelyn Bell Burnell at Institute of Technology Carlow with students from Tyndall College Carlow*

The Institute were also proud signatories to, and participants in, the high profile *Student Sport Ireland 20x20* campaign, the first national women in sport initiative by third-level institutions on the island of Ireland. The campaign was developed to create a cultural shift in society's perception surrounding girls and women in sport and to change the subliminal bias in the Irish psyche that exists around girls and boys, or women and men, when it comes to sport.



*Institute of Technology Carlow students taking part in the Student Sport Ireland 20x20 Campaign for Third Level Colleges, demonstrating its commitment to women and girls in sport*

Following the publication of the *Framework for Consent in Higher Education Institutions (Safe, Respectful, Supportive and Positive – Ending Sexual Violence and Harassment in Irish Higher Education Institutions)* in 2019, the Institute of Technology Carlow rolled out a number of training workshops and seminars in 2019 and 2020 for both staff and students of the Institute, both on Active Consent and Offering Support in the Aftermath of Rape and Sexual Assault. In 2021, the Institute established the Ending Sexual Violence, Prevention and Support Committee (ESP) to oversee its implementation of the *Framework for Consent in Higher Education Institutions*.

The ESP committee will be responsible for the review and implementation of governmental policy and procedures in relation to the framework. Members comprise representatives from the Institute's academic staff, student support services, its Office of Equality, Diversity and Inclusion (EDI), Human Resources office, Students' Union and a selection of external specialist agencies. Together, they will work to ensure delivery and implementation of the framework to ensure a campus culture at Institute of Technology Carlow that is safe, respectful and supportive. Staff and students will have access to education and support on the area of consent to make it a valued and social norm. This will include consent education, active bystander education, and disclosure and support training across Institute of Technology Carlow.

In March 2021, the Institute, in collaboration with Waterford Institute of Technology, Carlow College St Patrick's, Limerick Institute of Technology and Mary Immaculate College, received funding from the HEA's Gender Equality Enhancement Fund 2020 to roll out a gender identity and diversity training programme for staff in each of its colleges. The Institute will take the lead on the project entitled *The development and implementation of a gender identity, expression and diversity training programme for staff in Irish HEIs*. The project was awarded funding from the HEA fund that was established to advance gender equality initiatives in Irish higher education. The funding will be used to develop two distinct programmes: one for academic and professional management and support staff, and one for senior executive teams. Once piloted, the programme will be rolled out amongst the five partner institutions leading to the development and launch of a permanent resource that will be available for all staff. The programme will be delivered by ShoutOut, a charity that provides educational programmes in educational institutions in areas such as sexual orientation, gender identity and expression, and intersex identity.

Key Institute of Technology Carlow management and governance data, staff data and student data by gender for 2019/2020 and for 2020/2021 are presented in Tables 7 to 9. Further information on policies and plans can be accessed at [www.itcarlow.ie/resources/equality-diversity-inclusivity.htm](http://www.itcarlow.ie/resources/equality-diversity-inclusivity.htm).

Table 7 **Key Institute of Technology Carlow Management and Governance Data by Gender 2019/2020 and 2020/2021**

	2019/2020		2020/2021	
	MALE	FEMALE	MALE	FEMALE
<b>MANAGEMENT</b>				
Senior Executive	55.55%	44.44%	50.00%	50.00%
Institute Management Team	51.43%	48.57%	53.49%	46.51%
<b>GOVERNANCE</b>				
Governing Body	47.05%	52.95%	42.11%	57.89%
Academic Council	55.74%	44.26%	61.36%	38.64% *
<b>KEY BODIES, COUNCILS &amp; COMMITTEES</b>				
Membership	52.60%	47.40%	52.81%	47.19%
Chairpersonship	58.33%	41.67%	63.64%	36.36% **

\* There are two vacancies on Academic Council which are currently being filled with females. This will redress the imbalance.

\*\* The chairs and vice-chairs of Academic Council committees are in the process of being rotated to address this imbalance.

Data is drawn from the Institute of Technology Carlow Annual Report 2019/2020 and 2020/2021. Key Bodies, Councils and Committees are comprised of the following: Governing Body, Academic Council and its Committees (Academic Regulations; Programme Planning and Validation; Research and Development; Quality Assurance and Enhancement; Teaching, Learning and Support Services; Collaborative Provisions), Ethics Committee, Health and Safety Committee, EDI Committee (2020/2021), EDI Steering Committee (2019/2020), and Athena SWAN SAT (2019/2020).

Table 8 **Institute of Technology Carlow Staff Profile by Gender 2019/2020 and 2020/2021**

	2019/2020		2020/2021	
	MALE	FEMALE	MALE	FEMALE
<b>ACADEMIC STAFF</b>				
Academic Staff	56.85%	43.15%	55.00%	45.00%
Associate Lecturers / Occasional Academic Staff	52.24%	47.76%	49.20%	50.80%
<b>Academic Total</b>	<b>54.75%</b>	<b>45.25%</b>	<b>52.10%</b>	<b>47.90%</b>
<b>RESEARCH and ENTERPRISE SUPPORT STAFF</b>				
Research/Specialist/Enterprise Support	43.48%	56.52%	50.00%	50.00%
<b>PROFESSIONAL, MANAGEMENT and SUPPORT STAFF (PMSS)</b>				
Management	55.00%	45.00%	57.78%	42.22%
Administrative	5.56%	94.44%	4.05%	95.94%
Library	23.08%	76.92%	30.00%	70.00%
Student Services (incl. invigilators)	20.39%	79.61%	15.25%	84.74%
Technical and Maintenance Staff	68.89%	31.11%	64.58%	35.42%
Occasional	13.51%	86.49%	16.67%	83.33%
<b>PMSS Total</b>	<b>25.86%</b>	<b>74.14%</b>	<b>31.39%</b>	<b>68.61%</b>

Data is drawn from the Institute of Technology Carlow December 2019 and December 2020 returns to the HEA.



Table 9 **Institute of Technology Carlow Student Profile by Gender 2019/2020 and 2020/2021**

	2019/2020		2020/2021	
	MALE	FEMALE	MALE	FEMALE
<b>ALL STUDENTS</b>				
<b>Total</b>	<b>52.59%</b>	<b>47.41%</b>	<b>51.53%</b>	<b>48.46%</b>
<b>BY FACULTY</b>				
Business and Humanities	44.63%	55.37%	44.33%	55.67%
Engineering	89.55%	10.45%	89.65%	10.26%
Lifelong Learning (Carlow and Wicklow)	36.82%	63.18%	40.26%	59.74%
Science	66.44%	33.56%	63.78%	36.22%
Wexford (Full-time and Part-time)	28.74%	71.26%	31.83%	68.17%
Extended Campus	81.55%	18.45%	69.03%	30.97%
<b>RESEARCH STUDENTS</b>				
<b>Total</b>	<b>51.49%</b>	<b>48.51%</b>	<b>53.13%</b>	<b>46.88%</b>
<b>BY POSTGRADUATE RESEARCH AWARD LEVEL</b>				
Level 9 Masters by Research Students	52.46%	47.54%	54.12%	45.88%
Level 10 PhD Students	42.1%	57.9%	45.45%	54.55%

Data is drawn from the Institute of Technology Carlow March 2020 and March 2021 SRS final returns to the HEA.

## 1.6.2 STAFF DEVELOPMENT

Staff are at the centre of the Institute's mission and values. Since 2012, a priority objective has been the building of institutional research capacity and working toward key metrics required for Technological University designation. Strategies have included recruitment of research active Level 10 qualified staff and internal supports for staff in enhancing their academic qualifications, developing research and supervision capacity within academic departments and supporting staff to fulfil their potential with learning and development opportunities that are relevant and accessible. This has ensured that the rapidly developing institutional profile is aligned with a changing staff qualification profile. For example, the proportion of full-time academic staff qualified to doctoral level has increased steadily from 27% in 2014 to 48% in 2020 (Figure 23). Based on the Technological Universities Act 2018 criteria (i.e. full-time academic staff engaged in the provision of a programme that leads to an award to at least honours bachelor degree level), 53% of full-time academic staff are qualified to level 10 (Sept 2020 ECF Return). Furthermore, 97% of all academic staff members are qualified to Level 9 and / or Level 10 of the NFQ in 2020.

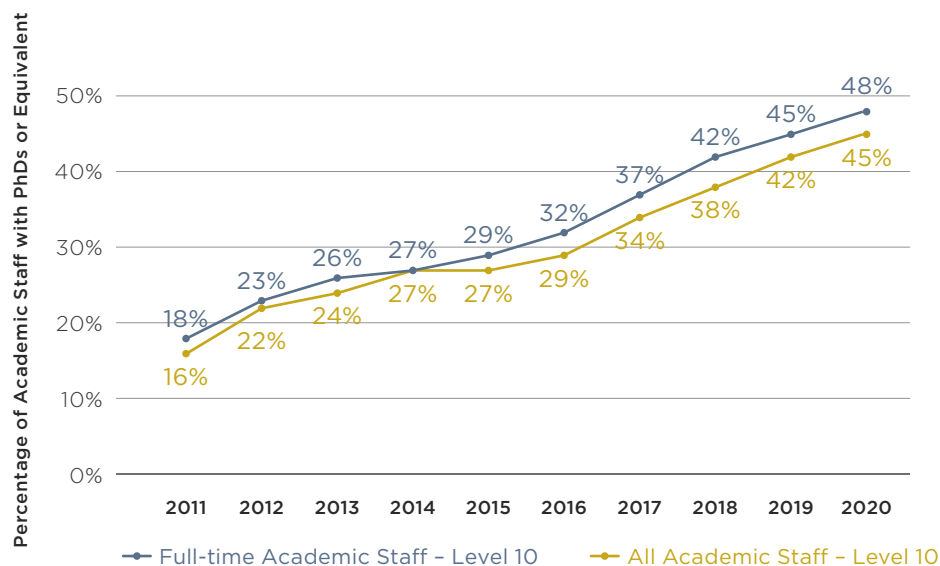


Figure 23 **Increase in overall and full-time academic staff with doctoral qualifications (2011-2020\*)** \*Source for 2020: September 2020 ECF return

The Institute's dedicated Teaching and Learning Centre acts as a support centre for both staff and students. The aim of the centre is to foster a culture of excellence in the area of teaching and learning and to contribute positively to the quality of the learner experience. Provision of support for staff and students is needs-driven and the centre acts in partnership with stakeholders across the entire Institute. It coordinates teaching and learning activities across all campuses and is underpinned by a philosophy of collaboration. In addition to the activities listed previously in Table 4, the Teaching and Learning Centre co-ordinated the following activities for staff in 2019/2020 and 2020/2021:

- Provision of accredited professional development modules to all staff (Table 10).
- Launch of the Institute of Technology Carlow Teaching and Learning Funding Grants 2019/2020, under the funding support of the National Forum for the Enhancement of Teaching and Learning (14 projects to a value of €45,000).

- Launch of the National Forum Seminar Series – four funded seminar events to support collaboration within the sector.
- Launch of large scale National Forum funding projects under the SATLE initiative (€98,000).
- Professional Development Programme for visiting Chinese lecturers (Feb-April 2020). Between 12-14 hours of support offered weekly over 9 weeks.

The Teaching and Learning Centre also provided the following learner-faced initiatives in 2019/2020 and 2020/2021:

- Supplementary academic support within all Faculties.
- Support to students via the Academic Writing Centre and the Maths Support Centre.
- Implementation of Blackboard Ally and development of supporting training resources.
- An accredited professional development teaching and learning module to all research postgraduate students (28 graduates from the module in 2019/2020).
- An online academic induction programme – Academic Success, Skills for Learning, Skills for Life, hosted through TLC Student Hub on the Institute's VLE, Blackboard.
- Learner-faced initiatives such as: Hear to Help (Peer Support) Initiative with Postgraduate Research students, March to Exams (Virtual Study) Initiative, Ask and Answer Support Initiative and Postgraduate Winter Writing Week.

Table 10 **Accredited academic professional development – Teaching and Learning Programmes 2019/2020 and 2020/2021**

Programme	No. Participants		No. of Cohorts		Credits	Comments
	2019/2020	2020/2021	2019/2020	2020/2021		
Teaching and Learning 1 (Foundation)	60	47	6	4	10	Existing staff, new staff, external applicants and postgraduate research students and ETB Laois-Offaly (2019/2020)
Teaching and Learning 2 (Advanced)	10	31	1	2	10	Existing staff, new staff, external applicants
Assessment and Feedback	6	11	1	1	10	Existing staff, new staff, external applicants
Curriculum Design	12	15	1	1	10	Existing staff, new staff, external applicants
Education Research Methods	12	6	1	1	10	Existing staff, new staff, external applicants
Technology-Enhanced Learning	9	6	3	1	10	Existing staff, new staff, external applicants
Research Supervision	12	11	3	1	10	Existing staff, new staff, external applicants, linked providers
Masters Dissertation	6	8	1	1	20	Existing staff, new staff, external applicants
<b>Total No. Participants</b>	<b>127</b>	<b>135</b>				
<b>Total Participants (2019-2021)</b>	<b>262</b>					

Institute of Technology Carlow's Graduate Attributes Framework, which was published in December 2017, continues to be embedded in curriculum design and development activities, particularly evident during the full programmatic review process undertaken in 2020/2021. The Graduate Attributes Framework has also been incorporated into the Learner Engagement and Progression Framework (LEAP), which underpins the Institute's Student Success Strategy.



*Dr Theresa Lowry-Lehnen, practice nurse at Institute of Technology Carlow, who won Practice Nurse of the Year 2020, IHCA Nursing Project of the Year 2019 and IPNA Educational Bursary 2019.*

### **Teaching Hero Awards 2020**

Institute of Technology Carlow are delighted to support the Teaching Hero Awards, which are coordinated by the National Forum for the Enhancement of Teaching and Learning in association with the Union of Students in Ireland (USI) and other students' unions nationwide. The Teaching Hero Awards are Ireland's only national, student-led awards for all those who teach in higher education. They provide an opportunity for students across the country to recognise and celebrate outstanding teaching in our higher education institutions. Teaching Heroes are nominated by individual students, who submit a short personal piece that explains why the person is their 'Teaching Hero'. Based on student nominations, all Teaching Heroes identified, with their agreement, receive national recognition.

In 2020, twenty-three Institute of Technology Carlow lecturers drawn from throughout the Institute were nominated for Teaching Hero Awards:

- Dr Adriana Cunha Neves
- Brian Garvey
- Christina Dobbyn
- Christopher Nulty
- Dara McHugh
- Dr Dean McDonnell
- Dominic Burke
- Dr Anne O'Connor
- Dr Rosemary O'Hara
- Dr John Trehy
- Eileen Farrell
- Gary Cahill
- Ivan Sheeran
- John Tully
- Dr Maeve Murphy
- Paul Barry
- Ross Palmer
- Susan Brennan
- Timothy Casey
- Dr Tomás Dwyer
- Trina Rea
- Vicki Anderson
- Dr Vincent O'Brien

The Institute was delighted to acknowledge the achievement of those from Institute of Technology Carlow who are receiving awards and to share this celebration of teaching.

## 1.7 RESEARCH AND INNOVATION

Institute of Technology Carlow's new five year Strategic Plan for Research and Innovation IMPACT (<https://www.itcarlow.ie/resources/ri-impact-strategic-plan.htm>) was launched in March 2020.

The Institute's Research and Innovation IMPACT strategy sets out an ambitious and pragmatic cross-institutional roadmap to enhance our research, scholarship and creative activities for societal, economic and environmental development.

The Institute continues to invest in research infrastructure, personnel, support structures and systems. A review of our COREs (Centre of Research and Enterprise) conducted in 2021 reported increased research enrolments, increased supervision capacity and increased outputs across all COREs. In association with the Research and Commercialisation Support Centre (RCSC) there was significant successes in winning Irish Research Council funding, Enterprise Ireland funding for capital equipment and innovation funding for industry partners. In the period under review, the Institute engaged with over 400 companies in research, technology transfer and enterprise support activities. The work with industry partners through our Research and Commercialisation Support Centre (RCSC) and Design + Technology Gateway accelerated through the pandemic. The Institute worked with companies, from owner manager run small businesses to multi-nationals, on new products / services or new business processes to assist a recovery from the pandemic and to prepare for Brexit. Emphasis was put on developing proposals with SMEs and multinational corporations (MNCs) to programmes including the Disruptive Technologies Innovation Fund, the Regional Enterprise Development Funds, and Innovation Partnership Programmes. These strategically important regional and national initiatives were won through targeted industry - institute interaction.

The Institute's research output continues to increase with the number of research publications per year (indexed in the Scopus database) more than doubling from 2016 to 2020. The Institute's researchers are increasingly collaborating with researchers in other institutions nationally and globally. Since 2015, our researchers have co-authored research publications with colleagues from 63 different countries (Figure 24).

Under a competitive funding call in September 2020, the Higher Education Authority awarded more than €644,000 to the Institute to support our research students and the contract research staff impacted by delays in carrying out their work. The Institute worked closely with the research teams to minimise these impacts while maintaining the integrity of the research programme.



## Our Institute of Technology Carlow researchers

In July 2020, Dr Laurence Kavanagh, Jerome Keohane, Dr Guiomar Garcia-Cabellos, Dr Andrew Lloyd and Dr John Cleary were awarded Best Review Paper 2019 by Resources, an international journal, for their paper: Global Lithium Sources - Industrial Use and Future in the Electric Vehicle Industry: A Review. The announcement was made by Resources as part of its Best Paper Awards that recognises outstanding papers published in its journal. The project established the baseline levels of lithium in soils, waters, and plants in the South-East of Ireland, prior to any future extraction of lithium from known pegmatite deposits in the Blackstairs Mountains. Lithium is a



key component in batteries for electronic devices and electric vehicles.

*Pictured are four of the five winning scientists from Institute of Technology Carlow. From left: Dr John Cleary, Dr Laurence Kavanagh, Dr Guiomar Garcia-Cabellos and Dr Andrew Lloyd.*

In December 2019 the Institute was awarded almost €400,000 to develop an industry-led engineering cluster to expand capability and competitiveness in the South East. The Chair of Engineering the South East is Michael Carbery, the Head of Innovation and Development Programmes with Keenan (Alltech Farming Solutions Ltd) in Borris, Co. Carlow. Following on from this announcement the Institute's engCORE team hosted a workshop that provided business leaders in the region the opportunity to reflect on their research and innovation strategy and consider how Institute of Technology Carlow can contribute to the implementation of that strategy. Attendees included representatives from a variety of companies such as Waters Technologies Ireland, AutoLaunch, Alltech Farming Solutions, DPF Engineering, APL, Keltech, Boston Scientific, Carlow Tooling, TekPak Automation, Hi-Spec and others. Dr Frances Hardiman, Head of Faculty of Engineering at Institute of Technology Carlow, was joined by Dr Cathal Nolan, Head of Department, engCORE directors, Design + Technology Gateway manager, technology transfer office manager and technical leads from various engineering research groups in delivering the workshop.





The Design programmes at Institute of Technology Carlow launched a new website, DesignCarlow.ie, in June 2021 to showcase the work of its students, promote design and mark 50 years of design education and research at the Institute. Ireland's first industrial design course was established at the Institute in 1971. The course was closely aligned with the internationally renowned Kilkenny Design Workshops and helped to develop design education as an economic driver for the region. The new website reflects 50 years of design with an archive of student design, from the early days of Carlow Regional Technical College through to the present Institute of Technology Carlow.

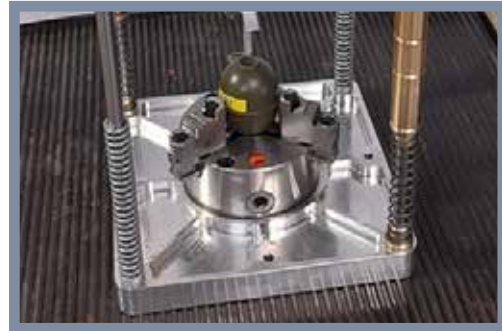
HealthCORE was a key partner in the development of an Erasmus+ training resource titled Sports Students as Mentors for Boys and Young Men ('SSaMs'). The project is the culmination of two years' work from partners in England, Spain, Italy, Greece, the Czech Republic and Ireland. The programme originated against a backdrop of increasing interest at a research and policy level on gender issues with boys and young men, including boys' and young men's health, educational attainment and links to early school leaving. Across the EU, boys have lower rates of educational attainment than girls, are much more likely to leave school earlier and less likely to go onto higher education. Furthermore, early school leaving also has more far-reaching detrimental impacts, including criminality and social exclusion. The SSaMs programme utilises a strengths-based mentoring methodology, to provide sports students with the knowledge and skills required to effectively mentor boys and young men. These are skills that will be highly applicable to sports-based work with young people on graduation when students enter the sports workplace.

Wexford Campus postgraduate researcher, Samantha Morris, received best paper award in the 2019 Irish Academy of Management Conference in Dublin. The conference provided a forum for academics and practitioners to address the key challenges of management. The conference featured a broad range of tracks relevant to management including: Accounting, Finance and Corporate Governance; Entrepreneurship and Small Business Management and Work, Employment and Organisation. Samantha's paper '*Investigating the structural relationships between attitudes to local food, destination choice, travel motivation, satisfaction and authenticity*' was awarded best paper in the Tourism, Hospitality and Food track at the conference.



### Defence Forces engineering project awarded funding under Public Service Innovation Fund

A project from the Faculty of Engineering and our collaborative partners in the Irish Defence Forces focusing on the remote disablement of explosive devices was in July 2021 awarded €50,000 funding under the Public Service Innovation Fund for future development. Students from the Ordnance School at the Curragh Camp, who are in their third year of the Bachelor of Engineering in Mechanical Engineering were awarded funding for their project entitled DISARM (Disablement In-Situ Alternative Remote Mechanisms). DISARM evolved from a platform prototype of a semi-remote disablement tool developed last year by the Ordnance School and subsequently awarded the 2020 Defence Forces Chief of Staff's gold innovation team award. The funding awarded for DISARM will be utilised to assist in producing prototypes designed to safely disable explosive devices to an industrial standard.



### On Feirm Ground - Investing in Farmers Health and Wellbeing

Institute of Technology Carlow partnered with the Department of Agriculture, Food and the Marine, the Department of Health, the Health Service Executive and Teagasc to fund a programme of research that has underpinned the development of a training programme for agricultural advisors to engage farmers on their health and wellbeing over the farm gate. Launched in October 2020, the programme, entitled *On Feirm Ground*, is a project of Engage: The National Men's Health Training Initiative and will train 800 agricultural advisors over the following 12 months.



*Pictured at the launch of On Feirm Ground are (l-r): Minister of State for Public Health, Well Being and the National Drugs Strategy, Frank Feighan T.D; Sean Cooke, CEO Men's Development Network; Minister of State for Research and Development, Farm Safety and New Market Development Martin Heydon T.D. Image credit: Ryan Byrne, Inpho.*

The National Centre for Men's Health at Institute of Technology Carlow, led by Dr Noel Richardson identified that farmers in Ireland experience a disproportionate burden of health problems, which undermine the profitability, competitiveness and sustainability of farming. These include: isolation and the decline of rural communities; issues relating to succession and inheritance; increasing pressures to scale up and changing farming roles; increasing paperwork demands; stresses associated with seasonal workloads; financial stress and the pressures associated with being self-employed. The research findings recommend that the *On Feirm Ground* training programme adopts a strengths-based approach to farmers' health, focuses on the issue of gender and the social determinants of farmers' health, and sets out clear roles, responsibilities and boundaries for advisors in their health role.

### **Innovation and Enterprise Development Highlights**

In 2019, the Institute established the Insurtech Network Centre DAC (INC) in partnership with UNUM, Sun Life, Wexford County Council and Carlow County Council and a number of industry partners. In 2019 NDIH DAC (C4D) was established in partnership with Glanbia, Cartoon Saloon, Kilkenny County Council, KIDCO, Design and Craft Council of Ireland and a number of industry partners.

In 2021 we commenced TEaM Rural. TEaM Rural is an Institute of Technology Carlow strategic entity focused initially in Co. Laois working on entrepreneurship and economic development in towns and villages with a population of less than 10,000 people. TEaM Rural is supported by the existing enterprise support infrastructure within Laois County Council, Laois Local Enterprise Office and Laois Partnership. The initiatives are funded by Enterprise Ireland under the Regional Enterprise Development Fund 2017-2020. These DACs are now making a contribution to our project pipeline across all our RDI activities.

In November 2020 spinout company, Aerial Agritech, a former participant in the Institute's New Frontiers programme, was awarded Small Business Innovation Research (SBIR) by the Marine Institute and Enterprise Ireland. Established in 2015 by Cian Gallagher, Aerial Agritech, in association with Institute of Technology Carlow, has a particular focus on bringing technology to industry operators. It will partner in this initiative with Bláth na Mara (Aran Islands Seaweed) and Wild Irish Seaweed, which will provide key support in enabling the transition to seaweed resource assessment.

In June 2021, Institute of Technology Carlow launched a new five-year partnership, with €700,000 in funding from Enterprise Ireland, to deliver the New Frontiers programme for emerging entrepreneurs across the south-east region, incorporating counties Kilkenny, Carlow, Waterford and Wexford. New Frontiers is a national entrepreneur development programme delivered by institutes of technology and universities across Ireland. It provides a comprehensive set of business development supports and mentoring to start-ups with innovative projects that have a scalable market. The Enterprise and Research Incubation Centre (ERIC) at Institute of Technology Carlow will deliver the programme over the next five years (2021-2025), assisting start-ups across the region. Dean Klatt, a graduate of the New Frontiers programme, has established Seed Golf and runs the company from the ERIC Centre. In just 18 months, Seed Golf has been named the official golf ball of the PGA EuroPro Tour with sales in 31 countries, including Australia, Russia, South Korea and the Middle East. Seed Golf's first ball, the SD-01, was produced in July 2017, targeting amateur players. Growth was based on a strong social media campaign, using Instagram and YouTube. South Korea recently became the 31st country in the company's reach with all sales conducted solely online via seedgolf.com.



*Dr Xuemei Germaine, Founder and CEO of MicroGen Biotech*

In 2020, Institute of Technology Carlow spinout MicroGen Biotech closed a \$3.8 million Series A round, led by Fulcrum Global Capital, The Yield Lab Europe and The Yield Lab Opportunity Fund (USA) and participated in The Yield Lab Europe's accelerator programme. MicroGen Biotech was established in 2012 as an Irish High-Potential Start-Up (HPSU) spinout from the enviroCORE research group at Institute of Technology Carlow. MicroGen Biotech applies constructed, functional microbiome technology to increase crop yield and health, while protecting food safety by remediating pollutants and improving soil fertility. Its proprietary technology blocks the uptake of heavy metals by crops on land that has been contaminated. Its products work directly on the soil to break

down pollutants and support the growth of good bacteria to restore sites to fertile land. This year MicroGen Biotech also won the Agtech and Food category at the recent Samsung Extreme Tech Challenge (XTC) competition, selected from over 2,400 companies across 80 countries. Dr Xuemei Germaine, Founder and CEO, also took home the Female Founder Award.

## EUROPEAN PROJECTS SUPPORTING SME INNOVATION

### Arts and Humanities Entrepreneurship Hubs

The Arts and Humanities Entrepreneurship Hubs (AHEH) project is a 3.5 year initiative co-funded by the European Union under the Erasmus+ programme. Ending in June 2021, the project brought together a partnership of 14 organisations from 7 European countries with the goal to equip arts and humanities graduates with the tools they need to succeed as entrepreneurs. The project developed innovative training programmes and materials which have been pilot-tested at regional and European level. The project worked with students and enterprises on a set of 'key challenges' to provide a robust assessment of the training material.

Seven Entrepreneurship Hubs within partner universities were developed including FUTURE Studio at Institute of Technology Carlow. FUTURE Studio is a collaborative space that stimulates the development of SME outreaches through supporting the development of digitalisation and e-working in the region as a cornerstone of incentives to relocate work activities in less advantaged regional areas, develop start-ups from the creative industries, encourage the emergence of collaborative and innovative projects with regional stakeholders and scale existing projects that lead to job creation.

### Catalyst

Catalyst is a cross border Ireland-Wales 2014-2020 pilot project that utilises the theme of sustainability to inspire innovation within Welsh and Irish businesses in the life science and food and drink sectors. The project had a total budget of €1.6 million and was delivered between February 2018 and December 2020. Catalyst delivered enterprise workshops, R&D residencies, trade residencies, and bespoke one-to-one sessions. The programme supported 60 enterprises who created 10 full-time jobs and 23 of the participant companies developed new products or services.

An Innovation Residency programme was delivered that saw SMEs conducting R&D with Institute of Technology Carlow and University of Wales Trinity Saint David, enabling cross-border collaboration to take place. Three separate residencies took place over the course of the project with each taking a different approach, including responding to a changing operating environment and the global pandemic.

## BUCANIER

BUCANIER (Building Clusters and Networks in Innovation, Enterprise and Research) project is a €2.9 million EU-funded scheme to support small businesses in Ireland and Wales. Finishing in February 2021, BUCANIER was part-funded through the European Regional Development Fund as part of the Ireland-Wales cooperation programme. The project worked in key growth sectors of the Welsh and Irish economies, including food and drink, life sciences and renewable energy to boost productivity across the two countries, increase innovation capacity within SMEs and social enterprises and strengthen collaborations with Higher Education institutions.

BUCANIER saw 132 SMEs engage with the project resulting in 62 enterprises introducing new to the firm products, 22 enterprises introducing new to the market products, 15 new full-time jobs created and the publication of an academic paper titled '*BUCANIER: A Cross-Border Innovation Ecosystem*' at the proceedings of the 15th European Conference on Innovation and Entrepreneurship in Italy.

## Enter To Transform

Enter to Transform - Transformational Entrepreneurship Hubs for Recognised Refugee Re-starters is a €2.14 million Interreg part-funded North-West Europe project which helps to increase the entrepreneurship capacity of Recognised Refugees (RR).

Having commenced in 2020, the initiative offers a social innovation addressing Recognised Refugee re-starters to become ready for business creation. Recognised Refugee restarters with business experiences in their own country have a huge potential for business creation and/or expansion but need specific mentoring to adapt to a new country. The project addresses the need of Recognised Refugee restarters for social inclusion through self-employment and aims at the impact on the regional economy and market. The project develops a supportive environment of hubs, which function through mentoring as a "door opener" to enter existing entrepreneurial infrastructures.

## Technological University Project Research initiatives

Over the period under review a number of research collaboration and capacity building initiatives were delivered. These include:

- A cross-institutional PhD scholarship initiative designed to encapsulate the requirements of impactful research across a broad spectrum of disciplines and industries, with programmes in

such areas as applied engineering, artificial intelligence, bioenvironmental science, education and technology, and health and rehabilitation.

- The Research 'Brown Bag Series' was a platform for researchers in both institutes to present their research, share ideas and identify collaborative research opportunities as part of the collective journey to becoming a technological university. The weekly series addressed diverse multidisciplinary topics and it alternated with presenters from Carlow and Waterford each week. Core strategic thematic areas including health, engineering, ICT, humanities, business and the environment were discussed with a focus on encouraging cross-institutional collaboration.
- South East Research Sparks provided an opportunity for research-active staff across both Institutes to present their research to colleagues, as well as outlining future directions they intended to pursue in line with their Institute's research strategy.
- The second Amplitude conference, hosted by the Technology Transfer offices and Research Centres from Institute of Technology Carlow and Waterford Institute of Technology, welcomed researchers and businesses from across the region to discuss future collaboration opportunities and how they can gain access to the multitude of funding streams available. Among the guest speakers were government representatives from the Department of Health, Department of Agriculture, Food and Marine, Department of Business, Enterprise and Innovation and Minister of State, John Halligan who outlined the strong positioning of Ireland's research and innovation on an international scale. The purpose of this conference in the region is to bring together the research and business communities in one room and discuss the current state-of-the-art, the opportunities available within industries and the ways in which a research centre can assist a company maximise on these opportunities.
- Workshops have also been designed and delivered including e.g. Proposal Intelligence for Horizon 2020 and Horizon Europe; COST Actions: networks of researchers from Europe and beyond; and, Open Research - Your Open Access Obligations.

The aim of these and other initiatives is to build research collaborative networks between the Institutes by highlighting the research personnel, techniques, skill sets and technologies present within both Institutes.

## 1.8 PARTNERSHIP WORKING AND COMMUNITY ENGAGEMENT

The contribution of Institute of Technology Carlow to its regions is evident in a number of ways. The Institute prides itself on the level of engagement in the civic, social, environmental and economic life of our regions. The scope of the work of our staff and learners crosses international boundaries, as well as national, and demonstrates how our graduate attributes are a living mechanism in developing our learners. The following sections demonstrate the richness and the global perspective our international students bring to our multicultural community of learning; our volunteer awards exemplify our connectedness and our social responsibility; our art and design projects show creativity; our programme developments build knowledge; our participation in national and international awards demonstrate confidence and reflection.

### **Our multicultural campus**

International Day at Institute of Technology Carlow is usually one of the highlights of the academic year with the Central Services Building a cacophony of music, dance, global foods and colour as students from up to 30 nations showcase their countries and cultures. Nations represented by the international study body at 2019's International Day included: Sudan; Nigeria; the Philippines; Russia; Malaysia; China; Pakistan; Saudi Arabia; Vietnam; Japan; India; Canada; Oman; Portugal; Spain; Austria; France; Germany; Finland; Switzerland; the Netherlands; Greece; Palestine and Democratic Republic of Congo. 'Welcome' was written in many languages as the campus transformed into a cornucopia of international flags, bunting, music, drumming, foods, native dress, video and dance as the Institute's international student body proudly showcased their home countries. Our international day had to move to the virtual world in 2020, with a virtual event entitled International Student Showcase 2020/2021 featuring cooking, podcasts, recipes, country facts, and quizzes. A podcast page allowed visitors to hear from international students from as far away as Trinidad and Tobago about life in a new country – including life in lockdown - and why they selected Institute of Technology Carlow as their college of choice.

### **Creativity**

In December 2019, Wexford Campus Art and Visual Communications Students exhibited their work at Wexford General Hospital, in an exhibition entitled Catching the Light. The collaboration with Wexford General Hospital saw 20 new works displayed in a new corridor for the Day Surgery Unit (The Slaney Ward) as well as some other areas of the hospital and in one of the hospital





gardens. *Catching the Light* explores a variety of processes and techniques that look at the emotions people experience in a hospital environment and the physical symptoms that may be associated with these emotions. The artworks examine the many ways in which art and other forms of healing, both modern and ancient, can make a huge difference to our wellbeing.

Culture Night 2019 saw the Institute host a number of cultural genres, including a live artistic performance, a guided tour of the Institute of

Technology Carlow art collection, and the screening of three artistic films and one feature-length concert film. Jung-A Han and Orla Ryan were the curators of 2019's Institute of Technology Carlow Culture Night offering. Orla Ryan is an international artist and lecturer in art at Institute of Technology Carlow's Wexford campus. Jung-A Han is an Institute of Technology Carlow art graduate and artist.

A guided tour of the Institute of Technology Carlow art collection also took place. The collection comprises an eclectic collaboration of nearly 300 figurative and abstract contemporary visual artworks, including exceptional works by artists such as Louis Le Broquy, Mark Redden, Julien Schnabel, Francis Bacon and Peter Monaghan. It also includes ten years of winning pieces from the BA Fine Art graduates in the Wexford Campus School of Art and Design.

A 30-minute screening of artists films including the work of Orla Barry, Orla Ryan and Jacinta Moore also took place. Orla Barry's *Breaking Rainbows* is a humorous and endearing look at sheep farming and our relationship to the natural environment. Orla Ryan's *Have you Forgotten Me Mr Haynes?* is a poetic film essay using footage from serial melodramas, produced by Stormy



Petrel (a collaboration between Orla Ryan, Brian Hand and Alanna O’Kelly). Jacinta Moore’s Stone Age and Beyond is a fusion of altered moving imagery that brings a modern twist to Browneshill Dolmen.

The final culture offering of the evening was a screening of the feature-length film *Amazing Grace* – the Aretha Franklin Concert Film directed by Sydney Pollack, in association with the Blackstairs Film Society.

In autumn 2019, two art students from the Wexford campus – Laura Flood and Sonya Weston – were selected to present their work at St Carthage Hall, Lismore Castle Arts in an exhibition that promotes the best of new graduate work from across the country.

### Connectedness

The Institute is involved at a number of levels with organisations across our regions. The following examples demonstrate our connectedness.

In the wake of international research showing that only 17% of primary school children meet the national physical activity guidelines, and the emergence of new conditions in children such as Paediatric Dynapenia (reduced muscle strength), an innovative free afterschool exercise programme was rolled out in Carlow in October 2019 to provide local children 6-12 year olds with increased muscle strength, cardiovascular health and fundamental movement skills. STEP (Structured Training Exercise Programme) START is the brainchild of Damien Sheehan, a certified athletic therapist (CAT) and lecturer in Strength and Conditioning in the Department of Health and Science. Supported by a team of MSc and 3rd year undergraduate students on the BSc (Hons) Strength and Conditioning programme at the Institute, the STEP START programme introduced six weeks of fun, strength and age appropriate exercise for children.

In September 2019, the Department of Humanities hosted a seminar in partnership with Early Childhood Ireland that offered the early childhood sector and ECEC students an opportunity to reflect and discuss the critical importance of quality early childhood experiences for children under six years of age. The seminar was part of a four nations tour organised by Early Years Northern Ireland, Early Years Scotland and Early Years Wales; each country hosted a seminar led by Aldo Fortunati and Barbara Pagni from La Bottega di Geppetto, the International Research and Documentation Centre on Childhood Gloria Tognetti in Tuscany, Italy.



*Pictured at the seminar, from left: Dr Sheila Long, Lecturer, Department of Humanities, Institute of Technology Carlow; Debbie Mullen, Early Childhood Specialist, Early Childhood Ireland; Veronica Byrne, Lecturer, Department of Lifelong Learning, Institute of Technology Carlow; Dr Eileen Doyle-Walsh, Head of Department of Humanities, Institute of Technology Carlow; Aldo Fortunati, President of La Bottega di Geppetto - International Research and Documentation Centre on Childhood, Tuscany, Italy; Barbara Pagni, Scientific Co-ordinator of La Bottega di Gepetto; Mary Beare Aust, Lecturer and Course Director, BA (Hons) Early Childhood Education and Care; Catherine McHugh, Early Childhood Specialist; Milica Atanackovic, Training and Practice Manager.*

Climate Change, Space and Celebrating Women in Technology were the three major themes of 2019's Eureka science and technology festival, which returned to Institute of Technology Carlow for its third edition from 11th to 16th November 2019 with a host of fun and interactive experiences to inspire the next generation of scientists and engineers. Conceived and organised by Dr Darren Kavanagh, an engineering lecturer at Institute of Technology Carlow, Eureka runs in tandem with National Science Week. The festival is supported by Science Foundation Ireland under the discover programme. Eureka actively promotes STEM (Science, Technology, Engineering and Mathematics) to primary, secondary and third-level students as well as teachers, academics and members of the public.

More than 200 secondary school students and teachers attended the Institute in January 2020 for the Tyndall Schools Lectures 2020, sponsored by the Institute of Physics in Ireland. The Tyndall Schools Lectures are designed to encourage young people to study physics in school and form the

next generation of innovative thinking physicists. The annual lecture series is named after Carlow native and physicist John Tyndall, who is responsible for many of the technologies we take for granted today, such as fibre optics. The lecture, entitled The ABC of the Universe – Using physics to unlock the hidden treasures of the Universe was delivered by renowned astrophysicist and science communication specialist Dr Liz Conlon, who is co-founder of the very successful Northern Ireland Science Festival. The event at Institute of Technology Carlow was organised by the assistant registrar Dr Yvonne Kavanagh, CPhys and introduced by Dr David Dowling, who is head of the Faculty of Science.

Four hundred primary school children from across the region descended on the Institute in March 2020 to participate in the VEX IQ Robotics competition. The budding engineers had spent months building and enabling their own robots to participate in the competition, which was organised by the Institute's Student Services and assisted by a team from the Faculty of Engineering, the Computing Services Department, Estates and the Sports Office.



### **Academic scholarships and gold awards for volunteerism**

The Institute awarded academic scholarships to 51 students for the academic year 2020/2021. Now in its 17th year, the Institute's academic scholarship initiative awards an academic scholarship to first year students who have attained the highest entry points for their chosen programme of study at Institute of Technology Carlow. Amongst the awardees were twin brothers Luke and Pauric Cush, past pupils of CBS Carlow. Luke is currently pursuing a Bachelor of Engineering (Honours) in Mechanical Engineering and Pauric is studying for a Bachelor of Science (Honours) in Construction.

Eight Chinese nationals studying at Institute of Technology Carlow were also presented with awards under the Claddagh Scholarship Programme. The Claddagh Scholarship Programme was established and organised by Education in Ireland and is open to citizens of China and Hong Kong.

As part of the ceremony, six students – Jolly O’Rick, Pauline Kelly, Paul McNamara, Martin Meaghar, Corlea Freeland and Robert Freeland - were recipients of gold awards for their volunteer work in the community. The President’s Volunteers Award was established in association with UNUM and Carlow Volunteers Centre to harness, support and acknowledge the contribution that students at Institute of Technology Carlow make to the college, its environs or their own community.



*Pictured are twin brothers Luke and Pauric Cush, past pupils of CBS Carlow who were amongst 2020/2021’s academic scholars. Pic: Mary Browne.*

### Confidence and reflection

Many of our students become involved in external competitions capturing academic excellence and demonstrating their high levels of knowledge and knowledge application.



*Eric Tai (fourth from left) is presented with his Rising Star in Architectural Technology Award at the 2019 RIAI Student Awards. He is pictured with RIAI President David Browne (second left) and representatives from award sponsors Xtratherm.*

In October 2019, Eric Tai was bestowed with the Royal Institute of the Architects of Ireland (RIAI) Rising Star in Architectural Technology Award at the RIAI Student Awards. Eric, who is a 4th Year Architectural Technology student, was presented with the award for his citation on the Education and Learning Centre at Institute of Technology Carlow.

Our students won multiple awards for artificial intelligence at 2020’s Games

Fleadh, hosted by LIT. Games Development student Eoin Galavan built a robot which defeated teams from colleges and universities across the country. Best Game Award went to the Institute of Technology Carlow team that created SWARM, a game that simulates a virus, employing Artificial Intelligence to defeat video game players. The virus images, inspired by global pandemic fears,

were created by Visual Communications students from Institute of Technology Carlow's Wexford campus. Much like a pandemic, the virus multiplied and mutated and could only be defeated by



players working cooperatively. Institute of Technology Carlow also received awards for User Experience and User Interface design, and an Innovation Award for the engaging game Build a Maze. The game was a hit with judges and visitors to the event and the team now plans to release the title to mobiles.

The Department of Electronic Engineering hosted the MIDAS (Microelectronics Industry Design Association) Ireland electronics conference in 2019, sponsored by Analog Devices, at which our student Mark Gaughran was declared winner of the MIDAS Third-level Electronics Project Competition. Mark was awarded €1,000 for his project Vehicle Breathalyzer and Safety Monitoring System. MIDAS Ireland is an industry-led cluster consisting of industry, educational, research and government agencies, working together to assist in the development of the electronics based systems sector in Ireland.

The Institute took home three of the top honours at October 2020's Smarter Campus Travel Awards. The undergraduate winners in the Design subcategory were 2nd year industrial design students Georgia Markham, Evan Lowry and Fredo Eyong for



their travel aid app. The concept behind the app is to help students with their daily commute while making travel more eco-friendly and is linked to a smart screen station within the campus. It facilitates students who want to walk, cycle or carpool to college and includes daily notifications about their commute.

Marketing students Roisin Dowling, Niamh Atkinson and Jennifer O'Dwyer also had great success, winning the Digital Marketing category with their college carpool app that encourages students to carpool while travelling to college. Their carpool karaoke video was also shortlisted as a finalist in

the Multi Media Video category. In the lecturer category, Institute of Technology Carlow lecturer Dorothy Keane took honours in the Marketing and Digital Marketing subcategory.

In total, three industrial/product design groups from Institute of Technology Carlow reached the top 10 shortlist in the Engineering and Innovation - Design section, two institute groups were nominated in the Marketing and Digital Marketing category and there was also a nomination in the Multi Media Video category.

### Knowledge building

In spite of the restrictions placed on the state by the global pandemic, the faculties developed a number of new additions to the Institute's portfolio of programmes.

In September 2019, the Institute launched its Higher Diploma in Applied Social Studies in Professional Social Care for Peter McVerry staff. This programme provides an opportunity for students to study for a one-year Higher Diploma in Applied Social Studies in Professional Social Care and is designed for graduates of non-social care disciplines who are working, or who wish to work in the social care sector.

In November 2019, Minister John Paul Phelan, Minister of State at the Department of Housing, Planning and Local Government, presented 88 graduates with the Certificate in Road Programme Management upon completion of their course. The programme was developed in collaboration with Local Authority Services National Training Group (LASNTG). An LASNTG sub-committee including Department of Transport, Tourism and Sport and Transport Infrastructure Ireland

together with Institute of Technology Carlow developed the course material, which was designed to meet the needs of administration and engineering staff in the Local Authority Roads Sector.



*Minister of State at the Department of Housing, Planning and Local Government John Paul Phelan TD, is pictured with Dr Patricia Mulcahy, President, Institute of Technology Carlow, Institute staff and invited guests at the presentation of parchments in November 2019 to graduates of the Certificate in Road Programme Management delivered in collaboration with the Local Authority Services National Training Group (LASNTG).*



*Pictured at the launch of the certificate course in Building Control Management at Institute of Technology Carlow are, from left: Mr David Denieffe, Vice President of Academic Affairs, Institute of Technology Carlow; Ms Sabrina McDonnell, Senior Executive Engineer, NBCO, Dublin City Council; Ms Mairéad Phelan, Programme Manager, NBCO, Dublin City Council; Mr Eoin Homan, Head of Dept. Built Environment and Extended Campus, Institute of Technology Carlow; Mr Colin Gallagher, Senior Executive Engineer, Built Environment Inspectorate, Fingal County Council; Mr John Wickham, Senior Advisor Building Standards, DHPLG; Dr Frances Hardiman, Head of Faculty Engineering, Institute of Technology Carlow; Ms Anne Meaney, Extended Campus Coordinator, Institute of Technology Carlow.*

Coordinated and delivered by the Institute's Extended Campus department, the Certificate in Building Control Management commenced in mid-October 2019 and was delivered in the Local Authorities' five regional training centres located in Cork, Dublin, Mayo, Donegal and Tipperary. The one year programme includes modules in: Built Environment Legislation; Administrative Functions; Building Control Management System; Building Regulations; Inspections and Inspection Procedures and Policy; Enforcement - Legal with Case Studies and Compliance and Support.

A programme in People Management and Strategy was launched in November 2020. The course was developed as part of a larger initiative to support social enterprise businesses across the South East during COVID-19. Under the Dormant Account Funds: Training and Mentoring for Social Enterprises Pilot, the Institute was awarded €90,740 to deliver an accredited southeast social



enterprise development programme to provide supports, mentoring and training. The overall programme focuses on three core areas of social enterprise support: strategy and governance; operations; and business development.

In April 2021, a new Certificate in Prevention, Partnership and Family Support commenced online. The programme, developed in partnership with Tusla, was first launched in 2019 and is the only accredited module of its kind in the country. Funded by the Department of Children, Equality, Disability, Integration and Youth, the Level 8 Certificate in Prevention, Partnership and Family Support aims to enhance the capacity and skills development of policymakers, providers and practitioners across statutory, community and voluntary sectors. The course was designed in consultation with Tusla Prevention Partnership and Family Support (PPFS) senior staff, the Carlow members of Child and Family Support Network, and the Children and Young People's Services Committee (CYPSC) Carlow.



The Bachelor of Science in Pharmacy Technician Studies was launched in June 2021. The Bachelor of Science in Pharmacy Technician Studies is designed to reflect the changing role of pharmacy technicians who contribute to the effective and safe optimisation of patients' medicines and personalised healthcare in a responsible and ethical way. Sláinte Care, the Government's ten-year programme for health services in Ireland, places an

emphasis on the prevention and self-management of chronic illness with pharmacy teams, both in community and hospital settings, have a key role in the delivery of these objectives.

A postgraduate Certificate in Innovative Materials for Industry 4.0 in collaboration with Dublin City University was launched in August 2021. Materials professionals are in global demand by industry for their skills in combining innovative new materials with critical technological advances. The course was designed to link traditional and industry 4.0 technologies with materials selection and sustainability in design and manufacturing. It will be led Dr David Culliton from the Department of Aerospace, Mechanical and Electronic Engineering (AME) at Institute of Technology Carlow in partnership with Professor Dermot Brabazon of DCU. This programme is funded under the Government's Human Capital Initiative.

## Engagement through the COVID-19 pandemic

From March 2020 to date the Institute has responded in a positive and constructive manner to the national response to the global pandemic. This section looks at some of the outward facing elements of this response.



In April 2021, the Institute facilitated the HSE COVID-19 Vaccination Centre for Carlow in the Barrow Centre. The Vaccination Centre on campus proved to be very successful and contributed enormously to Carlow being the county with the second highest vaccination rate in the country. By the time the centre closed in early September 2021 over 98% of the adult population of the county had been fully vaccinated.

*Tell Me About*, described as "a pandemic rural health and wellness symposia series", was a collaboration between Institute of Technology Carlow, Teagasc, the School of Nursing and



Midwifery at Trinity College Dublin, and Letterkenny IT. The series was produced by Institute of Technology Carlow lecturer Brendan Connolly at the Institute's media studios during the lockdown in 2020. The series was broadcast on the Institute's website and the Teagasc YouTube channel in November 2020.

*Tell Me About* includes contributions from academics and researchers from Institute of Technology Carlow, Teagasc, Trinity College Dublin, and NUI Galway, as well as healthcare professionals and representatives from a wide range of institutions and services across rural Ireland. Amongst the contributors are: Minister of State with special responsibility for Research and Development, Farm Safety and New Market Development Martin Heydon, TD; president of the National Ploughing Association, Anna May McHugh; former GAA president Nickey Brennan; journalist and broadcaster Billy Keane; and Catherine Comiskey, Professor of Health Modelling and Statistics at Trinity College

Dublin. The series mirrors the notion of being *Trom agus Eadrom* (Heavy and Light) and attempts to create a mix of scientific research, narrative contributor interviews as well as musical and poetic moments.

Professor Paul Horan, who is chair of the civic engagement committee at the School of Nursing and Midwifery, Trinity College Dublin described the series as “a phenomenal collaborative ground breaking project which aimed to communicate virtually with the rural community in Ireland about health and wellness in a way that overcomes the social public health restrictions of a global pandemic”.



In September 2020 Institute of Technology Carlow launched a student information app to assist the thousands of learners returning to its Carlow and Wexford campuses for a new academic year. *IT Carlow Student Info 101* is available on both Apple and Android phones features a huge variety of information on all aspects of college life at Institute of Technology Carlow. Students can access information in areas such as:

admissions; academic support; classroom locator; clubs and societies; examinations; maps; student supports; student finance; library, fees and grants, transport, and Students' Union. Class timetables and downloadable student forms are also on the app, which was designed by Square Root Solutions, based in Castlecomer, Co. Kilkenny. The student app also includes pertinent information on COVID-19 and Institute of Technology Carlow's return to campus protocols and is one of several non-contact supports put in place by the Institute for students. The Institute of Technology Carlow student handbook can also be downloaded via a QR code.

In the absence of traditional open days and school visits our communications office developed one-to-one virtual sessions to allow individual students to avail of specific information for the courses they are interested in and have their queries about facilities, courses, fees and access routes answered. The sessions were available with both the Institute's schools liaison team and the sports department and hosted via Zoom.

In April 2020 the Design+ technology gateway team at the Institute, which collaborates with

industry in product design and concept validation, designed and produced face shields for healthcare workers. Billy House, a product designer for Design+ at Institute of Technology Carlow, initially used two large format 3D printers at the Institute to print headbands for face shields but switched to his own design in order to increase production.

Separately, a team of pharmaceutical academics used laboratory alcohol to make hand sanitiser to a formula created by pharmacist Nicola Cantwell and Dr Brian O'Rourke, a lecturer and researcher in pharmaceutical formulation. The team, led by Dr Emma Smullen and Dr Guiomar Garcia-Cabellos, produced a 90-litre supply comprising alcohol, sunflower oil and hand soap as the key components.

In addition, during the early stages of the pandemic in spring 2020 the Faculty of Science and Health donated its supply of gloves, gowns and safety glasses to frontline healthcare workers.

## 1.9 CAPITAL DEVELOPMENTS AND SUSTAINABLE DEVELOPMENT INITIATIVES

Institute of Technology Carlow is committed to providing world-class facilities in its academic and social spheres to create an environment that welcomes, nurtures and inspires our learners to reach their full potential. The Institute has a major capital development programme, which covers the academic, sporting and recreational requirements of a global higher education institute.

In 2021, phase 2 of the South Sports Campus was completed. This phase of the development comprised a Sports Pavilion building providing 8 changing rooms, 2 referees rooms, a meeting room and storage facilities. The South Sports Campus is a 31-acre development located 1km from the Institute's Carlow Campus. The first phase, completed in 2019, consisted of 6 new full size playing pitches (1 x all weather artificial GAA pitch, 1 x grass GAA pitch, 2 x grass soccer pitches and 2 x grass rugby pitches), LED floodlighting, additional car parking and a 1.6km looped walking trail.



On the academic front, the detailed design and planning stage for the new Advanced Science and Technology Building was completed and the project was issued for tender in July 2021. Construction is expected to commence in Q4 2022. This €30m, 6,000m<sup>2</sup> development will have a Kilkenny Road location, adjacent to the Dargan Centre for Research and Innovation. It will allow the Institute to expand further across several key areas including Biopharma, Medtech, Agri-Food and



Health Sciences. This capital project is part of the Higher Education PPP Programme and is led by a national project board comprised of the HEA, the NDFA and the Department of Further and Higher Education, Research, Innovation and Science. With over thirty state-of-the-art laboratories and other support facilities, the Advanced Science and Technology Building will accommodate

the teaching, learning and research programmes at both undergraduate and postgraduate level. Amongst its unique features is a biomechanics laboratory with a full 40m indoor track and full high definition infrared cameras. The building will also house an altitude chamber for detailed research on human responsiveness to conditioned environments. It will have a full suite of laboratories for the physical, chemical and biological sciences. Furthermore, as part of our community engagement, the building will incorporate specialist facilities designed for interaction with community groups and promotion of STEM.

In 2021, the planning and detailed design was also completed for a new Corporate Support Services Building of 4,750m<sup>2</sup>. The development will comprise administrative departments, a restaurant and café,

atrium exhibition space and, outside, a public plaza. Planning permission was granted in December 2020 and construction on site commenced in October 2021.



The demolition of the former Carlow VEC secondary school was completed on the Carlow campus in 2020. The school stood on seven acres to the north of the campus which is now cleared and allows for construction of the Advanced Science and Technology Building, the Corporate Support Services Building, as well as providing sufficient capacity to deliver further capital projects as part of the Institute's current Masterplan.



These new developments follow on from the opening of the Houghton Building for Teaching and Learning in 2017; the Centre for Aerospace Engineering in 2015; the Dargan Centre for Research and Innovation in 2014; and Student Services Building in 2012.

Within this broader context, Strategic Plan 2019-2023 Priority 5 focuses on Sustainable Development. This commits the Institute to educating for sustainable development and leading by example. In the current reporting period, the following is noteworthy:

- In September 2019 the Institute officially launched the new waste management system that focused on waste minimisation, segregation and recycling. To date and prior to COVID-19 this project has included awareness campaigns.
- The Institute is working collaboratively with Carlow County Council on continuously improving its waste management processes through regular activity audits and training programmes focused on key personnel.
- In 2021, the Institute has now completed year four of the OPW's Optimising Power at Work Programme (OP@W). Summary update to academic year 2020/2021:
  - The baseline year was set as the 12-month period leading up-to the programme launch month, defined as May 2016 – April 2017;
  - Year 1 (defined as May 2017 – April 2018) saw energy gains of +3.26%;

- Year 2 (May 2018 – April 2019) swung for the first time into good energy savings -7.26%;
  - Year 3 (May 2019 – April 2020) continued in savings of -8.92%; and
  - Year 4 (May 2020 – April 2021) saw substantial COVID-19 influenced energy savings of -19.99%.
  - By the end of year 4 (May 2021 – April 2021) there was 1,192,458 kWh savings. To put in context, this results in 373 t of CO<sub>2</sub> (tCO<sub>2</sub>) emissions avoided – as much carbon that would be absorbed by 26,500 Irish evergreen trees per year.
  - By the end of year 4 the OP@W programme saw the equivalent energy saved to heat a 3-bed family home for 80 years or to heat 100 x 3 bed family homes for 10 months.
- The Institute is an SEAI Energy saving award recipient and remains committed to further reducing energy usage across all campuses through the implementation of energy saving measures and projects. The SEAI Annual Report 2020 on Public Sector Energy Efficiency Performance reported that the Institute made 42.5% energy savings since the baseline and met and exceeded its 2020 energy reduction target.
- Electrical Energy Projects
    - CSB Lighting Replacement: The lighting upgrade that took place in the CSB building in 2018 has saved approximately 11,000kWh or 3.44 tCO<sub>2</sub> annually. As much carbon that would be absorbed by 244 Irish Evergreen Trees per year, or heat and power a 3-bed house for 9 months.
    - Kitchen Air Handling Units (AHUs): We have installed Variable Speed Drives (VSDs) on the kitchen AHU's. The cooking periods take place early in the morning for the breakfast period, and before noon for the lunch period, however up to 2021 fans operated at full capacity all day. The VSD install has allowed the fan speed to reduce outside of cooking times. This alteration brings savings of approximately 29,000kWh or 9.06 tCO<sub>2</sub> annually. As much carbon that would be absorbed by 643 Irish Evergreen Trees per year, or heat and power a 3-bed house for 23 months.
    - Carpark Lighting: Estates has implemented a phase out programme for the existing carpark light fittings which are and will be replaced by lower energy LED fittings. Currently 20% of the light fittings have been upgraded, finally when the entire carpark is replaced this will save approximately 25,000kWh or 7.81 tCO<sub>2</sub> annually. As much carbon

that would be absorbed by 555 Irish Evergreen Trees per year, or heat and power a 3-bed house for 20 months.

- Nore Building Heating Pumps: Estates has investigated replacing large old heating pumps in the Nore building with new energy efficient variable speed pumps. In 2021, a new variable speed drive pump has recently been fitted on the Nore radiator circuit and it is anticipated this will save 18,000 kWh per year, or 5.63 tCO<sub>2</sub> annually. As much carbon that would be absorbed by 400 Irish Evergreen Trees per year, or heat and power a 3-bed house for 14 months. The next phase of replacement works consists replacement of one of the main header pumps and it is anticipated this will save 25,500 kWh per year, or 7.97 tCO<sub>2</sub> annually. As much carbon that would be absorbed by 565 Irish Evergreen Trees per year, or heat and power a 3-bed house for 20 months. A programme of old heating pump replacements is planned for the Nore, Burrin and LRC on a phased basis over the next number of years.
- LRC Server Room Economisation: A re-design of air movement in the server room air conditioning units resulted in 5% energy savings.

#### ■ Gas / Electrical Energy

- An upgrade of the Building Energy Management System has allowed a reduction of HVAC plant run hours during out of hours for the Nore, Burrin, CSB and Slaney Buildings. This has resulted in a reduced usage of gas and electricity.

#### ■ Water Usage

- Estates has completed water stewardship training through Irish water and developed a water map for the site and are in the process of creating a procedure for monitoring water usage on campus.
- New Water Coolers in Canteen – two new bottle fillers were installed in the ground and first floor of the canteen which have a digital display to show how many bottles of water have been saved.
- A review of water usage in old cisterns has been carried out with a phase out programme for old cisterns planned and the implementation of new controls of water to cisterns. It is estimated that this programme could save approximately 10,000 litres of water daily.



## 1.10 50TH ANNIVERSARY 1970-2020

In 2020, the Institute celebrated its 50th anniversary and over those years, the Institute has made it its mission to open up education for all.

Institute of Technology Carlow first offered higher education programmes to learners across the southeast in autumn 1970. There have been many changes in that half-century and a great many achievements by the Institute in its journey to becoming one of Ireland's largest institutes of technology with learners pursuing more than 300 programmes of study from certificates to doctorates. Over the last 50 years the Institute has empowered over 60,000 graduates to transform their lives through learning, while helping to build stronger communities and drive the creation of a vibrant economy.

Carlow has always been a centre of knowledge, scholarship and innovation. The region boasts a rich heritage of education, imagination and technological discovery. Tyndall, Dargan, Haughton, Lonsdale, Shackleton and Berkeley are just some of the thinkers and educators from this part of Ireland who continue to inspire current and future generations. It was within this tradition that Institute of Technology Carlow was established in 1970. Over the following years, Institute of Technology Carlow's learner population has grown in numbers and nationalities, surpassing the original expectations of its founders. With a current student and staff cohort of over 10,000 across centres in Carlow, Wexford and Wicklow, the Institute, together with partners in industry, government and community, continues to play a key role in driving economic growth and social

CELEBRATING  
**50**  
YEARS  
1970-2020



*Photo of the first intake of students at the then RTC Carlow in 1970. Pic: Karl McDonough.*

development in the regions and country it was established to serve.

Opened on 22nd September 1970 at a cost of £500,000, the first courses offered by the then Carlow Regional Technical College (RTC) covered technology, science and business with special emphasis given

to food technology, industrial processing and instrumentation. A two-year hotel management course designed for existing hotel employees cost £160 per annum, which included fees and accommodation. Job opportunities heralded for graduates at the time included computer programming, work-study specialist, quality controller and company secretary.

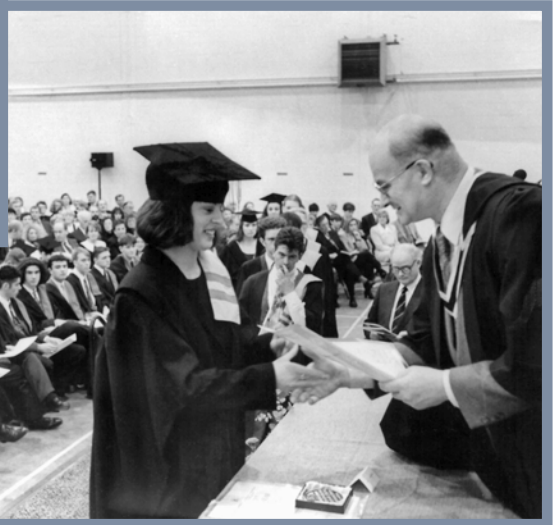
John Gallagher, educated at Summerhill College in Sligo and University College Cork was appointed the principal of the new regional college in January 1970. Mr Gallagher was a chartered engineer and prior to his appointment he was a senior lecturer at Liverpool Polytechnic. He steered the Institute through its early years when the Regional Technical Colleges were under the Vocational Educational Committees until they were placed on an independent basis by the Regional Technical Colleges Acts in 1993 and subsequently received Institute of Technology status in the late 1990s. Mr Gallagher retired in 2003.

A 1970 newspaper article in *The Nationalist* entitled "A Yellow World in Carlow", penned by broadcaster and Carlovian Olivia O'Leary, quoted a young electrical apprentice who spoke of the advantages of studying at Carlow RTC. He commented, "Country students don't have to go to the cities, running the risk of losing their identity in an anonymous mass. We want to make people aware of the fact that the college exists for everyone and that there are classes and courses here which can be taken by people of any age".

In the same article, student Clare Carbery said, "This is going to be better than a university. It will be less impersonal because we have a better staff-student ratio".

Institute of Technology Carlow is grateful to the educators and learners, the thinkers and collaborators who have joined us on our journey over the past 50 years. The Institute looks forward to the next 50 years of knowledge and innovation, of openness and engagement, of ambition and success, especially as it is at an advanced stage in its trajectory to becoming a technological university.

CELEBRATING  
**50**  
YEARS  
1970-2020



*Institute of Technology Carlow would like to acknowledge and thank The Nationalist and Leinster Times newspapers for access to their archives for its 50th anniversary project.*

## ORGANISATION AND GOVERNANCE



## 2.1 GOVERNING BODY

The Governing Body of Institute of Technology Carlow operates in accordance with a Governance Framework which comprises the Institutes of Technology Acts 1992–2006, the THEA Code of Governance and other applicable legislation. The Governing Body is collectively responsible for leading and directing the Institute’s activities and fulfils key functions, including; reviewing and guiding strategic direction and major plans of action, risk management policies and procedures, annual budgets and business plans, setting performance objectives, monitoring implementation and Institute performance, and overseeing major capital expenditure and investment decisions. The Governing Body acts on a fully informed and ethical basis, in good faith, with due diligence and care, and in the best interest of the Institute, having due regard to its legal responsibilities and the objectives set by Government. The Governing Body has a formal schedule of matters specifically reserved for its decision, comprising statutory functions and matters derived from the THEA Code of Governance. All functions which are not reserved functions under legislation are functions of the President.

### Compliance

The Institute is committed to implementing the highest standards of Corporate Governance. During the period being reported, the Governing Body considers that it has complied with the requirements of the THEA Code of Governance or in the case of non-compliance provided adequate explanation.

### Governing Body Membership and Meetings Attended

The Governing Body met on eight occasions during the academic year **2019/2020**. Below is a list of members and the number of meetings attended during the year.

Member	Representative Body	Meetings Attended 2019/2020
Mr John Moore	Chairperson	8/8
Dr Patricia Mulcahy	President	8/8
Ms Colette Lane	Unum Ireland Ltd	4/8
Ms Lily Holmes	P.B. Machine Tech Ltd	3/8
Ms Valerie Farrell	Teagasc	5/8
Mr Jonathan Downey	Merck Sharpe & Dohme	0/8
Mr Dan McInerney	Carlow County Council (resigned October 2019)	1/1

Member	Representative Body	Meetings Attended 2019/2020
Cllr Ger Frisby	Kilkenny and Carlow ETB	6/8
Cllr Matt Doran	Kilkenny and Carlow ETB	1/8
Mr Ciaran Keegan	Kildare and Wicklow ETB	1/8
Ms Patricia O'Brien	Kildare and Wicklow ETB	4/8
Ms Catherine O'Donnell	Waterford and Wexford ETB	2/8
Cllr Catherine Fitzgerald	Laois and Offaly ETB	2/8
Dr Carmel Roche	Academic Staff (resigned January 2020)	4/6
Mr Claus Derenda	Academic Staff	6/8
Ms Sarah Clarke	Professional Management and Support Staff (PMSS) (appointed November 2019)	3/4
Mr Thomas Drury	Student (appointed November 2019)	4/4
Ms Róisín Sheridan	Student (term of office expired October 2019)	1/2
Mr Robert Stacey	Irish Congress of Trade Unions	5/8

The Governing Body met on eleven occasions during the academic year **2020/2021**. Below is a list of members and the number of meetings attended during the year.

Member	Representative Body	Meetings Attended 2020/2021
Mr John Moore	Chairperson	11/11
Dr Patricia Mulcahy	President	11/11
Ms Edel Spillane	Unum Ireland Ltd	7/11
Ms Lily Holmes	P.B. Machine Tech Ltd	10/11
Ms Valerie Farrell	Teagasc	8/11
Mr Michael Carbery	Alltech Farming Solutions	6/11
Ms Kathleen Holohan	Carlow County Council	10/11
Cllr Andrea Dalton	Kilkenny and Carlow ETB	11/11
Cllr Ger Frisby	Kilkenny and Carlow ETB	10/11
Cllr Angela Feeney	Kildare and Wicklow ETB	11/11
Mr. Joe Kelly	Kildare and Wicklow ETB	11/11
Ms Catherine O'Donnell	Waterford and Wexford ETB	3/11
Ms Evelyn Dunne	Laois and Offaly ETB	10/11
Ms Caroline Murphy	Academic Staff	11/11
Mr Claus Derenda	Academic Staff	9/11
Mr Sam Alcock	Professional Management and Support Services Staff	11/11
Ms Alex Porter	Student (appointed February 2021)	4/7
Mr Thomas Drury	Student	8/11
Mr Ger Mooney	Irish Congress of Trade Unions (appointed February 2021)	6/7

## Governing Body Fees and Expenses

Members of the Governing Body are not eligible for fees in their capacity as Governing Body members. Members may be eligible for expenses for travelling to Governing Body meetings and for fees and expenses where they preside on interview boards.

In the academic year **2019/2020**, the following fees and expenses were paid to members.

Governing Body Member	Expenses €	Interview Fee €	Total Paid €
Ms. Catherine O'Donnell	1,175	5,400	6,575
Cllr. Ger Frisby	2,037	6,600	8,637
Cllr. Matt Doran	68	-	68
Cllr. Catherine Fitzgerald	69	-	69
Mr. John Moore	-	300	300
2019/2020 TOTAL	3,349	12,300	15,649

In the academic year **2020/2021**, the following fees and expenses were paid to members.

Governing Body Member	Expenses €	Interview Fee €	Total Paid €
Ms. Catherine O'Donnell	542	4,425	4,967
Cllr. Ger Frisby	6,550	16,200	22,750
Cllr. Angela Feeney	-	1,650	1,650
Cllr. Andrea Dalton	-	300	300
Mr. John Moore	21	1,200	1,221
2020/2021 TOTAL	7,113	23,775	30,888

## Strategic Plan, Annual Programmes and Budget

The Institutes Governing Body has formally undertaken an evaluation of actual performance, by reference to the Institutes strategic plan and budget and has subsequently approved an Annual Programme and Budget for the Institute.

## Annual Report and Financial Statement

The Governing Body are responsible for preparing the annual report and financial statements. The Governing body considers the financial statements 2019/2020 to be a true and fair view of the Institute's financial performance and its financial position at the end of the year. The Governing Body is responsible for approving the financial statements 2019/2020 and these were approved by the Governing Body on 26th August 2021. A full detailed copy of accounts can be found through our website: <https://www.itcarlow.ie/resources/finance-forms/financial-statements.htm>

The timeframe for publication of the next set of accounts for the Institute will be determined by the date set by the Minister for dissolution of the Institute, as specified under the Technological Universities Act 2018 (see below for relevant extract from the Act).

#### *Final accounts and final report of dissolved body*

*52. (1) The technological university shall, in respect of the period specified under subsection (3), prepare final accounts of the dissolved body. (2) A technological university shall, not later than the date on which it submits its first set of accounts following the appointed day to the Comptroller and Auditor General under section 22, submit the final accounts of the dissolved body to the Comptroller and Auditor General for audit and shall, immediately after the audit, present a copy of the accounts and a copy of the Comptroller and Auditor General's report on the accounts to the Minister who, as soon as practicable thereafter, shall cause copies of those accounts and that report to be laid before each House of the Oireachtas. (3) For the purposes of subsection (1), the Minister may specify a period that is longer or shorter than a financial year of the dissolved body. (4) The technological university shall, not later than the date on which it submits its first annual report following the appointed day to the Minister, prepare and submit to the Minister the final report of the activities of the dissolved body and the Minister shall, as soon as practicable thereafter, cause a copy of the final report to be laid before each House of the Oireachtas. (5) The final annual report of the dissolved body shall be published on the internet by the technological university as soon as practicable after copies of the report are laid under subsection (4).*

#### **Review of Governing Body Performance**

The Governing Body commissioned a comprehensive review at the end of 2019, undertaken by an external company, of the effectiveness of the Governing Body and considered its recommendations.

#### **Audit and Risk Committee of the Governing Body**

There were two meetings of the Audit and Risk Committee held during the academic year 2019/2020. The Audit and Risk Committee membership and number of meetings attended by each Member are listed below. Mr D. McInerney resigned in October 2019 and wasn't replaced as the term of the Governing Body was finishing in March 2020.



The Chairperson of Governing Body is satisfied that the Audit and Risk Committee has discharged its role effectively and efficiently and has met the requirements with regard to frequency of meetings in the 2019/2020 academic year. In March 2020, the term of the Governing Body expired and due to national elections and the setting up of a new Department of Further and Higher Education, Research, Innovation and Science, the appointment of the new Governing Body was delayed until September 2020. This delay meant that the Audit and Risk Committee could not meet during the period March 2020 – August 2020. The Chair of the Governing Body and the President were delegated to act in the capacity of the Governing Body during this interregnum.

Member	Meetings Attended 2019/2020
Mr. Dan McNerney – Non Executive Member of the Governing Body	0/2
Ms. Colette Lane – Non Executive Member of the Governing Body	1/2
Ms. Valerie Farrell – Non Executive Member of the Governing Body	2/2
Ms. Lily Holmes – Non Executive Member of the Governing Body	1/2

There were five meetings of the Audit and Risk Committee held during the academic year 2020/2021. The Audit and Risk Committee membership and number of meetings attended by each Member are listed below.

The Chairperson of Governing Body is satisfied that the Audit and Risk Committee has discharged its role effectively and efficiently and has met the requirements with regard to frequency of meetings in the 2020/2021 academic year.

Member	Meetings Attended 2020/2021
Ms Lily Holmes - Non Executive Member of the Governing Body	3/5
Cllr Andrea Dalton - Non Executive Member of the Governing Body	5/5
Mr Joe Kelly - Non Executive Member of the Governing Body	5/5
Ms Kathleen Holohan - Non Executive Member of the Governing Body	4/5
Ms Evelyn Dunne - Non Executive Member of the Governing Body	3/5

## Risk Management

The Governing Body approves the Institutes risk management framework and monitors its effectiveness, approval and oversight of Institute of Technology Carlow's Risk Management Policy including structured and periodic reviews and updates from the Executive Management Team. This review includes an assessment of the principal risks, risk rating and associated mitigations.

## 2.2 ACADEMIC COUNCIL – MEMBERSHIP AND SUMMARY OF WORK COMPLETED

### Academic Council Membership 2019-2020

Dr Patricia Mulcahy	President
Mr David Denieffe	Vice President Academic Affairs and Registrar
Mr Declan Doyle	Vice President Development and Research
Lt Col Rory McCorley	Registrar Defence Forces
Dr Frances Hardiman	Head of Faculty
Dr David Dowling	Head of Faculty
Ms Maebh Maher	Head of Faculty
Dr Karen Hennessy	Head of Campus
Mr Myles Kelly	Head of Department
Dr Eileen Doyle Walsh	Head of Department
Dr Martin Meagher	Head of Department
Dr Joseph Collins	Head of Faculty
Dr Paula Rankin	Head of Department
Mr Nigel Whyte	Head of Department
Dr Cathal Nolan	Head of Department
Dr Eoin Homan	Head of Department
Dr Mary Delaney	Head of Library and Information Services
Dr Gina Noonan	Head of Teaching and Learning Centre
Mr Thomas Drury	President Students' Union
Ms Maura Bolger	Technical Staff
Mr Ronán Lynch	Administrative Staff
Dr Sharon Harris Byrne	Department of Business
Mr John Tully	Department of Business
Dr Brian Casey	Department of Humanities
Ms Martina Moyne	Department of Humanities
Ms Una Grant	Department of Sport, Media and Marketing
Dr Deirdre Fleming	Department of Sport, Media and Marketing
Dr Dina Brazil	Department of Science and Health
Dr Rosemary O'Hara	Department of Science and Health
Dr Greg Doyle	Department of Computing and Networking
Dr Chris Meudec	Department of Computing and Networking
Mr Paschal Harte	Department of Built Environment and Extended Campus
Dr Ian Maher	Department of Built Environment and Extended Campus
Dr David Allen	Aerospace, Mechanical and Electronic Engineering
Mr Diarmuid O'Gorman	Aerospace, Mechanical and Electronic Engineering
Mr John Balfe	Wexford Campus
Dr Janette Davies	Wexford Campus
Mr Larry Banville	Faculty of Lifelong Learning

Mr Denis Coleman	Faculty of Lifelong Learning
Dr Carmel Smith	Faculty of Business and Humanities
Mr Andrew Keppel	Faculty of Engineering
Mr Gerry Moloney	Faculty of Science
Mr Patrick Morgan	Wexford Campus
Mr Ronan Larkin	Registered Student
Ms Rebecca Lawlor	Registered Student

### **Academic Regulations Committee**

Mr John Tully	Chairperson
Dr Paula Rankin	Vice Chairperson
Dr Patricia Mulcahy	President
Mr David Denieffe	Vice President Academic Affairs and Registrar
Ms Maebh Maher	Head of Faculty
Dr Karen Hennessy	Head of Campus
Dr Eileen Doyle Walsh	Head of Department
Mr Thomas Drury	President Students' Union
Mr John Balfe	Wexford Campus
Dr Carmel Smith	Faculty of Business and Humanities
Mr Andrew Keppel	Faculty of Engineering
Mr Ronan Larkin	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar
Ms Shauna Whyte	Head of Academic Administration and Student Affairs
Ms Mary O'Neill	Academic Administration
Ms Yvonne Hoare	Examination Officer

### **Programme Planning and Validation Committee**

Dr Patricia Mulcahy	Chairperson
Mr David Denieffe	Vice Chairperson
Dr Frances Hardiman	Head of Faculty
Dr David Dowling	Head of Faculty
Ms Maebh Maher	Head of Faculty
Dr Karen Hennessy	Head of Campus
Mr Myles Kelly	Head of Department
Dr Martin Meagher	Head of Department
Dr Joseph Collins	Head of Faculty
Dr Eoin Homan	Head of Department

Mr Thomas Drury	President Students' Union
Dr Brian Casey	Department of Humanities
Mr Paschal Harte	Department of Built Environment and Extended Campus
Mr Diarmuid O'Gorman	Aerospace, Mechanical and Electronic Engineering
Dr Janette Davies	Wexford Campus
Mr Gerry Moloney	Faculty of Science
Mr Patrick Morgan	Wexford Campus
Mr Ronan Larkin	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar

### **Quality Assurance and Enhancement Committee**

Mr David Denieffe	Chairperson
Dr Chris Meudec	Vice Chairperson
Dr Patricia Mulcahy	President
Mr Nigel Whyte	Head of Department
Mr Thomas Drury	President Students' Union
Dr David Allen	Aerospace, Mechanical and Electronic Engineering
Mr Ronan Larkin	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar
Dr Brian Jackson	Head of Research Studies
Dr Allison Kenneally	Director of the Office of Equality, Diversity and Inclusion
Dr Siobhan Ryan	Quality Assurance and Collaborations Officer

## Research and Development Committee

Dr Greg Doyle	Chairperson
Dr Rosemary O'Hara	Vice Chairperson
Dr Patricia Mulcahy	President
Mr David Denieffe	Vice President Academic Affairs and Registrar
Mr Declan Doyle	Vice President Development and Research
Dr Frances Hardiman	Head of Faculty
Dr David Dowling	Head of Faculty
Dr Eileen Doyle Walsh	Head of Department
Dr Cathal Nolan	Head of Department
Mr Thomas Drury	President Students' Union
Mr Ronán Lynch	Administrative Staff
Ms Martina Moyne	Department of Humanities
Dr Deirdre Fleming	Department of Sport, Media and Marketing
Mr Diarmuid O'Gorman	Aerospace, Mechanical and Electronic Engineering
Mr Denis Coleman	Faculty of Lifelong Learning
Mr Andrew Keppel	Faculty of Engineering
Mr Gerry Moloney	Faculty of Science
Mr Ronan Larkin	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar
Dr Brian Jackson	Head of Research Studies
Dr Fintan Bracken	Deputy Librarian
Mr Brian Ogilvie	Head of Research and Commercialisation Support
Mr Lukas Korcak	Postgraduate Learner engCORE
Ms Karolyn McDonnell	Postgraduate Learner socialCORE

## Teaching, Learning and Support Services Committee

Dr Dina Brazil	Chairperson
Ms Una Grant	Vice Chairperson
Dr Patricia Mulcahy	President
Mr David Denieffe	Vice President Academic Affairs and Registrar
Dr Mary Delaney	Head of Library and Information Services
Dr Gina Noonan	Head of Teaching and Learning Centre
Mr Thomas Drury	President Students' Union
Ms Maura Bolger	Technical Staff
Mr Ronán Lynch	Administrative Staff
Dr Ian Maher	Department of Built Environment and Extended Campus
Mr Ronan Larkin	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar
Mr Damien Raftery	eLearning Officer
Ms Rosemary Flynn	Head of Learner Support and Student Services
Mr Emmett Cullinane	Learning Technologist

### **Collaborative Provision Committee**

Dr Joseph Collins	Chairperson
Dr Gina Noonan	Vice Chairperson
Dr Patricia Mulcahy	President
Mr David Denieffe	Vice President Academic Affairs and Registrar
Lt Col Rory McCorley	Registrar Defence Forces
Dr Eoin Homan	Head of Department
Mr Thomas Drury	President Students' Union
Dr Sharon Harris Byrne	Department of Business
Mr Larry Banville	Faculty of Lifelong Learning
Mr Ronan Larkin	Registered Student
Ms Rebecca Lawlor	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar
Dr Brian Jackson	Head of Research Studies
Dr Siobhan Ryan	Quality Assurance and Collaborations Officer
Mr Donal McAllister	International Affairs Manager
Ms Anne Meaney	Extended Campus Coordinator

## **ACADEMIC COUNCIL AND COMMITTEES**

Meeting and Summary of Work Completed 2019 -2020

### **Meetings of Academic Council 2019/2020**

11th September 2019, 25th September 2019, 11th October 2019, 29th October 2019, 18th November 2019, 12th December 2019, 22nd January 2020, 24th February 2020, 12th March 2020, 26th March 2020, 2nd June 2020, 18th June 2020, 10th July 2020.

### **Academic Council**

Board of Examiner Reports: Ratification of Examination Results

Register of Adjunct and Visiting Fellows Update

Institutional Review Self Evaluation Report

Review of the Effectiveness of Academic Council

Academic Delivery Framework

THEA Guidelines on Designated Awarding Bodies

Ethics in Research Policy (Version 7) Update

Nominations from Academic Council for Representation on Governing Body

## **COVID-19 Contingency Plan**

Delivery and Assessment Policy  
Alternative Assessment Procedures  
Adoption of Duolingo Online Language Test Solution  
Assessment Strategies  
External Examiner Processes  
Requirements for Progression  
Programme Planning and Validation Processes  
Procedures for Conduct of a Remote/Virtual Viva Voce  
Work Placement Plan

## **Quality Assurance and Enhancement Committee**

Appointment of Examiners

## **Research and Development Committee**

Level 9/Level 10 Register Update

## **Academic Regulations Committee**

Student Charter Version 2 (Update)

## **New Taught Programme Validation: (PP2 Stage)**

### **Major Award:**

Master of Science in Digital Media with Business Analytics  
Postgraduate Diploma in Science in Digital Media with Business Analytics  
Higher Diploma in Business in Aquabusiness  
Higher Diploma in Arts in Digital Media Design  
Master of Engineering in Flight Test Engineering  
Postgraduate Diploma in Engineering in Flight Test Engineering  
Higher Certificate in Business in Logistics and Supply Chain Management  
Bachelor of Arts (Honours) in Counselling

### **Minor and Special Purpose Awards:**

Certificate in Design and Visualisation  
Certificate in Programming for Data Analytics  
Certificate in Digital Strategy

Certificate in Law and Regulation for Aquabusiness  
Certificate in Aquabusiness Environment  
Certificate in Financial Management and Planning in Aquabusiness  
Certificate in Marketing Management  
Certificate in Strategic and Innovative Management in Aquabusiness  
Certificate in Media Design  
Certificate in Graphic Design  
Certificate in Web Design  
Certificate in Counselling  
Certificate in Insurance (Life and General for Data)  
Certificate in Data Science Statistics for Insurance and Financial Services  
Certificate in Data Science (Analytics and Algorithms) for Insurance and Financial Services  
Certificate in Data Visualisation and Insights for Insurance and Financial Services  
Certificate in Peer Support Work  
Certificate in Applied Peer Support Work  
Certificate in Supporting Children and Young People with Autism Spectrum Disorder  
Certificate in Aviation Security for Screeners

### **New Taught Programme Validation: (PP1 Stage)**

#### **Major Award:**

Master of Engineering in Flight Testing  
Bachelor of Engineering in Robotics and Artificial Intelligence  
Master of Science in Industrial Automation  
Postgraduate Diploma in Applied Materials  
Bachelor of Science in Set Design, Construction and Management  
Bachelor of Science in Industrial Instrumentation and Control  
Bachelor of Science in Industrial Measurement and Control  
Higher Diploma in Arts in Journalism Practice  
Doctorate in Education  
Certificate in Insurance (Life and General) for Data Scientists  
Postgraduate Certificate in Workforce Planning  
Certificate in Professional Customer Care Advice  
Bachelor of Arts (Honours) in Sport, Business and Coaching



### **Minor and Special Purpose Awards:**

Certificate in Aerial Vehicle Platforms  
Certificate in Unmanned Aerial Vehicles  
Certificate in Flight Control Systems  
Certificate in Electric and Hybrid Propulsion  
Certificate in Data Acquisition and Analysis  
Certificate in Flight Testing  
Certificate in Aviation Finance and Legislation  
Certificate in Avionics Hardware and Software  
Certificate in Spacecraft Systems Engineering  
Certificate in Research Methods for Engineering  
Certificate in Industrial Measurement and Control  
Certificate in Python Programming  
Certificate in Prevention, Partnership and Family Support  
Certificate in Customs Clearance Procedures  
Certificate in Personal and Professional Development (Collaborative Programme – An Cosán)  
Certificate in Foundations in Adult Learning (Collaborative programme – An Cosán)  
Certificate in Communications (Collaborative Programme – An Cosán)  
Certificate in Critical and Ethical Thinking in a Changing World (Collaborative Programme – An Cosán)  
Certificate in Learning to Collaborate (Collaborative Programme – An Cosán)  
Certificate in Transformative Community Education (Collaborative Programme – An Cosán)  
Certificate in Prevention, Partnership and Family Support (Collaborative Programme – An Cosán)  
Certificate in Customs Clearance  
Certificate in Wellbeing and Mental Health Awareness in Youth Work  
Certificate in Introduction to Sport and Exercise  
Certificate in Python Programming  
Certificate in Data Science (Analytics and Algorithms) for Insurance and Financial Services  
Certificate in Data Visualisation and Insights for Insurance and Financial Services  
Certificate in Data Science Statistics for Insurance and Financial Services  
Certificate in Trade Facilitation  
Certificate in Introduction to Peer Support Group  
Certificate in Applied Peer Support Work

Certificate in Supporting Children and Young People with Autism Spectrum Disorder  
Diploma in Health and Safety at Work  
Certificate in Design Innovation  
Certificate in Biopharmaceutical Operations  
Certificate in Professional Customer Care Advice  
Certificate in Customs Compliance and Trade Facilitation  
Certificate in Information Technology Engineering  
Certificate in Aviation Security for Screeners  
Certificate in Traffic Management  
Certificate in Biopharmaceutical Operations  
Certificate in Irish Archaeology  
Postgraduate Diploma in Information Design with Business Analytics

### **On-Going Monitoring of Programmes**

#### **Desk Review of New Modules:**

Master of Science in Communications Technology Management  
Postgraduate Diploma in Science in Communications Technology Management

**Section 1:** Annual Programme Review

**Section 2:** Annual Update of Outstanding Conditions and Recommendations made by  
Programmatic Review Panel or New Taught Programme Panels

### **Teaching, Learning and Support Services Committee**

Learner Engagement and Progression Framework  
Provision of Pastoral Care for International Studies Policy and Procedures  
Overarching Guiding Principles for Teaching, Learning and Assessing in a Hybrid Teaching Environment

## Academic Council Membership 2020-2021

Membership	Category	Constituency
Dr Patricia Mulcahy	Ex-Officio	President
Mr David Denieffe	Ex-Officio	Vice President Academic Affairs and Registrar
Mr Declan Doyle	Ex-Officio	Vice President Development
Lt David Fitzpatrick	Ex-Officio	Registrar Defence Forces
Dr Frances Hardiman	Ex-Officio	Head of Faculty
Dr David Dowling	Ex-Officio	Head of Faculty
Ms Maebh Maher	Ex-Officio	Head of Faculty
Dr Karen Hennessy	Ex-Officio	Head of Campus
Mr Myles Kelly	Ex-Officio	Head of Department
Dr Eileen Doyle Walsh	Ex-Officio	Head of Department
Dr Martin Meagher	Ex-Officio	Head of Department
Dr Joseph Collins	Ex-Officio	Head of Faculty
Dr Paula Rankin	Ex-Officio	Head of Department
Mr Nigel Whyte	Ex-Officio	Head of Department
Dr Cathal Nolan	Ex-Officio	Head of Department
Dr Eoin Homan	Ex-Officio	Head of Department
Dr Mary Delaney	Ex-Officio	Head of Library and Information Services
Dr Gina Noonan	Ex-Officio	Head of Teaching and Learning Centre
Mr Thomas Drury	Ex-Officio	President Students' Union
Ms Maura Bolger	Professional Support	Technical Staff
Mr Ronán Lynch	Professional Support	Administrative Staff
Dr Sharon Harris Byrne	Academic	Department of Business
Mr John Tully	Academic	Department of Business
Dr Brian Casey	Academic	Department of Humanities
Vacant	Academic	Department of Humanities
Ms Una Grant	Academic	Department of Sport, Media and Marketing
Dr Deirdre Fleming	Academic	Department of Sport, Media and Marketing
Dr Dina Brazil	Academic	Department of Science and Health
Dr Rosemary O'Hara	Academic	Department of Science and Health
Dr Greg Doyle	Academic	Department of Computing and Networking
Dr Chris Meudec	Academic	Department of Computing and Networking
Mr Paschal Harte	Academic	Department of Built Environment and Extended Campus
Dr Ian Maher	Academic	Department of Built Environment and Extended Campus
Dr David Allen	Academic	Aerospace, Mechanical and Electronic Engineering
Mr Diarmuid O'Gorman	Academic	Aerospace, Mechanical and Electronic Engineering
Mr John Balfe	Academic	Wexford Campus
Dr Janette Davies	Academic	Wexford Campus
Mr Larry Banville	Academic	Faculty of Lifelong Learning

<b>Membership</b>	<b>Category</b>	<b>Constituency</b>
Mr Denis Coleman	Academic	Faculty of Lifelong Learning
Dr Carmel Smith	Academic	Faculty of Business and Humanities
Mr Andrew Keppel	Academic	Faculty of Engineering
Mr Gerry Moloney	Academic	Faculty of Science
Mr Patrick Morgan	Academic	Wexford Campus
Mr Michael Cahill	Student	Elected: Student Representative
Ms Alex Porter	Student	Registered Student (Female)

### **Academic Regulations Committee**

Mr John Tully	Chairperson
Dr Paula Rankin	Vice Chairperson
Dr Patricia Mulcahy	President
Mr David Denieffe	Vice President Academic Affairs and Registrar
Ms Maebh Maher	Head of Faculty
Dr Karen Hennessy	Head of Campus
Dr Eileen Doyle Walsh	Head of Department
Mr Thomas Drury	President Students' Union
Mr John Balfe	Wexford Campus
Dr Carmel Smith	Faculty of Business and Humanities
Mr Andrew Keppel	Faculty of Engineering
Mr Michael Cahill	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar
Ms Shauna Whyte	Head of Academic Administration and Student Affairs
Ms Mary O'Neill	Academic Administration
Ms Yvonne Hoare	Examination Officer
Ms Alex Porter	Registered Student

### **Programme Planning and Validation Committee**

Dr Patricia Mulcahy	Chairperson
Mr David Denieffe	Vice Chairperson
Dr Frances Hardiman	Head of Faculty
Dr David Dowling	Head of Faculty
Ms Maebh Maher	Head of Faculty
Dr Karen Hennessy	Head of Campus
Mr Myles Kelly	Head of Department
Dr Martin Meagher	Head of Department
Dr Joseph Collins	Head of Faculty
Dr Eoin Homan	Head of Department

Mr Thomas Drury	President Students' Union
Dr Brian Casey	Department of Humanities
Mr Paschal Harte	Department of Built Environment and Extended Campus
Mr Diarmuid O'Gorman	Aerospace, Mechanical and Electronic Engineering
Dr Janette Davies	Wexford Campus
Mr Gerry Moloney	Faculty of Science
Mr Patrick Morgan	Wexford Campus
Mr Michael Cahill	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar
Ms Alex Porter	Registered Student

### Quality Assurance and Enhancement Committee

Mr David Denieffe	Chairperson
Dr Chris Meudec	Vice Chairperson
Dr Patricia Mulcahy	President
Mr Nigel Whyte	Head of Department
Mr Thomas Drury	President Students' Union
Dr David Allen	Aerospace, Mechanical and Electronic Engineering
Mr Michael Cahill	Registered Student
Ms Alex Porter	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar
Dr Brian Jackson	Head of Research Studies
Dr Allison Kenneally	Director of the Office of Equality, Diversity and Inclusion
Dr Siobhan Ryan	Quality Assurance and Collaborations Officer

### Research and Development Committee

Dr Greg Doyle	Chairperson
Dr Rosemary O'Hara	Vice Chairperson
Dr Patricia Mulcahy	President
Mr David Denieffe	Vice President Academic Affairs and Registrar
Mr Declan Doyle	Vice President Development and Research
Dr Frances Hardiman	Head of Faculty
Dr David Dowling	Head of Faculty
Dr Eileen Doyle Walsh	Head of Department
Dr Cathal Nolan	Head of Department
Mr Thomas Drury	President Students' Union
Mr Ronán Lynch	Administrative Staff
Ms Deirdre Fleming	Department of Sport, Media and Marketing
Mr Diarmuid O'Gorman	Aerospace, Mechanical and Electronic Engineering

Mr Denis Coleman	Faculty of Lifelong Learning
Mr Andrew Keppel	Faculty of Engineering
Mr Gerry Moloney	Faculty of Science
Mr Michael Cahill	Registered Student
Ms Alex Porter	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar
Dr Brian Jackson	Head of Research Studies
Dr Fintan Bracken	Deputy Librarian
Mr Brian Ogilvie	Head of Research and Commercialisation Support

### Teaching, Learning and Support Services Committee

Dr Dina Brazil	Chairperson
Ms Una Grant	Vice Chairperson
Dr Patricia Mulcahy	President
Mr David Denieffe	Vice President Academic Affairs and Registrar
Dr Mary Delaney	Head of Library and Information Services
Dr Gina Noonan	Head of Teaching and Learning Centre
Mr Thomas Drury	President Students' Union
Ms Maura Bolger	Technical Staff
Mr Ronán Lynch	Administrative Staff
Dr Ian Maher	Department of Built Environment and Extended Campus
Mr Michael Cahill	Registered Student
Ms Alex Porter	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar
Mr Damien Raftery	eLearning Officer
Ms Rosemary Flynn	Head of Learner Support and Student Services
Mr Emmett Cullinane	Learning Technologist

### Collaborative Provision Committee

Dr Joseph Collins	Chairperson
Dr Gina Noonan	Vice Chairperson
Dr Patricia Mulcahy	President
Mr David Denieffe	Vice President Academic Affairs and Registrar
Lt Col David Fitzpatrick	Registrar Defence Forces
Dr Eoin Homan	Head of Department
Mr Thomas Drury	President Students' Union
Dr Sharon Harris Byrne	Department of Business
Mr Larry Banville	Faculty of Lifelong Learning
Mr Ronan Larkin	Registered Student
Ms Alex Porter	Registered Student
Dr Yvonne Kavanagh	Assistant Registrar

Dr Brian Jackson	Head of Research Studies
Dr Siobhan Ryan	Quality Assurance and Collaborations Officer
Mr Donal McAllister	International Affairs Manager
Ms Anne Meaney	Extended Campus Coordinator

## **ACADEMIC COUNCIL AND COMMITTEES**

Meeting and Summary of Work Completed 2020 -2021

### **Meetings of Academic Council 2020/2021**

2nd September 2020, 21st September 2020, 6th October 2020, 12th October 2020, 29th October 2020, 26th November 2020, 13th January 2021, 18th February 2021, 23rd March 2021, 15th April 2021, 20th April 2021, 12th May 2021.

### **Academic Council**

Board of Examiner Reports: Ratification of Examination Results  
 Examination Infringement Report  
 Institutional Review  
 Academic Delivery Framework  
 Disciplinary Hearing Reports  
 QQI Principles for Professional Engagements with Education Providers, including Programme Validation, Professional Accreditation and Approval  
 Guidelines on Work Placement  
 TU Application  
 Ethics in Research Policy V8 (Revised)  
 Contingency Planning for Supervised Professional Practice Social Care Placements

### **Linked Provision Committee**

Linked Provision Annual Report to Governing Body Template  
 Linked Provision Review

1. Institute of Technology Carlow and Gestalt Institute of Ireland
2. Institute of Technology Carlow and The Tivoli Institute

Linked Provision Annual Report to Governing Body 2021

## **Quality Assurance and Enhancement Committee**

Appointment of Examiners

New Policy: Supervised Professional Practice with Employer Organisations

Review: Policy and Procedure for Preparedness to Practice for Social Care Students

Review: Policy and Procedure for Student Attendance for Social Care Programmes

## **Research and Development Committee**

Level 9/Level 10 Register Update

Review of Institute Policy and Procedures for Research at NFQ Level 9 and Level 10:

1. Inclusion of Timeline for the submission of draft thesis
2. Revised Postgraduate Teaching Hours Contract
3. Revised Supervisory Arrangements

## **Academic Regulations Committee**

New Policy on Lecture Recording

Clarification on Regulation on Classification of Special Purpose Award with Credit Value of 60 or greater at Level 6, 7 and 8

Review of the Institute Student Complaints and Appeals Procedure

## **New Taught Programme Validation: (PP2 Stage)**

### **Major Award:**

Higher Diploma in Arts in Journalism and New Media

Master of Science in Industrial Networks and Cybersecurity

Postgraduate Diploma in Science in Industrial Networks and Cybersecurity

Master of Engineering in Applied Materials

Postgraduate Diploma in Engineering in Applied Materials

Postgraduate Diploma in Science in Advanced Pharmaceutical Analysis

Postgraduate Diploma in Science in contaminated Land Management

Master of Arts in Irish Regional History

Postgraduate Diploma in Arts in Irish Regional History

Postgraduate Diploma in Science in Information Design with Business Analytics

Master of Science in Applied Artificial Intelligence

Postgraduate Diploma in Science in Applied Artificial Intelligence



Master of Science in Cyber Security, Privacy and Trust

Postgraduate Diploma in Science in Cyber Security, Privacy and Trust

**New Taught Programme Validation: (PP2 Stage)**

**Minor and Special Purpose Awards:**

Certificate in News Gathering and Reporting

Certificate in Feature Writing

Certificate in Reporting and Publication

Certificate in Digital Journalism and Storytelling

Certificate in Broadcasting

Certificate in Media Law, Ethics and Values

Certificate in Media Entrepreneurship

Certificate in Industrial Networks

Certificate in Applied Finite Element Analysis

Certificate in Design Driven Innovation

Certificate in Innovation for Sustainable Enterprise

Certificate in Materials in Processing and Industry

Certificate in Materials Science in Engineering

Certificate in Penetration Testing

Certificate in Cyber Security Management

Certificate in Advanced Incident Response

Certificate in Modern Cryptography

Certificate in Blockchains and Distributed Ledgers

Certificate in Network and Cloud Security

Certificate in Python Fundamentals

Certificate in Workplace Planning

Certificate in Strategic Workforce Planning

Certificate in Workforce Planning Process

Certificate in Leadership Effectiveness

Diploma in Health and Safety at Work

Certificate in Risk Management

Certificate in Hazard Control

Certificate in Safety Practitioner Skills  
Certificate in Facilitating Domestic Violence Intervention Programmes with Men  
Certificate in Thoroughbred Breeding  
Certificate in Archaeology  
Certificate in Environmental Planning and Legislation  
Certificate in Medicines Administration and Patient Support

### **New Taught Programme Validation: (PP1 Stage)**

#### **Major Award:**

Master of Arts in Irish Regional History  
Postgraduate Diploma in Arts in Irish Regional History  
Master of Science in Environmental Health and Safety  
Postgraduate Diploma in Environmental Health and Safety  
Master of Science in Business in Risk Management  
Postgraduate Diploma in Business in Risk Management  
Master of Science in Creative Arts Psychotherapy  
Master of Business in Executive Leadership, Coaching and Transformation  
Higher Diploma in Business in Equality, Diversity and Inclusion  
Master of Science in Cyber Security, Privacy and Trust  
Master of Science in Applied Artificial Intelligence  
Bachelor of Science (Honours) in Organic Agriculture  
Bachelor of Science in Organic Agriculture  
Higher Certificate in Science in Agricultural Systems

#### **Special Purpose Awards:**

Certificate in Safe and Effective Work in Domestic Violence Prevention and Support  
Certificate in Thoroughbred Breeding Management  
Postgraduate Diploma in Advanced Pharmaceutical Manufacturing  
Postgraduate Diploma in Advanced Pharmaceutical Manufacturing  
Certificate in Environmental and Planning Legislation  
Diploma in Research Practice  
Certificate in Medicines Administration and Patient Support  
Certificate in Manufacturing and Design Engineering  
Certificate in Innovation Materials for Industry 4.0 and 5.0

Certificate in Clinical Supervision

Bachelor of Education (Honours) in Early Childhood Education and Practice

Bachelor of Arts (Honours) in Media and Public Relations

Bachelor of Engineering (Honours) in Biomedical Electronics

Bachelor of Engineering in Biomedical Electronics

Higher Certificate in Engineering in Biomedical Electronics

Bachelor of Science in Additive Manufacturing

Certificate in Preparation for Working Life

### **Programmatic Review 2021**

Faculty of Business and Humanities and related Lifelong Programmes

Wexford Campus and related Lifelong Programmes

Faculty of Engineering and related Lifelong Programmes

Faculty of Science and related Lifelong Learning Programmes

### **Annual Programme Review**

Annual Programme Review

Review of Institute Policy and Procedure for Validation of all Programmes at Level 6-10 NFQ

## 2.3 MANAGEMENT TEAM

### Management Team

September 2019 to August 2020

#### SENIOR MANAGEMENT TEAM

Dr Patricia Mulcahy	President
Mr David Denieffe	VP for Academic Affairs
Mr Cormac O'Toole	VP for Corporate Affairs
Mr Declan Doyle	VP for Development and Research
Dr Frances Hardiman	Head of Faculty of Engineering
Dr David Dowling	Head of Faculty of Science
Ms Maebh Maher	Head of Faculty of Business and Humanities
Dr Joseph Collins	Head of Faculty of Lifelong Learning
Dr Karen Hennessy	Head of Wexford Campus

#### HEADS OF DEPARTMENT (Academic)

Dr Cathal Nolan	Head of Department of Aerospace, Mechanical and Electronic Engineering
Dr Eoin Homan	Head of Department of Built Environment and Extended Campus
Dr Paula Rankin	Head of Department of Science and Health
Mr Nigel Whyte	Head of Department of Computing and Networking
Dr Eileen Doyle Walsh	Head of Department of Humanities
Mr Myles Kelly	Head of Department of Sport, Media and Marketing
Dr Martin Meagher	Head of Department of Business

## PROFESSIONAL MANAGEMENT

Ms Lindsay Malone	Deputy Head of Lifelong Learning
Dr Clare Power	Lifelong Learning Manager
Mr Eoin O'Brien	Lifelong Learning Manager
Dr Mary Delaney	Library and Information Services Manager
Dr Brian Jackson	Head of Postgraduate Studies
Dr Gina Noonan	Head of Centre for Teaching and Learning
Dr Allison Kenneally	Director of the Office for Equality, Diversity and Inclusion
Dr David Ryan	Director of the Office for Institute Planning and Research
Dr Yvonne Kavanagh	Assistant Registrar
Mr Martin Dolan	Human Resources Manager (to October 2020)
Ms Colette Lane	Human Resources Manager (from May 2020)
Mr Fergal Flanagan	Computing Services Manager
Ms Eleanor Rea	Finance Manager
Mr Brian Ogilvie	Research and Commercialisation Support Manager
Dr Janette Davies	Deputy Head of Wexford Campus
Ms Shauna Whyte	Academic Administration and Student Affairs Manager
Mr Donal McNally	Director of Sport
Mr David Buckley	Estates Manager
Mr Keith Williams	Capital Projects Manager
Ms Rosemary Flynn	Head of Student Services
Mr Donal McAlister	International Affairs Manager
Ms Ailish Delaney	Design+ Gateway Manager (to January 2020)
Mr Stephen Rooney	Design+ Gateway Manager (from February 2020)

**Management Team**  
**September 2020 to August 2021**

**SENIOR MANAGEMENT TEAM**

Dr Patricia Mulcahy	President
Mr David Denieffe	VP for Academic Affairs
Mr Cormac O'Toole	VP for Corporate Affairs
Mr Declan Doyle	VP for Development and Research
Dr Frances Hardiman	Head of Faculty of Engineering
Dr David Dowling	Head of Faculty of Science
Ms Maebh Maher	Head of Faculty of Business and Humanities
Dr Joseph Collins	Head of Faculty of Lifelong Learning
Dr Karen Hennessy	Head of Wexford Campus
Ms Colette Lane	Director for People and EDI

**HEADS OF DEPARTMENT (Academic)**

Dr Eileen Doyle Walsh	Head of Department of Humanities
Dr Eoin Homan	Head of Department of Built Environment and Extended Campus
Mr Myles Kelly	Head of Department of Sport, Media and Marketing
Dr Martin Meagher	Head of Department of Business
Dr Cathal Nolan	Head of Department of Aerospace, Mechanical and Electronic Engineering
Dr Paula Rankin	Head of Department of Science and Health
Mr Nigel Whyte	Head of Department of Computing and Networking

## PROFESSIONAL MANAGEMENT

Dr Fintan Bracken	Director of the Office for Institutional Planning and Research
Mr David Buckley	Estates Manager
Dr Janette Davies	Deputy Head of Wexford Campus
Ms Ailish Delaney	Design+ Gateway Manager
Dr Mary Delaney	Library and Information Services Manager
Mr Fergal Flanagan	Computing Services Manager
Ms Rosemary Flynn	Head of Student Services
Mr David Horgan	Human Resources Manager
Dr Brian Jackson	Head of Postgraduate Studies
Dr Yvonne Kavanagh	Assistant Registrar
Dr Allison Kenneally	Director of the Office for Equality, Diversity and Inclusion (up to November 2020)
Mr Donal McAlister	International Affairs Manager
Mr Donal McNally	Director of Sport
Ms Lindsay Malone	Deputy Head of Lifelong Learning
Ms Anne Meaney	Head of Extended Campus
Dr Gina Noonan	Head of Centre for Teaching and Learning
Mr Eoin O'Brien	Lifelong Learning Manager
Dr Sarah O'Connell	Director for Engineering Research and Innovation
Mr Colm O'Connor	MIS Project Manager
Mr Brian Ogilvie	Research and Commercialisation Support Manager
Dr Clare Power	Lifelong Learning Manager
Ms Eleanor Rea	Finance Manager
Mr Stephen Rooney	Cluster Manager at Engineering the South East (from January 2021)
Dr David Ryan	TU Project Director
Ms Shauna Whyte	Academic Administration and Student Affairs Manager
Mr Keith Williams	Capital Projects Manager

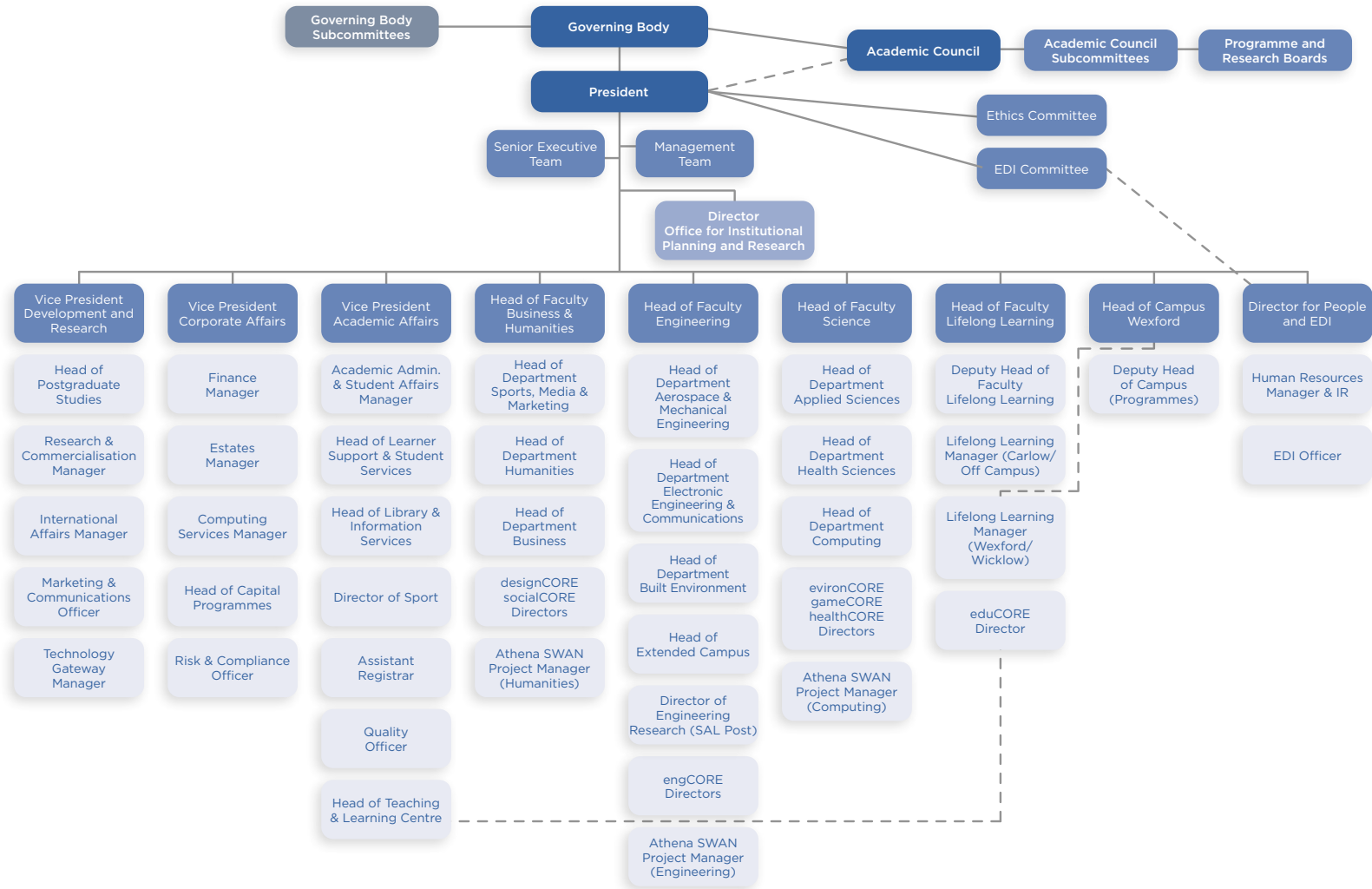


Figure 25: Current Institute of Technology Carlow Organisational Structure





# FINANCIAL STATEMENTS



### 3.1 FINANCIAL STATEMENTS FOR THE YEAR END 31ST AUGUST 2020

#### Extracts From Financial Statements Institute of Technology, Carlow

##### Consolidated and Institute Statement of Financial Position Year ended 31 August 2020

	Consolidated 31/08/20 €'000	Institute 31/08/20 €'000	Consolidated 31/08/19 €'000	Institute 31/08/19 €'000
<b>Fixed Assets</b>				
Property, plant and equipment	57,997	57,934	56,584	56,584
	<u>57,997</u>	<u>57,934</u>	<u>56,584</u>	<u>56,584</u>
<b>Current Assets</b>				
Receivables	1,872	1,877	2,158	2,199
Cash and Cash Equivalents	36,289	36,236	30,843	30,771
	<u>38,161</u>	<u>38,113</u>	<u>33,001</u>	<u>32,970</u>
<b>Less Payables: Amounts due within one year</b>	<b>(11,820)</b>	<b>(11,776)</b>	<b>(9,510)</b>	<b>(9,480)</b>
<b>Net Current Assets</b>	<b>26,341</b>	<b>26,337</b>	<b>23,491</b>	<b>23,490</b>
<b>Provision for amounts &amp; charges: retirement benefits</b>				
Retirement benefits obligations	(176,970)	(176,970)	(174,532)	(174,532)
Deferred retirement benefit funding asset	176,970	176,970	174,532	174,532
	<u>84,338</u>	<u>84,271</u>	<u>80,075</u>	<u>80,074</u>
<b>Deferred State Capital Grants</b>	52,789	52,726	51,177	51,177
Capital Development Reserve	20,956	20,956	18,538	18,538
<b>Unrestricted Reserves</b>				
Income & Expenditure Reserve	10,593	10,589	10,360	10,359
<b>Total</b>	<b>84,338</b>	<b>84,271</b>	<b>80,075</b>	<b>80,074</b>

**Extracts From Financial Statements  
Institute of Technology, Carlow**

**Consolidated and Institute Statement of Comprehensive Income  
Year ended 31 August 2020**

	Consolidated 31/08/20 €'000	Institute 31/08/20 €'000	Consolidated 31/08/19 €'000	Institute 31/08/19 €'000
<b>Income</b>				
State Grants	25,003	25,003	22,774	22,774
Tuition Fees and Student Contribution	21,525	21,525	21,823	21,823
Research Grants & Contracts	2,119	1,975	2,096	2,040
Student Support Funding	417	417	425	425
Other Income	2,642	2,641	2,585	2,585
Amortisation of Deferred Capital Grants	2,544	2,539	2,564	2,564
Interest Income	39	39	44	44
Deferred Pension Funding	10,391	10,391	8,763	8,763
<b>Total Income</b>	<b>64,680</b>	<b>64,530</b>	<b>61,074</b>	<b>61,018</b>
<b>Expenditure</b>				
Staff costs	34,784	34,636	32,498	32,444
Retirement Benefit Cost	10,391	10,391	8,763	8,763
Other Operating Expenses	11,196	11,202	11,143	11,142
Depreciation	2,782	2,777	2,776	2,776
<b>Total Expenditure</b>	<b>59,153</b>	<b>59,006</b>	<b>55,180</b>	<b>55,125</b>
<b>Surplus for the year before appropriations</b>	<b>5,527</b>	<b>5,524</b>	<b>5,894</b>	<b>5,893</b>
<b>Transfer to Capital Development Reserve</b>	<b>(5,334)</b>	<b>(5,334)</b>	<b>(5,502)</b>	<b>(5,502)</b>
<b>Release from / (to) Capital Development Reserve</b>	<b>40</b>	<b>40</b>	<b>384</b>	<b>384</b>
<b>Surplus after appropriations</b>	<b>233</b>	<b>230</b>	<b>776</b>	<b>775</b>
Experience gains / (losses) on retirement benefit obligations	(1,414)	(1,414)	4,241	4,241
Reduction in pension liabilities arising from retirements in the year	4,550	4,550	4,544	4,544
Changes in assumptions underlying the present value of retirement benefit obligations	6,480	6,480	(21,736)	(21,736)
<b>Total actuarial gains/(losses) in the year</b>	<b>9,616</b>	<b>9,616</b>	<b>(12,951)</b>	<b>(12,951)</b>
Adjustment to deferred retirement benefits funding	(9,616)	(9,616)	12,951	12,951
<b>Total comprehensive income for the year</b>	<b>233</b>	<b>230</b>	<b>776</b>	<b>775</b>





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INSTITUTE *of*  
TECHNOLOGY  
CARLOW

Institiúid Teicneolaíochta Cheatharlach

