



**Higher Education System
Innovation and Transformation Call 2018**

Transformative Student-Centred Learning Record
(Acronym: *Transform-EDU*)

INSTITUTE OF TECHNOLOGY BLANCHARDSTOWN
(TECHNOLOGICAL UNIVERSITY DUBLIN)

PROJECT DETAILS

Project Information:	
Project Title:	Transformative Student-Centred Learning Record (Transform-EDU)
Project abstract:	<p>The <i>Transform-EDU</i> is a three-year <i>ca.</i> €1.4 million project involving Dublin Institute of Technology, Institute of Technology Blanchardstown and Institute of Technology Tallaght. The project partners have recently qualified for designation as Ireland's first Technological University— The Technological University Dublin (TU Dublin). The project proposes to develop and pilot an innovative approach to learning, where elements of structured programmes, and co and extra-curricular events are purposefully integrated to create a rich learning environment. It considers that, whereas key programme learning outcomes are achievable within any structured discipline-specific academic curriculum, the 21st century graduate profiles espoused by employers are dynamic, requiring an equally agile learning ecosystem, to ensure consistency in producing graduate who meet and/or exceed the technical and employability skills demanded in a wide spectrum of job-roles.</p> <p>Strategically, the <i>Transform-EDU</i> Project aims to establish a systemic linkage and interplay between teaching and learning, engagement (enterprise, civic and community), resources and infrastructure development; building upon the history, experiences and achievements of the three partners. Achievement of transformative learning against key graduate attributes will be depicted in a comprehensive and authentic <i>Transformative Learning Record</i> for individual learners. Through exposure to identifiable <i>Tenets of Transformative Learning</i>, the project will enable students to experience greater transformations from their learning than they would otherwise gain from qualifications in HEIs that do not explicitly attempt to create such opportunities. <i>It will deliver a framework towards making such experiences more universally accessible, thereby embedding a unique, graduate attribute-inspired institutional identity; a truly learner-centred approach to higher education and training.</i></p> <p><i>The proposal supports innovation, transformation and quality improvement in teaching and student learning outcomes, a priority area for this first HEA Innovation and Transformation Call in 2018. It also addresses the Key System Objectives 1, 2, 3, 4 and 5 in the Higher Education Systems Performance Framework 2018-2020.</i></p>

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Section 1: Description of Project Team**1.1 Listing of project team members and summary roles in project work packages (WP) and workstreams.**

Name	Institution and Department	Project Role
WP1 Project Coordination & Management		
Dr Philip Owende	ITB Academic Quality Manager	Project Coordinator
Dr Fiona Malone	ITB Department of Business	Project Director and Coordinator WP3 & WP4
WP2 Characterising the TU Dublin Transformative Education Framework		
Dr Jen Harvey	DIT Head of LTTC	WP 2 Coordinator
Dr Fiona Malone	ITB Department of Business	Contributor
Miriam O'Donoghue	ITT Head of Lifelong Learning	Contributor
WP3 Developing the Framework for Transformative Learning (TL) Process		
<i>Workstream WP3.1 Sustainable Development and Sustainability Science</i>		
Cormac McMahon	ITB Engineering Dept.	<i>Workstream Lead</i>
Andy Maguire	DIT Sustainability Coordinator	Contributor
Miriam O'Donoghue	ITT Head of Lifelong Learning	Contributor
<i>Workstream WP3.2 Social and Emotional Skills Development and Work Readiness</i>		
Dr Aiden Carthy	ITB Department of Humanities	<i>Workstream Lead</i>
Dr Ashley O'Donoghue	DIT Head of Staff Development	Contributor
Suzzane Duggan	ITT Department of Humanities	Contributor
<i>Workstream WP3.3 Service Learning, Civic & Community Engagement</i>		
Dr Phil Mulvaney	ITT Head of Strategic Projects	<i>Workstream Lead</i>
Dr Catherine Bates	DIT Access & Civic Engagement	Contributor
Des Moore	ITB Head of Civic Engagement	Contributor
<i>Workstream WP3.4 Integrative Cross-disciplinary TL Events</i>		
Dr Cormac Doran	ITB Head of CHERPP Centre	<i>Workstream Lead</i>
Dr Noel O'Connor	DIT Director of Student Dev.	Contributor
Ronan Keaskin	ITB Sports Development Officer	Contributor
WP4 Developing Learning Resources and Staff Competencies		
<i>Workstream WP4.1 Development of Standard for Transformative Learning Record (TLR)</i>		
Paul Dervan	ITB Department of Business	<i>Workstream Lead</i>
Dr Ashley O'Donoghue	DIT Head of Staff Development	Contributor
Eoin Campbell	ITT Learning Technologist CELT	Contributor
<i>Workstream WP4.2 Implementation of Universal Design for Learning</i>		
Dr Larry McNutt	IT Blanchardstown	<i>Workstream Lead</i>
Dr Jen Harvey	DIT Head of LTTC	Contributor
Geraldine Roche	ITT Assistive Technology Officer	Contributor
<i>Workstream WP4.3 Establishment of Digital Campus Support for TLR</i>		
Dr Kevin O'Rourke	DIT Digital Campus Architect	<i>Workstream Lead</i>
Daniel McSweeney	ITB Head of Informatics Dept.	Contributor
Eoin Campbell	ITT Learning Technologist CELT	Contributor
WP5 Developing Student-Centred QA-QE Processes and Procedures for Transformative Learning (TL)		
Prof Brian Bowe	DIT Head of Learning Dev.	WP Coordinator
Dr Philip Owende	ITB Academic Quality	Contributor
Sinead O'Neill	ITT Academic Quality Manager	Contributor
WP6 Implementation and Sustaining Transformative Learning Record (TLR)		
Sandra Thompson	IT Blanchardstown	WP Coordinator
Dr Jen Harvey	DIT Head LTTC	Contributor
Eoin Campbell	ITT Learning Technologist CELT	Contributor

1.2 Summary Profiles of the Project Work Package/Workstream Leaders

This sub-section provides synoptic profiles of *Transforms-EDU* project Work Package Coordinators and Workstream leaders. It is intended to demonstrate the team's collective capacity to deliver the project, based on their current decision-making roles in teaching and learning at the partner institutions, expertise in the outlined elements of the project, and record of accomplishment in delivery of projects of similar scale and complexity.

Philip Owende PhD CEng EurIng FIEI

Dr Philip Owende is a Chartered Engineer and [Fellow of the Institution of Engineers of Ireland](#), and currently the Academic Quality Manager, [IT Blanchardstown](#). He also holds position of [Visiting Associate Professor University College Dublin \(UCD\)](#). As member of the TU Dublin Academic Steering Board, his current roles encompass: preparation/alignment of quality assurance processes to curricular objectives; development/implementation of academic policies and procedures, and; curricular planning through engagement with TU Dublin partners. He has led the development/rollout of a wide range of STEM programmes, ranging from Higher Certificate ([NFQ Level 6](#)) to Masters Programmes ([NFQ Level 9](#)), most recent being the [MEng in Internet of Things Technologies](#) under [TU Dublin Programmes of the Future](#), and [MSc in Sustainable Energy & Green Technologies](#) of UCD. He has been principal researcher in funded projects worth over €3 million, has supervised 9 PhD and 11 Masters projects to completion, published 6 book chapters and over 40 refereed publications, and currently has an [H-Index of 19 with over 3,200 citations](#) in Scopus. He has led international verification reviews of undergraduate engineering programmes on behalf of the [International Engineering Alliance](#) for mutual recognition of awards supporting engineering graduates' mobility in Canada, Australia, New Zealand, and Malaysia.

Fiona Malone EdD ACMA, CGMA, MA, PGCE, PGradDip, BSc(Hons)

Dr Fiona Malone is an associate member of Chartered Institute of Management Accountants and Chartered Global Management Accountants. Fiona is currently Head of Department of Business, [IT Blanchardstown](#), with key role in course development and delivery, quality assurance, student and staff development, resource planning and management and industry liaison. She has led in the development/roll out of many Business programmes from Higher Certificate (NFQ level 6) to Masters level (NFQ Level 9), including Accounting and Finance, Digital Marketing, Spots Management and Coaching and Springboard Programmes.

Jen Harvey PhD M.Phil, BSc. Dip EdTech

Dr Jen Harvey is the Head of the [DIT Learning, Teaching and Technology Centre \(LTTC\)](#). Prior to this, she was the Head of Distance Learning. Before moving to Dublin, she worked in a number of teaching and academic development roles in various Scottish Universities. She is currently involved in coordinating a number of postgraduate LTTC CPD short courses including Academic Leadership in teaching, Learning and Assessment, Higher Education Policy as well as teaching and supervising on all the LTTC postgraduate programmes. She chairs a number of institutional committees and working groups including the Learning, Teaching and Assessment Strategies committee. She is a member of the steering board of the [National Forum for the enhancement of Teaching and Learning](#) and has been successful in obtaining DIT funding for a number of EU and national strategic development projects, acting as project lead for collaborative projects relating to Assessment and Feedback, student transition into third level, student engagement and work-based learning.

Cormac MacMahon BEng, MIE, MBA

Cormac spent 5 years in the Middle East where he was Dean of Business at [Bahrain Polytechnic](#) and tasked with developing range of future oriented Bachelor of Business, Logistics and Maritime programmes to support the development of professional and enterprise work-ready graduates. A strategic aspect of Cormac's role was to enhance employability of graduates through implementation of a range of pedagogical approaches, including: effective lifelong learning inventory (ELLI), work-integrated learning, problem-based learning and embedding professional qualifications into the Polytechnic's education programmes. Cormac was instrumental in the development of the Bahrain Qualifications Framework, was an institutional and programme review auditor for Bahrain QQA and served on its national taskforce for research and innovation. Cormac recently returned to [IT Blanchardstown](#) and has been seconded to a [National Forum for the](#)

[Enhancement of Teaching and Learning](#) sponsored initiative to support professional development in teaching and learning. In Ireland, Cormac led the development of a several programmes in Entrepreneurship and Engineering, ranging from NFQ Level 6 [Certificate in Enterprise Skills](#) to NFQ Level 9 [MSc in Technology Entrepreneurship](#) and has been teaching across a wide range of industry-based engineering programmes. Cormac is currently completing his Doctorate at Waterford Institute of Technology and expects to submit in 2018. He has published 4 book chapters in the field of entrepreneurship and numerous conferenced proceedings, primarily in engineering education and also led several funded projects, including the [Accelerating Campus Entrepreneurship](#) under SIF II.

Aiden Carthy ^{PhD}

Dr Aiden Carthy is the director of the [National Research Centre for Psychology, Education and Emotional Intelligence](#). Aiden is an experienced academic and educational consultant and has been widely published in the fields of Applied Education and Emotional Intelligence. Aiden has extensive research experience and is heavily involved with postgraduate research supervision. He is currently acting as principal supervisor for five PhD students and provides mentor support for academic supervisors at ITB. He is a reviewer for a number of international research journals and is a board member of the Graduate Research School at DIT and an associate member of the [Centre for Mental Health and Community Research at NUI Maynooth](#).

Phil Mulvaney ^{PhD}

Dr Phil Mulvaney is Head of Strategic Projects at the [Institute of Technology Tallaght \(ITT\)](#). Her role is to lead and work on designated strategic projects for the Institute, including the Institute's Strategic Plan and HEA Performance Management Reviews. She is also engaged in a number of projects relating to the application of the Institute for Technological University designation - in partner with Dublin Institute of Technology (DIT) and Institute of Technology Blanchardstown (ITB). She is currently responsible for the development of ITT's Learning, Teaching and Assessment Strategy, and has managed a several projects that advance the Institute's role in the provision of education and training, and research and innovation. Previously, Dr Mulvaney was Head Department of Management at ITT and responsible for academic leadership; achieving excellence in programme development and delivery; building and strengthening links with industry; and managing the development and implementation of quality assurance. Her main publications, research and consultancy are in the area of industrial innovation and the economics of technological change and development.

Cormac Doran ^{EdD}

Dr Cormac Doran is currently the [Head of the Centre for Higher Education Research, Policy and Practice \(CHERPP\)](#), an international collaborative project hosted by the University of Ontario Institute of Technology, Durham College, and the Technological University for Dublin Alliance. He is on secondment from his substantive role as Head of the Department of Humanities at [IT Blanchardstown](#). As head of CHERPP, he oversees about 40 projects in higher education as part of a HEA funded programme towards enhancement of academic mobility between Ireland and Canada. Cormac also holds position of Adjunct Professor at the [University of Ontario Institute of Technology \(UOIT\)](#). He is a Fellow of the [Royal Society of Arts](#), and has been a Board member of a number of organisations, including among others: Minister of Education appointee to Leargas; North Fingal Citizens Information Centre; Valley Community Employment Project, and; Youth Work Ireland. Cormac is a consultant with a number of national and local agencies in the community and youth sector.

Paul Dervan ^{BSc (IT), MBA}

Paul is the Programme Leader for the [Bachelor of Business Programme at ITB](#), and has lectured undergraduate students in both part-time and full-time programmes since 2003. Prior to joining ITB, Paul held senior management positions within the marketing and IT departments at Eircom. In these roles he had P&L responsibility for Eircom's equipment maintenance business and was responsible for delivery of IT projects on time and within budget. He was chair of the curriculum sub-group of [FIT Ltd.](#), a government-sponsored agency tasked with preparing and delivering courses to marginalised learners to enable them secure jobs in the IT Industry. The curriculum sub-group task was to ensure that courses were industry-focused and well planned. Paul has published a number of academic papers dealing with the use of

technology in education including the enhancement of the assessment process to enhance students' preparation to join the workforce. In this endeavour, he has developed a close working relationship with the [Transformation Learning Team at the University of Central Oklahoma \(UCO\)](#) over the past year.

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Kevin O'Rourke PhD

Dr Kevin O'Rourke is currently the Digital Campus Architect at Dublin Institute of Technology. His [professional career](#) has spanned advertising and publishing in Dublin, New York and London, and he worked on publishing projects with Routledge and with the university presses at Oxford and Cambridge. He joined DIT in May 2002 as project manager for learning technology, and subsequently worked with the Learning, Teaching & Technology Centre as head of eLearning support and development where his duties also included teaching and supervising postgraduate students. In 2014 he was seconded part-time to the National Forum for the Enhancement of Teaching and Learning in Higher Education to work on developing the [Digital Roadmap for Irish higher education](#). Subsequently in 2016 he worked full-time with the Forum to produce the report: [Ireland's Higher Education Technical Infrastructure A review of current context, with implications for teaching and learning enhancement](#).

Larry McNutt Ed.D, M.Ed,H.Dip.Ed, FICS

Larry is currently the Registrar at [IT Blanchardstown](#). Larry has over 35 years' experience in the Higher Education both in Ireland and in Australia, with 15 years at Senior Management as the Head of School of Informatics and Engineering at ITB. He has held academic positions in Southern Cross University Australia, Letterkenny IT, DCU and Capella University, USA. He is a Fellow of the Irish Computer Society, a board member of [AHEAD](#), and is a member of [NSAI Technical Committee TC02/SC 13](#). His research interests and publications include distance education, educational technology, instructional design, computer science education and universal design for learning. He is a reviewer for [The MERLOT Journal of Online Learning and Teaching](#), [Computers in Human Behaviour](#), and [The All Ireland Journal of Teaching and Learning in Higher Education](#). He is a member of Steering Committee for [International Conference on Engaging Pedagogy](#) and Co-Chair of the [Ireland-Canada Higher Education in Transformation Symposium](#).

Brian Bowe PhD

Prof Brian Bowe is the Head of Learning Development in the College of Engineering & Built Environment at [Dublin Institute of Technology \(DIT\)](#), leads the *CREATE* STEM education research group and is the [European Aviation Safety Authority \(EASA\)](#) quality manager for DIT. He has facilitated over 300 education development workshops worldwide and consulted for numerous higher education institutes on topics such as problem-based learning, assessment, curriculum development, quality assurance, group learning and peer instruction. As Head of Learning Development, he has led changes in learning, teaching and assessment practices and quality assurance processes in the College of Engineering & Built Environment. His research interests include examining students' approaches to learning within [group-based project-driven pedagogies](#), [gender studies in STEM education](#), [cognitive development](#), [conceptual understanding](#), [sustainability](#) and [pedagogical evaluations](#), employing a wide range of methodologies, including [phenomenology](#) and phenomenography. He is currently coordinating a national spatial reasoning project funded by Intel Ireland and the [Irish Research Council](#), examining the gender differences in spatial cognition and their impact on success and engagement in STEM education. His research group currently has 18 academic members and 12 PhD/MPhil students, and is participating in three European Commission funded collaborative projects.

Sandra Thompson MAcc, BSc

Sandra is currently lecturer in accounting and finance at the Institute of Technology Blanchardstown (ITB) School of Business. She qualified as a chartered accountant and chartered tax advisor with PwC. Sandra has considerable experience in business, accountancy, taxation, and educational areas, having worked for private, public and corporate clients. She recently published a paper on Operating Reserves in Irish Non Profit Organisations. Sandra's research interests are in the changing landscape of the accounting profession, particularly in technology and analytics, and student-centred teaching and learning. Sandra is Course Coordinator in Accounting and Finance Programme at ITB, and part of the peer-mentoring programme team overseeing learning experience dedicated to Year 1 of study at ITB.

Section 2: Institutional strategy

2.1 Strengths of the *Transform-EDU* project partners

The *Transform-EDU* project is being proposed by the Institute of Technology Blanchardstown (ITB) (Lead), in partnership with Dublin Institute of Technology (DIT) and Institute of Technology Tallaght (ITT). The consortium of the three institutions was recently designated to become Ireland's first Technological University (TU)¹, the TU Dublin, which is to be established in January 2019. The TU will be located on three campuses at Grangegorman, Blanchardstown, and Tallaght and will be underpinned by an inclusive and open learning experience offering pathways to education and training from Level 6 (Apprenticeships) to Level 10 (Doctorate) awards in the National Framework of Qualifications (NFQ)², to a diverse range of enrolled students. The sections below highlight the strength of the *Transform-EDU* project partners.

Dublin Institute of Technology— DIT has been an integral part of the higher education system in Ireland for 30 years. With autonomous degree awarding authority up to and including PhD level, DIT combines the excellence of a traditional university system with professional career-oriented learning and prepares graduates for productive leadership roles in both the public and private sectors. Supporting over 20,000 students, DIT has commenced its relocation to a single 73-acre campus in Grangegorman, in Dublin's north inner city. In September 2014, the first 1,200 students moved into the new campus, and that number will rise to 10,000 over the next two to three years. Strong industry engagement is reflected in DIT's successful technology transfer and enterprise creation, as well as in its strong research base. Over the past eleven years, DIT has helped to create more than 400 sustainable businesses, which have raised over €200 million in equity investment and created 1,700 quality jobs.

Institute of Technology Blanchardstown— Since its inception in 1999, ITB has been pursuing its mission of making education accessible to a diversity of learners. Its purpose-built campus, spanning over 56 acres located within a busy industrial commercial setting, has allowed ITB to build an excellent reputation for engagement with industry and the professions, ensuring that graduates are prepared for the workplace of today and the future. Currently, ITB has nearly 3,500 students studying in full-time, part-time and online programmes. The institute has deep commitment to widening participation in education and serving the needs of the people of Dublin and beyond; it has supported over 150 early stage start-ups, almost 100 companies through business acceleration and a further 90 companies through business incubation since 2010.

Institute of Technology Tallaght— Established in 1992, ITT currently caters for a student population of 6,000, approximately equally split between full-time and part-time learners. ITT features among the top three HEIs in Ireland supporting Lifelong Learning and top three for research in the institute of Technology Sector. A majority of ITT students come from the local area; 76% from the immediate Dublin City and County regions, and 90% from the greater Dublin area. The institute's mission is to be the centre of higher education and knowledge creation within South Dublin County. It aims to broaden participation in higher education, to support research and commercial innovation, and to advance the economic, social and cultural life of the region.

The TU Dublin partner institutions currently have over 28,000 students registered in both full-time (68%) and part-time programmes (32%), with undergraduate programmes accounting for 78% (*ca.* 22,000) of the total student population. The partner institutions offer approximately 800 academic programmes across over 30 schools. In addition, there are significant common provisions across the campus locations, making the planned curriculum transformations towards the future state challenging in both scale and complexity³.

¹ DES. 2018. [DIT, IT Blanchardstown and IT Tallaght come together in bid to become first Technological University in Ireland](#), Department of Education and Skills (DES), Press Release, July 2, 2018.

² QQI. 2018. [National Framework of Qualifications \(NFQ\)](#)

³ TU4Dublin. 2018. Application for designation as a Technological University, The TU4Dublin context for programme provision planning, p. 40. TU4Dublin Alliance.

2.2 Strategic objectives of the *Transform-EDU* project partners

2.2.1 *The Technological University Context*

The functions of a technological university⁴, having particular regard to the needs of the region in which the campuses of the technological university are located, shall be (among others) to:

- (1) Provide programmes of education and training that reflect the needs of citizens, business, enterprise, the professions and other stakeholders in the region in which the campuses of the technological university are located and facilitate learning by flexible means.
- (2) Provide for the broad education, intellectual and personal development of students, for the purposes of enabling them, as graduates, to excel in their chosen careers and to contribute responsibly to social, civic and economic life in innovative and adaptable ways.
- (3) Serve the community and public interest by— developing and promoting strong social and cultural links, and links supporting creativity, between the technological university and the community in the region in which the campuses of the technological university are located.

The TU Dublin is also obliged to contribute to the widening participation in higher education in its regional remit⁵. The widening participation refers to positive engagement in the social, cultural, economic and educational lives of such communities to address social exclusion, and any inherent disadvantages and challenges in accessing higher education and enhancing employability prospects⁶.

2.2.2 *Graduate Attributes of TU Dublin*

The mission of TU Dublin is to foster graduates and researchers who will be future leaders of society in the fields of science, technology, business, humanities and the applied social sciences. The TU Dublin curriculum will develop graduates who, in both creative and practical ways, further the realisation of an enriched and internationally competitive economy and society. Designed through collaborative effort between industry, academia and government, the TU Dublin curriculum will achieve the following graduate attributes:

- *Expert*— Experiential learners; Discipline knowledge; Practice-based learners; Work-based learners; Ethical; Leaders; Project managers.
- *Engaged*— Socially responsible; Civically responsible; Curious; Motivated self-starters; Active team players; Reflective practitioners; Global citizens.
- *Enterprising*— Independent thinkers; Creative; Career-educated; Self-starters; Innovators; Entrepreneurs; Well organised
- *Enquiry-Based*— Critical thinkers; Digitally literate; Inquisitive; Problem solvers; Creators of new knowledge; Analytical.
- *Effective*— Excellent communicators; Information literate; Self-managers; Decision makers; Resilient; Reflective practitioners

The fitness-of-purpose of the outlined attributes for the current setting in employment, skills and workforce strategy, and the associated future transformations are anchored against a range of criteria as set out in key national and international benchmarks. These included: Functions of a Technological University⁷; Desirable graduate attributes as set out in the National Employer Survey⁸ and Action Plan for Education⁹; Internationalisation Strategy for Ireland¹⁰; and, Strategy for Higher Education-Enterprise Engagement 2015-2020¹¹, among others. The outlined attributes reflect step changes that have occurred in skill needs, and which are anticipated into the future for TU Dublin graduates to succeed in this new, brave, global society, while recognising that;

⁴ Technological Universities Act 2018, Functions of Technological University (Chapter 2).

⁵ Technological Universities Act 2018, Functions of Technological University (Chapter 2; Item 9(I)).

⁶ TU4Dublin. 2018. Application for designation as a Technological University, p. 62. TU4Dublin Alliance.

⁷ Technological Universities Act 2018, Functions of Technological University (Chapter 2).

⁸ <http://hea.ie/assets/uploads/2017/06/National-Employer-Survey.pdf>

⁹ <https://www.education.ie/en/Publications/Corporate-Reports/Strategy-Statement/Action-Plan-for-Education-2017.pdf>

¹⁰ <https://www.education.ie/en/Publications/Policy-Reports/International-Education-Strategy-For-Ireland-2016-2020.pdf>

¹¹ <http://hea.ie/assets/uploads/2017/06/Enterprise-Engagement-Strategy.pdf>

We are currently preparing students for jobs that don't yet exist...using technologies that haven't yet been invented...in order to solve problems we don't even know are problems yet.

Richard Riley, Secretary of Education under President Clinton.¹²

The outlined graduate attributes and planning for learners' success calls for new ways of thinking towards implementation of a learner-centred education environment— *The Transformative Student-Centred Learning*. While recognising, the significance of progression in learning through the incremental NFQ level of awards; it is arguable that, the TU Dublin attributes cannot be successfully delivered within the highly-structured and tightly-monitored learning environments offered within discipline-specific programmes in their current state alone. A fundamental issue is whether or not independent thinkers, critical thinkers, self-managers, resilient aptitude and socially and civically responsible graduates can be realised in learning environments that are overly restrictive.

The strongest influence on learning is assessment¹³. However, assessment of learning outcomes to accurately reflect employability in most part defy precise measurement techniques. . This suggests potential recording and reporting in two ways to accurately reflect employability; (a) via the certified academic transcripts (as normal), and; (b) supplemented by portfolios, accounting for the learners personal development planning and reflections¹⁴. The overall intention of the *Transform-EDU* Project is to develop an instructional framework that combines the highly structured and tightly monitored discipline specific education pathway, with a comprehensive learner-centred record of transformative learning achieved through co-curricular and extra-curricular learning activities. Inevitably, this raises two important questions: Do current Quality Assurance (QA) systems lead to, or even encourage, the development and establishment of student-centred learning environments? Does adhering to current QA procedures support student-centred learning, or even best practice in teaching and learning? Consequently, in addition to the requisite learning supports championed in this proposal, a robust QA system will be developed to support educators and learners as they deliver the proposed transformational learning curriculum.

Innovation(s):

- *While this may not be a new concept, the innovation is in the use of different learning opportunities and technology platforms to integrate the achievable outcomes from the structured discipline-specific modules, with those from co and extra-curricular activities within rich cross-disciplinary ecosystem for learning.*
- *In addition, the work programme, i.e., the combined work packages and workstreams in the project recognise that, academic staff must be provided with training and dedicated supports to enable them to provide guidance that is more effective to learning, i.e., enabling learners to develop and demonstrate their skills in a modern and job- role-relevant manner.*

2.2.3 Transformative Student-Centred Learning Concepts and Objectives (See WP2, WP3, WP4 and WP6 later)

Student-centred learning—Teaching and learning literature widely apply the term student-centred learning (SCL). While connotations of SCL are varied, in practice it is described by a range of terms such as flexible learning, experiential learning, self-directed learning etc., which lead to confusion surrounding its implementation. From literature, the teacher-centred/content-oriented and the student-centred/learning-oriented conceptions are located as either ends of a continuum anchored on the three concepts that are regularly used to describe student-centred learning, viz., level of learner's choice, active/passive learning, and power balance between the learner and instructor. Practical implementation then becomes an exercise of determining how far up the continuum academic programmes are able to move within any contextual barriers. Drawing from the outlined graduate attributes, implementation of student-centred learning for TU Dublin provides scope for differentiation of graduate profiles for different academic programmes and the TU as a whole, with implications for curriculum design, teaching and learning methods and associated

¹² Pompa C. 2015. Jobs for the Future, Chapter 3 Trends shaping the jobs of the future, p. 13. London: Overseas Development Institute

¹³IBEC. 2018. Future ready: improving graduate employability skills, p. 13, Key employability skills. Smarter World, Smarter Work, An IBEC Campaign. 36 pp.

¹⁴Yorke M and PT Knight. 2006. Embedding employability into the curriculum. Learning and Employability, Series 1, York (UK): The Higher Education Academy.

assessment practices. In respect of assessments and since programme implementation on the continuum is so flexible; the quality assurance-quality enhancement (QA-QE) systems for TU Dublin should follow-suit, i.e., require or at least be encouraging strategies towards the student-centred end of the continuum.

Transformative learning— The Nerstrom Transformative Learning Model (Nerstrom, 2014¹⁵) represents Transformative Learning as embodying four sequential phases (Figure 2.1), namely: (a) having an experience; (b) making reasonable assumptions; (c) challenging related perspectives, and; (d) revealing a new experience—the transformation. The four phases represent how learning transformations are constructed, and identifies them as continuous cycles, i.e., once transformative learning occurs, individuals become more receptive to experiencing it again. In addition, once TL occurs, it becomes more unlikely that learners revert to prior beliefs.

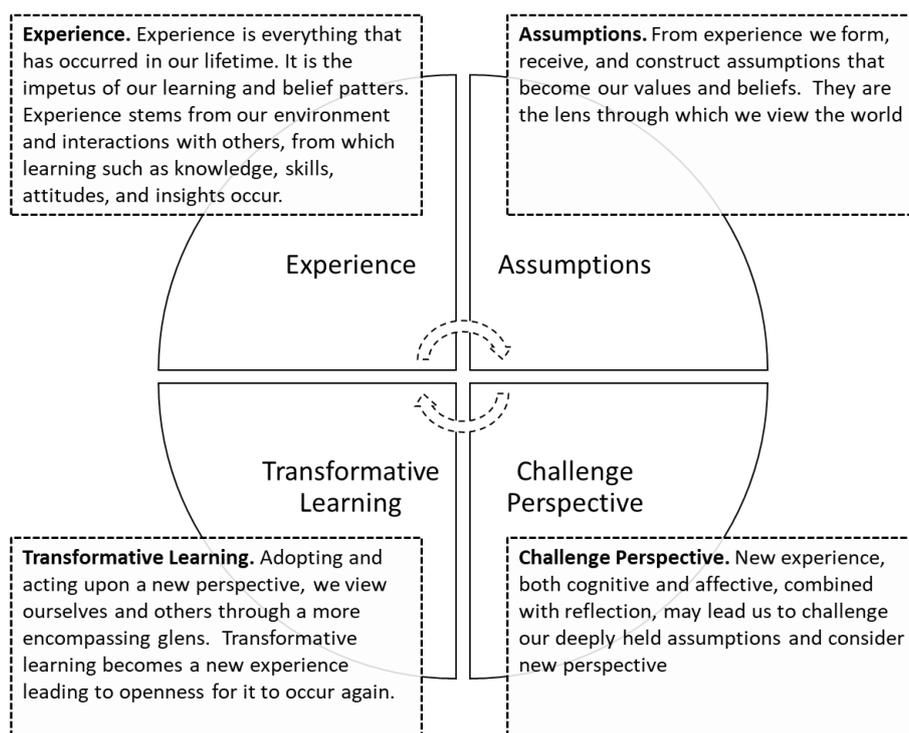


Figure 2.1 Nerstrom Transformative Learning Model (Adapted from: Nerstrom, 2014)

One could argue that ‘proper’ student-centred learning should be inherently transformative, as transformation is a characteristic of the student-centred learning environment. Both SCL and transformative learning are underpinned by social constructivism, hence they go hand-in-hand. Both require students to first focus on their own experiences and prior knowledge, before being “forced” to challenge their assumptions and knowledge through the cognitive perturbation process.

In higher education institutions, learners grow and transform through both structured discipline specific academic engagements, and any inherent co and extra-curricular dispensations, from both within the institutional structures and as part of planned engagement and interactions with stakeholders, e.g. enterprise and civic communities. However, for the most part, the information provided for in learners’ academic transcripts are constrained to achievements in the discipline-specific knowledge gained primarily in their respective programmes of study. In the scheduled designation of the *Transform-EDU* project partners to TU Dublin, the following key questions need to be addressed:

¹⁵ Nerstrom, Norma (2014). An Emerging Model for Transformative Learning. Adult Education Research Conference. Harrisburg, PA: New Prairie Press <http://newprairiepress.org/aerc/2014/papers/55>

- (1) Is it possible to track and display learner development and transformation in other areas supporting employment and employability criteria matching TU Dublin's declared graduate attributes outlined in section 2.2.2?
- (2) Is there a framework for authentication of learner development and achievement of transformative learning in non-discipline specific competencies that will contribute to overall employment and employability?
- (3) An offshoot from point (2) above is that our current quality assurance systems struggle to assure quality of learner development and achievement, but quality enhancement protocols are flexible and, therefore should be the focus.

The *Transform-EDU* project focuses on an innovative approach to learning where elements of structured programmes, and co and extra-curricular events will be purposefully integrated to create the rich learning environments that are required to foster transformative learning. *Transform-EDU* recognises that, although key learning outcomes in most part may be achievable within structured discipline-specific academic curricular, the 21st Century Graduate profiles that are demanded by employers will be dynamic, therefore, requiring equally agile learning environments to ensure consistency in producing graduates who meet and/or exceed the skills demand by enterprise.

Within the *Transform-EDU* project, the programme learning outcomes are formally credited within their designated Award Standards in the National Framework of Qualifications. Concurrently, achievement of transformative learning against the key graduate attributes will be provided in comprehensive and authentic *Transformative Learning Record* (TLR) for individual learners, and which will be formulated against Employment and Employability Guidelines for their particular programmes of study. Competency areas of focus in the foundation TLR tenets include: sustainable development and sustainability science; emotional intelligence, and; service learning, civic and community engagement. These will be guided by a robust QA-QE system that is also to be developed.

Innovation(s):

- *The advantage of this approach is that outcomes of individual programmes are graduate profile-driven, therefore can be easily adapted or tailored to different academic programmes.*
- *The approach can be replicated easily across HEIs, therefore providing a more focused approach to meet both National HE targets and their regional remits.*

2.2.4 Implementation of Sustainable Development Goals (Refer to Workstream 3.1 under WP3 later)

On September 25, 2015, Ireland and 192 other UN member-states adopted the 2030 Agenda for Sustainable Development¹⁶; the 15-year global framework centred on an ambitious set of 17 Sustainable Development Goals (SDGs), 169 targets and over 230 indicators. The 2030 Agenda for Sustainable Development encourages countries to develop national responses to the Sustainable Development Goals (SDGs), and incorporate them into planning and policy. In Ireland, the Sustainable Development Goals National Implementation Plan 2018-2020¹⁷, aims to provide a framework for how Ireland will implement the Sustainable Development Goals from 2018-2020, to support national policies which contribute to meeting the Goals, and to facilitate multi-stakeholder participation. In addition to being the focus of SDG4—*Quality Education*, the National Implementation Plan recognises that education can make an important contribution to achieving all the Sustainable Development Goals. For example, SDG 4.7 requires that, by 2030, all learners should acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

¹⁶ United Nations. 2015. *Transforming Our World: The 2030 Agenda for Sustainable Development*. United Nations, A/RES/780/1, 41 pp.

¹⁷ DCCA. 2018. *The Sustainable Development Goals National Implementation Plan 2018-2020*. Dublin: Department of Communication, Climate Action & Environment (DCCA), Government of Ireland.

Innovation:

The Transform-EDU project considers that effective education in sustainable development and sustainability science are themselves inherently transformative; as formal education/training is critical to enhancing awareness of global challenges to sustainability, the relevant individual and societal or communal responsibilities need to be in place to address them.

Transform-EDU also considers that the environmental, urban and societal challenges faced today demand concerted actions across sectors and academic disciplines^{18,19}. As a higher education institution, the TU Dublin can meet key graduate attributes related to sustainability through “Living Lab” practices, by fostering of sustainability learning in areas such as urban planning, green infrastructure, low carbon technologies (viz. efficient energy use, resource conservation etc.), biodiversity, among others. *A living lab is a platform for innovation, applied to the development of new products, systems, services, and processes in an urban area; employing working methods to integrate people into the entire development process as users and co-creators to explore, examine, experiment, test and evaluate new ideas, scenarios, processes, systems, concepts and creative solutions in complex and everyday contexts*²⁰. A Living Lab functions on collaborative experiments and learning that integrate users and stakeholders as co-producers of the underpinning knowledge. Such can provide a viable system for enhancing learners’ employment and employability credentials.

2.2.5 Commitment to Service Learning, Civic and Community Engagement (Refer to Workstream 3.3 under WP3 Later)

Having attained Technological University status, the TU Dublin has commitment to initiate and foster engagement with the civic and community organisations in the regional remits of all its three campuses, as one of the primary functions set out in the legislation²¹. In the engagement framework, as part of the rationale for renewal of higher education, the National Strategy for Higher Education to 2030²² sets out a clear imperative for institutions to engage proactively with stakeholders and the wider society—the national innovation ecosystem. A key recommendation in the accompanying Implementation Plan²³ is that, both undergraduate and taught postgraduate education should explicitly address the generic skills required for effective engagement in society and in the workplace. These link favourably with the concept of the *Quadruple Helix Model of Open Innovation*²⁴, a new approach for tackling complex societal challenges. At present, civic engagement activities in the individual TU Dublin partner institutions are dispersed and adjudged to be relatively uncoordinated.

As part of the application for Technological University status, in 2016, TU Dublin partners participated in a pilot of the *Carnegie Ireland Community Engagement Framework*. The assessment panel noted that advancing community engagement, as a core academic activity requires a fundamental shift in educational philosophy, which compels institutional change – changes in structures, policies, practices, and culture. For all the campuses, the trajectory of civic/community engagement work is strongly in the direction of deeper and more pervasive work. However, the feedback from the expert panel assessing the application of the three Institutes was that “All of the three Institutes are in an early stage in the evolution of institutionalizing civic engagement”. There are four key areas of evolution: Providing conceptual clarity surrounding civic engagement; Making community engagement part of the core academic work of the institution; Developing both organisational and digital infrastructure that supports and advances civic engagement, and; Using/developing the campus infrastructure for community engagement activities.

¹⁸ Brand R & A Karvonen. 2007. The ecosystem of expertise: complementary knowledges for sustainable development. *Sustainability, Science Policy & Practice*, 3(1):21-31.

¹⁹ McCormick K, L Neij, S Anderberg, L Coenen. 2013. Advancing sustainable urban transformation. *Journal of Cleaner Production*, 50:1-11.

²⁰JPI Urban Europe. 2018. Urban Living Labs by JPI Urban Europe. Available at: <https://jpi-urbaneurope.eu> [accessed 21/08/2018].

²¹ Technological Universities Act 2018, Functions of Technological University (Chapter 2; Item 9(k))

²² DES. 2011. National Strategy for Higher Education to 2030, Chapter 5 (Engagement with the wider society, pp. 74-79. Dublin: Department of Education and Skills (DES).

²³ DES. 2011. National Strategy for Higher Education to 2030; Implementation Plan, Table of Recommendations, Item 6, pp. 13. Dublin: Department of Education and Skills (DES).

²⁴ The quadruple helix adds civil society to the triple helix of government-university-industry interactions. It includes users (which may be the citizen, the consumer, the patient, depending on the situation) who becomes directly involved in the innovation process, leading to improved outcomes for societies and regions. See <http://urbact.eu/triple-helix-3h-where-are-europe%E2%80%99s-cities-standing>

2.2.6 Requirement for Robust Quality Assurance and Quality Enhancement System (Refer to WP5 later)

The Irish Business and Employer Confederation (IBEC), the largest business lobby group and largest lobbying organisation in Ireland, considers that academic curricula offer a catalyst for innovation and the best opportunity to embed employability skills development into the teaching, learning and assessment experience for students²⁵. Implementation of appropriate curricula requires (among others): the fostering of employability outcomes; development of discipline-specific employability profiles and skill maps, with integrated cross-disciplinary opportunities; development and diversification of work related opportunities and exposures, both internal and external to a learning institution, and; dedicated employability supports for academic staff. Quality Assurance (QA) describes processes that seek to ensure that standards in teaching and learning ecosystems meet acceptable thresholds of quality. Quality Enhancement (QE) refers to the enhancement of education and training provisions and the standard attained by learners. Generally, education, a range of systems align best to quality assurance. While such may ensure meeting or even exceeding prescribed minimum standards, continuing with such systems, may lead to 'islands of innovation and best practice', and not necessarily a systemic change to student-centred learning.

Innovation(s):

- *The Transform-EDU project considers that validation of learning in such a diversified learning experience framework requires compatible learner-centred QA-QE processes and procedures.*
- *Opportunities for mapping and inter-operability of assessments procedures between structured and experiential learning provides unique pathways for meeting any prescribed Programme Learning Outcomes from two different perspective. The robust QA-QE system will therefore transform teaching and inspire learning.*

2.3 What problem does the Transform-EDU Project seek to solve?

In its most recent global challenge insight report on *The Future of Jobs*, the World Economic Forum comprehensively addressed the trend in employment and the necessary supporting skills, hence, proposed a range of workforce strategies required in this fourth industrial revolution (WEF, 2016)²⁶. For example, the report observed that, jobs are becoming increasingly collaborative and focused on solving complex problems in more creative ways and are more trans-disciplinary. Such and similar trends require fostering of cognitive skills, e.g., complex thinking, management of relationships, emotional intelligence and teamwork or collaborative settings (Krucoski, 2016²⁷). Recent rapid shifts in technological trends and the skills required to develop and support them also demand for equally agile adaptation by the workforce at all levels in learning new knowledge, and in gaining new skills throughout their working lives, *vide*:

*The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn – Alvin Toffler.*²⁸

Like any other HEIs that are trying to adapt to changing skill demands as aforementioned, the TU Dublin graduate attributes focus on imparting cognitive and cross-functional skills, such as critical thinking, creativity, collaboration, and complex problem solving (Refer section 2.2.2). Students are expected to learn through structured discipline-specific theory and practical work, supplemented with practice-led internship programmes. In addition, new educational models and variants of discipline-specific courses integrate industry/work experience. However, many HEIs including the collaborating partners in this project, still cannot and do not offer them to every student in every discipline to guarantee an authentic *Universal Learning Experience*.

Overall, the modern workplace is dynamic and multi-cultural; consequently, employers are increasingly seeking graduates with a rounded skillset that includes both the relevant technical knowledge, and a broad

²⁵IBEC. 2018. Future ready: improving graduate employability skills, p. 5 Recommendations. Smarter World, Smarter Work, An IBEC Campaign. 36 pp.

²⁶ WEF. 2016. The Future of Jobs: Employment, Skills and, Workforce Strategy for the Fourth Industrial Revolution, 167 pp. Geneva: World Economic Forum (WEF).

²⁷ Krucoski P (2016). 10 skills you need to thrive tomorrow – and the universities that will help you get them. The Annual Curators Meeting of the Global Shapers community Geneva, Switzerland from 19 to 22 August. Available on the internet at: <https://www.weforum.org/agenda/2016/08/10-skills-you-need-to-thrive-tomorrow-and-the-universities-that-will-help-you-get-them/>

²⁸ Pompa C. 2015. Jobs for the Future, Chapter 7 Skills for the jobs of the future, p. 29. London: Overseas Development Institute

range of social and emotional skills. Graduates will be expected to join multi-professional teams and may work across a number of time zones and with a diverse range of clients and co-workers. Therefore, skills such as adaptability, stress management and having a positive outlook are highly valued, yet despite the adaptations of curricular models mentioned earlier, employers report such skills are often lacking amongst new entrants. The transformative learning model envisioned in the proposal for funding outlined in Section 3 is a novel and systemic means of ensuring that, in addition to technical competencies gained in the discipline-specific programmes, the students are civically engaged, and critically and socially aware. Successful testing and adoption of such a system will ensure that graduates possess the specific skills that are required in the modern workplace, which will lead to increased levels of graduate employability.

Innovation (s):

- *Through exposure of learners to identifiable tenets of transformative student-centred learning, the Transform-EDU project will develop and support a complementary learning environment in parallel to the structured discipline-specific programmes that will enable students to experience greater transformations in their learning than if they gained their qualifications in HEIs that do not explicitly attempt to create such opportunities.*
- *It is envisioned that the project outcomes will provide a framework for other HEIs to continuously evaluate their curricular designs, teaching and learning methods, and assessment practices, as part of integrated learning (structured discipline specific learning augmented by a wide spectrum of experiential learning opportunities) and quality enhancement process.*

2.4 Project fit to the institutional strategic plan

The ITB Strategic Plan 2016-2019²⁹ focuses on progressive transformation into TU Dublin as a consortium with DIT and ITT, who are also partners in this *Transform-EDU* project. The plan was developed in coordination with Transform-EDU project partners, specifically to support the development of learner experience that will be transformative and create a distinctive identity for TU Dublin. The ITB strategic plan covers six thematic areas, namely: Teaching and Learning; Research Enterprise and Innovation; Engagement; Staff Empowerment; Infrastructure Expansion, and; Structure and Systems Expansion.

As part of the Higher Education Authority's Strategy and Performance Dialogue 2018-2021³⁰, the HEA engages in a process of strategy and performance dialogue with higher education institutions (Performance Compacts), in order to improve system and institutional performance, enhance system accountability, and enable the HEA to manage system risks. The combined *Transform-EDU* partner institution compacts are informed by national policy objectives and national and regional social and economic needs. Arising from the dialogue process, the strategic priorities for the three institutions have been mapped into the Higher Education Performance Framework³¹. For example, the mapping for ITB Strategic Priorities is outlined in Table 2.1, which also specifies the six key system objectives to be addressed and the associated strategic priorities. The *Transform-EDU* project focuses on KSO 1 to 5, and draws equally from similar mapping for DIT and ITT as partners in this proposal.

²⁹ ITB. 2016. Strategic Plan 2016-2019, Transforming into a Technological University, 26 pp.

³⁰ <http://hea.ie/funding-governance-performance/managing-performance/strategy-and-performance-dialogue/>

³¹ HEA. 2018. Higher Education System Performance Framework 2018-2020. 34pp.

Table 2.1 Mapping of ITB Strategic Priorities to the National Key System Objectives (KSO)³². The *Transform-EDU* Project will primarily focuses on deliverables for KSO 1 and 2 (Strategic Priorities 1.1, 1.2, 2.1, 2.2) and contributes to KSO 4 and 5 (Strategic Priorities 4.1, 4.2, 5.1 and 5.2), and incorporates postgraduate student training that address Key System Objective 3.

NATIONAL KEY SYSTEM OBJECTIVES	ITB STRATEGIC PRIORITIES
Objective 1 —Providing a strong talent pipeline combining knowledge, skills & 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>Strategic Priority 1.1— Create a rich learning environment through an innovative, flexible and multi-disciplinary curriculum model.</p> <p>Strategic Priority 1.2— Expand our innovative use of technology to further enhance the teaching and learning environment, and continue to develop a learner-centred approach to academic quality enhancement.</p>
Objective 2 —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>Strategic Priority 2.1— Engage visibly and effectively with our key stakeholders, both nationally and internationally, including promotion of culture of collaboration with our communities.</p> <p>Strategic Priority 2.2— Enhance the internationalisation of the Institute.</p>
Objective 3 —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>Strategic Priority 3.1— Develop the research culture to foster and support research, innovation and enterprise initiative, and deepen the integration of research and scholarship into our academic programmes.</p> <p>Strategic Priority 3.2— Broaden research, enterprise and innovation capacity, build capability and enhance performance.</p>
Objective 4 —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>Strategic Priority 4.1— Increase student numbers while fostering student diversity through developing innovative programme models.</p> <p>Strategic Priority 4.2— Forge deeper collaborations with DIT and IT Tallaght in developing structures and systems to achieve designation as a technological university.</p>
Objective 5 —Demonstrates consistent improvement in the quality of the learning environment with a close eye to international best practice through a strong focus on quality & academic excellence.	<p>Strategic Priority 5.1— Enable individuals and teams to grow professionally and personally through a transformational learning environment.</p> <p>Strategic Priority 5.2— Support the evolving change and development needs of our people.</p>
Objective 6 —Demonstrates consistent improvement in governance, leadership and operational excellence.	<p>Strategic Priority 6.1— Operate in a sustainable, ethical governance way and in a financially responsible manner, including enhancement of range and effectiveness of professional services for TU.</p> <p>Strategic Priority 6.2— Forge deeper collaborations with DIT and IT Tallaght to achieve designation as a technological university, including the development of physical and digital capacity to expand reach and impact.</p>

³² ITB. 2018. Draft Mission-Based Performance Compact 2018-2021 between Institute of Technology Blanchardstown and The Higher Education Authority, pp 12- 20.

Section 3: Proposal for funding

3.1 Proposed Methodology

3.1.1 Outline of Overall Project Structure

Figure 3.1 depicts the project schematic. In order to ensure that students develop holistically and are work-ready, co and extra-curricular coaching modules and workshops will be offered across the eight key domains that have been demonstrated to foster academic success and employability. Students will be enabled to develop mastery in one or more of these key areas and such engagement will be recognised at graduation, when they will be presented with the TLR alongside their academic award. Coaching and workshops will be designed to complement the academic curriculum and monitoring and evaluation will ensure that skills development remain current and in line with the needs of employers and the wider economy.

3.1.2 Outline of the Project Work Packages

WP1 Project Coordination & Management

[Leader: Dr Philip Owende, ITB]

Work Package 1 (WP1) will provide an organisational and decision making structure for the project to match the complexity and intensity of the *Transform-EDU* project. The project coordinator will ensure that work schedules are adhered to, deadlines met, all partners kept fully informed of progress across the project, relevant information disseminated beyond the project partners, and that financial reporting are accurate. The management structure will be as follows:

- (1) Project co-ordinator with overall responsibility for the project— will cover all financial dealings; offer advice and guidelines for WP leaders on budget allocations compile financial reports from WP/workstream cost statements, and ensure financial aspects remain on budget.
- (2) Programme Director will be in-charge of coordinating the WP activities and each WP leader will report to the project director on a regular basis. He/she will closely monitor progress and produce regularly updated schedules to ensure that objectives of each technical WPs/workstreams are met and that the project remains on target and in compliance with any agreed HEA conditions for the project.

The project manager/director will put in place a schedule of dissemination activities specified from each of the WPs and workstreams. All TU Dublin campuses will facilitate project seminars, workshops and conferences related to the dissemination of the outputs of the *Transform—EDU* project. Peer-reviewed journal publications and technology reviews, and rollout of proven concepts will be the principal modes of ensuring robust interrogation of the substantive deliverables and associated risks, and the subsequent testing and re-calibration of the most promising outcomes/innovations arising from the project.

WP2 Characterising the TU Dublin Transformative Education Framework

[Leader: Dr Jen Harvey, DIT]

The eight domains within which training and coaching will be offered to students, map onto academic curricula to varying degrees (Figure 3.1). Therefore, to ensure maximum impact, a comprehensive curriculum matching exercise will be conducted to assess exactly where and how aspects of employability are developed and assessed and where gaps exist, and supports are most needed. Considering the regional remits of the TU Dublin campuses, *Transform-EDU* considers that a single approach to employability may not suit all taught academic programmes, therefore TU Dublin *Institutional Employment Guidelines* and *Discipline Specific Employment Guidelines* will be developed.

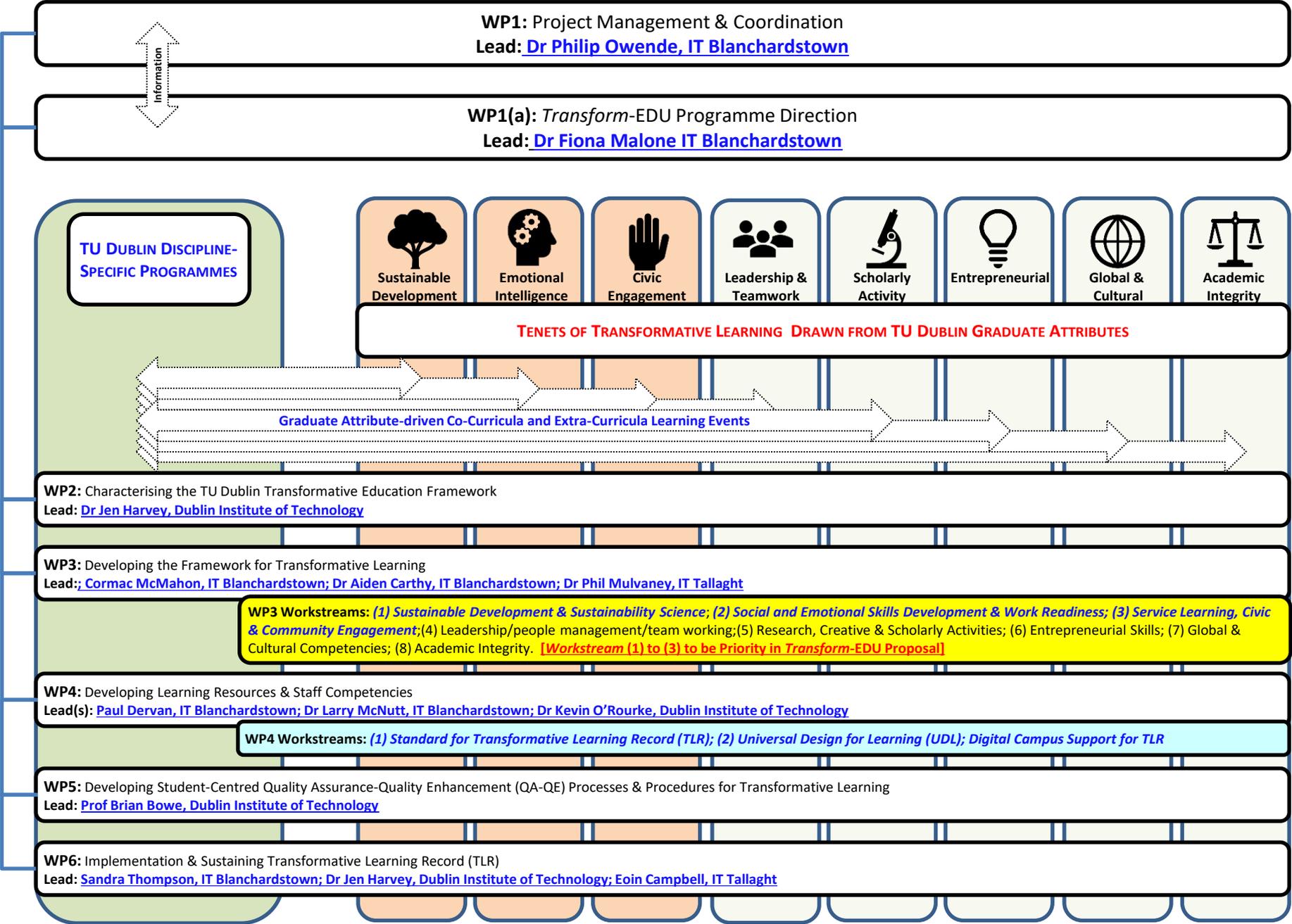
Innovation(s):

The innovative aspect in WP2 is in the development of the robust two-way interactions between the structured, discipline-specific (DS) elements of programmes, and the respective TL tenets and events (Figure 3.1). Drawing from the living laboratory research concept^{33,34}, a learner-centred open innovation Ecosystem will be developed, to support applied teaching and learning in the TU Dublin campuses.

³³ Evans J, R Jones, A Karvonen, L Millard and J Wendler. 2015. Living labs and co-production: university campuses as platforms for sustainability science. *Current Opinion in Environmental Sustainability* 16:1–6

³⁴ GEM Report. 2017. What is a 'living laboratory', and why should all universities become one? Global Education Monitoring (GEM) Report; World Education Blog <Accessed: August 17, 2018>

Transform-EDU Project Schematic— Submitted under HEA Innovation & Transformation Call 2018



WP3 Developing the Framework for Transformative Learning (TL) Process

This work package is critical to the success of *Transform-EDU* in meeting its two key objectives of achieving transformative learning experience and ensuring graduate work-readiness. Transformative learning opportunities will be designed to enable students to become emotionally literate and self-aware, to make a positive contribution to local and global communities and to develop key skills associated with employability that are specifically sought by contemporary employers. Collectively, the transformative learning experiences that will be created across the various workstreams in this work package will ensure the development of dynamic, work-ready graduates who will meet the skills requirements of the 21st century, globalised workplace.

Workstream WP3.1: Sustainable Development and Sustainability Science

[Leader: Cormac McMahon, ITB]

Strategic relevance of this workstream is outlined in section 2.2.4. Global economies are increasingly focusing on sustainability in order to reduce costs in an environmentally conscious manner. This workstream is aimed at developing a physical, institutional and virtual design ecosystem that will enable a living lab style learning environment through collaborations within the aggregated current and new academic schools and disciplines in the new multi-campus TU Dublin setting to:

- (1) Map the relevant attributes of academic courses to aspects of sustainability;
- (2) Generate a pipeline of living lab projects to support learning both within discipline-specific programmes and as part of TL events;
- (3) Integrate sustainability into the organisational structure and business model of TU Dublin, as an area of strategic importance in the transformation of DIT, ITB, and ITT into TU Dublin.

Workstream WP3.2: Social and Emotional Skills Development and Work Readiness

[Leader: Dr Aiden Carthy, ITB]

The primary purpose of this workstream (see background in section 2.3) is to develop a suite of training modules and workshops that will enable students to enhance their social and emotional competencies; hence, to foster graduate attributes associated with employability, and career success in their discipline. These will be made available to students throughout their programmes of study. Modules designated for Year 1 of study will focus on promoting self-awareness, intercultural awareness, and stress management. In Year 2 of study, learners will be offered group-based programme/discipline-specific coaching events (e.g., Business, Engineering, etc.). In the final year of study, students will be offered a work-readiness module, with a practical focus to enable them to demonstrate mastery of key skills for employment. Learning events will include employer-delivered seminars and workshops. Learners will also receive coaching in CV and interview preparation, and mock competency-based interviews with employers.

Workstream WP3.3: Service learning, Civic & Community Engagement.

[Leader: Dr Phil Mulvaney, ITT]

The strategic relevance and commitment to service learning, civic and community engagement for TU Dublin have been outlined in Section 2.2.5. The overall objective of this Workstream is to institutionalise civic engagement in TU Dublin, specifically to:

- (1) Advance community engagement as a core academic activity within TU Dublin, building on experience and achievements in this area, and drawing on the insights and learnings from other HEIs, nationally and internationally;
- (2) Use the CampusEngage Guide³⁵ to complement existing activity in TU Dublin, set new baseline figures and key performance indicators for engagement activity across research, teaching and learning, student volunteering and public engagement.

³⁵Irish Universities Association. 2018. Measuring Higher education Civic and Community Engagement; a supporting framework. 12 pp.

*Workstream WP3.4: Integration of Cross-disciplinary TL Events***[Leader: Dr Cormac Doran, ITB]**

While core disciplines underpin knowledge and build subject expertise (Figure 3.1), interdisciplinary learning is important to prepare students for employment roles. In the *Transform-EDU* project, opportunities for cross-disciplinary offering will be addressed under organised TL events. The objectives of *workstream WP3.4* will be: (a) to determine elements that could be offered as part of cross-disciplinary TL events; (b) generate a pipeline of inter-disciplinary events to provide innovative opportunities for extracurricular experience in interdisciplinary projects and teamwork.

WP4 Developing Learning Resources and Staff Competencies

Work Package 4 (WP4) deals with developing learning resources and staff competencies required for TL assessment. Academic staff will be expected to be able to develop learning activities/objects and also facilitate the establishment of environments (curricular, co-curricular and extra-curricular) designed to expand learners' perspectives, so that they understand the benefits of developing important life skills while enrolled in TU Dublin, and as lifelong learners after their graduation.

*Workstream WP4.1: Development of standard for Transformational Learning Record (TLR)***[Leader: Paul Dervan, ITB]**

The objective of this workstream is to develop a system for capturing and validating the characteristic and levels of learning gained from designated TL events, in a clear and standardised manner; referred to from here as the *Transformative Learning Record* (TLR). When adopted, the TLR will be an addendum to the standard transcripts offered to learners at graduation, who may use it to enhance their employability credentials. Three levels of learning will be captured and validated, namely:

- (1) Exposure (*Base-level proficiency*)— evidenced general awareness and basic understanding of the tenet.
- (2) Integration (*Advanced proficiency*)— advanced understanding of the tenet, its value and purpose.
- (3) Transformation (*Superior Proficiency*)— evidence characterised by a major shift in perspectives and behavior.

The capture, validation and recording of co and extra-curricular learning will involve: recording and assessment of learner participation/engagement with both on and off-campus, exposure-level events (e.g. study tour or attendance of an industry-linked presentation); specification and implementation of an e-Portfolio platform to allow students to formulate, present and store artefacts developed as part of their engagement and progression with TL.

*Workstream WP4.2: Implementation of Universal Design for Learning (UDL)***[Leader: Dr Larry McNutt, ITB]**

This *Workstream* deals with implementation of Universal Design for Learning (UDL); a set of principles for curriculum development that give all individuals equal opportunities to learn, including students with disabilities, to address such and similar issues. UDL is a relatively new concept in higher education. Therefore, its implementation requires a drastic shift in how we think about educational practice, so that a greater diversity of students, including those with disabilities are accommodated. Objectives of this workstream are, to:

- (1) Develop a coherent UDL policy for the TU Dublin, based on clear vision and strategies;
- (2) Initiate and build upon the support networks and partnerships as primary UDL resources;
- (3) Identify priority programmes for engagement of learners as UDL partners;
- (4) Initiate redesign of curriculum processes and enhance teaching and learning, while maintaining learning outcome standards at designated NFQ levels.

*Workstream WP4.3: Establishment of Digital Campus Support for TLR***[Leader: Dr Kevin O'Rourke, DIT]**

This workstream focuses on the development and deployment of dashboard capability for learners which will enable them to self-monitor progress thereby empowering them to take control of their own learning.

Part of this will entail students assembling examples of their work in a repository/e-Portfolio tool to reflect their strengths across the programme duration, enabling them to demonstrate how they meet any competencies claimed. The e-Portfolio will be externally linkable to enable learners to share the record for purposes of job application or for further education, scholarship application etc. Objectives are to:

- (1) Develop and deploy learner TLR dashboard to track progress through programmes of registration
- (2) Plan/schedule TL events across the TU Dublin campuses with appropriate access provisions to enable cross-disciplinary participation;
- (3) Identify an e-Portfolio standard for TLR development and management;
- (4) Offer academic integrity training to support taught programmes;
- (5) Develop an integrated TLR course handbook for academic staff, with appropriate training

WP5 Developing Student-Centred QA-QE Processes and Procedures for Transformative Learning (TL)

[Leader: Prof Brian Bowe, DIT]

Work Package 5 will develop a quality assurance-quality enhancement (QA-QE) system that will continue to support innovation, while integrating best practice in all aspects of education in TU Dublin. The quality enhancement system developed will not only provide processes and criteria, but will also continuously seek to identify weaknesses and areas for improvement, require root cause analyses to be completed, and most importantly, will include a supportive process that engages all relevant stakeholders to address any identified issues and make appropriate changes for enhancement. Such a system will change the perception of quality assurance from a process that must be completed and adhered to, to a process that supports, enhances, improves and is effective. The quality enhancement system will be developed by bringing together all relevant stakeholders. This will be the first QE system in higher education in Ireland that has been specifically designed for enhancement and that aligns to transformative student-centred learning environments. Adhering to this new QE system will inevitably lead to programmes adopting student-centred pedagogical approaches, as opposed to the current situation where programmes only choose to adopt student-centred approaches. This, in turn will lead to a greater focus on the development of graduate attributes, which will be supported by the Transformative Learning Record (TLR).

WP6 Implementation & Sustaining Transformative Learning Record (TLR)

[Leader: Sandra Thompson, ITB]

The *Transform-EDU* project considers that change takes time, effort, and focused intent, hence; change may be scary to many and should be approached in a gradual manner. This project will apply the stage diffusion of technology model for this WP on *Implementation and Sustaining Transformative Learning Record* phase. In *Stage 1 Pilot and Review*, the project team and identified early adopters will guide a core-trained group towards extended implementation of the TLR. *Stage 2 Pilot and Review* will provide authentic (hands-on, collaborative) staff development opportunities, peer work opportunities and support to any staff willing to consider change to and adoption of the TLR as a distinguishing teaching and learning brand for the TU Dublin.

3.2 Potential Impacts and Benefit to the Higher Education System

Crucially, *Transform-EDU* considers that the core skills required in the contemporary workplace demand for richer and deeper interactions and collaborations in the student-centred learning processes. It considers that, graduate attributes such as independent learning and critical thinking cannot be efficiently fostered through a tightly monitored, highly structured learning environment associated with discipline specific programmes alone. Considering the expected skills and the projected evolution into the future, it is increasingly clear that employers will not hire graduates for what they have studied, but for what problems they can solve. Therefore, the skills challenge is in developing graduates with competencies to manage their agility and adaptability to dynamic work-related problem-solving demands.

Innovation(s):

Transform-EDU project will develop and pilot a framework to make Transformational Learning experiences more universally deliverable and quality assured. Since the framework is designed to evolve from prescribed graduate attributes, it provides a basis for systematic adaptation to any graduate attributes, prescribed to meet employment and employability guidelines for a wide range of institutions and academic programmes.

3.4 Project Workplan

3a Project Objectives and Implementation Plan

Table 3a should be considered in conjunction with the Gantt Charts on Page 33 through Page 36

	(a) Work package(s)	(b) Short Description	(c) Timescale	(d) Outcomes /targets	(e) Key Milestones
WP1	<i>Coordinating Partner: ITB</i> Project Coordination & Management	Project administrative coordination, financial management, project management meetings, and scheduling of dissemination activities. WP1 will also be responsible for quality assurance of the project and processes, specifically to ensure; adherence to work schedule, information flow to/between partners, progress reporting across WPs and to HEA oversight arrangements, and dissemination beyond the project partners.	2019-2021	Key target will be to deliver project within the allocated budgets plus accurate financial reporting throughout the duration of the project.	<ol style="list-style-type: none"> 1. Periodic reports– Month 12, 24 and 36 2. Final report– Month 36 3. Progress tracking workshops – Month 6, 12, 18, 24, 30, 36 4. Development of project website– Month 3 (with regular updates) 5. Project information brochure– Month 6
WP2	<i>Coordinating Partner: ITB</i> Characterising the TU Dublin Transformative Education Framework	Definition of framework and development of institutional and programme level <i>Employability & Employment Guides</i> . Mapping of graduate attributes to measurable <i>Tenets of Transformative Learning</i> in multiple sample programmes covering selected disciplines across TU Dublin campuses.	2019-2021	<ol style="list-style-type: none"> 1. Curriculum audit of employability across TU Dublin—Month 12; 2. Identification of employability gaps and redress strategy—Month 16 3. Institutional and discipline-specific Employment Guidelines developed—Month 24 	<ol style="list-style-type: none"> 1. Recruitment of researcher. —Month 2 2. Development & administering of audit questionnaire 3. Completion of data processing and analysis 4. One Postgraduate programme completion – Month 24
WP3	<i>Coordinating Partner:</i> <ul style="list-style-type: none"> • <i>Workstream WP3.1</i> (DIT) • <i>Workstream WP3.2</i> (ITB) • <i>Workstream WP3.3</i> (ITB) • <i>Workstream WP3.4</i> (ITB) Developing the Framework for Transformative Learning (TL) Process	Development of the framework. Initial considerations from underpinning literature and experience to include: Sustainable development & sustainability science; Service Learning, Civic & Community Engagement; Social and emotional skills development and work readiness; Leadership/People Management/Team Working; Research Creative & Scholarly Activities; Entrepreneurial skills; Global & Cultural Competencies; Academic Integrity	2019-2021	<i>Workstream WP3.1</i> <ol style="list-style-type: none"> 1. Comprehensive sustainability attributes mapping—Month 12; 2. Seed projects bank established—Month 12. 3. Integration of sustainability into TU Dublin organisational structure and business model—Month 34 	<i>Workstream WP3.1</i> <ol style="list-style-type: none"> 1. Sustainability integration status report— Month 4 2. Strategy for pipeline of living lab projects agreed— Month 8.

				<p><i>Workstream WP3.2</i></p> <ol style="list-style-type: none"> 1. Comprehensive survey of Irish employers to determine the key graduate attributes they most prize - Month 12 2. Quantitative analysis of impact of work-readiness coaching—Month 24 3. Suite of work-readiness training workshops that can be rolled out across the third level sector — Month 34 <p><i>Workstream WP3.3</i></p> <ol style="list-style-type: none"> 1. Knowledge, skills and competency framework for CE; pedagogical framework; online module; self-reflection digital learning tool; staff training and development—Month 1-12 2. Development of communities of practice between TU Dublin and external stakeholders/community organisations in the design, delivery, development and assessment of civic engagement activities—Month 9-36 	<p><i>Workstream WP3.2</i></p> <ol style="list-style-type: none"> 1. Results of a comprehensive survey of employers on graduate attributes and work readiness – Month 12 2. Statistical analysis of effectiveness of work readiness coaching on employability and employer satisfaction – Month 24 3. Design of a training programme for final year students to enhance employability and work readiness – Month 36 <p><i>Workstream WP3.3</i></p> <ol style="list-style-type: none"> 1. Module Descriptor—Month 4 2. Knowledge, Skills and Competencies Framework—Month 5 3. Pedagogical Framework—Month 6 4. Self-reflection Digital Learning Tool 5. CE Partners and students identified and engaged in the project development phase—Month 4 6. CE External Partners engaged for Pilot Implementation Phase – Month 10 7. CE External Partners engaged for Phased Implementation—Month 12
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				<p>3. Mainstream CE modules, expanded offerings and QA-QE marks—Month 14-36</p> <p><i>Workstream WP3.4</i></p> <p>1. List of inter-disciplinary events to provide innovative opportunities for extracurricular experience in interdisciplinary projects or teams—Month 16</p>	<p><i>Workstream WP3.4</i></p> <p>1. Consultation process to identify parameters for cross-disciplinary TL events—Month 4</p> <p>2. Design workstream questionnaire and admin process—Month 6</p> <p>3. Administer survey and process data (cycle 1)—Month 6-18</p> <p>4. Draft schedule of discipline-specific courses for consultation as part of cross-disciplinary TL events—Month 13-36</p>
WP4	<p><i>Coordinating Partner:</i></p> <ul style="list-style-type: none"> • <i>Workstream WP4.1</i> (ITB) • <i>Workstream WP4.2</i> (ITB) • <i>Workstream WP4.3</i> (DIT) <p>Developing Learning Resources and Staff Competencies</p>	<p>WP4 involves: the development of standard for Transformational Learning Record (TLR), depicting clear levels of achievement; Universal Design for Learning (UDL); Planning/Scheduling TLR Events across the TU Dublin partners; e-Portfolio standard for TLR development and management; Development of Integrated Course Design and Delivery Handbook for academic staff; undertaking Academic Integrity Training (Taught Programmes and Research); and provision of Digital Campus Support Processes for TLR.</p> <p>A key enabler to TL in the piloting phase will be in securing voluntary/nominated participation from both academic and technical staff, with underpinning support from senior management teams in moderation of any potential changes to staff workloads.</p>	2019-2021	<p><i>Workstream 4.1</i></p> <p>1. Assessment rubrics for Integration and Transformation levels – Month 6</p> <p>2. TLR – Month 14</p> <p>3. e-Portfolio platform – Month 24</p> <p>4. Integration of learner management system and VLE – Month 30</p> <p><i>Workstream 4.2</i></p> <p>1. Coherent UDL policy for the TU Dublin & Adoption.</p> <p>2. UDL support networks and partnerships for resources;</p>	<p><i>Workstream 4.1</i></p> <p>1. Comprehensive staff communication plan developed- Month 6</p> <p>2. A ‘train the trainer’ programme scheduled for staff teams – Month 6</p> <p>3. Training and motivational pack for learners developed – Month 8</p> <p><i>Workstream 4.2</i></p> <p>1. Draft UDL policy—Month 4</p> <p>2. MOU with agreed UDL concerted action with at least 3 partners.</p> <p>3. Priority programmes for UDL identified (6 in Year 1</p>

		The initial staff training to be delivered by collaborators from University of Central Oklahoma (UCO), where successful TL process has featured since 2014. The Institute of Technology Blanchardstown has a working agreement with UCO.		<p>3. Prioritise at least 2 programmes per institution (6 in total in Year 1) for learner-engagement;</p> <p>4. Redesigned curriculum process to accommodate UDL.—Month 34</p> <p><i>Workstream 4.3</i></p> <p>1. Develop and deploy learner TLR dashboard to track progress through programmes of registration—Month 6</p> <p>2. Plan/schedule TL events across the TU Dublin campuses with appropriate access provisions to enable cross-disciplinary participation—Month 12</p> <p>3. Identify an e-Portfolio standard for TLR development and management—Month 18</p> <p>4. Offer academic integrity training to support taught programmes—Month 24</p> <p>5. Develop an integrated TLR course handbook for academic staff, with appropriate training—Month 34</p>	<p>to 3, 2 per institution)—Month 2, 14, 26</p> <p><i>Workstream 4.3</i></p> <p>1. Preliminary investigations and procurement tenders completed. Relevant training plan and documentation drafted—Month 3</p> <p>2. Relevant training plan and documentation drafted. Procurement tenders completed—Month 9</p> <p>3. Piloting of dashboard and e-Portfolio capability with selected groups, followed by review, accompanied by relevant training for staff and students—Month 15</p> <p>4. First review of pilot, accompanied by relevant training for staff and students—Month 21</p> <p>5. Finalising and deployment of mature model—Month 3</p>
WP5	<i>Coordinating Partner: DIT</i> Developing Student-Centred QA-QE Processes and Procedures for Transformative Learning (TL)	Development of student-centred QA-QE procedures covering TLR. Protocol for adapting in-person courses for online delivery. Academic Integrity standard.	2019-2021	1. Set of QA/QE principles aligned to transformative student-centred learning.	1. Establishment of working group of experts in QA, education development and pedagogy to develop

				<p>2. New QE system (procedures and processes) for TU Dublin</p>	<p>set of QA-QE principles-- Month 3.</p> <p>2. Establishment of working group to draft new QA-QE system (procedures and processes) underpinned by the principles developed-- Month 6.</p> <p>3. Principles aligned to transformative student-centred learning with due internal and external stakeholder consultation— Month 9.</p> <p>4. Draft 1 of the new QA/QE system for TU Dublin, and integration of the Transformative Learning Record--Month 21.</p> <p>5. Draft 1 circulation to stakeholders and subsequently tabled at relevant academic fora, and revised version for approval by Academic Council--Month 30.</p>
WP6	<p><i>Coordinating Partner: ITB</i></p> <p>Implementation & Sustaining Transformative Learning Record (TLR).</p>	<p>Conduct Stage 1 Pilot & Review with <i>Innovation Team</i>. Conduct Stage 2 Pilot & Review (Early Majority Staff Group). Adoption of TLR as TU Dublin Standard. & Interlink with Credit Bearing Learning Record (CBLR)</p>	2019-2021	<p>1. Stage 1 pilot Final Report — Month 16</p> <p>2. Stage 2 pilot Final Report — Month 26.</p> <p>3. TU Dublin policy on TL Developed—Month 30</p> <p>4. Vision & Implementation Action Plan for TL and TLR—Month 32</p> <p>5. Framework for continuous and periodic QA-QE evaluation—Month 32</p>	<p>1. Stage 1 pilot (Draft 1 Report)—Month 14</p> <p>2. Stage 2 pilot (Draft 1 Report)—Month 24</p> <p>3. Draft TL Policy—Month 28</p> <p>4. Draft Implementation Action Plan—Month 30.</p> <p>5. Transformative-education conference – Month 34</p>

3b). Project Financial Plan

Table 3b: TOTAL Expected Costs (€)						
	<u>Work Package (1)</u>	<u>Work Package (2)</u>	<u>Work Package (3)</u>	<u>Work Package (4)</u>	<u>Work Package (5)</u>	<u>Work Package (6)</u>
Staff Costs						
<i>Academic</i>	223,778	37,296	197,891	149,185	37,296	261,074
<i>Support staff</i>	29,027	-	-	34,427	71,736	-
Materials						
Travel	3,000	6,500	7,000	10,500	1,500	1,500
Soft infrastructure	-	-	-	25,000	-	-
Equipment (under €15k)	-	-	-	-	-	-
Other (Including postgrad students)	16,000	49,500	156,000	61,789	4,960	5,000
Total Direct Costs	271,805	93,296	360,891	280,902	115,493	267,574

TOTAL DIRECT COSTS	€1,389,961
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(Summary of all work package costs listed above)

Table 3b: Yearly Expected Costs (2018) (€)						
	<u>Work Package (1)</u>	<u>Work Package (2)</u>	<u>Work Package (3)</u>	<u>Work Package (4)</u>	<u>Work Package (5)</u>	<u>Work Package (6)</u>
Staff Costs	-	-	-	-	-	-
<i>Academic</i>	-	-	-	-	-	-
<i>Support staff</i>	-	-	-	-	-	-
Materials	-	-	-	-	-	-
Travel	-	-	-	-	-	-
Soft infrastructure	-	-	-	-	-	-
Equipment (under €15k)						
Other (Including postgrad students)	-	-	-	-	-	-
Total Direct Costs	-	-	-	-	-	-

2018 TOTAL DIRECT COSTS	(Start 2019)
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(Summary of all work package 2018 costs listed above)

Table 3b: Yearly Expected Costs (2019) (€)						
	Work Package (1)	Work Package (2)	Work Package (3)	Work Package (4)	Work Package (5)	Work Package (6)
Staff Costs						
<i>Academic</i>	71,744	11,957	47,828	47,829	11,957	83,701
<i>Support staff</i>	9,394	-	-	11,038	23,379	-
Materials	-	-	-	-	-	-
Travel	1,000	2,500	2,500	1,500	500	500
Soft infrastructure	-	-	-	25,000	-	-
Equipment (under €15k)		500	1,500	9,559		
Other (Including postgrad students)	2,000	24,000	99,706	4,738	2,960	-
Total Direct Costs	84,139	38,957	151,535	99,664	38,797	84,202

2019 TOTAL DIRECT COSTS	€497,294
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(Summary of all work package 2019 costs listed above)

Table 3b: Yearly Expected Costs (2020) (€)						
	Work Package (1)	Work Package (2)	Work Package (3)	Work Package (4)	Work Package (5)	Work Package (6)
Staff Costs						
<i>Academic</i>	74,572	12,429	49,716	49,715	12,429	87,001
<i>Support staff</i>	9,676	-	-	11,473	23,917	-
Materials	-	-	-	-	-	-
Travel	1,000	2,500	2,500	1,500	500	500
Soft infrastructure	-	-	-	-	-	-
Equipment (under €15k)	-	500	1,500	2,500	-	-
Other (Including postgrad students)	2,000	24,000	76,000	26,492	500	1,000
Total Direct Costs	87,248	39,429	129,715	91,680	37,346	88,501

2020 TOTAL DIRECT COSTS	€473,918
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(Summary of all work package 2020 costs listed above)

Table 3b: Yearly Expected Costs (2021) (€)						
	Work Package (1)	Work Package (2)	Work Package (3)	Work Package (4)	Work Package (5)	Work Package (6)
Staff Costs						
<i>Academic</i>	77,461	12,910	51,640	51,640	12,910	90,371
<i>Support staff</i>	9,957	-	-	11,917	24,440	-
Materials	-	-	-	-	-	-
Travel	1,000	1,500	2,000	1,500	500	500
Soft infrastructure	-	-	-	-	-	-
Equipment (under €15k)	-	500	1,000	500	-	-
Other (Including postgrad students)	12,000	-	25,000	24,000	1,500	4,000
Total Direct Costs	100,418	14,910	79,641	89,558	39,350	94,872

2021 TOTAL DIRECT COSTS	€418,749
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(Summary of all work package 2021 costs listed above)

3.3 Budget Information/Justification

Work Package/Workstream	Specification of Staff Roles and Requirements	Equipment/Services Requirements
WP1 Project Coordination & Management		
	<ul style="list-style-type: none"> • Project coordinator SL2 Grade @ 8 Hrs/week • Programme Director SL1 Grade @ 16 Hrs/week • Financial Administration Grade xx@ 6 Hrs/week 	<ul style="list-style-type: none"> • Dissemination (periodic) six workshops @ €2,000/year for 3 years • Dissemination conference @ 34 months, €10,000 (Year 3) • Travel and subsistence cost, €1,000/year for 3 years
WP2 Characterising the TU Dublin Transformative Education Framework	<ul style="list-style-type: none"> • WP Coordinator SL1 Grade @ 4 Hrs/week for 24 months (Year 1&2) • 1 Postgrad (Masters) for 24 Months (Year 1&2) 	<ul style="list-style-type: none"> • Travel and subsistence cost of €2,500/year for Year 1 & 2 and €1,500 in Year 3. This will cover reconnaissance and consultations to gain insights to and adopt best international practice. • Consumables (€500/annum for 3 years)
WP3 Developing the Support Framework for Transformative Learning (TL)		
<i>Workstream WP3.1 Sustainable Development & Sustainability Science</i>	<ul style="list-style-type: none"> • Workstream leader Lecturer Grade @ 4 Hrs/week • 1 Postgrad (Masters), one assigned to each partner, each for 24 Month registration. (Year 1&2) 	<ul style="list-style-type: none"> • T&S to support cross-campus meetings (€1000/annum for Year 1 & 2; €500 in Year 3) • Contract costs for questionnaire development, administering & data analysis (€2,000/annum in Year 1&2)
<i>Workstream WP3.2 Service Learning, Civic & Community Engagement</i>	<ul style="list-style-type: none"> • Workstream leader L Grade @ 4 Hrs/week • 1 Postgrads (Masters) for 24 Month registration (Year 2&3) 	<ul style="list-style-type: none"> • Consumables (€500/annum for 3 years) • Working group and stakeholder consultation sessions (€1,000/annum in Year 1 & Year 2)
<i>Workstream WP3.3 Social & Emotional Skills Development & Work Readiness</i>	<ul style="list-style-type: none"> • Workstream coordinator L Grade @ 4 Hrs/week (3 years) • 1 Postdoc (Year 1) • 1 Postgrad (Masters) for 24 Months (Year 1&2) 	<ul style="list-style-type: none"> • Workshops material (€1,000/annum for Year 1 & Year 2, €500 for Year 3) • T&S for conference attendance €1,000/annum for 3 Years)
<i>Workstream WP3.4 Integrative Cross-disciplinary TL Events</i>	<ul style="list-style-type: none"> • Workstream coordinator L Grade @ 4 Hrs/week (3 years) 	<ul style="list-style-type: none"> • Interdisciplinary workshops and events (€1,000/annum for Year 2 & Year 3)

Work Package/Workstream	Specification of Staff Roles and Requirements	Equipment/Services Requirements
WP4 Developing Learning Resources and Staff Competencies		
<i>Workstream WP4.1: Development of standard for Transformational Learning Record (TLR)</i>	<ul style="list-style-type: none"> • Workstream leader Lecturer Grade @ 4 Hrs/week for 3 years. • UCO External Consultants for train-the-trainer programme Fees 10 Hrs @ €100/Hr (6 hrs in Year 1; 4 in Year 2) • UCO External Consultants air ticket plus subsistence costs for 2 persons in years 1 (€4,000) & 1 person in year 2 (€2,000) • In Year 1, Staff Costs of up to 10 Hrs/week to be covered by Programme Director in Year 1—This is directed to tenet development, end-user requirements specification, design input, testing and validation 	<ul style="list-style-type: none"> • Travel & subsistence expenses across campuses (€1,000/year for 3 years) • Equipment in Year 1 (2 PCs @600, 6 barcode readers @ €350) • Training and promotional videos: Year 1 €5,000; Year 2 €2,000.
<i>Workstream WP4.2: Universal Design for Learning (UDL)</i>	<ul style="list-style-type: none"> • Workstream leader Lecturer Grade @ 8 Hrs/week for 3 years. • 1 Postgrad (Masters) for 24 Months (Year 2&3) 	<ul style="list-style-type: none"> • Repository consolidation of media and artefacts €500/year (For 3 years) • Travel & Subsistence costs provided for collaborative projects
<i>Workstream WP4.3: Digital Campus Support for TLR</i>	<ul style="list-style-type: none"> • Workstream leader Lecturer Grade @ 4 Hrs/week (3 Years) • IT Technician Technical Officer Grade TL Process & system integration @ 8 Hrs/week (for 3 Years) 	<ul style="list-style-type: none"> • Epigeum Academic Integrity software license €25,000 (Perpetual license acquired in Year 1) • Project to consider LinkedIn freeware for pilot.
WP5 Developing Student-Centred QA-QE Processes and Procedures for Transformative Learning (TL)		
	<ul style="list-style-type: none"> • WP Coordinator SL2 Grade @ 4 Hrs/week for 3 Years • 3 QA Officers Grade ?@ each at 4 Hrs/week (Year 1&2) 	<ul style="list-style-type: none"> • Working group and stakeholder consultation sessions (€2,000 consultant fees in Year 1, plus €500/annum running cost for 3 years) • QE system development (€1,000 in Year 3)
WP6 Implementation & Sustaining Transformative Learning Record (TLR)		
	<ul style="list-style-type: none"> • WP Coordinator SL1 Grade @ 2 Hrs/week (Year 1), @4 Hrs/week (Year 2&3) • 6 Academics Lecturer Grade @ 4hrs/week (Year 2&3) 	<ul style="list-style-type: none"> • Working group and stakeholder consultation sessions (€1,000/annum in Year 2 & Year 3) • Development of final report and Action Plan (€3,000 in Year 3)

Gantt Chart of *Transform-EDU* Work Packages

(This Gantt Chart should be considered in conjunction with the *Project Objectives and Implementation Plan* outlined on page 22 through page 26)

Work Package 1: Project Coordination & Management																								
Outcomes/Deliverables	Year 1 (2019)				Year 2 (2020)				Year 3 (2021)															
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Task 1.1 Administrative coordination	[Solid black bar]																							
Task 1.2 Financial management	[Solid black bar]																							
Task 1.3 Project Management Meetings	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]
Task 1.4 Dissemination ³⁶	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]

Work Package 2: Characterising the TU Dublin Transformative Education Framework ³⁷																							
Outcomes/Deliverables	Year 1 (2019)				Year 2 (2020)				Year 3 (2021)														
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
Task 2.1 Curriculum Audit Stage 1 (Employability Locations)	[Solid black bar]				[Solid black bar]				[Solid black bar]														
Task 2.2 Curriculum audit Stage 2 (Employability Development)	[Solid black bar]				[Solid black bar]				[Solid black bar]														
Task 2.3 Identification of employability gaps	[Solid black bar]				[Solid black bar]				[Solid black bar]														
Task 2.4 Institutional & Discipline-specific Employment Guidelines	[Solid black bar]				[Solid black bar]				[Solid black bar]														
Task 2.5 Implementation & Dissemination of Findings	[Solid black bar]				[Solid black bar]				[Solid black bar]														

³⁶ Dissemination activities includes the hosting of Transformative Education Conference in Month 34 of the *Transform-EDU* project

³⁷ Inherent risk in curricula audit will be in the dynamic programme offerings as institutional programmes undergo interrogation to minimise duplication

Gantt Chart of Transform-EDU Work Packages.....continued

(This Gantt Chart should be considered in conjunction with the *Project Objectives and Implementation Plan* outlined on page 22 through page 26)

Work Package 3: Developing Frameworks for Transformative Learning (TL) Process																							
Outcomes/Deliverables	Year 1 (2019)				Year 2 (2020)				Year 3 (2021)														
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
<i>Workstream WP3.1 Sustainable Development/Sustainability Science</i>																							
• Sustainability attributes mapping																							
• Living-lab projects bank (Looking beyond Transform-EDU lifetime)																							
• Sustainability integration to organisational structure & business																							
<i>Workstream WP3.2 Social & Emotional Skills Development & Work Readiness</i>																							
• Survey of Irish employers for key graduate attributes																							
• Quantitative analysis of impact of work-readiness coaching																							
• Suite of work-readiness training workshops scheduled																							
• Dissemination																							
<i>Workstream WP3.3 Service Learning, Civic & Community Engagement</i>																							
• Competency framework; Assessment; CE online module development																							
• Communities of practice partners engaged & staff training																							
• Rollout of seed module(s) & Reviews																							
• Mainstream CE modules and expand offering																							
• Dissemination																							
<i>Workstream WP3.4 Integrative Cross-Disciplinary TL Events</i>																							
• Consultation process for cross-disciplinary events																							
• Workstream survey to identify viable events (including staff training)																							
• Offers of interdisciplinary events & schedule in TL process																							

Gantt Chart of Transform-EDU Work Packagescontinued

(This Gantt Chart should be considered in conjunction with the *Project Objectives and Implementation Plan* outlined on page 22 through page 26)

Work Package 4: Developing Learning Resources and Staff Competencies																							
Outcomes/Deliverables	Year 1 (2019)				Year 2 (2020)				Year 3 (2021)														
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
<i>Workstream WP4.1</i> Development of Standards for Transformative Learning Record (TLR)																							
• Assessment rubrics developed																							
• TLR testing																							
• e-Portfolio platform integration																							
• Integration of learner management & VLE																							
• Dissemination																							
<i>Workstream WP4.2</i> Implementation of Universal Design for Learning																							
• UDL policy for the TU Dublin developed																							
• Develop UDL support networks and partnerships for resources																							
• Pilot programme selection and piloting																							
• Redesign curricular process to accommodate UDL																							
• Dissemination																							
<i>Workstream WP4.3</i> Establishment of Digital Campus Support for TLR																							
• Develop and deploy learner TLR dashboard																							
• Schedule TL events for cross-disciplinary participation																							
• Identify an e-Portfolio standard for TLR development & management																							
• Offer academic integrity training to support taught programmes																							
• TLR course handbook for academic staff + appropriate training																							
• Dissemination																							

Gantt Chart of Transform-EDU Work Packagescontinued

(This Gantt Chart should be considered in conjunction with the *Project Objectives and Implementation Plan* outlined on page 22 through page 26)

Work Package 5: Developing Student-Centred QA-QE Processes and Procedures for Transformative Learning (TL)																							
Outcomes/Deliverables	Year 1 (2019)				Year 2 (2020)				Year 3 (2021)														
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
Task 5.1 Development of set of QA-QE principles																							
Task 5.2 Draft new QA-QE system for TU Dublin																							
Task 5.3 Principles alignment to TL & stakeholder consultation																							
Task 5.4 Draft 1 of the new QA/QE system for TU Dublin																							
Task 5.5 Draft circulation, feedback and approval																							
Task 5.6 Dissemination																							
Work Package 6: Implementation & Sustaining Transformative Learning Record (TLR).																							
Outcomes/Deliverables	Year 1 (2019)				Year 2 (2020)				Year 3 (2021)														
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
Task 6.1 Stage 1 Pilot & Review (Innovation Team)																							
Task 6.2 Stage 2 Pilot & Review (Early Majority Group)																							
Task 6.3 TU Dublin Policy on TL																							
Task 6.4 Action Plan for TL																							
Task 6.5 Framework for continuous/periodic evaluation developed																							
Task 6.4 Dissemination																							

Section 4: Sustainability and Mainstreaming Plan

The following systematic plan will be used to mainstream and sustain outcomes of the *Transform-EDU* project. It includes the need to identify resources that will be dedicated to, and/or sought, for sustainability once the HEA Innovation and Transformation Call 2018 funding period has ended:

- (1) Development of over-arching TU Dublin policy on Transformative Learning (TL) and Transformative Learning Record (TLR);
- (2) Use the knowledge gained from the Stage 1 and Stage 2 pilots under WP6 to evaluate performance and develop clear and stimulating vision for implementation of TL and TLR for the TU Dublin;
- (3) Formulate sustainability strategies for all stages of the associated student-centred learning experience;
- (4) Develop post-project *Implementation Action Plan* supported by a coherent budget for phased or full capacity resourcing;
- (5) Develop a robust system for periodic evaluation and QA-QE framework supporting discipline-specific contexts.

The *Transform-EDU* project bears significant opportunities for successful implementation of transformative learning and thereby offers a unique learning-experience in the TU Dublin. However, it also carries a broad agenda, which includes challenges in change and how transformation could be achieved; therefore, it also bears elements of risk to successful implementation. By closely monitoring and evaluating progress in WP1 through WP6, the *Transform-EDU* project will identify such challenges and risks as part of the blueprint for development of the *Implementation Action Plan* in point (4) above.

The *Transform-EDU* project contains ambitious work packages and workstreams, each contributing to realising effective delivery of the envisioned transformative student-centred learning. It is arguable that the real impacts of the project, in terms of extended the adoption and implementation of the outcomes, will be witnessed in the period after the three-year lifespan of the HEA Innovation and Transformation Call 2018 funding. Therefore, if selected and approved for funding, the *Transform-EDU* project will leverage on expected outcomes to attract additional support for rollout of the projected outcomes and further development of learning experience in TU Dublin.

The Transform-EDU project includes plans for recruitment and training of five postgraduate students (research masters programme), and a one-year postdoctoral fellowship (under workstream 3.2); which directly address the Higher Education System Performance Framework 2018-2020, Objective 1³⁸, i.e.; Providing a strong talent pipeline combining knowledge, skills & 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.

³⁸HEA. 2018. Higher Education System Performance Framework 2018-2020, p. 8.

Section 5: Impact Statement

5.1 Impact in the Context of Innovation and Institutional Transformation

Strategically, the *Transform-EDU* Project aims to develop systemic linkage and interplay between teaching and learning, engagement (enterprise, civic and community), and resources and infrastructure development, building upon the history, experiences and achievements of the three transforming institutions. It also draws from eclectic insights and learnings from other HEIs, nationally and internationally.

The Transform-EDU Project will embed a unique, graduate attribute-inspired identity for the TU Dublin; a truly learner-centred approach to higher education and training.

Expected value of *Transform-EDU* to TU Dublin students are:

- (1) Learners who will use the TLR to capture and record their engagements with and the outcomes gained across a spectrum of cross-disciplinary events will develop e-Portfolios of their work. These will supplement the standard degree certificates, providing a better reflection of the range of competencies attained, hence, employability credentials. Unlike the use of degree certificates alone, the portfolios will enable learners to include artefacts that will validate the competencies claimed.
- (2) The TLR assessment rubric will enable learners to demonstrate a broad range of abilities gained from both structured discipline-specific courses, and opportunities for fostering their personal development skills towards enhancing graduate employability and professional practice.
- (3) *Transform-EDU* project contends that the learners, having engaged with the identified tenets of transformative learning, will have significantly enhanced employability skills for meeting challenges of the Smarter World requiring Smarter Work³⁹.

For staff, the *Transform-EDU* project directly addresses the development of learning resources and staff competencies to support the Transformational Learning process. Right from inception in 2019, the project will contribute to the implementation of Continuous Professional Development Framework for all academic staff in the TU Dublin.

In doing the above, *Transform-EDU* directly addresses the Higher Education System Performance Framework 2018-2020's Key System Objective 1⁴⁰: Providing a strong talent pipeline combining knowledge, skills & 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. The recent attainment of designation as the first Technological University in Ireland provides TU Dublin with the impetus and scope for innovation and collaboration within and between different functional areas in DIT, ITB and ITT. This proposal offers comprehensive planning for the transformational framework, which if adequately resourced, will be capable of achieving the real institutional transformation that the TU Dublin requires.

5.2 Impact in the Context of Access and Quality Improvement in Higher Education

The workstreams under WP4 deal with development of learning resources and staff competencies, encompassing the: Development of a standard for Transformational Learning Record (TLR); Adoption and implementation of Universal Design for Learning (UDL), and; Establishment of Digital Campus Support for TLR. These are geared to significantly enhancing the quality of opportunity through education and training, and providing for support of a student body that reflects the diversity and social mix of the population in Ireland; therefore, this contributes directly to meeting Key Systems Objective 4⁴¹. The WP5 deals with development of student-centred quality assurance and quality enhancement processes and procedures for implementation of transformative learning (TL).

³⁹IBEC. 2018. Future ready: improving graduate employability skills. Smarter World, Smarter Work, 36 pp. Dublin: IBEC.

⁴⁰HEA. 2018. Higher Education System Performance Framework 2018-2020, p. 8.

⁴¹HEA. 2018. Higher Education System Performance Framework 2018-2020, p. 15.

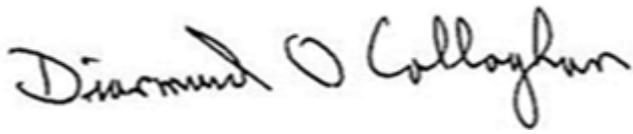
5.3 Opportunities for replication and application to the whole HE System

The *Transform-EDU* project directly addresses the following High Level Targets (among others), defined by the Key System Objectives (KSO) in the Higher Education Systems Performance Framework 2018-2020:

1. Develops institute-wide and discipline-specific Employability and Employment Guidelines (KSO 1);
2. Implements continuous professional development framework for all academic staff from 2018 (KSO 5);
3. Initiates a student success strategy (KSO 4);
4. Contributes to guidelines to steer the process of total quality management, in line with best international practices (KSO 5);
5. Contributes to policies for digital teaching and learning (KSO 5).
6. Contributes to KSO 1 through the training of five postgraduate students (Masters Level), including a postdoctoral fellow position which is part of the training.

All above targets are applicable to the HE sector as a whole; therefore, right from the planned project start in 2019, the process, deliverables and outcomes of the *Transform-EDU* project bears real potential for replication and application to the whole HE System to enhance system performance. To enable replication and application to the whole HE system, the project has adopted a strategy for achieving peer-review and publication of all its substantive deliverables in educational research journals as of utmost importance. Other dissemination events such as seminars and workshops are scheduled throughout the project duration, and will provide bases for discourse and interrogation of progress. Planned events will culminate in the *Transformative Learning Conference* at 34 Months in the project schedule.

Section 6: Signatures

Head of Lead Institution Signature:	
Name:	Dr Diarmuid O'Callaghan
Title:	President, Institute of Technology Blanchardstown
Date:	September 13, 2018

Head of Collaborating Institution 1 Signature:	
Name:	Dr Brian Norton
Job title:	President, Dublin Institute of Technology
Date:	September 13, 2018

Head of Collaborating Institution 2:	
Name:	Mr Thomas Stone
Job title:	President, Institute of Technology Tallaght
Date:	September 13, 2018