Trinity College Dublin
Coláiste na Trionóide, Baile Átha Cliath
The University of Dublin

STRATEGIC DIALOGUE

CYCLE 4

Self Evaluation Report

May 2017

Overview of institutional progress

The Strategic Plan 2014-2019 of Trinity College Dublin, the University of Dublin articulates Trinity's Vision that

> *As a university of global consequence, we will be known for realizing student potential and for research and scholarship that benefits Ireland and the world.*

With a mission to
> *provide a liberal environment where independence of thought is highly valued and where all are encouraged to achieve their full potential.*
> *We will:*

- *Encompass an ever more diverse student community, providing a distinctive education based on academic excellence and a transformative student experience;*
- *Undertake research at the frontiers of disciplines, spurring on the development of new interdisciplinary fields and making a catalysing impact on local innovation and on addressing global challenges*
- *Fearlessly engage in actions that advance the cause of a pluralistic, just, and sustainable society.*

The Strategic Plan 2014-2019 is structured around nine goals that identify our priorities in education, research and innovation and engagement and these have a clear resonance with national priorities. A key objective is to incorporate the national priorities of participation and access, teaching and learning, research and innovation, regional engagement and internationalisation, while also ensuring that Trinity maintains its position as a leading international research-led university. Constant monitoring of progress on achievement of our strategic objectives, combined with the conclusion of this phase of the HEA Compact, provides an opportunity for reflection.

International recognition of our success in delivering our mission is evidenced through the invitation to join the League of European Research Universities (LERU), following a rigorous evaluation of research volume, impact and funding, strengths in postgraduate training, size and disciplinary breadth, and peer-recognised academic excellence. Trinity welcomes the opportunity to advocate for the interests of research-intensive universities in Europe as a member of this prestigious group of 23 leading universities.

Collaboration with international and national partners is core to Trinity's mission. During the period of this Compact Trinity was invited to become the first university outside the US to join the Consortium for Advanced Studies Abroad (CASA), a consortium of nine leading research universities in the US, providing a framework to facilitate international student mobility, enabling our strategies around internationalisation, enhancing the student experience and broadening curricula. International partnerships recently developed or under consideration include Singapore Institute of Technology, Thapar University (India), Columbia University, New York (USA), the University of Economics, Ho Chi Minh City (Vietnam), Ashoka University (India), the government of South Korea. Nationally, Trinity has developed closer ties with the Royal Irish Academy of Music, Marino Institute of Education and Carlow College. In 2014 lecturer appointments in Sociology and in History were made jointly by Trinity and Carlow College. While the driver for initiating new partnerships may differ, Trinity seeks to ensure that each has the potential, over time, to deliver benefit to all partners across more than one aspect of our collective mission of education, research and innovation and engagement. For example, Trinity's relationship with Intel is multi-faceted: through the research centres CRANN, AMBER, CTVER, public outreach in partnership with the Science Gallery, secondment of Intel researchers to Trinity, transfer of knowledge through licence or acquisition and now through the Trinity Employability Award in partnership with Intel which aims to increase students' awareness of the Trinity Graduate Attributes, to support their development of these attributes, and to enhance students' ability to recognise and communicate these attributes to employers. [See **case study** attached.]

Trinity's Strategy for Research Excellence recognises that the research reputation of the University is based squarely on the excellence of its research cohort. At the core of the Strategy, therefore, is a focus on enabling researchers to achieve their maximum potential. The Strategy recognises the increasing importance of multi-disciplinary groupings to tackle global research questions and includes measures aimed at augmenting and building research communities. Such collaborative relationships across academic and commercial partners also directly correlates with more impactful research outputs.

At a time when there are so many challenges facing universities and the third level sector in general, it is important to note that Trinity's contribution to excellent research is continuing to expand and gain global recognition. The Global Brian Health Institute (GHBHI), philanthropically funded and co-led by Trinity and the University of California, San Francisco, will train 600 global leaders over 15 years in the US, Ireland and across to the world to carry out dementia research, deliver health care and influence policies and practices.

The innovation agenda has been greatly strengthened by the University Bridge Fund, which provides €60m of venture capital funding for investment in new companies formed from Ireland's higher education institutions. The establishment of the fund was led by Trinity and UCD and 50% of the fund has been designated for investment in these two institutions. To date the Fund has supported 6 companies (3 from TCD/UCD) with seed investment and has an active pipeline of potentials. Knowledge Transfer Ireland awarded the University Bridge Fund the 2016 Knowledge Transfer Initiative Award. Trinity was ranked as the number one university in Europe for the number of undergraduate alumni who go on to found companies that receive a first round of venture capital backing [Pitchbook, Universities Report 2016]. In the period

covered by the report (2010-15) Trinity produced 114 such entrepreneurs, 106 companies and raised capital of approximately US$655 m. Trinity's student accelerator, LaunchBox and the Blackstone LaunchPad Programme, dedicated to student entrepreneurship, have established 31 companies between them in 2016.

Last year's report provided a comprehensive review of the objectives and progress on the Trinity Education Project (TEP) – a change project impacting on all undergraduate curricula – which will improve the educational and overall student experience. In 2016/17 the University Council approved a new academic year structure which will enable examinations at the end of each semester. Student support for semesterisation, articulated through programme reviews and focus groups, was an important driver as was recognition that it would enable our internationalisation agenda. Another significant work stream for the TEP this academic year has been discussion and development of institutional-level progression regulations, replacing the numerous programme-specific models currently in place. Agreement on these regulations will provide greater consistency of regulations for all students, simplify processes and systems, and once again, further facilitate international mobility.

Lessons learned during the first two years in the TEP, a major transformational change project, have necessitated a recalibration of the timeline and streaming of the project into separate phases. Starting in 2018-19 we will be rolling out a vastly simplified system of admissions for our core programmes, which will offer four entry routes but allowing for 19 separate exit degrees. [See objective 1 under **Excellent teaching and learning and quality of the student experience].** Comparable work is currently underway on other programmes, particularly those in the Two Subject Moderatorship, with a view to roll out in 2019-20.   Experience too from implementation of the online strategy has provided a reminder that cultural change requires significant support and time to ensure buy-in. While there have been some successes in this area, notably in the provision of CPD programmes and the provision of not for credit modules, the ambitious targets for programmes for credit have been problematic [see objective 3 under **Participation, equal access and lifelong learning**].   The university commissioned an external review of our online strategy and the conclusion was that the state of online learning is currently immature. Guided by the findings of the external panel we will be putting in place new structures to foster a culture of online learning across all disciplines and reinvigorating our online provision in the coming year.

Any review at this point must acknowledge the funding issue. Trinity welcomes the Cassells Report and the recognition of the underfunding of third level education. In our submission to the Expert Panel we noted that the over-riding issue facing the sector is sustainability and the challenges posed in relation to meaningful planning in a context of long-term uncertainty. Decisions relating to the projected size of the third-level student population in Ireland need to be taken urgently. Unless there is to be either significant unmet student demand, or unplanned, under-resourced growth, there is an urgent need to identify a funding model that will provide for sustainable, targeted, growth in student numbers in a manner that does not simply reward opportunistic, short-term increases in the undergraduate student population, but works

toward an agreed vision of a sustained, differentiated sector. The key to this is an agreed base price per student, without which it will be impossible to absorb the anticipated increase in student numbers. Trinity strongly supports the proposal for a cap on fully-funded numbers, with options for accommodating students outside of quota.

In conclusion, Trinity's vision and mission, delivered through our strategic objectives, will continue to ensure we make a distinctive international and national contribution. Progress on meeting our Compact objectives has coincided with delivering the Strategic Plan 2014-2019 and Trinity looks forward to the next phase of the Strategic Dialogue with confidence and enthusiasm.

1. **Regional Clusters**

The HEA will be aware, from discussions early in 2016 about the its document on *Regional Clusters: Maximising Collective Impact* and from previous Strategic Dialogues, that progress on agreeing and implementing objectives in the Dublin Leinster I Pillar has been slow. Work, however, continues on the objectives of the initial teacher education institute, particularly collaboration in areas of shared research interest.

Nonetheless, separate to the Regional Cluster framework, Trinity continues to engage in strategic collaborations which can bring benefit to all partners. On the research level, joint publications with UCD continue to be Trinity's most significant collaborations [3,692 collaborators since 1980, *Source: InCites, 25 April 2017*). As reported last year, Trinity and UCD led the establishment of the University Bridge Fund. To date the Fund has supported six companies (three from TCD/UCD) with seed investment and has an active pipeline of potentials. In 2016 Trinity received over €10 million from Science Foundation Ireland for five collaborative research projects developed with partners. For example, ENABLE is a multi-university research programme involving SFI research centres and industry partners, focussing on the key challenges for achieving smart communities and cities through enabling smarter transport services, reducing pollution and improving our work places. The Irish LOFAR consortium, will build a telescope in Birr Castle building on Ireland's great scientific heritage of the Leviathan Telescope of Birr, acting as a magnet to attract technology companies to the area.

Trinity has been successful in deepening its strategic partnership with Marino Institute of Education through approval of a shared Academic Strategy. Guided by a Trinity-MIE Joint Academic Strategy Group projects include collaboration on curriculum development and research in the area of early education and educational leadership, including a collaborative research funding application to Erasmus + for a project on Teaching for Holistic, Relational and Inclusive Early Childhood Education. This year saw the delivery by MIE of the International Foundation Programme, a one-year pre-undergraduate programme to equip future students with the appropriate English language and discipline specific academic and learning skills to prepare them for full-time undergraduate programmes at Trinity in the two streams of Engineering and Sciences and Business, Economics and Social Sciences.

As part of our Strategic Plan 2014-2019, Trinity has strengthened links with the Royal Irish Academy of Music, particularly in joint teaching between the RIAM and the Lir, National Academy of Dramatic Art.

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
1. To implement recommendations of the Sahlberg Report	To set up a new collaborative institute for education	No shared teaching across provision offered for four partners	a. Engagement with Teaching Council re CPD **This has been paused pending an internal review by the Teaching Council of its accreditation processes. An agreed position paper on CPD was presented on behalf of the four partners to the Teaching Council of Ireland.** b. Joint funding proposals for collaborative research projects. **Joint meetings of research groupings are held leading to collaboration on research.** c. As part of the development of the collaborative PME, delivery of a model for School Placements and foundation disciplines **Progress on this objective was slow this academic year, partly due to resource constraints and competing institutional priorities.**	

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
2. To increase collaboration in the creative arts cluster	To establish shared teaching building on institutional strengths	Some sharing of modules between the Lir and RIAM	a. To continue collaboration **The Lir and the RIAM continue to collaborate on an 'Opera Briefs' production performed at the Project Arts Centre. This involved modules on theatre skills, stage production and technical management and theatre history and design. The RIAM provided classes in score reading, part of stage management training.** b. To develop a course proposal for a joint Masters with GradCAM	

			It is still the intention of the School to bring forward a joint proposal; however resource limitations have impacted on progress.	

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
3. To progress a more coherent system of HE provision within the regional cluster, while enhancing the particular strengths of individual partners	An agreed framework for the regional cluster within which academic planning based on institutional strengths and student demand		To reach a decision within the Cluster on whether this objective should be prioritised. **Discussions at the Regional Cluster level have so far been inconclusive on this issue.**	

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
4. To progress towards more collaboration within the regional cluster	A joint academic strategy to promote more extensive collaborations in teaching and research between Trinity and Marino Institute of Education	MIE is an Associated College of Trinity. MIE is under the joint trusteeship of the Congregation of Christian Brothers European Province and Trinity College Dublin	a. To implement collaborative social inclusion projects. b. To increase the number of Trinity Schools which link with MIE on the delivery of its strategy to extend its offering for education and allied studies. **Synergies between MIE and Trinity include collaboration through complementary and joint research and teaching activity with the School of Education in initial teacher education for early childhood, primary, second-level, further education, higher education and lifelong learning. Ten MIE academic staff are research associates in the School's research groups. The research agenda for the Centre for Research in IT in Education, with contributors from Trinity's Schools of Education and Computer Science and MIE, explores how technology can be used to enhance teaching and learning and its work benefits from both technological and educational perspectives. [See also the Overarching Statement]** **The History Education Initiative is a collaborative project involving the School of Histories and Humanities, MIE and representatives of Glasnevin Trust supporting primary teachers to reflect on and learn from the 1916 commemorations for future commemorations through a continuing professional development summer course.** **Trinity's Student Counselling Service, Student Learning Development Service and Disability Service have developed service-level agreements to provide high-quality service to MIE**	

| | | | | **students, developed in the spirit of cooperation and non-duplication across the partner institutions.** | |
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Institution Objective	Performance indicator	Baseline	Interim target, end 2015	Final target, end 2016, commentary and data source	Summary
5. To progress a more coherent system of HE within the regional cluster, while enhancing the particular strengths of the partners	Regionally coordinated approach to transfer and progression pathways		To advance towards a framework of transfer and progression pathways	a. From 2016/16 students who pass the TAP Foundation Course will receive an award at level 6. **All Foundation Course students receive a level 6 QQI award which is accepted for admission to other Higher Education institutions. Forty students graduated in 2015/16 and 53 students registered for 2016/17.** **The Recognition of Prior Learning Policy has been approved and is in place for 2017/18.** b. To continue work on developing QQI entry routes to programmes in STEM and Business and Social Sciences **TCD and UCD have aligned FET admissions requirements for entry to programmes. An implementation plan to widen FET to HE progression routes for 2018/19 is being progressed.** c. To finalise the WP strategy **A *Widening Participation Working Group* is actively progressing strategic objectives, which includes the prioritisation of particular groups and widening FET entry to support the strategic objective of 25% of undergraduate new entrants from disadvantaged cohorts by 2019.**	

2. Participation, equal access and lifelong Learning

Trinity has long been committed to a College-wide approach to achieving equity of access to and progression through our programmes and these objectives are supported by the College community, including a large-scale voluntary contribution from staff and the student body. The expertise of the Trinity Access Programme (TAP) is recognised and its Foundation year is now being used as a template for low-income young adults in Oxford University. The Irish Research Council has provided funding to support TAP in researching the comparative impact of the TAP Foundation course, the foundation year in Oxford University and the Higher Education Access Route. Trinity has also initiated and managed two national schemes (Trinity Access 21-CFES and College Awareness Week) which are gaining momentum and dovetail with the goals and the objectives of the National Access Plan for Equity of Access to Higher Education. In 2016, 23% of total undergraduate admissions through the CAO have been facilitated by alternative entry routes, including from the Further Education and Training sector, the HEA/DARE, TAP programmes and first time mature entrants. Recognising the particular challenges for student retention, post-entry supports are provided and have been extended through Pathways to the Professions programmes, which are embedded with Faculty structures and Student Services to help prepare all access students for successful transition to meaningful careers and postgraduate studies.

Trinity's partnership with Future Learn in the provision of MOOCs closely aligned to our research expertise has been a valuable component of our engagement with society with almost 100,000 enrolments. Success in reaching ambitious targets for new postgraduate taught programmes delivered wholly online has been more problematic. A review of the online strategy, facilitated by external assessors, has been completed and its findings and recommendations will inform how Trinity re-engages with this core part of our educational mission [**see Overarching Statement**].

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
1. To ensure the student body entering HE reflects the diversity of Ireland's population	To increase the proportion of entrants from non-traditional routes	17% in 2010/11	24% **23%** of the 2016/17 CAO entrants [Source: Senior Lecturer's Annual Report 2015/16, including 2016/17 Admissions]	

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
2. To ensure the student body entering HE reflects the diversity of Ireland's population			Scaling the model to a further 3 HEIs **The model is currently in 11 schools. The project has secured a blend of public and private funding to support plans for a scaling-up across Ireland, in collaboration with NUI, Galway, Dublin Institute of Technology and the Education and Training Boards with a target for a deep intervention in 60 schools, in areas of low progression to higher education, by 2020.**	

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
3. To ensure the student body completing HE reflects the diversity of Ireland's population	To increase participation and access through the provision of flexible, high-quality learning for credit and not-for-credit courses and modules	A limited number of courses offered blended learnings	a. To increase the number of postgraduate students taking courses for credit online to 200. **In the academic year 2016/17 there are 102 students enrolled on postgraduate programmes delivered solely online. All are programmes developed as part of a strategic objective to increase Trinity's presence in this space, primarily responding to the need for professional development in the fields of health and social sciences.** b. Three not for credit modules run in partnership with Future Learn **Three not-for-credit modules, in areas of research strength, have been run in conjunction with Future Learn with almost 100,000 enrolments. The Irish Lives in War and Revolution, for example, has been released four times and is Future Learn's most popular MOOC. The MOOC -**	

			Strategies for Successful Ageing - was developed by Trinity EngAGE presenting TILDA research and offering participants strategies to support health and well-being with a particular focus on ageism, and social inclusion of older persons.	

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
4. To contribute to the Implementation Transition Reform agenda	To have completed and assessed the Admissions Feasibility Study	Additional admissions criteria only in place for a limited number of courses	To extend the Feasibility Study to a third cohort. To consider how the research findings may inform future developments. **The Admissions Feasibility Study has been extended to a fourth year (2017/18). The research findings will be available at the end of 2016/17.**	

3. **Excellent teaching and learning and quality of the student experience**

The period of the HEA Compact has aligned with a range of activities within Trinity that focus on enhancing teaching and learning and the quality of the student experience and last year's report provided a comprehensive report on the objectives and progress of the Trinity Education Project (TEP). The impact of quality reviews of the undergraduate programmes, Science, BESS, and Law has supported the ambitions of the TEP, now in its third year. In addition to the transformative impact that the TEP changes will have on the undergraduate curriculum, academic and administrative staff and systems, it will also deliver much desired changes for students who, through various quality reviews and evaluations, have sought end-of-term examinations, more diverse assessment methods, mobility and work/research placements, greater emphasis on employability, and simplified programme regulations.

This academic year a full review of the undergraduate evaluation process was conducted in an effort to address concerns around survey fatigue, survey timing, evaluation methods and the perception of impartiality. The review included focus group meetings with staff and student class representatives across 20 Schools. The consensus from both academic staff and student constituencies reinforced the value of module level evaluation. The findings of the review have fed into the development of a Student Partnership Agreement, which aims to facilitate a culture of students-as-partners in the learning through greater dialogue and engagement.

Following an assessment of academic development needs in respect of eLearning, a number of steps have been taken to improve the teaching and learning culture and to increase the use of learning technologies by staff and students. A draft VLE Policy is nearing approval and defines a minimum standard within the institutional VLE for all modules. The implementation of the policy will increase awareness and usage of the VLE across all programmes. A number of technology-enhanced learning projects were developed and implemented to assist in the development of an e-learning culture including blended 'flipped classroom' modules and online lessons. Trinity continues to collaborate with partners across the sector in shared projects, including with IADT, on a project funded by the National Forum, Digital Skills in

Action. Trinity is leading the development of an online module for Teaching Assistants which will be rolled out across the sector in 2017-18.

Links between quality reviews and other College-wide strategic initiatives can be seen through the strategic review of the Careers Advisory Service in October 2015. There is a renewed focus on employability and integrating opportunities for placements and internships as part of the undergraduate curriculum. In 2016, Trinity launched an 'Employability Award', with Intel as the first industry partner and 39 STEM students successfully completed the programme. [**See the Case Study**.] Trinity plans to scale this programme with a range of new industry partners and broaden access to the initiative to students in the Faculties of Arts, Humanities and Social Sciences and Health Sciences.

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
1. To promote excellence in teaching and learning to underpin a high quality student experience	Enhanced quality assurance by regular external review of programmes	Currently conducted for all courses, as part of annual examiners' reports/School Reviews/professional accreditation	To have the structures in place for implementation of the recommendations of the external reviews of the large common entry programmes, in the context of the Trinity Education Project **One of the recommendations of the external review of the Science programme was a review of admission routes. The four new separate entry routes (Biological and Biomedical Sciences, Chemical Sciences, Geography and**	

			Geoscience and Physical Sciences) replace the common entry Science programme and five other direct entry courses and will have their first admission in 2018/19. The existing CAO quotas have been redistributed across the four new entry routes. **The recommendations arising from the BESS review included issues aligned with the objectives of the TEP such as streamlining of the examination process, delivering transferable skills across the undergraduate curriculum and opportunities for internships and study abroad. The Schools are working through these recommendations as they align the existing programme to the new approved programme architecture for multidisciplinary programmes.**	

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
2. To promote excellence in teaching and learning to underpin a high quality student experience	To embed opportunities for student evaluation at module and programme level	a. Annual evaluation of approximately one-third of undergraduate modules.	a. To continue evaluation by students and to implement policies and practices which address issues raised through responses. **In 2015/16 94% [90% the previous year] of undergraduate modules and 96% of**	

| | | b. Annual evaluation of taught postgraduate courses | **postgraduate taught programmes were evaluated [90% the previous year] and the results made available through the Annual Faculty Quality Report.**

b. To maintain the existing participation rate in the ISSE survey

In 2016 participation in ISSE was 22.8%, down slightly from 23.2% in 2015. | |

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
3. To increase opportunities for developing innovation in the curriculum	Opportunities for undergraduate students to take modules in innovation and entrepreneurship as part of the Broad Curriculum (BC) offerings	Currently there is no provision in the undergraduate curriculum for all students to take electives in innovation and entrepreneurship	To design an optional undergraduate certificate in innovation and entrepreneurship. **Building on the success of the Postgraduate Certificate in Innovation and Entrepreneurship delivered by the Innovation Academy and delivering Trinity's strategic commitment to an integrated approach to innovation and entrepreneurship supported by teaching, research and engagement, a proposal for a level 7 Certificate in Innovation and Entrepreneurship has been developed and is expected to be delivered, first, in 2017/18. The Certificate, to be delivered on a part-time basis over the period of a student's undergraduate degree, will foster a culture of innovation and entrepreneurship and develop core skills of innovation and enterprise. It will be practically oriented with a specific emphasis on project work and problem based learning. Specifically, participants will develop the following skills:** • **Communication skills – the ability to articulate ideas in a coherent and convincing manner** • **Teamwork – the ability to work effectively in multidisciplinary group setting**	

			• **Leadership – to acquire leadership and negotiation skills.** • **Adaptability – to be flexible enough to adapt in a dynamic group environment** • **Ethics – to maintain an awareness of global issues and how innovative solutions are critical to a sustainable future.**	

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
4. To promote excellence in teaching and learning to underpin a high quality student experience	To increase use of effective learning technologies	42% of modules with activity in the Virtual Learning Environment (VLE)	a. 60% of modules with activity in the VLE. **55% of modules with activity in the VLE in 2016.** b. A further 120 academic staff availing of professional development in e-learning **249 academic staff participated in professional development to increase digital capacity in 2016.**	

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
5. To promote excellence in teaching and learning to underpin a high quality student experience	To increase the provision of professional development in academic practice in collaboration with the National Forum for the Enhancement of Learning and Teaching in Higher Education and Regional Cluster partners	10 academic staff taking part in M Ed in Higher Education in 2010/11	a. Expand modules on offer to Certificate. First award of Certificate to those who have completed assessment. **Candidates have five years to complete three modules in the Special Purpose Certificate. Between 2015 and 2016 there has been 8 graduations; 29 participants have currently completed two modules.** b. To evaluate the first joint programme and develop and facilitate revised programme based on evaluation. **The Research Supervisor Development Programme, jointly delivered by Trinity and UCD to participants from both universities has been evaluated and developments have been informed by the responses. Participants have valued the interaction with colleagues from both institutions.**	

4. High quality, internationally competitive research and innovation

In the next cycle of the Compact Trinity looks forward to identifying performance indicators in the research domain which provide a more comprehensive view of our distinctive mission and reflect our performance compared to international and national peers. [**See also Overarching Statement.**] For example,

- Trinity continues its leading performance in H2020 Funding with average income per year from H2020 increasing to 73% over FP7 performance €12.5m versus €21.6m). Trinity was ranked 29th in Europe and 1st in Ireland by EU financial contribution for granted research projects in H2020.
- Trinity accounted for approximately 50% of the national total of ERC grants – with 15% of the faculty base in 2016.
- On the international front, Trinity was awarded three R01 (Basic Research Grants) from the US Government – with a total project value of $3.5m and is the only Irish HEI to currently hold an R01.
- Trinity won three grants from the Simons Foundation, with a value of more than $1m for Neuroscience and Mathematics research. The Simons Foundation's mission is to advance the frontiers of research in mathematics and the basic sciences.
- Trinity accounted for three of the five Royal Society University Research Fellowships awarded in Ireland
- Trinity secured two highly respected Wellcome Trust Investigator Awards and one Wellcome Trust Institutional Strategic Support Grant

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
1. To diversify research funding sources	% of non-Exchequer research income	30% non-Exchequer income in 2010/11	36% non-Exchequer income **32%**	

2.	To increase research activity	Proportion of research-productive staff	70% in 2010/11	85% **82%** Following a review of the University's research quality metrics, new faculty-level metrics have been developed that place a renewed emphasis on high-quality outputs, as opposed to high quantity outputs and these metrics are currently being implemented.	
3.	To maintain research impact relative to the world	Research impact (number of citations per paper) compared with the research impact of world's papers	1.65 in 2010/11	1.78 **1.84** (InCites, for 2016, 28 April 2017)	
4.	To disseminate the results of TCD's research widely	% of TCD research papers available on Open Access	28% in 2010/11	60% **46%**	

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

Coinciding with the period of this Compact, Trinity has implemented an industry engagement strategy which has seen an increase of 75% in individual engagements. There has, too, been a clear improvement in the quality and diversity of engagement (higher revenues per engagement, repeat contracts and long term agreements). The performance of three SFI centres (AMBER, ADAPT and CONNECT) are key factors.

Responding to the needs of new enterprise and entrepreneurs we have grown our enabling capability for start-up companies by 97% since 2010/11. The eco-system has evolved through step by step addition of supports and functions including those for student entrepreneurs, enhancing both the learning and student experience. The introduction of the University Bridge Fund in 2016 by TCD and UCD (€60M of venture capital funding for investment in new companies) is the latest addition to this eco-system and is a key example of the benefits of institutional collaboration.

- Trinity won two Knowledge Transfer Ireland awards for 2016 – The Collaborative Research Impact award with Ceramicx Ireland Ltd, and the Knowledge Transfer Initiative Award (TCD and UCD) for The University Bridge Fund. Both awards recognise our ability to form partnerships with significant impact and scale.
- Established in 2016, ENABLE is a multi-university Research Programme led by Trinity and involves the SFI research centers; CONNECT, ADAPT and LERO. Over 25 SME and MNC industry partners supported the application with a committed €3.5m cash. This was matched with €8m SFI exchequer co-investment. ENABLE will focus on the key challenges for achieving smart communities and cities through enabling smarter transport services, reducing pollution and improving our work places.
- Inflazome, a Trinity spin-out which develops inhibitors of the inflammasome (regulates our innate immune response) incorporated in September 2016 to take on a €15m investment after a complex licencing deal with UniQuest.
- Trinity produced its first spin-out from the BioInnovate programme with ProVerum. Two more companies have since come to Trinity with EI Commercialisation Fund grants and are planning to spin-out.
- A student company, IDly Systems, won EI CSF grant funding after completing LaunchBox and taking a licence to Trinity technology.

[**See also Overarching Statement**.]

There is clear evidence of a stabilisation in National Patenting since 2011 as the system adjusts to higher levels of due diligence, non-patentable software IP and industry collaborations. Trinity's performance during this period is in line with the National trend as measured by the ratio of IDFs converting to Patent Filings, both of which are 25%.

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
1. To increase engagement with industry	Number of contracts with industry	97 in 2010/11	125 **170**	
2. To promote entrepreneurship in the university	Number of start-up companies enabled by Trinity	40 in 2010/11	58 **79** **LaunchBox (14 Student Companies in 2016), LaunchPad (17 Companies in 2016), Innovation Academy, access to the Trinity Technology Enterprise Campus (40 companies 2016), enabling spin-outs and spin-ins of alumni and graduate companies (3 in 2016), SME engagement via access to our infrastructure and, accommodating companies and researchers on campus (5 in 2016). This resulted in a record total of 79 enabled companies for 2016.**	
3. To promote economic impact of research	Number of patent applications	31 in 2010/11	20 **13** **Our stated goal of increasing the value of our patent portfolio is proving to be successful with more licences to industry in 2016 than prior years. Despite the fact that the overall number of patents applied for is below target our increasing ability to market and execute licences is clear evidence of a step up in the quality of the**	

| | | | intellectual property that is managed. **Year on year growth in the key metrics of Active Licences, Options and Agreements (139 in 2016, 88 in 2014) and Patent Families (116 in 2016 and 93 in 2014) is evidence of the improving quality and diversity of the patent portfolio.** [Data drawn from the AKTS Survey data submitted by TCD to EI and HEA in the relevant year.] | |

6. **Enhanced internationalisation**

Trinity's internationalisation strategy is taking place in a global context of increasing competition among all universities for internationally mobile students, and the increasing complexity of the mission of research universities generally. The last four years have seen significant achievements in international student recruitment. As regards diversifying the student body, 26% of students in 2016/17 are non-Irish and 13% are from non-EU countries. This growth trajectory compares with some of the highest risers in the United Kingdom across two comparable five-year periods [source: HESA]. A renewed focus and additional supports, including improvements in the promotion of exchanges, advice for students and curriculum mapping processes, have seen a substantial increase (from 260 to 613) in outward student mobility. Trinity's ranking for International Outlook has been rising in recent years - 90.4 in THE 2017. It is the leading Irish University in the QS rankings for international Faculty (98) and International Students (85.9) and Trinity has been shortlisted among the final four candidates for the European Association for International Education (EAIE) 2017 Institutional Award for Innovation in Internationalisation, which demonstrates institutional best practice within a European context.

Lessons learned from student feedback, including the ISB, have helped inform the objectives of the Trinity Education Project, in particular about improving consistency in programme regulations, transparency in marking schemes, semesterisation, provision of internships and increased opportunities for student mobility as part of undergraduate programmes.

Our internationalisation strategy leverages to maximum effect our alumni networks for student recruitment, student mentoring and partnership development.

Of particular focus as the strategy matures is the identification and development of new academic partnerships which deliver value, to both partners, in education, research and engagement.

Notwithstanding the success to date Trinity continues to monitor, review and amend where necessary its internationalisation strategy in what is a very competitive and uncertain environment, as evidenced by the as yet unknown implications of Brexit.

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
1. To ensure that the university is globally competitive and internationally-oriented	To increase the number of inward non-EU students (both full-time and visiting) / all with wgt1	953 in 2010/11	2,219 **2,286**	
2. To ensure that the university is internationally-oriented and provides students with opportunities to study abroad	To increase outward staff and student mobility opportunities	260 students participated in outward exchanges in 2010/11	450 **436**	

Institution Objective	Performance indicator	Baseline	Final target, end 2016, commentary and data source	Summary
3. To ensure the university's reputation in international research collaborations	To maintain the measure of international research collaborations by co-authorship of TCD research papers as indexed by Thomson Reuters Web of Sciences/InCites databases	53.5% in2010	55% **55%**	

Trinity Employability Award: Case Study

Background and Aims.
Trinity is in the process of renewing the Trinity education. As part of this activity, a set of Trinity Graduate Attributes were recently developed in consultation with employers. The Trinity Graduate Attributes are: to think independently, to communicate effectively, to develop continuously and to act responsibly. Another core element of Trinity's strategic plan is to reinvigorate its relationship with national and multinational employers. Trinity recently signed an MOU with Intel, and this relationship provided the opportunity for a partnership between Intel, Trinity Teaching and Learning and the Careers Advisory Service to develop the pilot Trinity Employability Award.

The Trinity Employability Award in partnership with Intel aims to increase students' awareness of the Trinity Graduate Attributes, to support their development of these attributes, and to enhance students' ability to recognise and communicate these attributes to employers. The award is targeted at Junior Sophister (3rd year) students in STEM, namely the Computer Science, Engineering, Chemistry, Physics and Mathematics.

Award Outline
In order to achieve the award, students were required to participate in:
- 30 hours of extra-curricular activities - e.g. club and society involvement, volunteering, or part time work
- 1x4 hour "Make it Count" workshop delivered by the Trinity College Careers Advisory Service and Student Learning Development Unit
- 1x8 hour workshop on Model Based Problem Solving, delivered by Intel on-site
- 1 of either 1x4 hour workshop on Statistics for the Real World or 1x4 hour workshop on LEAN Management, delivered by Intel on-site.

The content of the workshops was designed to enable students to develop transferrable skills that were relevant to Intel's business, but which would also increase students' employability in whichever area they choose to work after graduation.

Participation
50 places were made available, and 120 students expressed an interest in participating. Places were allocated in such a way as to ensure representation of all target Schools, and to ensure a gender balance on the programme. This gender balance was a key element for Intel, who are keen to encourage women in STEM. 39 students completed the award programme.

Award Assessment
The award assessment was purposely different from the traditional style of assessment to which university students are accustomed, in order to present an engaging and creative challenge. The assessment involved:

- A 500 word reflection where the student integrated and articulated the learning he/she achieved from across this programme.
- A photograph of an image that represented his/her achievement of a single graduate attribute as a result of this programme, accompanied by a title and a narrative of no longer than 250 words.
- A two minute presentation to two assessors

Students took part in an assessment event where each student presented to two assessors – one member of academic staff, and one Intel staff member. All students who completed these steps were awarded a "Trinity Employability Award in partnership with Intel" certificate, six finalists, who made a short presentation to an invited audience, received a tablet and the two winners received a prize of €2,500 each.

Participant Feedback

The students were surveyed at the end of the programme. 96% gave a satisfaction rating of 6 out of 10 or above (75% rated it 8 or above); 94% feel more employable as a result of participating in the award; and 85% would recommend the award to a friend.

Student comments included:

- "This helped me to think about the need to assess myself and push myself to improve the skills that I lack and will also help me in standing out in interviews"
- "I have realised I am employable"
- "Participating in the award not only helped me to develop skills to make me more employable, but it also made me aware of the skills I already possessed, and how they contributed to my employability."
- "I see [my degree] now for what it really is. It is a tool that I will use, not only in broadening my knowledge in the area of engineering, but also in learning invaluable skills about team work, communication, organisation and how to problem solve, all qualities encompassed by the Trinity attributes."

Future developments

This was year one of a two year feasibility study. Feedback from participants this year will be reviewed to inform year two in 2017/18. The intention, subject to resources being available, is to roll out the Trinity Employability Award from 2018 onwards. We plan to develop partnerships with a diverse range of employers, who can bring different inputs to the award, and to open the award to students from all disciplines in Trinity.