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## Facilitating External Engagement and Developing Industry-Focused Programmes in Cork Institute of Technology

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# FACILITATING EXTERNAL ENGAGEMENT AND DEVELOPING INDUSTRY-FOCUSED PROGRAMMES IN CORK INSTITUTE OF TECHNOLOGY (CIT)

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## Abstract

As organisations focus on economic indicators and return on investment their approaches to learning and development opportunities are transformed. In a challenging, competitive climate there is a need to ensure that long and short term benefits are maximised. Through supported two-way engagements with higher education institutions, organisations can contribute to the formation of work-ready graduates and access relevant and current development opportunities for their employees.

While engagement is often presented as a third mission of universities, encompassing the full range of external interactions with enterprises, individuals and communities, separate and distinct from the first two missions of teaching and research, it is most effective if it is closely interlinked with them. Vorley and Nelles [1] describe the third mission as a 'thread that has the capacity to weave together teaching and research, while assuming a more economic and societal focus'. As described by Goddard 'Insofar as external engagement is taking place, the academic heartland is protected by specialist units dealing with technology transfer and continuing education. However the external engagement agenda... requires institutional responses, co-ordination and transversal mechanisms.' [2].

This case study describes the experience and issues raised for Cork Institute of Technology, a Higher Education Institution (HEI) in Ireland in responding to the challenges. The institute has created a dedicated unit to facilitate effective engagement with industry and to ensure that engagement is integrated across the institute and at the core of strategy and practice. This case study explores experiences in bridging the gap between the institution and industry and in implementing industry focused programmes developed in partnership, which are mutually beneficial and maintain academic standards.

Keywords: Engagement, Collaborative programme design, Co-delivery, Workplace as a centre for learning, Validation, RPL and WBL, Strategic partnerships

## 1 CONTEXT

In 2011 the Department of Education and Skills in Ireland published its forward-looking document 'National Strategy for Higher Education to 2030' [3]. That document focused on restructuring the higher education system as a key action in ensuring Ireland's economic development and the creation of an 'Innovation Island'. The Strategy document stated that 'Engagement with the wider community must become more firmly embedded in the mission of higher education institutions'. The difficult economic climate in Ireland has brought competitiveness and sustainability of employment into sharp focus. This has, in turn, impacted on how industries and organisations are engaging with training and development in terms of planning for the future and having a workforce capable of responding to market changes. Training and development units within companies are more conscious of spending budgets on activities which will have a relevance to the employee but also the organisation and organisational development goals. It is clear that by working in close partnership with enterprise, higher education institutions can play a significant role in anticipating and responding to learning and development needs.

### 1.1 Cork Institute of Technology

Cork Institute of Technology is a higher education institution on the south coast of Ireland with a student population of some 9000 whole time equivalent third level students, and incorporating Faculties of Science and Engineering, and Business and Humanities, as well as Colleges of Art and Music, and the National Maritime College of Ireland. Working with enterprise partners has always

been an important part of Cork Institute of Technology's mission. This has included: ensuring that the curriculum is relevant and current for local regional and national employers, working in partnership with industry experts to develop applied research solutions and supporting new and emerging workforce reskilling and upskilling needs.

Between 2006 and 2014 Cork Institute of Technology had an opportunity to contribute to the development of practice in higher education engagement with external enterprises and organisations through a nationally funded initiative. Under a competitive bid process through the Strategic Innovation Fund of the Higher Education Authority (HEA), CIT successfully proposed a project which would see a number of higher education institutions, both universities and institutes of technology, work together to seek to establish a collective view of the breadth of interactions possible and to develop practices, processes and policies that would optimize the interaction for both the higher education and the enterprise partner. This project, which was led by CIT, entitled Roadmap for Employment-Academic Partnership or (REAP), contributed to a considerable furthering of the discourse on academic-enterprise relations in Ireland and has resulted in a number of useful guidelines for practice as well as an improved understanding of what can be achieved through partnership and the commitments required for successful partnerships to be developed and maintained.

## **1.2 REAP Project**

The Higher Education Authority (HEA) in Ireland invested significant funding in the restructuring of higher education in Ireland between 2006 and 2010 in an attempt to make it more responsive to the economic changes and more dynamic in its educational offerings going forward. One such funded project was the Roadmap for Employer Academic Partnerships (REAP) which built on the work of the Education in Employment (EIE) project and focused on the workplace as a centre for learning, the aligning of industry and higher education in the creation of more relevant and meaningful programmes.

The project was led by Cork Institute of Technology and included Athlone Institute of Technology, Dublin Institute of Technology, Institute of Technology, Tallaght, Sligo Institute of Technology, National University of Ireland Galway, Waterford Institute of Technology and University College Cork. Funded through Strategic Innovation Fund Cycle 2, the REAP project aimed at developing and validating a model and roadmap for partnership and engagement between higher education institutions (HEI) and employers and enterprises. This partnership approach is seen as especially relevant in the context of a dynamically changing economic and demographic environment. Through exploration of good practice and analysis of existing practice, the project supported the development of toolkits and the sharing of experience to enhance opportunities for mutually beneficial interactions between higher education and enterprise.

Within the range of potential partnership engagements the REAP work has mainly focused on five different types of interaction:

- Cooperative work placement;
- Specialist targeted course development to meet specific enterprise learning needs;
- Professional postgraduate pathways;
- Academics/researchers contributing within enterprises;
- Opportunities for professional employers/employees to contribute within the academic environment.

The findings to date have shown that successful and sustainable partnerships need "resources, relationships and realistic objectives". The key HEI enablers to support enterprise engagement include clear point of contact and good communication, flexible and responsive administrative procedures and processes and the valuing of partnership activities at the core of the institution.

The literature on partnership reports barriers in terms of perceived inaccessibility and inflexibility of the HEI in dealing with enterprise needs. However, the experience of successful partnerships has provided ample evidence that these barriers can be overcome.

## **2 HIGHER EDUCATION AND ENTERPRISE ENGAGEMENT**

Higher education institutions are expected to be responsive to the needs of the economy and the labour market, while at the same time affording citizens the right to appropriate levels of education to

sustain economies in stable societies. Langworthy and Turner [4] describe the University role within a complex process requiring forecasting of emerging workplace skills needs and a trend towards lifelong learning in a model of engaged scholarship. The growing interest in the interface between the higher education sector and the world of work at European Union and national levels is evident as an increasing number of research projects, incentives and initiatives now have a distinct enterprise and labour market focus. The June 2012 report from the Expert Group on Future Skills needs noted:

The cross-disciplinary teaching of design disciplines (industrial, fashion, craft, architecture) could be consolidated within the 3rd level education system – with opportunities for students to undertake practical design project work within companies to develop customer insight and commercial awareness. This would also facilitate greater enterprise input into the shaping and delivery of course provision. [5]

Employers looking at academic institutions often experience them as a myriad of separate disconnected entities. Trying to ensure that the business intelligence gained from engagement interactions is gathered and built upon demands good internal communications processes within higher education institutions. Making it easier for business and community groups to engage means developing greater understanding of the priorities and environments within which the different organisations operate. It also requires the higher education institution to be able to understand and project an accessible image of what can be achieved in partnership. In other words to help organisations to view a higher education institution as a useful partner for learning and research it is necessary to provide illustrations or exemplars of such activities which reflect well on the process. Simple things, like how to contact an institution, can act as a barrier and external organisations' perceptions of the inaccessibility of higher education can be reinforced by lack of consistency in responding to queries.

## **2.1 CIT Extended Campus**

CIT, like most academic institutions, consists of a variety of academic units, departments, schools and faculties and research units and centres. In order to enhance the interactions between CIT and enterprises a first step was to try to understand how the institute is perceived when viewed from the perspective of the external enterprise. Not surprisingly, the view from the outside is not one of a single coherent entity but actually of several interactions with separate academic departments. It is important to point out that the enterprise often looks like a series of disparate and not well-connected units as well, from the higher education perspective. In trying to understand and codify the various kinds of beneficial interactions that can occur, experience showed that most tend to fall into three separate categories:

### Graduate Formation

- Curriculum design
- Course review and monitoring boards
- Guest lectures
- Site visits
- Work placement and internship
- Work-based projects
- Employability and entrepreneurship

### Workforce development

- Customised learning opportunities
- Continuing professional development
- Recruitment
- Recognition of prior learning

### Research and innovation

- Consultancy
- Use of facilities and equipment
- Exploitation of research outcomes
- Licencing and patents
- Incubation centres

Building on a significant history of engagement with local and national enterprise, as well as leadership of two inter-institutional projects at the interface between academia and enterprise, Cork Institute of Technology established the CIT Extended Campus in November 2011. The Extended Campus model is unique in the Irish higher education system as a single point of contact for external organisations seeking to interact with academics and researchers in CIT for graduate formation, workforce development or research and innovation. It provides a stimulus for interaction through case studies and exemplars intended to generate the 'pull' from within the enterprise sector. By exploring existing successful interactions it supports the development of good practice pathways and shared institutional learning. The Extended Campus acts as a focal point for the sharing of information and practice on engagement and external organisations and contacts in order to support and contribute to institutional strategy and knowledge and aims to:

- Make it easier for external organizations to engage in mutually beneficial interactions with CIT academics and researchers
- Develop a clear view of the extent and depth of existing and desirable engagement interactions to feed into institutional strategy and decision-making
- Stimulate more interactions and measurably support regional economic development
- Ensure that the variety of interactions with companies are collated and built on to develop broader supportive long-term mutually beneficial partnerships.

Experiences to date show that organizations are motivated to work with higher education in seeking flexible and accessible solutions to learning and development needs informed by their competitive business realities. Developing customized solutions sensitive to the learners existing skills and knowledge and leveraging opportunities to attain learning in a planned and supported way within the workplace setting presents significant challenges for the employer, higher education institution and learner.

## **2.2 Learning engagements**

Quintini [6] points to the importance of work-related education and training to alleviate skill mismatch, where it allows the under skilled worker to acquire the competencies they lack and the skilled worker to combat skill obsolescence. In terms of determining the type of education and training sought or desired, Toner [7] asserts that Employers typically want firm-specific short duration training, whereas employees want skills that are recognised, transferable and provide a decent wage in the external labour market. Acknowledging this tension between the expectations of the employer and the employee in terms of motivation, Hansson [8] reports significant benefits for both associated with education and training with an estimated 20-50% of the benefits accrued by the employee with the remainder of the productivity effects going to the employer.

The research findings presented by Linehan [9] demonstrate that higher education systems are being challenged in relation to the learning provision which they offer to a range of part time learners. This research found that, of 433 different courses considered in the Irish third level system, over 254 were developed and offered based on a need identified by the higher education provider alone. Over 220 were designed by the HEI alone and 366 are delivered on the campus while only 160 consider the recognition of prior experiential learning at entry. This paints a picture of a Higher Education system which is somewhat inflexible and out of touch with the employers/learners. It contrasts with isolated agile and flexible solutions that are increasingly being developed in response to specific learning needs as part of close working relationships between higher education institutions and enterprises.

Organisations and enterprises seeking to develop their knowledge base and to engage with HEIs, however, can face a confusing array of schemes and an inconsistency of approaches. There is a need for the education sector to proactively facilitate and simplify the engagement process. Developments must be informed by an understanding of the sectoral and regional, current and emerging learning needs. The need for workplace innovation and the transformation of the concept of work from the static use of previously acquired skills into a dynamic of continuous learning is accepted as essential for the Ireland of the future.

In its statement on education and training the National Competitiveness Council (NCC) [10] clearly identifies the role of HEIs as key drivers of national and regional competitiveness and growth. The

need for HEIs to respond more flexibly to the learning and development needs of the business community is identified. Enhanced employability possibilities, and improved personal development opportunities arise through partnership arrangements between HEIs and employers.

The NCC report notes that as employers respond to ever changing markets, the possibility of stable career roles is far less likely with individuals experiencing frequent change in roles during their working lives. This indicates a shorter skills shelf life and an increased need for up skilling and reskilling of the workforce. Increasingly, therefore, the Irish higher education system will be called upon to facilitate the education and development needs of those already in the workforce.

In addressing the difficulties anticipated by the HEIs in responding to the educational needs of those in the workforce, the NCC highlights:

- Relevance of courses: greater collaboration is required between education and training providers, employers and the students themselves;
- Timing of courses: the provision of workplace based training which is fitted around working hours needs to be more actively promoted;
- Costs: addressing the anomaly whereby full-time students can access education without tuition fees while part-time students must pay is seen as important in broadening access;
- Access to information: there is a need for a form of adult career guidance whereby learners can access information about courses and programmes relevant to their desired employment outcomes

### **2.3 Supporting Learning Engagements with Enterprise**

An important part of the development of responsive and flexible learning engagements is the recognition that learning happens outside of higher education institutions and that the workplace itself is a valuable and valid centre for learning. Integrating the recognition of prior learning (RPL) and validation of prior learning (VPL) into course development as well as workplace learning form an important part of CIT's two-way relationships with enterprise. Interest in work-based learning has grown significantly since the beginning of the 1990s in part due to the rapid changes in society and working life, the development of communications technology and the growing production of knowledge in the economy. These changes and advances have challenged higher education systems and structures in dealing with the content and organisation of work as well as the need to keep pace with continuously changing workplace skills and learning needs.

Through the REAP project consortium a review of practice in customised learning developments to meet specific industry needs was undertaken. This resulted in the identification of general stages within the process and the exploration of enablers in the development of flexible and accessible learning opportunities [11].

The report also identified the following enablers for customised learning development programmes with industry;

- Existing relationship and good mutual understanding between the higher education institution and the company
- Clear points of contact and commitment to the vision and the process from both sides
- Clear decision structures in each organisation with regard to the development of a customised programme so that changes are clearly and easily implemented Identifiable learning need to motivate both in developing an appropriate solution
- Flexible approaches to learning and assessment
- Availability of funding
- Existing exemplars which show the potential of HEI employer engagements

Some examples of these interactions are illustrated in the following section.

### **3 SOME EXAMPLES OF LEARNING INTERACTIONS**

#### **3.1 CIT and Irish Naval Service**

The engagement between CIT and Irish Naval Service began over twenty years ago. In relation to workforce development the Naval service has a strong tradition of non-formal learning in the workplace. In terms of validation, this learning has traditionally been exclusively for the purposes of workforce and rank progression and attracted no academic credit. In 2008, the Irish Naval Service realised that if they were to achieve their aim of become the most professional Naval service in the world by 2015 they needed to re-examine their approach to training and development. In particular, there was a need to link their training experiences and opportunities to the Irish National Framework of Qualifications to facilitate academic progression. It was also desirable for personnel to have qualifications which were recognised outside of the defence forces.

In terms of workplace development and the workplace as a centre for learning, in 2008 CIT and the Irish Naval Service (INS) collaborated on the inclusion of a stream within an existing BSc (hons) in Nautical Science specifically designed for INS personnel. The content of the four specialist modules integrated and built upon the pre-existing non-formal training from the workplace. Content experts from higher education and the INS worked together to design and develop the modules within the framework of the programme design.

In addition, then a workplace mentor network was developed to support the learner in attaining the learning outcomes regardless of work location. This mentor network supports the learner throughout the process whether stationed on land or at sea. The assessment is jointly conducted by workplace senior officers and academic staff which further demonstrates the level of collaboration in this engagement.

As the programme is validated by CIT and is subject to the same academic quality standards which underpin all academic programmes. The programme successfully created further employment and study options to participants and built on their prior and developing workplace learning. The impact for the Irish Naval Service was that it restructured their approach to all training and development in terms of aligning to the national framework of qualifications and in courses linked to staff progression which were traditionally designed and delivered solely by the workplace. It also opened up new possibilities in terms of course development from undergraduate to professional doctorate studies.

#### **3.2 CIT CAMMS and SR Technics**

SR Technics Airfoil Services (SRTAS) situated in Mahon Cork has achieved a remarkable turnaround since threat of closure in 2008. At that time SRTAS, who repair jet engine turbine components, embarked on a turnaround strategy which included the adoption of Lean Sigma techniques for process improvement.

Having examined a number of training providers, the Centre for Advanced Manufacturing and Management Systems (CAMMS) at CIT was selected as the partner of choice in training and mentoring staff in Lean Sigma techniques. CAMMS set out to engender the culture of Lean Sigma excellence and continuous improvement within SR Technics. Staff embarked on a training programme with CAMMS where all staff were given some introductory exposure to Lean Sigma concepts. In addition, 96 staff received four half days training in basic problem solving, 43 undertook CAMMS Green belts and three have completed Black belts with two more on the way. The ultimate goal is for CAMMS to train enough Lean Sigma leaders to make SR Technics self-sufficient in terms of their capability to train their own workforce.

Up-skilling placed a huge emphasis on the workforce taking ownership of and responsibility for the improvements themselves. Staff were encouraged to develop their own personal skills, were given opportunities for promotion and new work, and were rewarded both collectively and individually when new milestones were achieved. The turnaround has allowed SRTAS to expand their premises. Significant accumulated losses have been turned into profits in a very short time. CAMMS staff mentored students through their Green and Black belt projects, and (once some staff were trained) SR Technics provided additional mentoring to new entrants. Staff have the advantage of fulfilling the

academic requirements for the Lean Sigma programmes, while simultaneously improving their workplace and achieving their workplace goals.

Billy Power, General Manager of SR Technics (Cork, Ireland) has said that 'CAMMS was one of the significant enablers' of the company's turnaround'.

## 4 CONCLUSIONS

Higher education and enterprise engagements have the potential to deliver significant benefits for both parties. The range of possible interactions can span a considerable variety of activities. In working to support these activities it is important to stress that the relationships that underpin these interactions are complex and that both parties need to be prepared to work closely together to explore the need and to commit resources to the collaboration. Having realistic expectations about what can be achieved and a willingness to work toward common goals sets the scene for positive interactions but generally in the context of long term relationships. The examples provided herein illustrate how higher education institutions and external organisations can collaborate to achieve flexible, accessible learning pathways which are sensitive to the learner needs as well as the organisation/employer needs.

## REFERENCES [Arial, 12-point, bold, left alignment]

- [1] Vorley, T. & Nelles, J. (2008) '(Re)Conceptualising the Academy: Institutional Development of and Beyond the Third Mission.' Higher Education Management and Policy; 20 (3)
- [2] Goddard, J. (2005) 'Institutional Management and Engagement with the Knowledge Society.' Higher Education Management and Policy; 17 (1) 23-44
- [3] Department of Education and Skills (2010) National Strategy for Higher Education to 2030. Report of the Strategy Group. Available online [http://www.hea.ie/files/files/DES\\_Higher\\_Ed\\_Main\\_Report.pdf](http://www.hea.ie/files/files/DES_Higher_Ed_Main_Report.pdf)
- [4] Langworthy, A. & Turner, T. (2003). 'Learning for the workplace and beyond: the challenge of university-community engagement', HERDSA
- [5] Expert group on Future Skills Needs (2012) Key Skills for Enterprises to Trade Internationally. Dublin EGFSN
- [6] Quintini, G. (2011), 'Over-qualified or Under-skilled: a Review of Existing Literature'. OCED Social Employment and Migration Working Papers. No 121, OECD Publishing
- [7] Toner, P. (2011). 'Workforce Skills and Innovation: An Overview of Major themes in the Literature', OECD Education Working Papers, No. 55, OECD Publishing
- [8] Hansson, B. (2008). 'Job-related Training and Benefits for individuals: A Review of Evidence and Explanations', OECD Education Working Papers, No. 19, OECD Publishing
- [9] Linehan, M. (2008). Work-based Learning: Graduating Through the Workplace. Cork: CIT Press.
- [10] National Competitiveness Council (2009). Statement on Education and Training. Dublin: Forfás.
- [11] Sheridan, I. & Murphy, JP. (2013). Customised Learning Development – An exploration of practice. Cork: CIT Press