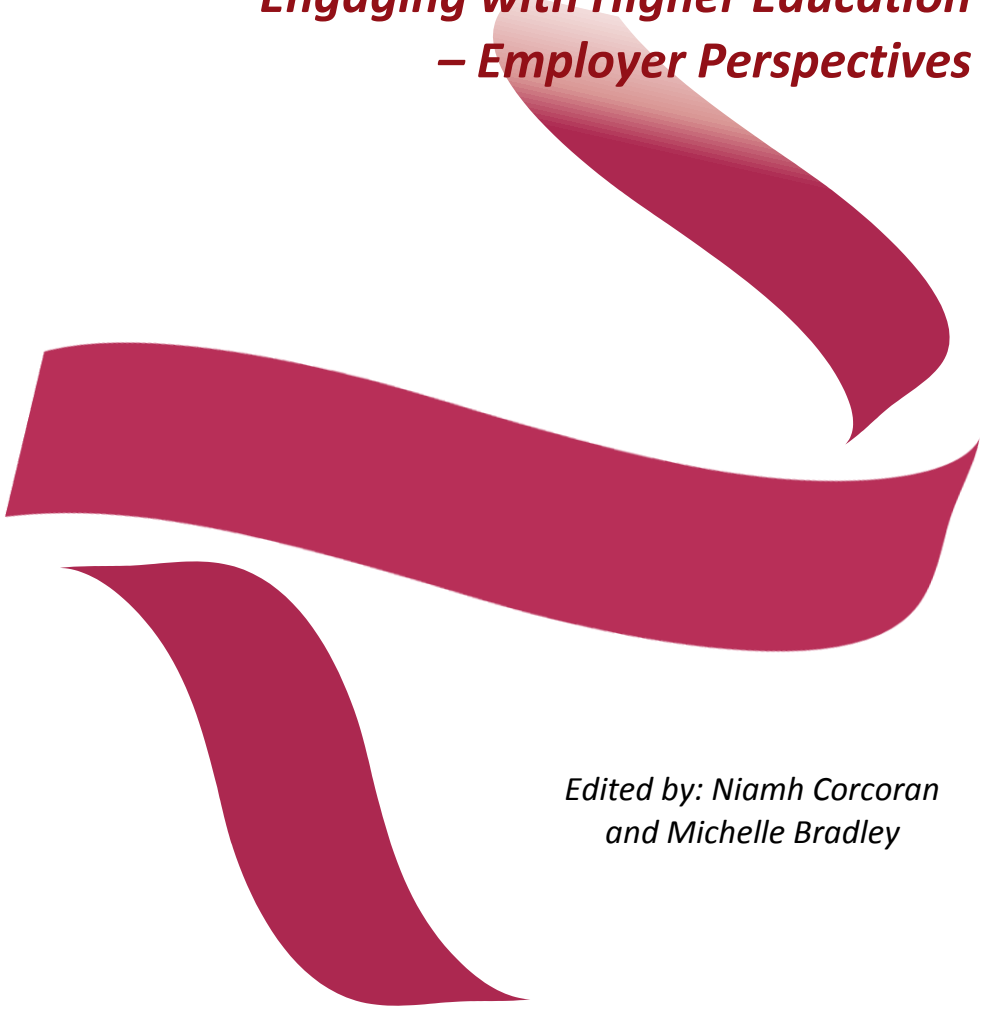
Roadmap for Employment
– Academic Partnerships

Engaging with Higher Education – Employer Perspectives



Edited by: Niamh Corcoran and Michelle Bradley

Acknowledgements

The separate presentations comprising this report are derived from transcripts of recordings made at the REAP *Engaging with Higher Education – Employer Perspectives* symposium in NUI Galway on 3rd December 2009. There has been some editing involved in compiling the transcripts into this aggregated work. Thanks to all for their contributions.

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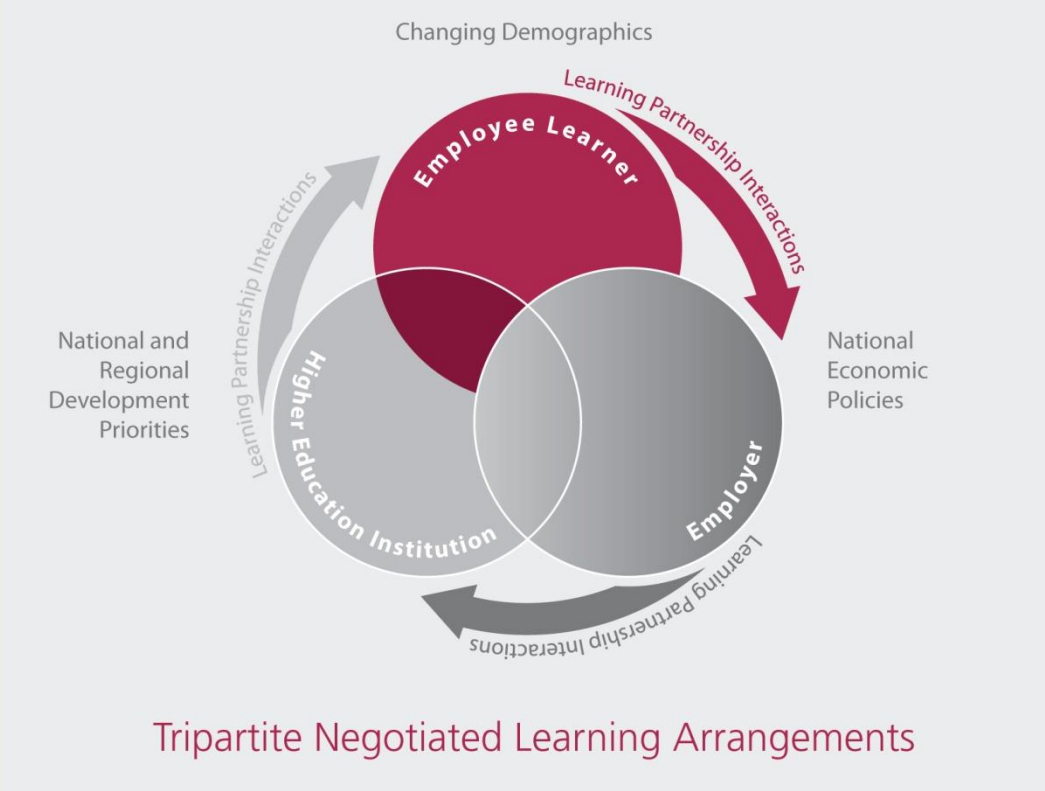
REAP

The Roadmap for Employment-Academic Partnerships (REAP) Project

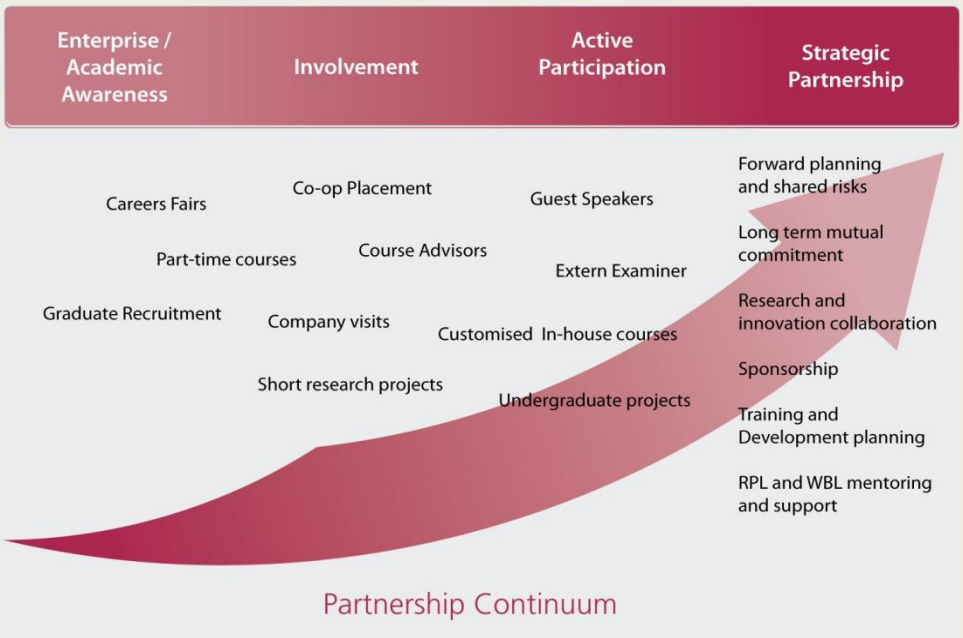
The REAP project is a Strategic Innovation Fund Cycle 2 collaborative project aimed at developing and validating a model and roadmap for partnership and engagement between higher education institutions (HEI) and employers and enterprises. This partnership approach is seen as especially relevant in the context of a dynamically changing economic and demographic environment.



The partnership concept is extended beyond that of the learning partnership. By exploring existing examples of good practice throughout the project consortium and identifying enablers and barriers, a toolkit will be developed to facilitate engagement across the spectrum of potential partnership activities. The impact will be twofold - both HEIs and enterprises will be encouraged to seek out opportunities to engage and to identify any barriers to engagement within their systems and processes. Through the REAP project, it is intended that enterprises will view HEIs as key service providers and strategic partners.

Introduction

The range of potential partnership interactions with some examples is summarised on the following graphic:



Within the range of 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 include:

- Clear point of contact and good communication;
- Flexible and responsive administrative procedures and processes;
- Integration and 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, reviewed through the project, has provided ample evidence that these barriers can be overcome.

Introduction

The REAP symposium, organised on Thursday 3rd December 2009 in NUI Galway, provided an opportunity to better understand the different partnership engagements between the Higher Education Institutions (HEIs) and Employers . . . from Employer perspectives.

The aim for the symposium was to examine the challenges and opportunities faced by industry when working with HEIs. A cross-section of engagement examples were presented by industry/enterprises to stimulate interesting discussions and dialogue between all parties.

Sharing ideas, knowledge and experiences is a well-proven method of learning and communicating information. Awareness of various Employer/ Academia engagements can be of enormous benefit and invaluable to all. This document provides an overview of the collaborative challenges, benefits and insights in the range of engagements, as presented by Ivan Mooney (Brivant Ltd), Paul Comiskey (Intel Ireland), Natasha Kinsella (Irish Hospitality Institute), John Mee (SolanoTech Ltd.) and Sean Mythen (Former CEO Wexford Enterprise Board).

Ivan Mooney, Engineering Manager - Brivant Medical Engineering

Ivan Mooney is a graduate of NUI Galway with a degree in Mechanical Engineering. Ivan is Engineering Manager at Brivant Ltd., which specialises in guidewire development, manufacturing and interventional products. Brivant began their operation in the NUI Galway Campus Innovation Centre in 2002. Between October 2002 and April 2004 they received EN46001/ISO9001 accreditation and also CE approval for CLK/OEM guidewire. A patent was filed for the CLK guide wire and in September 2003 they commenced shipments of sterile products. In 2007 they validated their new 25,000sq. ft facility in Parkmore Industrial Estate, Galway and the company still resides in this facility today. In 2009 Brivant were acquired by Lake Region Medical, who are a substantial contract medical device manufacturer.

Abstract

This paper is an overview of an industry-academia partnership that was forged between NUI Galway and Brivant Ireland. The story outlines the reasons why this process worked for them as the industrial partners, the benefits of the collaboration with a Higher Education Institution and the challenges that they faced throughout the process.

Some background on the funders first. Enterprise Ireland is the state agency responsible for supporting the development of manufacturing and internationally traded services companies. It provides funding and supports for companies - from entrepreneurs with plans for a high potential start-up, through to large companies expanding their activities, improving efficiency and growing export sales. It also provides funding and supports for college-based researchers to assist in the development, protection and transfer of technologies into industry via licensing or spin-out companies. The bringing together of these 2 partners – Industry and Academia is what the first talk in the symposium was related to; an indigenous local company relayed its experience of working and collaborating with a Higher Education Institution.

Reasons for collaborating with a HEI

One of the main reasons that this company chose to engage with a HEI and go down the collaborative Innovation Partnership project path was that one of its staff members was working part time in the college. The employee outlined to management how this process worked, emphasising that there was 80% funding available to the partnership which was very attractive for the company and the HEI. This gave the company the opportunity to explore ideas that it may normally have left on the back boiler.

Figure 1: Advantages for Brivant engaging in Innovation Partnership Projects

Outcomes from the Process of Engagement

The process encouraged Brivant to engage in research areas that were not an immediate priority for them and which, otherwise, would not have had resources committed to them. By engaging with the HEI, this Innovation Partnership process allowed them to do this.

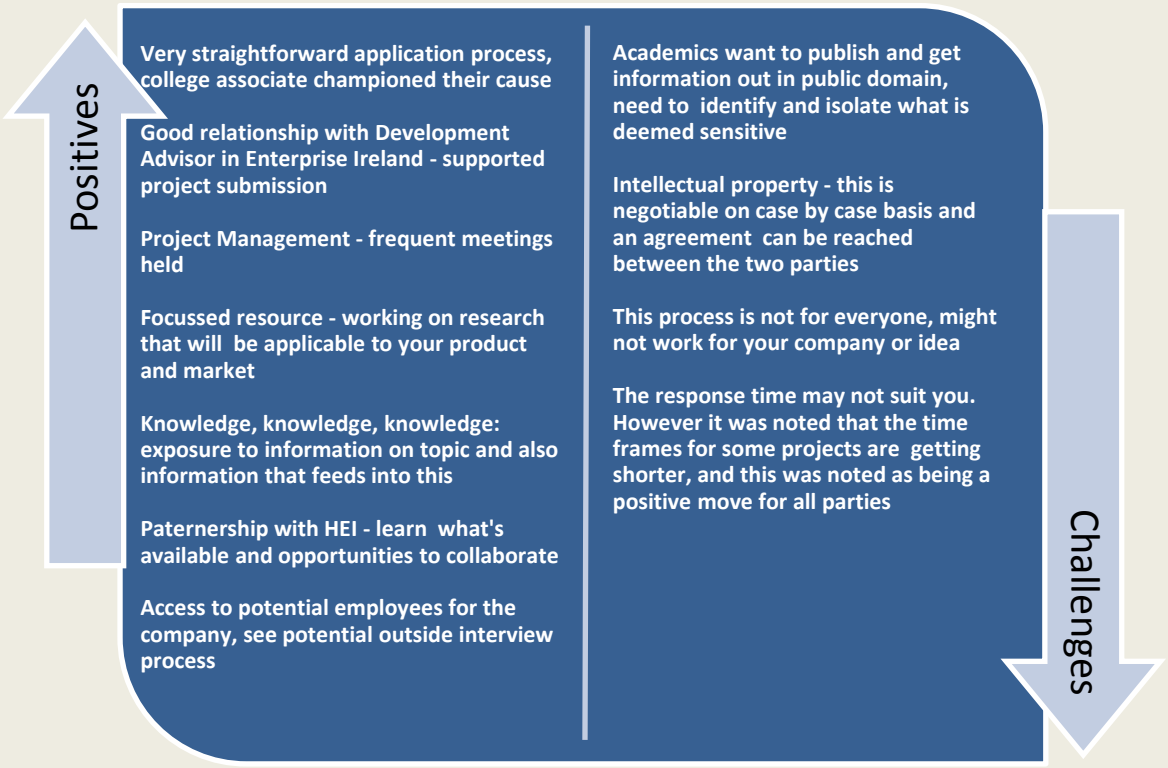


Figure 2: Positives and challenges of engagement with HEI

Key Learnings

- ✓ Engaging with a Higher Education Institution (HEI) can bring tangible benefits to your organisation.
- ✓ Spend time on your Heads of Agreement / Research Agreement – It will be worth it.
- ✓ Find a champion in the HEI who will engage with you and your research interests and who will focus on your needs.
- ✓ Build sustainable relationships with departments and schools in the HEIs that can help grow your business and enterprise.

Influencing Change and Course Development within a HEI

Paul Comiskey

Paul Comiskey holds an MSc in Applied Physics and is a qualified Marine Radio and Electronics Officer (1981). He spent a number of years working abroad for RSAF (Saudi Arabia), Panhard (France) and his own business in Australia. Paul has had roles such as Equipment Maintenance Coordinator and Lead Technician in Intel (Sputter Equip for 4 years and Ion Implanters for 8 years). For the last 5 years, Paul has worked on Science and Equipment Skills programs for Intel and, representing Intel, he has worked with a number of HEIs in influencing change and course development.

Abstract

Paul shares some of his experiences and, in the following text, he examines:

- the different types of influencing behaviours
- which influencing behaviour works best when collaborating with HEIs and the reasons why
- potential barriers to change that both industry and academia need to be aware of when partnering
- suggested questions that should be asked when considering course development in third level institutes in terms of learning outcomes, the level of the course and the depth to which the subject should go
- what is more important – depth or breadth of education and skills?

Introduction

In considering the many factors involved in influencing change and course development within a HEI, Paul has:

- examined each of the key words in the title: influencing, change and course development
- looked at a link in the context of both industry and the higher education institutes
- looked at where there are conflicts or gaps of understandings between the partners, in terms of what industry wants and what the academic institute can offer
- suggested how these gaps can be resolved

Influencing Behaviours

Everyone probably knows from their own experiences different types of influencing and how important it is, but it could be said that using your influencing skills is part of how to build a successful partnership between the HEI and industry. The HEI cannot let industry be the total influence. It has part of the responsibility to influence back.

Figure 1: Influencing presentation slide

There are three types of influencing behaviours: push, pull and push/pull. When industry and academia decide to collaborate, the push/pull behaviour is the most valuable. However, most people use the push and pull behaviours but not the push/pull behaviour.

A push behaviour, when you are trying to influence somebody, is where you tend to be quite assertive; either representing yourself as an individual or you representing industry, in this instance, Intel. So you tend to be very assertive and you tend to be very rational, and this is a very useful behaviour.

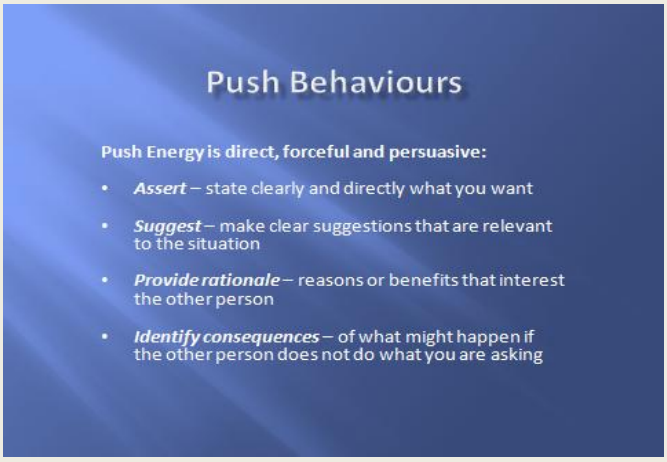


Figure 2: Push Behaviours presentation slide

With pull behaviours, it tends to be obviously less of a threat. You may question more, you may summarise what the individual is telling you or saying to you so that you understand more clearly what he is trying to get across to you. And at times you may disclose information to make them feel more comfortable.

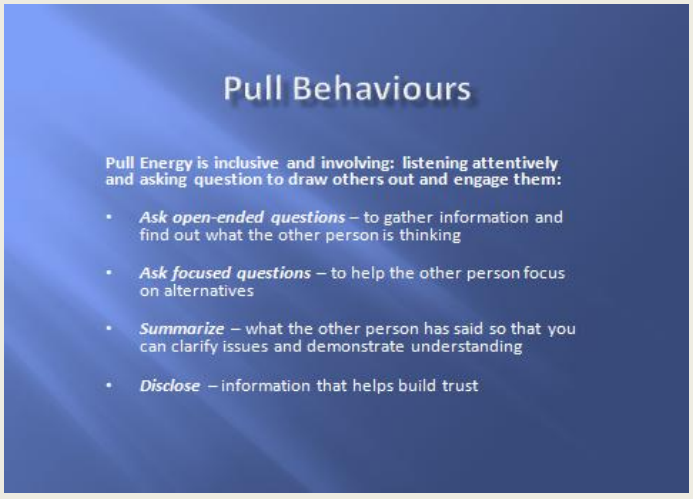


Figure 3: Pull Behaviours presentation slide

From Intel's perspective, the best behaviour to use when actually dealing with people, industries or colleges is the push/pull behaviour model. This model is the most difficult one because really what it requires is that you have to create a vision for that person or for that organisation as to where you want to go together, and that can be challenging. To do that, you have to have a very clear vision in your own mind, and usually that is not the case. It is necessary to show leadership - that is something that very often is lacking, both in companies and government institutes. So for successful partnerships, focus less on the push, less on the pull, focus more on the combination of the push/pull behaviour.

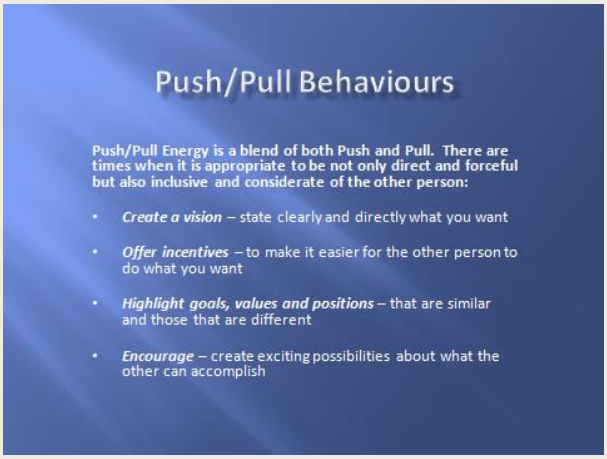


Figure 4: Push/Pull Behaviours presentation slide

When industry wants to solve problems, it can use universities, governments and external bodies. When these bodies are working together, they are actually working in a very complex fashion. It does not really matter what problems are being worked on but there is a core team and the success of the core team actually reaching the goal, is the ability to work within a network. Networks are very powerful. As well as using yourself as an individual to influence, you should try and use the people around you as levers. A network is more powerful than an individual because by definition it extends beyond the normal boundaries, therefore it will have a much broader and more complex view of how an organisation is working and the inflection point within the organisation, and that is key. The inflection point needs to be found and it is not always an individual, it is something. As an employee of Intel, a key inflection point would be material science. The reason it is a key inflection point for the employee is that it is a key inflection point for Intel, but what makes Intel a world leader? Nothing to do with computers… it is material science. So if you don't know that that is the button you need to press when you're talking to an Intel employee, if you're not talking about material science, they are not interested. You could be missing out, and it is part of your responsibility to find out the right buttons to press in a partnership.

As a point of caution, do not overuse a network, be careful what a network tells or shows you. They do give a lot of data, very often they may want you to view the data certain ways so they steer you in a certain direction, that is ok provided you know that networks have vested interests. Vested interest can be good because it actually means that people care, even if they are caring for themselves or for their own organisation, a vested interest is actually better than no interest at all.

Change

What things drive change in technology? The reason Intel and companies like Intel are very successful is because they can predict change ahead of time, set themselves up for the change. This refers to change in science and engineering, not management change or anything like that - if you cannot do that, you're finished. But they can predict where the technology is going to go, they can predict the next materials on the periodic table that they are going to have to use to stay ahead of the competition and they set the organisation up, or they set themselves up so that change is not stifled by the hierarchy or the management structure. The company is set up and strategies of the company are such that change is encouraged and the ability for people to be ready for change is encouraged.

So what are the potential barriers to change? Figure 5 below shows, the biggest barrier to change from an individual perspective is point (a) and to a certain extent point (b). Having poor education, poor verbal, written and communication skills is a big barrier to people being able to change, that is why education, as a whole, is very important. From an organisational perspective, point (d) is a major barrier. If there are no strong leaders within the organisation, all of the other barriers will exist and will influence as a barrier to organisational acceptance of change, so leadership is very, very important.

What are potential barriers to change?

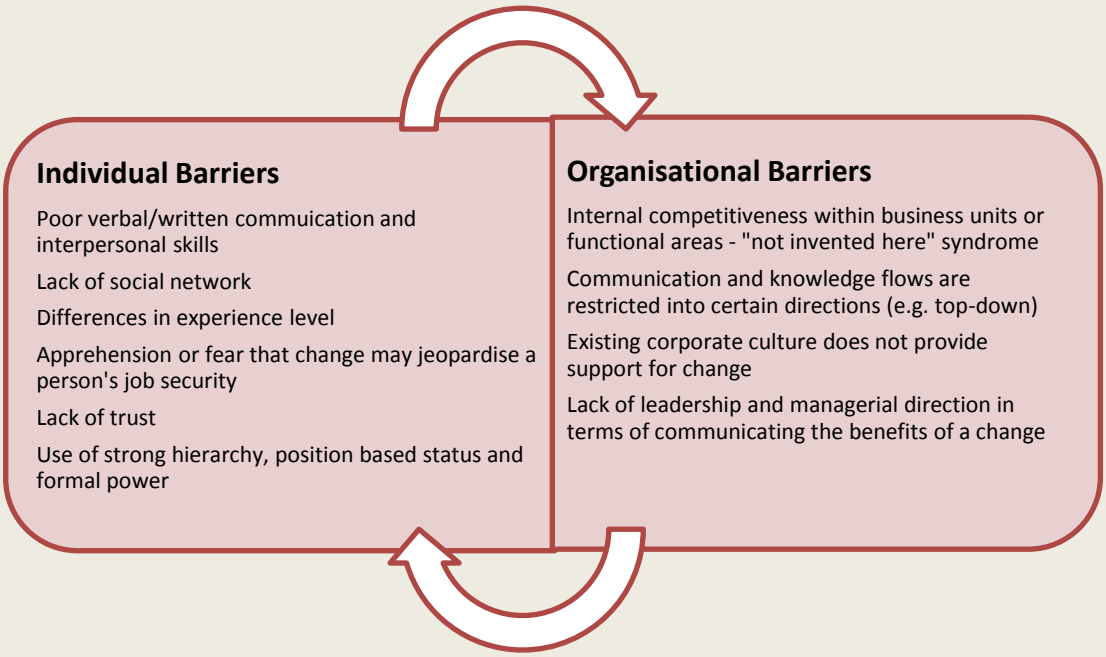


Figure 5: Barriers to change

Course Development

What should a good course or a good module look like for the learner to progress, and what will they be able to do differently when they have completed it?

Remember that Education and acquiring of both Knowledge and Skill is for the Person's whole life and not just for the time they spend performing a specific job in a specific company

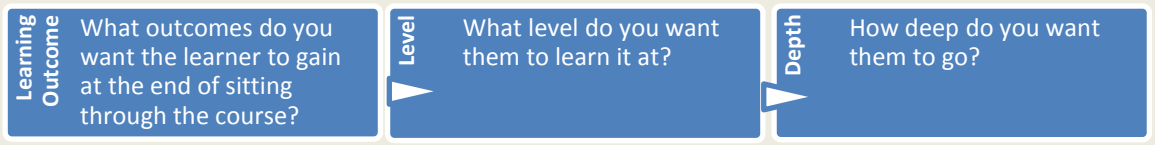


Figure 6: Course Development – 3 areas of focus

Another very important thing you need to understand, when you are building learning, is how will I enable the learner to capture the shared learnings that they are going to experience within the group that they are learning from? It is not just the teacher teaching them something. What is also important is how they share the learning amongst themselves within the peer group, and then externally, because really that is the real power of learning – to be able to capture not what the instructor is telling you but to capture the experiences of the people in the room and then share those within the class in a formal sense and then also outside of the room.

The points below list a number of questions to be asked when developing a course in order to include the necessary learning outcomes, level and depth required.

a. Is the level appropriate to where you want the learner to progress to; So if they have a good theoretical knowledge of plasma physics but not of its application - does this pose a learning outcome challenge rather than question the person's level of knowledge?

b. On the other hand if they have a good knowledge of both the application and the fundamental physics but are unable to go deeper in how the application affects the chemistry of a process, is this an indication that they need more depth on fundamental physics at a higher level?

c. How do you tie the principles learned to practical application? – very often the use of case studies of past problems is a very good method of doing this.

d. What is the practical content of the module and how important is this to supporting the development of a skill? – as opposed to the acquiring of knowledge

e. How is knowledge captured and shared? – a really sophisticated way of enhancing learning is to capture and share the students' learnings during the running of the course

f. How does it compare with the equivalent from the USA, Germany, UK etc.? Always look outside of your own company or college and then further afield.

g. What industries does the course/module tie into? – important to have a spread

h. What is the assessment/exam mix? – too much of either can be problematic. Examining in a traditional manner still plays an important part in forcing learning – yes, part of learning something is being forced to do it, either by some external or internal need.

Figure 7: Course development considerations: presentation slide

An important point is to not let industry steer the academic course development too much. Industry will tell the HEI what it wants, but the HEI has a responsibility to the person to give them something that is, not just what the industry wants them to have, but is something that is going to be useful to them in five or ten years time - not necessarily in the specific job or industry that they are working in now, but for the future.

So how do the three key points of influencing, change and course development tie in together? Organisational learning is the ability to actually learn better and faster as discussed in Peter Senge's book "The Fifth Discipline". Intel's ability to learn faster than their competitors is probably, long term, the only sustainable advantage a truly great company has.

Depth versus Breadth

What does the current state look like for a company? The University or the Institute of Technology identifies a need based on historical needs of either students or industry, or a combination of these. The higher education institute is responding to a need based on what is deemed popular. It responds to a need based on what the current job market supports. It may provide a need based on what a specific company wants or what the HEI perceives as being the industry need at the time.

What would a desired state look like for both the HEI and industry? This could be where the HEI has delivered training or the education to a student or an employee, it is delivering knowledge and skill in some of the areas that are going to be

useful to them in their job. The student obtains a depth of knowledge and skills in some targeted key specific areas but also obtains breadth across a range of disciplines. This breadth allows them to place their discipline in context, in a changing environment – so they are not so specialised that they cannot work in a problem space where they are confronted with many different and new variations of technology, across multiple disciplines.

When it comes to depth versus breadth, many companies and indeed academia struggle in this space. The ideal person/employee is often identified as someone who possesses both and is able to switch from going deep on a problem to coming back up and thinking about it in a broader context. The best Problem Solvers possess and use both and are very rare.

It is important to have people gain their early confidence and expertise by going deep over a small range of disciplines – this will take many years for most but once they have acquired this depth they will have gained the confidence and skill to go and explore breadth. In industry this is often achieved by job rotations but academia also have a role to play here. For later learning (life long learning) it is important for the HEI to understand how they play into this field and what they can provide the learner with to promote them acquiring breadth more effectively when in industry. This is a facet of learning that requires more attention and study from industry and academia as the understanding of it is, for the most part, weak and traditional. In Intel, in order to get promoted as a technical leader for example, the employee would have to have a deep understanding of their particular technical area of expertise. For breadth, Intel employ managers for that!

Enhancing the Industry-Academia Partnership Experience

How might the gap be bridged between what industry wants and what the Higher Education Institute is capable of delivering? How might it be done? The best way to do this is to ensure that industry comes to the HEI with a strong unambiguous well written problem statement. When the language is weak in a problem statement, it means that the people who are giving the HEI the problem don't really care about it - they just want to hand their problem to the HEI. There is no way the HEI is going to solve that problem - it is a weak problem statement. Industry needs to look at ways to make their problem statement stronger. The answer is problem definition. To really understand a problem, it has to be segmented. If it cannot be done, you are wasting your time. Whether it is a technology problem or not, does not really matter. Industry should be prepared to spend two days characterising their problem before they go to the university and say "Here's my problem statement, do you think you can handle this?". If not, they are not serious about their problem. This should lead to a more successful collaborative partnership between industry and academia.

Key Learnings

- ✓ Remember that Education and acquiring of both Knowledge and Skill is for the Person's whole life and not just for the time they spend performing a specific job in a specific company
- ✓ Networks are very powerful. A network is more powerful than an individual because by definition it extends beyond the normal boundaries
- ✓ As a point of caution, do not overuse a network
- ✓ For successful partnerships, focus less on the push, less on the pull, focus more on the combination of the push/pull behaviour
- ✓ To really understand a problem, it has to be segmented

Natasha Kinsella, CEO, Irish Hospitality Institute (IHI)

Natasha Kinsella holds a Masters of Hospitality Management from DIT, BSc in Human Resources Management from CIPD and is also an honours graduate of hotel & catering management from AIT. She has held numerous positions within the Irish hospitality sector involving her in many key projects in support of marketing the hospitality industry as a career choice.

Abstract

"Resources, Relationships and Realistic objectives" were identified by one speaker as the critical factors in any third-level – employer partnership. Assuming that relationships include effective communication mechanisms, it is difficult to imagine a better summary of the undoubted complexities of higher education-employer partnerships.

In order to create and sustain an effective relationship, all parties need to think about their overall organisational structures and processes, as well as understanding the critical roles of mission, the core values, and skills of their respective partners.

Ms. Natasha Kinsella, CEO, Irish Hospitality Institute, delivered a very interesting talk outlining the relationship that has developed between their network and a Higher Education Institute. The Irish Hospitality Institute is a representative organisation of the tourism and hospitality sector and was established in 1966. Its overall vision is to drive professional excellence in hospitality management in Ireland and this has been the same vision since its conception.

To achieve this professional excellence, the organisation needed to generate and foster strong external relationships. They realised very early on that they were not in a position to reach these goals on their own and needed to collaborate and build a partnership with a HEI. One such partnership was formed with Dublin Institute of Technology (DIT) and it is still one that is very strong today where both parties work for the needs of not only the individual members but also the sector.

Introduction / Background

IHI is a non-profit organisation and relies on its members to drive and support the activities of the organisation. There are currently 1000 members in the institute and they vary from different organisations within the tourism and hospitality sector as a whole. They are not just restaurants, hotels or catering – they come also from the IT, tourism, transport and leisure sectors, while also having input from key trainers and retired members in industry. There is a process to joining the Institute and that is dependent on qualifications as well within the sector.

There are also membership grades within the institute ranging from student grades to graduate to the top grade which would be the fellow of the institute. Securing qualifications for these levels was the nature of their collaboration with DIT.

This collaboration/partnership allowed the Institute to achieve its own goals by engaging in the Continual Professional Development networking and also as a communication source. The presentation was delivered from an employer perspective and the importance and value of the relationship between a HEI and enterprises.

Objectives of the Irish Hospitality Institute (IHI)

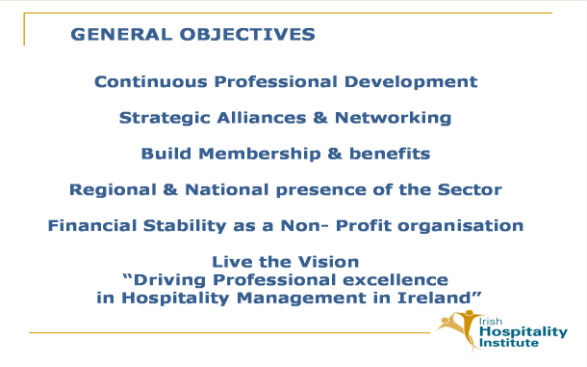


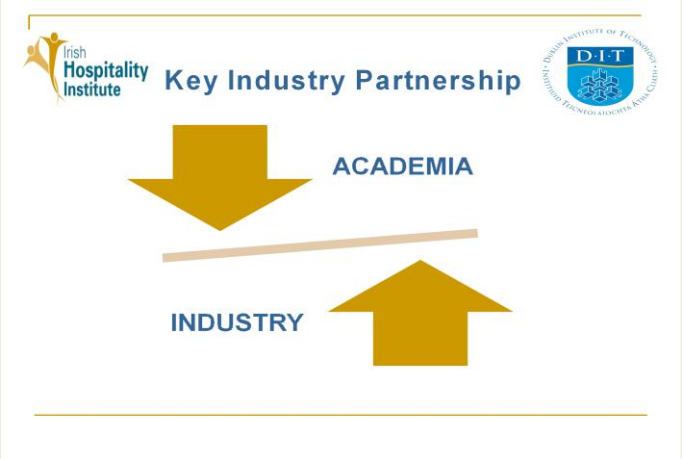
Figure 1: Objectives of IHI

In terms of the general objectives of the institute, which are outlined above - Continuous Professional Development (CPD), strategic alliances and networking generated a real need for external relationships to be built and fostered. In addition to these core objectives, building the membership of the Institute, generating regional and national presence of the sector whilst also securing financial stability as a non-profit organisation were also considered critical to the progress and success of the IHI. Engaging with key industry partners and Higher Education Institutions were mechanisms by which these objectives were achieved and it was in this regard that the relationship with DIT evolved under the umbrella of the *Skillnet network*.

Partnership development

The partnership with DIT originated in 1999 with the inception of the first ever *Skillnet network*. The Skillnet concept began with 57 networks and the IHI-DIT network was one of the original ones. The purpose of the network was to facilitate the training need that was within the sector as the IHI was not in a position to do it in isolation.

There was a natural fit between the 2 partners, however, there were complexities regarding what the IHI needed and what academia could provide for them. In 2006 DIT and specifically the School of Hospitality Management and Tourism developed what is now known as "Magic Touch" and the IHI became a partner in this because of the original partnership with DIT. This was further developed in 2009 with the progression towards a corporate partnership approach which also works for the benefit of DIT as it allows it to open the model to other specific industries not just tourism and hospitality.



This slide demonstrated the importance of structuring a balance between what academia can provide and what Industry needs. It is critical to find the fit or the balance in terms of how that partnership or relationship might work.

This was something that was never really teased out in terms of potential & opportunity for both partners at the beginning of this partnership but was examined later on in the relationship.

Figure 2: Key Industry Partnership

Figure 3 describes what the partners were able to achieve through this engagement in the Partnership Benefits list below and emphasised that there were not many barriers from the outset:

Figure 3: Partnership Benefits & Barriers

Key Learnings

- ✓ Be able to *work harder, but together* with less
- ✓ Consider the option of having a *dedicated contact* for industry
- ✓ Provide *easy access* to expertise within the HEI
- ✓ *Networking opportunities* provide mechanism for industry to talk and learn from each other
- ✓ *Circulate key research information* to partners – something will eventually drive them to collaborate

Incubation Company and Development within a HEI

John Mee

John Mee has over 27 years of industry experience in telecom systems development primarily in management roles. In 2007, John and Santanu Mazumdar founded SolanoTech and this is an Irish based software company specialising in Networked TV and Video services delivered over Internet Protocol (IPTV). The company is addressing the rapidly expanding market for Enterprise IPTV based solutions and the need for reliable control and user interface for these solutions. SolanoTech has specialist expertise in blending competencies in Java enabling technologies, IMS, IN, IPTV, Telecom Legacy and NG Networks and Telecom Web Services.

Abstract

This discussion looks at the importance of a start-up company setting itself up in an incubation centre in a Higher Education Institute (HEI) and the associated benefits of this partnership. John talks about the company, its products, why it decided to set up in a HEI incubation centre, the company's experience and the many benefits it experienced as a result of being part of this collaboration. Without this successful collaboration, John feels his company would not be in the position it is in today. John also touches on the challenges associated with collaborating with HEIs and how these can be overcome to ensure a smoother strategic partnership in the future.

Introduction

SolanoTech is involved in IPTV technology. This technology competes with satellite and cable. IPTV technology is used for distributing television programmes over a local area network or telephone line and the advantages are two-fold: the quality of the signal and the interactivity with the television programme, enhancing the TV experience.

SolanoTech's idea was to develop a software product which controls the user interface on the TV. The software drives the user interface so that when the channel is changed, the process of changing the channel is managed by SolanoTech's software. It controls the flow of data from the network to the user on the TV. This software is licensed and that is the main income revenue for the company, approximately 78%. The remaining revenue is made up from professional services (10%) and customised bespoke middleware development (12%).

Incubation Company Experience

Looking at the experience of being an incubation company in a Higher Education Institute (HEI), SolanoTech is a product of the whole college system. The idea is the company's own, the technology is its own but the kind of support it has received from the people around it has been phenomenal.

The first interaction with the higher education sector was joining an enterprise development programme. In this case it was the Midlands and West Enterprise Programme (MWEP) and it was jointly hosted by Athlone Institute of Technology (AIT) and Galway-Mayo Institute of Technology (GMIT). SolanoTech joined this programme in 2007. Joining this particular programme had many advantages such as support to specific training in business development, starting your own business, market validation and sales process as well as office accommodation in AIT. Having the office accommodation in AIT also had its advantages as the new start-up company had a credible address.

The programme also gives access to internal and external networks such as Metro Network and the peer network of other people in the programme, all going through the same experience, coming across the same issues and problems. The programme allowed the company to undertake market validation several times and to develop these important contact networks.

A start-up company is like a premature baby – without support it will die, particularly in the current climate. It needs external support mechanisms so being part of the programme, having a credible address in the Midland Innovation and Research Centre in AIT, having access to mentors and programme leaders and peers all helped SolanoTech in the early days. Figure1 below shows the support mechanisms in place and the impact they had on SolanoTech, being an incubation company in a HEI.

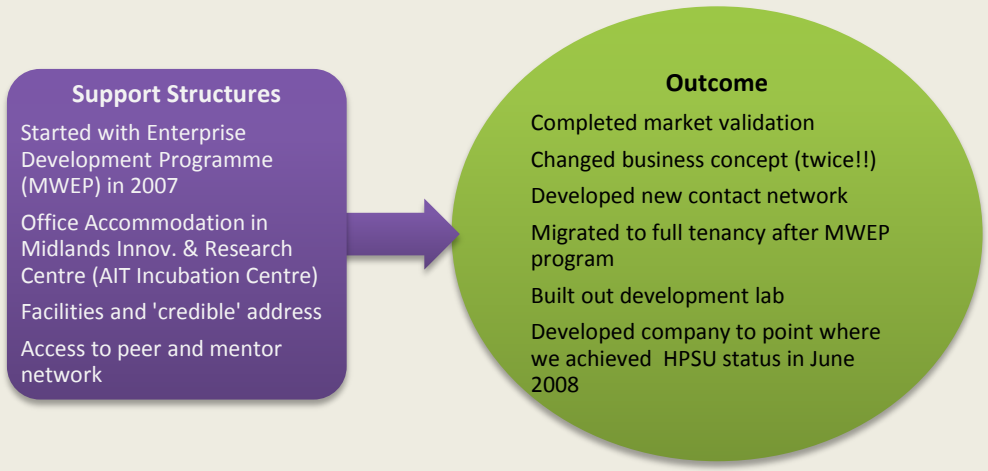


Figure 1: SolanoTech Support Structures

Benefits of collaborating with a HEI

With the support of a HEI, SolanoTech has built up a credible business idea and has a product to sell in a relatively short space of time. This was all helped significantly by the support it received from AIT. SolanoTech was granted HPSU (High Potential Start-Up) status from Enterprise Ireland in June 2008.

Choosing the right HEI to team up with is important. In SolanoTech's case, AIT has a Software Research Institute with a strong background in telecoms and software so it was a perfect match for the company. With the help of AIT, SolanoTech was successful in securing funding from both the BMW (Borders Midlands and West) Assembly and Enterprise Ireland for numerous Innovation Vouchers which were essential for the company to develop prototypes and early versions of the key product. The relationship SolanoTech has with the Software Research Institute in AIT is very strong and the company has used the institute's expertise for other self–funded projects to help the company climb the R&D capability ladder. The company has also successfully collaborated with the IT department in NUI Galway on a Masters project which is very closely linked to SolanoTech's product. This project has now been completed and the student gained a first class honours and is now pursuing her PhD.

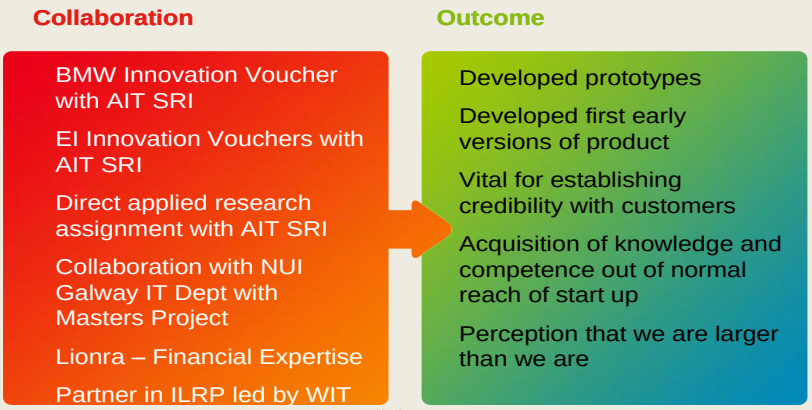


Figure 2: HEI Collaboration – Outcomes

The benefits of being an incubation company in a HEI are numerous, some of which are listed below. Although SoltanoTech have found the experience of being an incubation company in a HEI an extremely worthwhile experience and an essential ingredient in its success to date, there are a number of challenges working with a HEI that could improve the process for future potential new start-ups, as indicated below:

Incubation Company in a HEI - Benefits

- Access to various start-up programmes
- Access to funding opportunities
- Resident in an incubation centre
- Credible address
- Access to business and technical expertise
- Involvement in internal and external networks
- Mentor support
- The importance of an office environment for a start-up company - you have somewhere to go each morning
- The importance of the support structures available to a start-up company housed in an incubation centre in a credible HEI should not be underestimated
- Strategic Partnerships: As part of the journey to success as an incubation company, SolanoTech has formed a number of strategic partnerships with a number of HEIs as well as several other companies across the globe which expands their customer base and product sales

Collaborating with a HEI - Challenges

- A number of HEIs are focused on basic research and, to an extent, applied research too. However, the majority of start-up companies, especially in the ICT sector, are not usually interested in basic or even applied research. They are into development and normally adapt existing technology or know-how. To attract start-ups into its incubation centre, a HEI needs to sell the fact that it offers applied R&D support to the companies.
- Intellectual Property: Start-up companies can get protective of their IP and can be put off interacting with a HEI, as they see it as a barrier. From a HEI perspective, it is not interested in exploiting the IP – it is not a commercial entity in that sense. It wants to protect the IP and ensure the company has a chance to exploit the IP.
- Speed of Response: The development cycles are getting shorter and the market windows smaller, so by the time an engagement is underway, if it takes six months to get something across the line, it is already too late. That's the speed at which companies have to adapt to and react in industry. So if an incubation company, or a start-up, is dealing with a HEI and looking for support, it is imperative that both parties are working off the same timeframe so that there is no ambiguity in the end goals and timelines of the project.

Figure 3: Incubation Benefits - Collaboration Challenges

Key Learnings

- ✓ Choosing the right HEI for a company to team up with is very important
- ✓ A start-up company is like a premature baby – without support it will die, particularly in the current climate
- ✓ The importance of an office environment for a start-up company - you have somewhere to go each morning
- ✓ Involvement in internal and external networks is essential

Bridging the Gap between SMEs and a HEI

Dr Sean Mythen

Dr Sean Mythen was CEO of Wexford County Enterprise Board for 15 years. He recently took early retirement in order to set up his own company AdSum Training and Consultancy Ltd. He has been closely involved with Waterford Institute of Technology over the last ten years. He chaired the EnAct programme (Technology Transfer from 3rd level) and is a founder member of Enniscorthy Enterprise & Technology Centre. He has delivered numerous papers on entrepreneurship and recently developed a competency framework for small business.

Abstract

Evidence suggests that Institute–Industry relationships are widely practised. These engagements can range from small-scale, temporary projects to permanent, large-scale collaborations and can be initiated and managed by individual university researchers and their research groups or industry representatives. Research has proven that our Higher Education Institutions need to become more proactive and get out and meet with their industry partners – to identify their needs in the areas of research, lifelong learning, service, etc. The concept of the "diagnostic kit" was referred to a number of times throughout the presentations made at the symposium in NUI Galway – seeking to get small businesses to think about what their unique selling point is and understanding what elements are critical to their success and how they can actually collaborate effectively with a HEI to achieve this success.

During his address Dr. Mythen outlined that he believed that there is always an opportunity for the HEI and industry to collaborate. "They need to be master of everything that's why they need the help, to have that help to pull it apart and absolutely map it down and see where the core requirements are, where the weaknesses are and where they need help."

Introduction / Background

The concept of the Enterprise Boards was developed in 1993 and began to make considerable impact in the regions in 1994. The pilot Enterprise Board was in Galway. Currently there are 35 Enterprise Boards established now with roughly a budget of approximately €1 million each. A considerable percentage of that budget would be allocated to training – providing training for small businesses in their respective regions. In total there is an overall budget of €35M – and between €10-12m would be assigned for Training.

Some Enterprise boards may have a little more than the €1 million budget and that amount would depend on the population in their region.

There is a central support within Enterprise Ireland for all of the Enterprise Boards and that role was previously performed by the Department of Trade and Enterprise directly.

There is a very wide spectrum of the type of businesses that the enterprise boards deal with. They would often be seen to act as a conduit for Enterprise Ireland in their role to encourage businesses to become High Potential Start Ups (HPSUs). Depending on which report you read, 90-93% of the businesses in Ireland employ less than 10 people. With each of these companies there is an urgent need to improve the management capabilities of the small businesses and there is still a lot of work that can be done to achieve this and a lot of the work can be done with the Higher Education Institutions to help move this forward.

Background to Partnership

"We sometimes use the phrase "they don't know what they don't know" to describe getting small businesses to engage with a Higher Education Institute"

Wexford County Enterprise Board first became involved with Waterford Institute of Technology (WIT) in 1995. The board approached WIT out of necessity because at the time they required one of their programmes to be certified and due to proximity and compatibility - the relationship was born.

A considerable amount of work had been completed for the programme prior to connecting with WIT – it was well documented and content was written – however the need was there for it to be certified and WIT addressed this need.

This programme – Management Development Programme – is now considered to be the flagship programme and one that is quite intensive for small business managers.

The Wexford County Enterprise Board has always looked at the idea of strategically aligning themselves with other like-minded individuals or institutions. Each individual Enterprise Board employs four or five people and aligning the system with the Institutions of Technology and getting out there and getting directly into businesses, there is a considerable amount of work that can be achieved.

Objectives of Management Development Programme

The Management Development Programme has been running now for the past 2 years – a level 6 programme and accounts for 30 credits.

This programme works with a maximum of 20 businesses over the 20-22 weeks and it covers 2 semesters. At the end of the programme the participants have to produce a business plan. This plan is then vetted and assessed by WIT and submission of this business plan is required for certification from the Management Development.

One key point noted during Sean's talk was that the Enterprise Centre provides a vehicle for small businesses to get certification that they might not otherwise have considered or engaged in. Some participants who have successfully attended the Management Development Programme have gone on to get their degree through the Enterprise Centre in Enniscorthy. The important point to note in this statement is that they have achieved this without actually physically attending an Institute of Technology.

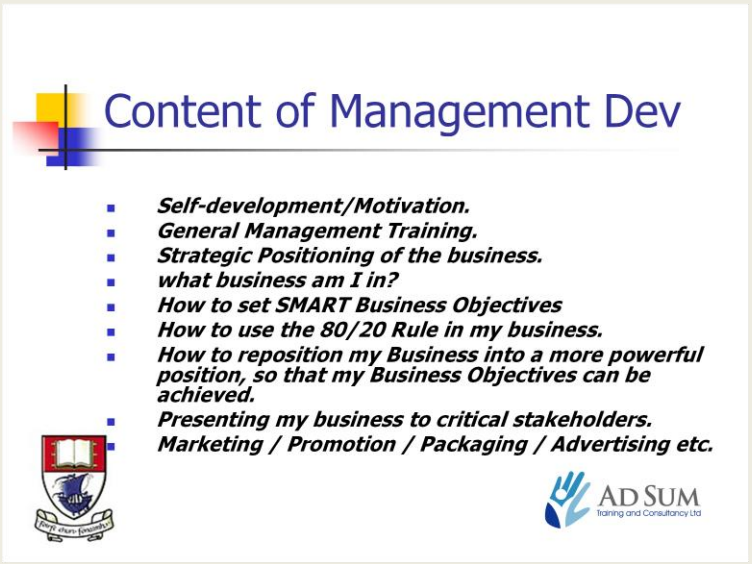


Figure 1: Management Development Content presentation

Figure 2: Management Development Content presentation

Details of Partnership

The question was often asked - Why Management Development?

Based on numerous reports, for example the small business forum report, there is a very strong link between management capability and the bottom line performance.

Given the spectrum of companies that deal with the Enterprise Boards, very few of them would actually produce management accounts or measure how they are doing. There is a huge need to improve the management capabilities in small business and there is a belief that there is still a lot more work to be done.

Bridging the Gap between SMEs and a HEI

The majority of the 35 Enterprise Board now have some form of a relationship with a Higher Education Institution and one of the difficulties with the delivery of the Management Development Programmes is that there is no real commonality on the content of the Programme between all of the Enterprise boards.

The concept of *business diagnostics* was referred to by another speaker earlier in the morning. This has also been considered for the past year or 2 and an attempt has been made to come up with a format where they could very quickly get to grips with a small business and where they want to go and what the difficulties are in reaching that destination.

Key Learnings

- ✓ Engagement between SME and Higher Education Institutions is necessary
- ✓ Peer Learning and one to one mentoring is a very effective method of learning
- ✓ SMEs "Don't know what they don't know"
- ✓ Businesses don't really want to engage unless they know for sure that they can get something out of it and that it will improve their business pretty much immediately.
- ✓ An immediate response is often required from Industry
- ✓ Institutions need to "sell" to industry what they have to offer them

Conclusion

Ongoing research has identified that Enterprises - Higher Education Institution (HEI) engagement is of immense importance, not only to regional development but also to the growth of the partners involved in the engagement. Many varying examples of Academia - Industry/Business partnerships currently exist across the key sectors - however a large number of these engagements go unrecorded, often take place with no formal structure and with no follow-up procedure. Many occur as a result of personal contacts and years of trust.

Ensuring that Enterprises and HEIs work together is a very significant step in attracting future business and development for industries in any region. A united front can only demonstrate that each partner is growing and forming a life long environment for the benefit of both parties. Through this joint partnership, it can lead to regional development, increase in real life learning for students and staff, while also helping industry climb that R&D capability ladder to secure their future in their region.

It has been noted that the stumbling block to new Enterprise - Academia engagements is often the fact that business/industry does not know *who* or *where to* go to for help when approaching a HEI. The organisation of symposiums, such as the event held in NUI Galway in December 2009, only highlights the potential for collaboration and also the identification of possible solutions to make the partnership work better and more effectively. For example this could take the form of a single point of contact within the institute or a central hub for all industry enquiries.

The December 2009 symposium aimed to explore existing examples of good practice throughout the project consortium and also identify enablers, barriers and challenges to these successful collaborations. Through the REAP project these findings and insights will produce a toolkit to encourage and ensure successful engagements in the future between the enterprise and HEI. It is anticipated that enterprises will view the HEIs as key service providers and strategic partners for their future collaborations.

Roadmap for Employment
– Academic Partnerships

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