

2015-4

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Recommended Citation

Jameson, John and O'Donnell, Patrick, "The Entrepreneurial University: a Unifying Theme for TU4Dublin" (2015). *Stream 1: Enterprise and Engagement*. 6.

<https://arrow.tudublin.ie/st1/6>

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The Entrepreneurial University: A unifying theme for TU4Dublin?

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Abstract⁴

The paper is presented as a rationale for the adoption of an entrepreneurial university model as the guiding principle for the organisation of the Technological University for Dublin (TU4D)⁵. It is argued that the entrepreneurial university provides a coherent context in which the internal resources and capacities of the three organisations, within the alliance, can be aligned to the external environment and the needs of their stakeholders through agility, flexibility and responsiveness. The paper first considers a broad definition of what is understood as an entrepreneurial Higher Educational Institution (HEI). It then considers the entrepreneurial mind-set as a precursor to the development of an appropriate organisational culture and appropriate individual practice. The paper identifies the OECD-European Commission Guiding Framework for Entrepreneurial Universities as providing key pillars and component measures which have been incorporated into the entrepreneurial university evaluation tool HEInnovate, which may provide direction for the TU4D project. The paper concludes with two sections which draw together the work of the Industry, Business and Employer Engagement (IBEE) Workgroup in developing a number of Organisation Principles together with their implications for organisational design within the specific context of the TU4D. The final section proposes a development process to transform TU4D into an entrepreneurial university.

Introduction & Context

The paper is presented as a rationale for the adoption of an entrepreneurial university model as the guiding principle for the organisation of the Technological University for Dublin (TU4D)⁶. It is argued that the entrepreneurial university provides a coherent context in which the internal resources and capacities of the three organisations within the alliance can be aligned to the external environment and the needs of their stakeholders through agility, flexibility and responsiveness.

1. The paper first considers a broad definition of what is understood as an entrepreneurial Higher Educational Institution (HEI), a definition which by necessity must have meaning for all organisational participants across disciplines, structures, systems and processes.

⁴ Acknowledgement

The authors wish to acknowledge the major contribution made by the members of the TU4Dublin Industry, Business and Employer Engagement (IBEE) Workgroup, drawn from the three TU4Dublin partner institutions, to the ideas expressed in this paper. In particular, the Organisational Principles on Page 9 are an output of the IBEE Workgroup. The members of the IBEE Workgroup are: John Behan, James Bridgeman, Dr. Anthony Buckley, Jean Cahill, Pat Coman, Fiona Cranley, Dr. Frank Cullen, Dr. John Donovan, Margaret Fitzsimons, Rachel Freeman, Dr. Catherine Gorman, Assumpta Harvey, Dr. John Keogh, David Kirk, Jack McDonnell, Claire MacNamee, Tom Nolan, Mike O'Connor, Eoin O'Kennedy, Dr. John O'Neill, Adrian Payne, Margaret Whelan, Pat O'Donnell, John Jameson.

⁵ Technological University for Dublin (TU4Dublin/TU4D)* is a working title for a project involving Dublin Institute of Technology, Institute of Technology Tallaght and Institute of Technology Blanchardstown seeking designation as a Technological University

⁶ Technological University for Dublin (TU4Dublin/TU4D)* is a working title for the project to seek designation as a Technological University by the entity formed by the merger of Dublin Institute of Technology, Institute of Technology Tallaght and Institute of Technology Blanchardstown.

2. The concept of an entrepreneurial orientation in the HEI context is considered, in which the emphasis is placed on an entrepreneurial mind-set as a precursor to the development of an appropriate organisational culture and appropriate individual practice.
3. The paper outlines the key pillars and component measures used within the OECD Guiding Framework for Entrepreneurial Universities (2012), which have been incorporated into the HEInnovate entrepreneurial university evaluation tool co-sponsored by the European Commission. In the context of the TU4D, it is argued that the Guiding Framework provides a useful perspective through which each of the TU4D themes can be unified, interpreted and operationalised.
4. The fourth section of the paper suggests a number of Organisation Principles and their implications for organisational design within the specific context of the TU4D. These principles have emerged through discussion within the Industry, Business and Employer Engagement (IBEE) Workgroup⁷, comprising representatives of the three institutions.
5. The fifth section outlines a development process to transform TU4D into an entrepreneurial university.

The term ‘entrepreneurial university’ is not new, having been introduced by Burton Clarke (1998) to define a particular mind-set to be found within the attributes of such an institution. His principal finding was that universities wishing to label themselves as entrepreneurial operated upon principles of collective action regarding their willingness to take risks backed up with appropriate support structures.

1. Definition

Entrepreneurship is a concept for which more than one hundred definitions are currently in use (OECD Guiding Framework for Entrepreneurial Universities, 2012: 2). Many of these have sought to broaden the concept away from its genesis as solely a business / management idea towards a concept applicable to any organisation and any area of endeavour. As such the entrepreneurial concept is strongly related to the concept of innovation as a meta-construct useful in organisational design. As far back as 1985, Peter Drucker, in his seminal work ‘Innovation and Entrepreneurship,’ held that it is entrepreneurs who innovate. “Innovation is enhanced by those who can think, behave and act in an entrepreneurial manner. Innovation is underpinned by entrepreneurship” (Hannon, 2013: 11).

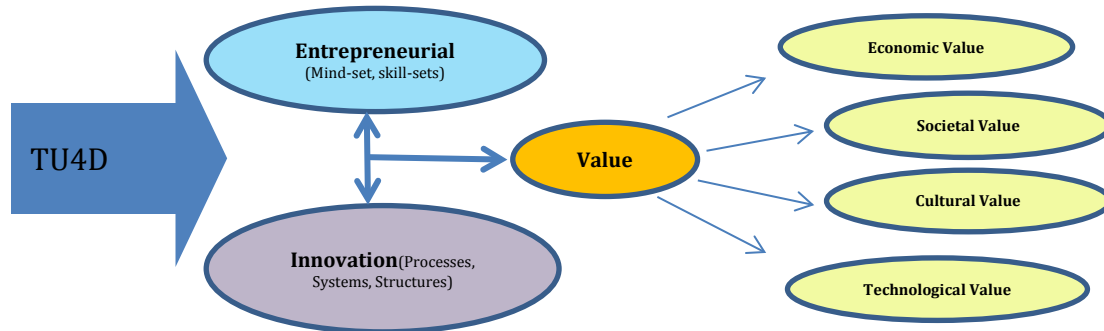
A common theme of entrepreneurial organisations is the creation of value through innovation, in which value can be identified as economic, societal, cultural and/or technological. The Workgroup, in considering the literature on the entrepreneurial university, found it useful to conceptualise the TU4D as an organisation which creates value through innovation. The following diagram attempts to depict a top level process through which the TU4D could create public value through the adoption of behavioural (entrepreneurial) and process (innovation) elements which are essential characteristics of a successful entrepreneurial university.

The model envisages the TU4D as an organisation characterised by an entrepreneurial and innovative staff working within an enabling infrastructure

⁷ A TU4D Project Working Group drawn from the three Institutions

creating value defined by stakeholders. The creation of such an organisation would create an energising challenge for the TU4D. Work undertaken by the OECD and European Commission through the HEInnovate initiative to find a single definition of the Entrepreneurial University which works across the European Higher Education Area has proved difficult and controversial. As would be expected, there is no one-size-fits-all definition of the Entrepreneurial University, but rather there is an invaluable plurality of approaches, inventive, creative and yet practical, which distinguish the entrepreneurial style. (HEInnovate, 2012: 2)

The TU4D:- ‘An entrepreneurial higher educational organisation creating value through



Two common aspects of the many definitions, within the literature, are that entrepreneurship applies both to individuals and organisations; and that it concerns the innovative, forward looking and value creating utilisation of resources. (HEInnovate, 2012: 2). In an entrepreneurial HEI, teaching, research and societal engagement are intertwined, in which leadership; governance and external stakeholder involvement create a continuous synergy and dynamic exchange.

A useful working definition of the entrepreneurial higher education institution (HEI) has been provided by Gibb (2013):

“Entrepreneurial higher education institutions are designed to **empower staff and students** to demonstrate **enterprise, innovation and creativity** in research, teaching and pursuit and use of knowledge across boundaries. They contribute effectively to the enhancement of learning in a societal environment characterised by high levels of uncertainty and complexity and they are dedicated to creating public value via a process of open engagement, mutual learning, discovery and exchange with all stakeholders in society – local, national and international.”

The definition emphasises the empowerment of people in their use of innovation, creativity and enterprise in their response to learning and social engagement. Being an entrepreneurial higher education institution depends, to a large extent, upon individuals and innovative ways of doing things. The definition is useful in operationalising the entrepreneurial HEI and has implications across all organisational functions and disciplines comprising the institution.

Prof. Paul Hannon defines the entrepreneurial university in simpler terms as: “An institution that creates an environment, within which the development of entrepreneurial mind-sets and behaviours are embedded, encouraged, supported, incentivised and rewarded”. Hannon (2013: 12)

Both definitions are useful in identifying the essential elements of an entrepreneurial mind-set and an enabling organisation as essential components for an effective entrepreneurial university.

2. The Entrepreneurial University

The distinctive principle of the entrepreneurial university is that it empowers all staff, students external stakeholders and communities to effect meaningful change in the world around them, and does so by directly engaging in such change through its own activities. The focus is on creating organisational DNA which enables the organisation to act entrepreneurially across all disciplines, at all levels and in all functions.

The creation of an entrepreneurial university represents a transformational opportunity to develop a truly relevant and innovative organisation capable of responding flexibly to the needs of stakeholders and society in ways that have real and lasting impact while enhancing the graduate attributes the student experience.

The challenge is to reconceptualise the HEI as an academic enterprise, one that is agile, competitive, adaptable and responsive to the changing needs of our stakeholders and society alike. The adoption of an academic entrepreneurial mind-set may be useful as an organising principle, both organisationally and conceptually. However, instilling the spirit and application of enterprise into the institutional culture of a public HEI is a major challenge, not least of which is coping with legacy administrative and management systems. The creation of a HEI that combines academic excellence, maximum societal impact and inclusiveness to as broad a demographic as possible requires the conceptualisation of a new HEI paradigm for the TU4D – the Entrepreneurial University.

Gibb & Hannon, in their in their work, ‘Towards the Entrepreneurial University’, identify a recurring theme within higher education policy worldwide; the view that universities can no longer claim to be the sole or even main source of intellectual property. Retaining their position, they argue, requires partnerships with other stakeholders in society (Gibb & Hannon,2006).The arguments for Mode 2 engagement, “socially distributed, application-oriented, trans-disciplinary, and subject to multiple accountabilities” (Nowotny et al., 2003) and Mode 3 (the connected university) engagement require the university to be a proactive partner in the co-creation and use of knowledge in support of societal goals.

A major study by the European Commission (2008), of organisational entrepreneurship, recommends that at all levels (EU, National and Institutional) there is a need to embrace a broad definition of entrepreneurship as a state of mind applicable to all settings and aspects of life. Their position

is that entrepreneurship, broadly understood, refers to the way that individuals and organisations create and implement new ideas and ways of doing things, respond proactively to the environment, and therefore initiate change involving various degrees of uncertainty and complexity. Adopting entrepreneurship in university change is not only related to the understanding of entrepreneurship but also to the institutional and structural changes as well as the interplay between strategy, curriculum, pedagogy and teaching. An entrepreneurial policy acts as a catalyst and driving force for university transition (Kyro and Mattila, 2012: 2). The entrepreneurial University is different from a traditional university, it is not an ivory tower; it is not just a repository of knowledge; it is not an island of intellectual tranquillity; it is not a bureaucracy driven by committee and process. But instead... The entrepreneurial university is an agent of economic and social change; a place of collisions, collaborations and societal engagement (Morris, & Page, <https://entrepreneurship.okstate.edu/files/entrepreneurialuniversity.pdf>).

Being or becoming an entrepreneurial HEI is a response to the many challenges which raise questions about the current shape and constitution of the educational sector. Some scholars are calling for a 'deep, radical and urgent transformation' (Barber et al., 2012), questioning in particular the relevance of traditional conceptual and organisational models. (HEInnovate, 2012.) Moses (2005) argues that HEIs are complex pluralistic organisations with each department and discipline facing different stakeholder environments with varying degrees of complexity and actual or potential involvement in knowledge creation, exchange and utilisation processes. Successfully managing such complexity is dependent upon the motivated commitment of engaged individuals enabled through the intelligent design of systems, structures and processes aligned to the organisational mission and strategy. Within such complex organisations and their networked environments, entrepreneurship as a process can promote change and development through enhancing the capacity to recognise and act upon new opportunities. (OECD Guiding Framework for Entrepreneurial Universities, 2013).

Being an entrepreneurial HEI depends, to a large extent, upon individuals and innovative ways of doing things. It is the creation of informal personal networks between academics and entrepreneurs that seems to hold the key. (Gibb & Hannon, 2006). Promoting the entrepreneurial HEI is not about re-labelling existing systems and structures; it is about recognising and building, in innovative ways, on what already exists.

Hjorth (2003) in 'Rewriting entrepreneurship – for a new perspective on organisational creativity', suggests that the development of an entrepreneurial university involves a total commitment to a coherent mission and strategy through which an engaged and motivated human resource are allowed to act innovatively, supported by appropriate systems and structures. Whereas in the traditional HEI managerial processes are processes mainly of control, normality, and standardisation, the 'entrepreneurial' approach is about play, anomaly, and movement (Hjorth 2003: 260). For traditional HEIs the challenge for management is to create an enabling environment and culture

within a managed framework where responsibility, authority and accountability are appropriately assigned.

Becoming an entrepreneurial university may involve difficult institutional change towards a position of intellectual entrepreneurship (Cherwitz, 2002, 2005) where each and every individual and unit within the organisation internalises entrepreneurial characteristics and implement entrepreneurial practices within their area of influence, creating a living entrepreneurial culture. Institutional change can be defined broadly in terms of both changes in formal and informal ways of doing things. It therefore embraces not only changes in organisations and organisational relationships but also changes in the governance systems and underpinning culture. (Gibb & Hannon, 2006) Organisation theory suggests that for progress to be made the pressures for change need to be clearly understood, felt and owned within the organisation (Schein, 1992). It is imperative that the entrepreneurial university has clarity and coherence in its mission, vision, values, and strategy, and that its people, systems and structures are enabled to support the entrepreneurial mission of the organisation.

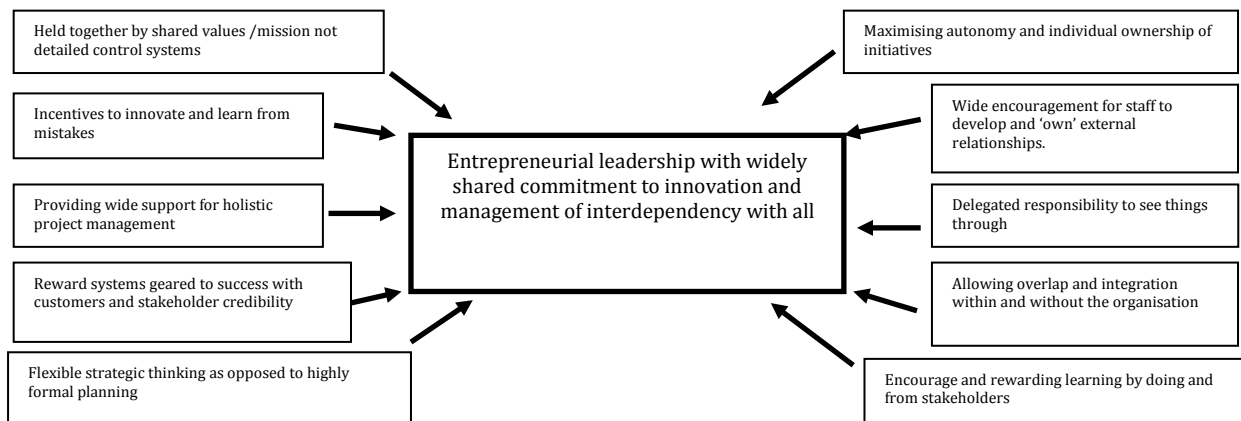
In developing an entrepreneurial culture, Louis et al (1989) found that institutional entrepreneurship is very difficult to engineer. Instead, they suggest that the move to an entrepreneurial university is essentially driven by the activities of individual faculty. The importance of academic entrepreneurs is widely accepted and is linked to a common view that an appropriate prevailing institutional culture is critical to successful entrepreneurial activity (Glassman et al., 2003). Commonly quoted components of entrepreneurial cultures include a willingness to take risks, shared governance and appropriate reward systems.

Chung and Gibbons (1997), offer further support in refuting mechanistic approaches to the development of corporate entrepreneurship by suggesting that entrepreneurial behaviour within an organisation can only be effectively promoted through an appropriate corporate culture. A culture in which motivated individuals with enabling support systems, structures and services are constantly challenged to expand their capabilities through innovation, creativity and problem solving behaviour. In general, organisations can be designed to enhance or constrain entrepreneurial behaviour. Enterprising behaviour demands freedom for individuals to take ownership of initiatives, see such initiatives through, enjoy and take personal ownership of external and internal relationships, make mistakes and learn from them by doing. The capacity to innovate and be creative is a function of individual enterprising behaviour and entrepreneurial organisation design. The Entrepreneurial University creates and is created by entrepreneurial individuals within a supportive environment.

It has been argued that, in terms of organisation, entrepreneurial universities are managed in such a way that they become capable of responding flexibly, strategically and yet coherently to opportunities in the environment. Burton Clarke describes that as having a 'strong steering core with acceptance of a model of self-made autonomy' across the academic departments ...

entrepreneurship becomes part of the university’s core strategy. The ultimate outcome is the creation of an enterprise culture defined particularly as one open to change and to the search for, and exploitation of, opportunities for innovation and development (Gibb & Hannon, 2006: 15). Clark characterises the organisational foundation of the university as “the steady state for change”(Clark, 2004: 92) and discusses how transformation and sustainability interrelate (*ibid.*,: 178). He points to a “steady state infrastructure that pushes for change” and “includes a bureaucracy of change” (*ibid.*,:5). These ideas combine concepts that seem contradictory, but taken together they signify strong organisational dynamics in entrepreneurial universities where the status quo is to change continuously. This idea of universities being able to accommodate constant change brings connotations of the organisation theory of the “learning organisation” (Pedler et al., 1991; Burgoyne et al., 1994; Easterby-Smith et al., 1999), the flexible organisation (Gjerding, 1996, 2003; Volberda, 1998) and the knowledge-creating organisation (Nonaka and Takeuchi, 1995; Krogh, Ichijo and Nonaka, 2000; Nonaka and Nishiguchi, 2001). All of these approaches are based on the notion that organisational dynamics derive from reconciling seemingly contradictory practices.

Entrepreneurial challenges to university organisation design



Source: University as an entrepreneurial organization (adapted from Gibb, Haskins, and Robertson, 2009)

Coyle, Gibb, & Haskins (2013), in a major work for The University Leaders Programme, ‘Entrepreneurial University: From Concept to Action’ found that essentially entrepreneurial organisations are designed to encourage and support bottom-up initiative and reward and empower such initiative. Such organisations facilitate informal relationships and network building as a necessary condition for the promotion of innovation via the building of individual and collective social capital. They are held together more by shared values and culture than by formal control systems and more by informal flexible strategic thinking and awareness than by highly formal planning systems, Coyle, et al. (2013: 16). The greatest challenge remains in ‘how’ universities become entrepreneurial institutions and how they create effective environments for developing entrepreneurial capacities in their staff and students. (Hannon, 2013: 14). The model outlined below is a framework for evaluating the broad entrepreneurial challenges to university organisation design (Gibb, Haskins and Robertson, 2009). The challenges point to the

operational and cultural adjustments required for an organisation to be truly entrepreneurial.

3. Key Pillars and Characteristics of Entrepreneurial University–HEInnovate Framework

The OECD and the European Commission (2012) have combined to promote HEInnovate (2012), a major research initiative and an evidence based tool which attempts to evaluate entrepreneurial practices in higher education institutions. Based on the OECD guiding framework for entrepreneurial universities, their research work has identified the entrepreneurial characteristics of HEIs and enables organisations to evaluate themselves against best practice. As such the HEInnovate tool provides a guiding framework for the entrepreneurial university in which seven key pillars of individual and organisational capacity are evaluated: These include:

HEInnovate Entrepreneurial Framework Pillars

1. Leadership and Governance
2. Organisational capacity, People and Incentives
3. Entrepreneurship Development in Teaching and Learning
4. Pathways for Entrepreneurs
5. HEI Business / External Relationships for Knowledge Exchange
6. The Entrepreneurial HUI as an Internationalised Institution
7. Measurement of the Impact of the Entrepreneurial University

The model provides clear guidance as to the objectives, strategies, behaviours, systems and structures required of a university to be entrepreneurial. The pillars provide a useful design guideline and evaluation framework for HEIs seeking to organise around the concept of the 'entrepreneurial University'. The achievement and maintenance of the seven pillars has significant implications for the organisation design and ongoing operation of the entrepreneurial university. As part of the TU4D development process it is proposed to use HEInnovate to benchmark progress in this regard.

4. Organisation Principles and their implications for Organisational design

The Industry, Business and Employer Engagement (IBEE) Workgroup developed the following principles and organisational implications for supporting the development of an entrepreneurial university. These principles were developed in the context of the specific circumstances of the TU4D alliance institutions.

No	Principles
1	Collegiate and co-operative participation of all staff towards an agreed vision.
2	To be entrepreneurial in our: <ul style="list-style-type: none"> • mind set – (Responsive, Agile, flexible, enabling, innovative, empowered, Can-do/will-do) and our • skill-set (Support Systems, QA, Finance, HR, Co-ordination & Reporting); & our • delivery - responsive, flexible, innovative, proactive, impactful, and relevant to our stakeholders needs
3	The TU4D will be entrepreneurial in building its own autonomy through additional revenue streams
4	Develop deep and sustainable Inter-Relationships with Stakeholders and to implement the highest standards of Ethical practice and Corporate Social Responsibility.
5	Create and deliver a highly engaged student experience
6	Organisation based on Subsidiarity with Responsibility, Authority, Accountability, & Transparency
7	Built upon a strong discipline base with cross discipline systems /networks
8	Promotion and fostering of Organic Networks (Staff & Co-Ordination Unit) both internally and externally
9	The creation of an Enabling Professional Services & Infrastructure
10	To develop staff and students for a national and international context.
11	The deployment of Specialist Entrepreneurial Engagement expertise: <ul style="list-style-type: none"> • to promote co-ordinated engagement activity & • to improve the visibility of engagement activities. • To develop appropriate data recording, management & reporting mechanisms, providing accurate & timely business intelligence.
12	Engagement with our region for direct economic development and innovation, (Engaged Teaching, Learning and Research) <ul style="list-style-type: none"> • An ENGINE for enterprise creation and development • A HUB of the Innovation Eco-system • An INTEGRATOR of development services
13	Create a Risk Tolerant learning organisation

5. Development Process for an Entrepreneurial and Engaged University:

The following steps are proposed as part of a process to realise the entrepreneurial university.

Vision and Values

- Articulate the high-level mission, vision and values reflecting an entrepreneurial theme; based on a widely consultative process with all stakeholders, and drawing on exemplars of good practice.
- Highlight the values that underpin the entrepreneurial approach, such as to be engaged with and/borderless to community, industry and other stakeholders; to

be internationally engaged and international in culture; to be adept at revenue generation and creating academic autonomy; to be agile, responsive, proactive, risk-tolerant, and to aim to maximise regional, national and international impact .

- Implement the organisational mission, and vision as lived values.

Develop the Mind-set and Skillset

- Disseminate and "sell" the broad entrepreneurial concept to stakeholders; as a simple coherent story highlighting the benefits to the organisation and to the individual, and as a unifying theme, a key defining characteristic and a stimulating challenge with a role for everyone involved in the new university.
- Involve all stakeholders in developing the entrepreneurial concept.
- Provide comprehensive, phased training and mentoring programmes to staff to develop an entrepreneurial mind-set and entrepreneurial skills for team working, environment scanning and opportunity identification.
- establish vertical teams and mission-based cross-functional teams to examine, redesign and continuously improve processes, practices and systems with a focus on the identified missions and the strategic goals.
- Develop innovative and creative ways of achieving learning outcomes that support the "entrepreneurial" graduate attribute, build on existing activities such as industry and community-based learning and research, and cross-disciplinary projects and expand and mainstream these so that they are embedded in all programmes.
- Leverage the skills and experience of the highly entrepreneurial areas of activity that already exist in the institutions: industry and community engagement activities, applied research centres, incubators, enterprise development programmes and the technology transfer unit.
- Provide genuine opportunities to stakeholders to provide feedback on their perception of progress towards the vision, e.g. using the HEInnovate self-assessment tool.
- Flexible recruit of key contributors on temporary, adjunct, secondment and advisory basis.

A Strong Steering Core

- Construct a comprehensive strategic framework for the development and performance of the university, setting clear high-level objectives to which all units are expected to contribute, with substantial autonomy in how they do so, and setting standards for accountability and reporting.
- Revenue generation for increased autonomy, in a manner that enhances the creation of human, intellectual, social and cultural capital, will be a clear priority, as both the practice and the outcome of revenue generation are essential elements of entrepreneurialism.
- Develop a streamlined, comprehensive reporting system, which minimises the work of recording activity and dovetails with the internal reporting requirements for high-level decision-making and the external reporting requirements of Government, funders etc.
- Identify the organisation-level enablers and inhibitors of an entrepreneurial approach and work with the relevant stakeholders to optimise the external and internal environment, such as:
 - Level of strategic, operational and financial autonomy
 - Flexibility of employment contracts and work practices
 - Enabling organisational structure, processes, systems
 - Recognition and reward mechanisms and structures
 - Clear and transparent financial arrangements to facilitate and incentivise units and individuals to develop initiatives aligned to the strategic goals

- Proactive, risk-tolerant and team approach by service providers such as Finance, HR, QA, IT, Estates, Health & Safety etc. to develop and support initiatives aligned to the strategic goals and to overcome externally imposed (eg legal) constraints, with private sector response times.

Organise and Resource

- Provide and resource an enabling infrastructure consisting of a network of champions in all units, academic and non-academic; the Entrepreneurship and Engagement Network, supported by a lean central Entrepreneurship and Engagement Office. The Network and Office would monitor and promote entrepreneurial behaviour in all its forms - innovative teaching and learning, community and enterprise engagement, internationalisation, revenue generation, speed of response to opportunities etc.
- Promote and support the establishment of organic temporary interdisciplinary and inter-function networks to address opportunities and challenges in teaching and learning, research and engagement as they are identified.

Conclusion

The TU4D represents a unique opportunity in Irish education to create a new type of higher education institution. One which is truly relevant to the current and future national requirements and together with its stakeholders creates a positive contribution to society. To do so the TU4D will have to be brave in its ambition, and willing to re-conceptualise its mission, its values, its systems and its processes, to free and trust its people to create the new entrepreneurial university.

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