



Trinity College Dublin
The University of Dublin

MEMORANDUM

To National Planning Framework consultation 2017
From Diarmuid O'Brien; Chief Innovation & Enterprise Officer, Trinity College Dublin
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Introduction:

Modern economies that rely on technology require innovation districts to prosper. Trinity College Dublin is in a position to partner with government and industry to help foster such a district on university-owned property in Dublin's Docklands which would act as the foundation for the next stage in the capital and the country's economic development.

Trinity is currently working on a master plan which would effectively create a second campus in Dublin's docklands that would in turn act as the mainstay of a much larger development that would co-locate established companies, start-ups and university spin-offs to foster synergies and an eco system that supports enterprise and innovation. This campus would be on a 5.5-acre site owned by Trinity in the docklands. Similar developments have helped to spur the economies of cities such as Boston and Rotterdam in recent years.

The primary model of innovation districts is where large scale mixed-use development is centred on major anchor institutions and on a rich base of related firms, entrepreneurs and spin-off companies involved in the commercialisation of innovation. In all well-established innovation districts research universities are a critical and required component of the eco-system. Importantly the more successful universities in these innovation districts have recognised knowledge transfer and innovation as a primary objective.

In all these cases, the pattern is broadly similar. A world-class university has worked with government and industry to create the sort of environment where all three stakeholders can co-operate and flourish to the benefit of the country.

The development of such a district will be a massive project that will require significant government help in the initial stages; both financial and in areas such as planning but it has received enthusiastic support at the early stages from government organisations involved in fostering innovation.

Innovation Context:

When Ireland reflects on our vision for 2040 we must understand the dramatic journey we have travelled in the last 20 years and look to see the global trends with which we must compete to ensure our national and international offering remains globally competitive.

In the last twenty years the economic story of Ireland has evolved in a dramatic and positive manner. Ireland has advanced its reputation from being a country recognised for the availability of well-

educated low-cost labour to support areas of enterprise such as manufacturing; to being a globally recognised location of choice for the fastest growing technology companies in the world.

This narrative can be brought to life by four immediate references:

1. The significant evolution of the large companies who invested in Ireland in the 1990's – such as Intel and IBM. Thirty years ago these companies were manufacturing silicon chips and magnetic hard drives on the outskirts of Dublin. In the period since these first investments the reputation and mandate of both plants has develop significantly. Intel now designs, develops and manufactures the most complex semiconductor devices in the world at Leixlip and operates perhaps the most complex added value manufacturing facility in Europe. IBM has developed a broad mandate to incorporate innovation, smart cities and healthcare. In both cases the employment numbers have grown and the responsibility of the businesses in Ireland increased.
2. The growth of employment linked to the born-of-internet companies who have invested heavily in Ireland (and Dublin in particular) over the last decade. Companies like Google, Facebook, Twitter, LinkedIn, HubSpot and AirBnB now employ over 10,000 people directly in Dublin and have ownership for driving value and enterprise activity for those businesses into Europe, Asia and beyond. These companies value innovation as a critical success factor for their businesses.
3. The growth of indigenous industry. Last year Enterprise Ireland client companies demonstrated record exports of €20.6Bn; double the level of 2005. This is a great success story which points to the innate entrepreneurial capacity of Irish people. However when one digs deeper in relation to these numbers it is evident that the companies who have been investing in research and innovation over the last decade have driven both increases in exports and employment. Those companies who have not invested in innovation have seen drops in both sales and job numbers. Innovation is a critical component of economic competitiveness.
4. The transformation of the academic – enterprise relationship. Today all higher education institutions see industry as a critical stakeholder and are heavily engaged in collaborative R&D activities with industry, in the placement of their students with industry and the establishment of strategic partnerships for mutual benefit.

These high level references clearly indicate that the nature of the Irish proposition has evolved significantly. In short enterprise success remains inextricably connected with the talent of our work force but in addition there is an enhanced focus on how both innovation and research support foreign direct investment, competitiveness of indigenous industry and the global reputation of Ireland.

Trinity Innovation – Reputation:

In the context of research and innovation it is important to note that Trinity is not only Ireland's leading higher education institution but is recognised as one of Europe's leading innovation universities; with a proven record of accomplishment of significant impacts from our research, student entrepreneurs and our alumni. Some key highlights are noted below:

- Trinity is the #1 ranked university in Europe (and outside the US) for graduate entrepreneurs. Over the last decade Trinity produced 192 entrepreneurs who established 180 companies and raised capital of approximately US \$2,166 million.

- Trinity is the only Irish university in the Europe's most innovative universities and was the #1 ranked university in for relative citations from its patent portfolio – a clear measure of quality.
- Trinity campus companies have raised €600M in venture funding over the last twenty years and produced exports in excess of €1.2Bn.
- Trinity runs Ireland's most innovative student accelerator – LaunchBox – which has supported the development of new leaders such as Iseult Ward, the CEO of FoodCloud, who in 2017 is on the Forbes 30 under 30 list of new global leaders.
- Trinity was the first university outside the US to be awarded funding to host the Blackstone LaunchPad Programme. An entrepreneurship programme looking to activate students to consider entrepreneurship as a career option.
- Trinity is providing new thought leadership to Ireland in establishing the €60M University Bridge Fund – the first venture fund in Ireland fully focussed on exploiting innovation from within universities.
- Trinity is Ireland's leading university for industry partnership – engaging in collaborative research with 9 of the top ten ICT companies and 8 of the top 10 medical device and pharmaceutical companies.

Generational Opportunity – Establish an Innovation District Dublin:

The importance of continuous innovation within enterprise and the development of a talent pipeline which can support the needs of innovation within industry is self-evident. In this context Ireland now needs to reflect on how it can best position itself in a post-Brexit world. Tax incentives of themselves will not be sufficient and are becoming relatively less important. It is clear that Ireland must continue to up its game in terms of skills, innovation and research to compete successfully for foreign direct and indigenous investment.

There is also a requirement to recognise the international paradigm shift which has occurred around centres of innovation – which have moved from suburban science parks into our cities. Globally many cities (Boston, New York, Barcelona, London, Rotterdam, St. Louis), in partnership with internationally leading universities (MIT, Harvard, Imperial, UCL) have developed innovation districts. These districts drive interactions between large technology companies, high potential start-ups, entrepreneurial initiatives and universities; enabling the development of an amplified innovation culture and set of infrastructures which attracts investment and enhances competitiveness.

For Ireland to remain competitive we need to create an environment which can enable a porous interface to exist between the enterprise and academic community, between indigenous and multinational companies, between our national research centres and our entrepreneurs. These interface must enable the two-way flow of ideas, people, funding and ambition.

Globally interfaces of this kind have been enabled by the establishment of innovation districts which cluster together entrepreneurs, start-ups, business accelerator, incubators, world class research and growing global businesses. These districts thrive on the establishing an environment where there is both a high density and proximity of innovation actors and by creating infrastructure – physical and social – which activates these communities to create amplified economic return.

In essence what is required is the establishment of an innovation equivalent to the Irish Financial Services Centre. An ambitious initiative that can transform the national activity and the international reputation of Ireland as a globally competitive home for innovation.

Innovation District Dublin:

The rapid development of the national innovation story is also mirrored in the Trinity story. In the last twenty years Trinity has continued to enhance its connections with industry and now has research collaborations with over 400 companies; is leading in creating high potential start-ups and in licensing its globally ranked patent portfolio to industry.

These developments have focussed Trinity on the unique role it can play for Ireland in supporting the development of an innovation district in Dublin. These realisations are driving ***Trinity's plans for a second campus in the heart of the Dublin Docklands*** which has been dubbed Ireland's Silicon Docks and is already home to many IT world leaders and users including Google, Yahoo, Facebook, Twitter, Dropbox, Airbnb and Trip Advisor. This new campus will be known as the Trinity Technology and Enterprise Campus (TTEC).

Trinity has already 5.5 acres of prime real-estate based on the grand canal and co-located within 400m of the following European HQ for Google, Twitter, LinkedIn, Facebook, HubSpot etc. The new TTEC campus can potentially provide up to 110,000m² when complete and can bring together world leading research; the most innovative companies globally – both large and small; and a location which will act as innovation and enterprise hub for Dublin and Ireland.

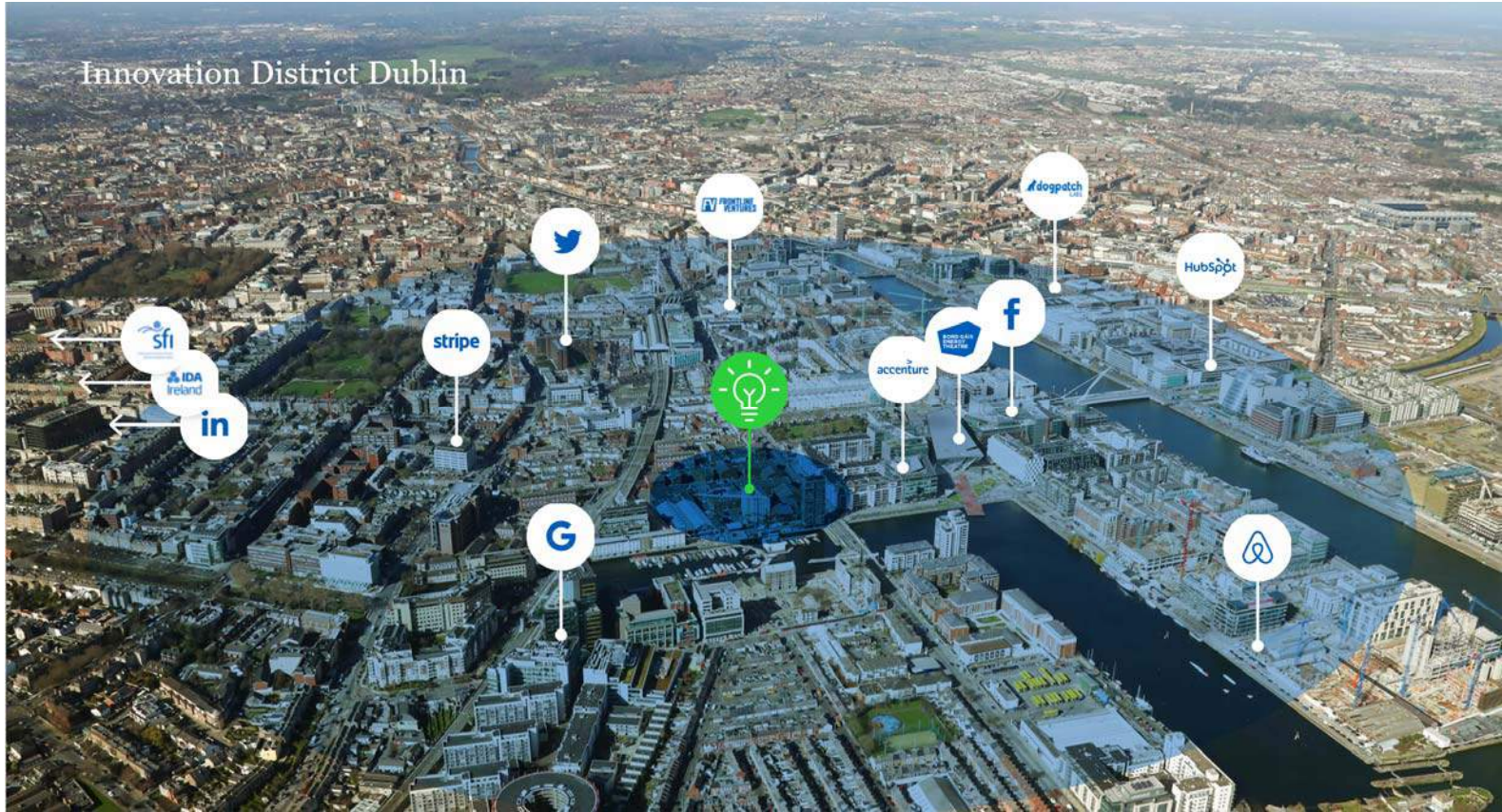
The campus will provide a unique and essential component of new infrastructure in Dublin; which would enable the formation and international marketing of an **"Innovation District Dublin"**. The campus would encourage new teaching methods and true co-operation across disciplines to produce more graduates with the sort of skills necessary in a modern economy. This is vital for future development but the campus would also have the potential to transform how Dublin can be positioned as an innovation leader and an attractor of foreign direct investment. It could enable real connection from a research, innovation, talent development and commercialisation perspective of Ireland's leading university and the world's leading companies.



Trinity College Dublin
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Location for Trinity Technology and Enterprise Campus and the Innovation District Dublin – Silicon Docks



Innovation District Dublin – Trinity Technology and Enterprise Campus surrounded by global innovation leaders



What is evident from the best practice models is that the silicon docks location in Dublin has many of the required attributes to become an effective innovation district. However, without an anchor institution the value of the other critical components in this district cannot be fully leveraged or harnessed. **Trinity College Dublin is the ideal anchor institution for the establishment of the Innovation District Dublin and is committed to playing that role for Ireland.**

Economic Impacts

The campus would enable significant economic and innovation impacts for Ireland including:

- the enhanced training of increased numbers of both undergraduate and postgraduate students in E3 – educated in a new unique environment linked to excellent research and industry.
- increased international competitiveness of Irish research as measured through international research income; the attraction of the best academics and students globally; the development of large scale strategic relationships with industry and the spinning out and in of high potential companies
- a globally benchmarked 12,000m² co-working enterprise space run by Cambridge Innovation Centre (CIC) who are recognised as the world leaders in running innovation spaces and run comparable spaces in Kendall Square in Boston, St Louis; Philadelphia, Miami and Rotterdam.
- a globally connected innovation community.
- a landing site for new FDI companies; an innovation space for existing FDI and indigenous companies.

A full economic impact study will be complete by Q4 2017.

First Steps Taken:

Dublin has a growing international reputation as a location of choice for the world's more innovative companies and also as a location for the development of high potential start-ups. It's time to capitalise on that reputation. To that end, Trinity has signed a Memorandum of Understanding with Cambridge Innovation Centre¹ (CIC) which is considering establishing a presence in Dublin. CIC is the global leader in co-working space management and in enabling the development of innovation districts.

Trinity is commencing the appointment of a master planner to develop a detailed plan for the TTEC site. Part of this process will include a detailed engagement with external stakeholders on the requirements needed to establish a globally competitive innovation district.

Trinity would welcome the opportunity to engage the NPF for a more detailed discussion of the potential of a new innovation district in Dublin.

Conclusion:

Universities have always played a role in the advance of society but that role changes as society changes. Both Ireland and Trinity have changed almost beyond recognition in the past few decades. It is time that the university and the state combine forces with industry to create an eco-system that fosters indigenous start-ups and works with foreign direct investment to ensure that these investors deepen their roots in Ireland. The lesson of the Irish Financial Services Centre is that concepts such as a financial or innovation district, that work well elsewhere in the world, can also be transferred to in

¹ <http://cic.us/>

Ireland if imagination and ambition are allowed to work in tandem. Ten years ago, it seems likely that a scheme of this ambition would not have been entertained by either Trinity or the state but circumstances have changed as the geo-political environment alters for good and as universities re-invent themselves to play new roles alongside their historic mission to teach and research. Trinity hopes that the National Development Framework will find space for this plan to use Trinity as a catalyst for the creation of a real, deep-rooted innovation district in the centre of Dublin.