

OPEN INNOVATION IN THE URBAN KNOWLEDGE ECONOMY

THE REPOSITIONING OF UNIVERSITIES TO SUPPORT THE DEVELOPMENT OF CITIES
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Cities are increasingly engaging with the knowledge economy as a mechanism to enhance social and economic development and to enhance their future sustainability. Approaches to date have been driven on an action by action basis with little or no development of frameworks that support interaction between the city stakeholders in a knowledge economy. Perhaps one of the most important developments of recent years is the recognition that accessing external knowledge and expertise rather than relying solely on the capabilities of an organisations internal staff and resources is critical to improving the competitiveness and innovation performance of organisations. In an urban context local authorities and municipalities in collaboration with universities can reposition themselves to support the development of cities through innovation and creativity and the adoption of an open innovation approach.

As identified in the [URBACT II RUnUP Network](#) Baseline Study, defining the knowledge economy has been the subject of significant debate and while a number of general definitions have been articulated no single definition has been able to capture all aspects of the commodity that is knowledge. Given this confusion an alternative argument has emerged that the knowledge economy is not a new phenomenon and that "the economy has always been driven by knowledge leading to innovation and technological change and knowledge based institutions have helped store and share knowledge for centuries. What we see today is essentially more of the same but operating on a bigger scale and at a faster pace".

The increased mobility of employees, access to venture capital funds, the changing role of supplier companies and the increasing number of ideas that remain undeveloped within the corporate environment has seen a new focus on the utilisation of knowledge which is held not just by a company but by its employees, suppliers, customers, clients and competitors. The term "open innovation" was first articulated by Chesborough (2003), as an approach for increasing the efficiency and effectiveness of the innovation process. By opening up innovation to the ideas of suppliers, distributors, professionals of various kinds and, above all, end users it was possible to develop better products and services that were more in tune with customer preferences and needs. Originally the idea referred to opening up innovation among firms and particularly SMEs - but the concept of open innovation can also be broadened to public services and to traditional municipal functions like planning and the design of public spaces and buildings.

Eurico Neves, the lead expert of the thematic network UNIC in his article "[Bringing down the City Walls 'open innovation' for new open cities](#)" has highlighted the background to open innovation and the need for cities to reposition themselves through innovation and creativity. In particular his article recommended the creation of spaces where interaction can take place (e.g. Living labs) attracting talent and skills to innovation processes, technological infrastructure and investing across boundaries as a mechanism for expanding innovation capacity and capability within cities.

Open innovation models are seen as creating value by leveraging many more ideas, due to their inclusion of a variety of external concepts, and can also enable greater value capture, by using a key asset, resource, or position not only in the organisations own business model but also in other organisation's businesses.

Eurico Neves in his article highlighted the role of universities in this urban context and the traditional gap between universities, research centres and business concluding that universities are in effect working within a closed innovation system.

The URBACT II RUnUP thematic network has established similar conclusions. Universities are positioned as mechanisms for research and development and subsequently licensing, patenting and spin-outs. However an economic development perspective examining the needs of the local economy, its modernisation, transformation, transplantation and new sector creation establishes common ground where local priorities can be articulated and the role of the university in this context can be openly explored and suitable knowledge transfer approaches defined in support of triple-helix development.

RUnUP addresses in a uniquely different way the fundamental issues of how universities should engage with their local communities with a particular focus on medium-sized cities; the role of local authorities and municipalities and the importance of triple helix structures for supporting economic development and encouraging entrepreneurship. Rather than simply starting from the existing supply of research in universities, RUnUP looks at the needs and “absorptive capacity” of local firms and how these two worlds can be opened up to each other in a way that generates knowledge that is conducive to local development.

This article looks at how the concept of “open innovation” can help medium and small sized cities to become strong players in the knowledge economy. It argues that these cities have an important role to play in opening up the traditional top down research driven models, followed by many universities, to the real needs of local firms. It provides two practical examples, one from the city of [Tampere](#), Finland, and another from [Coventry](#), England of how cities can use open innovation as a “tool for economic development”. These findings from the RUnUP network are important for all those people who are concerned to ensure that that the next round of “smart growth” really benefits all types of city rather than leading to further concentration and segregation.

Open Innovation as a tool for Urban Economic Development

Our urban economies are undergoing fundamental change. The rapid growth of global markets with the development of information and Communications Technologies has permanently altered our economic base. In this environment cities need to establish strategies that bring together new partnerships and collaborations.

The EU 2020 strategy for smart growth and recent EU communications on innovation has recognised that too many regions have simply tried to copy the global champions of innovation without understanding their own unique capabilities, specific opportunities and practical limitations. As a result this has led to costly duplication and investments which have little chance of succeeding on world markets. As a result the Commission has recommended that regions and cities should now adopt “smart specialisation strategies” by focussing on innovations which apply and adapt knowledge (produced elsewhere) to the specific needs of local firms and inhabitants. The cities involved in RUnUP have been tackling this issue head-on by understanding how nearby universities can build on the real the strengths and weaknesses of their main local industries.

Open innovation in this context has the ability to accelerate collaboration within and between urban areas of the European Union, creating new business opportunities and responding to community needs, impacting on quality of life, living conditions and employment. The experience gathered by the URBACT RUnUP thematic network suggest that, a collaborative approach within and between urban areas and municipalities, of thinking and acting together will bring competitive advantage. Successful urban areas need active promotion of their identity, their core values and strengths and their future opportunities. But open innovation still requires knowledge and a skilled workforce to provide a sustainable competitive advantage, but one that is based within a connected environment with quality networks, workplaces and creative spaces that enable connections to people and markets. Such innovation networks are vital for the creation of wealth through new products, new services and new markets, translating ideas into prosperity.

Examples from European Cities

Cities all over Europe are exploring the opportunities offered through an open innovation approach, each with their own particular emphasis and issues. To illustrate this below are 2 different case studies. The first is the RUnUP study visit city of Tampere, where a creative space has been established to support the development of innovation and entrepreneurial networks between companies and university students. The second is the RUnUP study visit city of Coventry, where the university has established a collaborative partnership approach to innovative and entrepreneurial networks supported by connected environments and shared spaces for university-firm interaction.

→ Tampere

The new Finnish innovation strategy recognises that paradigms are changing in relation to the individual, value creation, globalisation, demographics, services and knowledge. It is clear that current strengths will not suffice to meet future challenges. At a local level this has seen a significant change in the Tampere innovation model. This is a bold approach as it is based on new policy development for the local area rather than one based on lessons learnt from elsewhere.

A central feature of this development is the [Demola](#) open innovation platform located in Tampere. Demola is a 'demo factory', a multidisciplinary open innovation environment where researchers and students can co-create and develop new digital products and services with global market potential. Companies provide project ideas, concepts and guidance for student teams, who then develop the ideas further by building demos and test beds, doing trials and analyses, and creating business models.

Partner companies give continuous guidance to the student project teams through weekly meetings, workshops and one-to-one support. Demola staff provide additional support on project management, development models and working methods. Companies implement suitable projects or the projects generate new start up businesses.

The shared physical workspace of Demola has proved to be an important factor in fostering co-creation and an open innovation community. Demola is not just a work place but also an environment that is beneficial to innovation and provides an atmosphere open towards new working methods and continuous interaction.

Student teams are working with unproven concepts that need novel solutions. This reinforces the importance of a shared space because it enables teams to tap into the Demola community for problem solving and the creation of new ideas. Best practice can be identified and distributed to other teams as well in such a close working environment.



Tampere's DEMOLA Open Innovation Centre

In many teams, there are students from several universities or colleges. Having a neutral location that is conveniently located in the city centre of Tampere has enabled unbiased and constructive collaboration among people from different academies and organisations. As a result of its approach the project is supporting in excess of 400 students per year and 80 projects.

→ Coventry

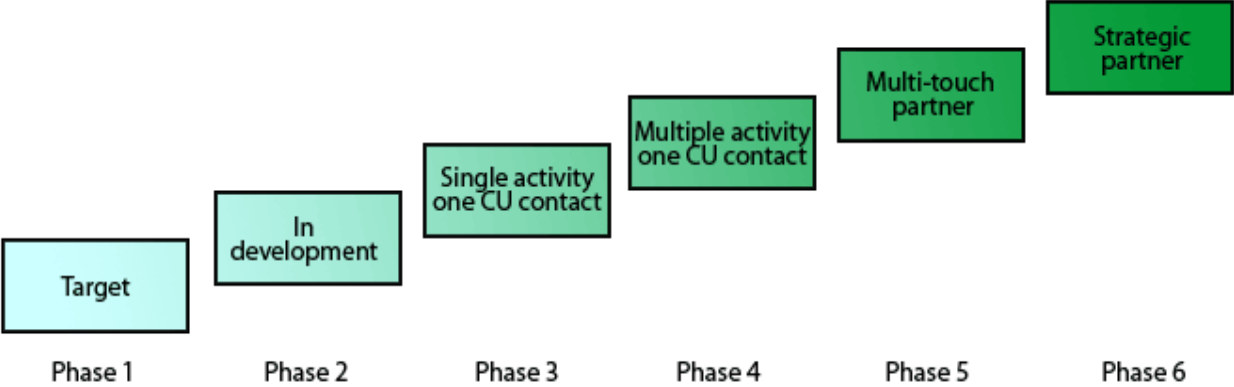
[Coventry University](#) in our context of open innovation combines a broad base of academic excellence and expertise with a focus on applied research, enhancing external community interaction and achieving a status as a successful, business-facing university.

The University values the partnerships it develops and believes in investing time and effort to strengthen these relationships, turning them into long-term strategic alliances. Just as these alliances influence teaching, so to business solutions are supported by the latest thinking and research from industry-leading names at the University. Coventry University has produced a simple partnership development process and methodology (below) aimed at promoting a culture of knowledge sharing and improved partnership working. The aims of which are to:

- Implement a partnership development framework at all levels of the University
- Formalise the multi-touch and strategic collaborations where the university works with the same organisation on multiple activities and where there is a strategic development relationship between organisations.
- Increase the number of partners at all partnership development phases, including individual projects.
- Improve knowledge sharing regarding current and future partnerships
- Improve current knowledge management systems to increase internal communication
- Work towards a culture of information sharing and improved partnership working

Led by the Corporate Partnership Unit, the University has a number of strategic alliances across different sectors of industry. These partnerships enable the University to develop opportunities and raise its profile, leading to better quality of services delivered to students. The partnerships take many different forms ranging

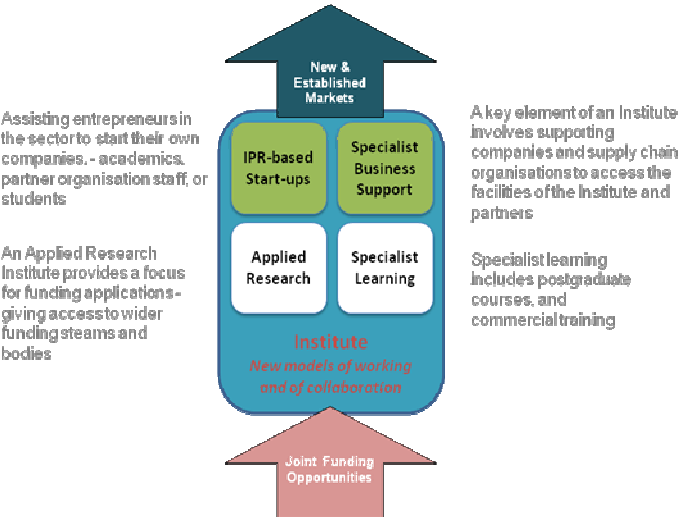
from long-term strategic alliances with larger companies to smaller project-based collaborations with SMEs.



Coventry University Partnership Development Framework

In line with an open innovation philosophy, the University classifies its Applied Research as activities ranging from traditional academic research and collaborative research with partners, through to knowledge transfer activities, consultancy and continuing professional development. Applied Research expertise at Coventry University is clustered around specialist Centres, Groups, & Institutes. Through its Research Institutes, the University provides high quality buildings and facilities to support staff and partners undertaking applied research activities. The aim of each institute is to create an environment which supports a unique combination of commercial activity and academic research. Coventry University offers 3 examples of this approach.

The Institute Model



Coventry University Applied Research Institute Model

The Health Design & Technology Institute (HDTI) is an innovative research institute and dedicated facility championing a national initiative to provide better community healthcare products and services for the elderly and people with disabilities. The institute brings together SMEs, large corporate businesses, healthcare practitioners, patients, and carers to develop new products and services for the self-management of improved health and well-being. As a result of this activity the HDTI supports 65 business-university collaborations on an annual basis.

The Serious Games Institute (SGI) is a dedicated facility for applied research, business incubation and demonstration; supporting and showcasing the emerging serious games industry. Serious games use gaming technology and virtual worlds for a primary purpose other than pure entertainment. Applications include defence, healthcare, and emergency/disaster management scenarios.

The Institute for Creative Enterprise (ICE) nurtures and develops graduates and arts based businesses into creative enterprises; supporting the performing arts, arts practice, media, communication and cultural studies. In addition ICE provides a dynamic environment for researchers and practitioners to develop unique interdisciplinary research activities in the creative industries. As a result of its activities the institutes deliver 30 business-university collaborations on an annual basis.

Open Innovation and Universities

As was identified in the RUnUP network baseline study the focus of a university even among the so called 'producing class' is on intellectual property right protection, licensing and spin-out company development delivered through a 'push model' as a basis for revenue generation rather than collaboration in its truest sense. Yet historically a significant proportion of our universities have been born out of the need for research and industrial collaboration with firms, particularly in key sectors (e.g. automotive, ICT, pharmaceutical).

But this is not the only issue, collaboration with our universities is perceived as high cost, where the objectives of the partners are often divergent resulting in misunderstandings regarding the aims of collaboration and the priority given to the delivery of activity.

Against this background open innovation provides a real opportunity for the universities in our urban centres to integrate external sources of knowledge and expertise into the innovation processes of firms. The management of intellectual property (IP) is important and the case of Demola in Tampere can be used as a reference site where IP rather than being "left on the shelf" and undeveloped is assigned to students by firms for the development of ideas, and where a project is successful returned to the company for a fee.

At a theoretical and to some extent a practical level universities can be considered a part of the open innovation paradigm, they enable businesses to access and use external knowledge, expertise and resources for bringing new product and service innovations to the marketplace. This 'absorptive capacity' as a driver of innovation and creativity is as fundamental to competitiveness as the production of knowledge through research and development in itself. Geographical proximity is particularly important in this context, however innovation and entrepreneurial networks operating on a more informal basis are seen as more important for knowledge exchange.

Universities rather than being 'ivory towers' could provide neutral, shared spaces where collaboration between university staff and students can take place with industrial researchers, SMEs and users. The models of Demola (as a neutral location in the city) and of Coventry (for partnerships and applied research) provide suitable case examples of how the use of a shared creative and innovative space could be delivered. This would provide for the development of trust, relationships and information exchange, a shared space for 'soft innovation' and a physical space for networking with business angels, venture capitalists etc.

Concluding Remarks

Open innovation represents a clear opportunity for our urban knowledge economy. It will be the establishment of creative, innovative networks supported by quality

workplaces and creative spaces that will support the competitiveness of our cities and their role in the global economy.

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The universities in our cities need to move beyond their historic 'closed innovation' approach with its resultant focus on intellectual property right protection, licensing and spin-out company development with the target of increasing revenue generation.

The case studies from Tampere and Coventry provide practical examples of how universities can undertake a positive role in the development of our urban economies, supporting creativity and innovation through collaboration between the staff and students of a university and the local business community.

The operational actions being developed by cities within URBACT networks, particularly the RUnUP network and those within the innovation and creativity pole are a reminder that universities and the development of the knowledge economy more generally in our cities is of fundamental importance to competitiveness on a global level. Universities can complete a transition from a closed model of innovation to an open model that drives innovation and creativity and that can have a positive impact on our urban economy.

URBACT II

URBACT is a European exchange and learning programme promoting sustainable urban development.

It enables cities to work together to develop solutions to major urban challenges, reaffirming the key role they play in facing increasingly complex societal challenges. It helps them to develop pragmatic solutions that are new and sustainable, and that integrate economic, social and environmental dimensions. It enables cities to share good practices and lessons learned with all professionals involved in urban policy throughout Europe. URBACT is 300 cities, 29 countries, and 5,000 active participants

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