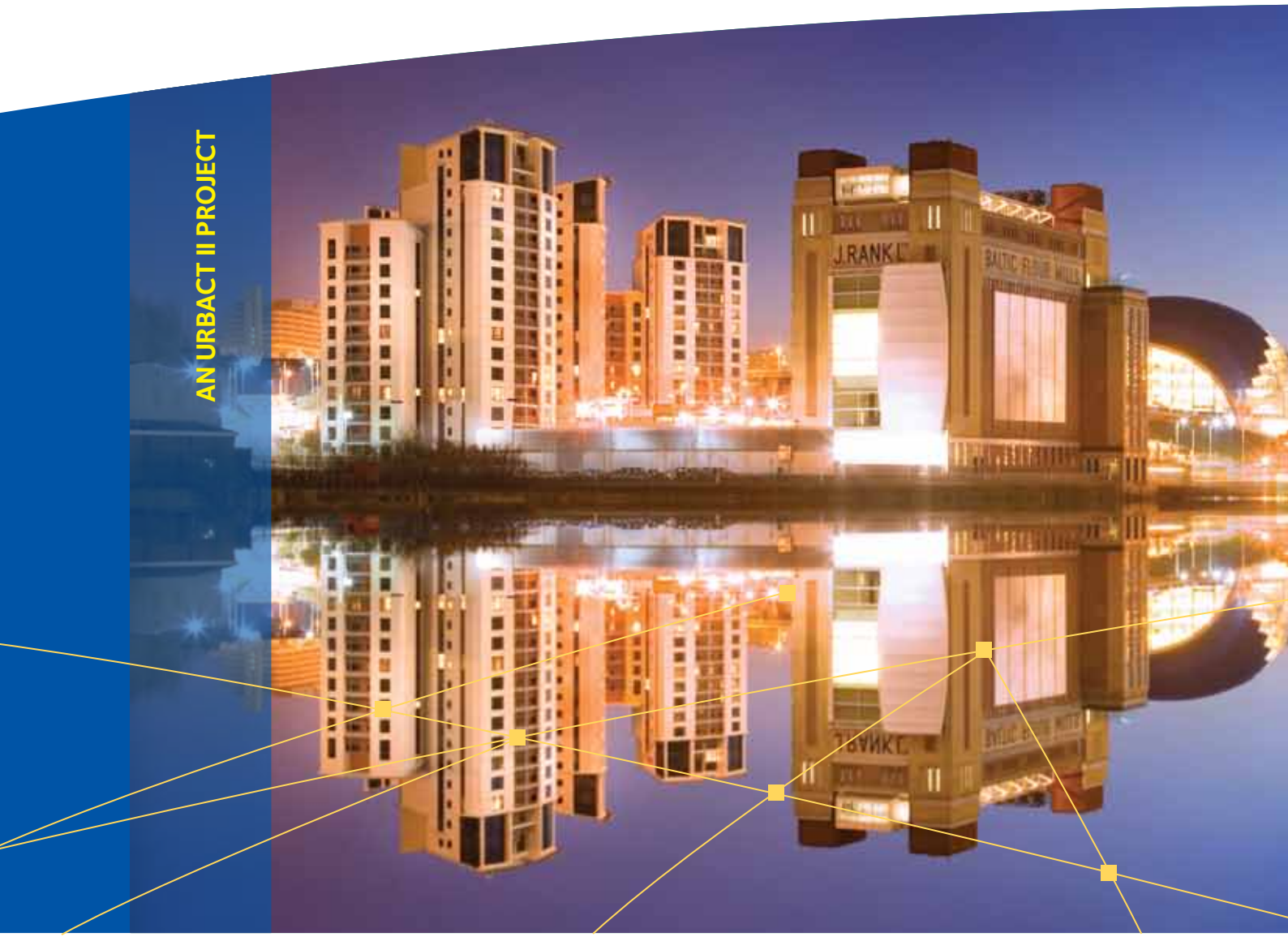
RUnUP Thematic Network Final Report

Conclusions and Recommendations

AN URBACT II PROJECT



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Executive Summary

The URBACT II Operational Programme is based on two thematic axes: Cities, Engines of Growth and Jobs; and Attractive and Cohesive Cities. The focus on Cities as Engines of Growth includes prioritisation of networks that address the promotion of entrepreneurship, the improvement of innovation and the knowledge economy, and employment and human capital.

The URBACT II part-funded Role of Universities for Economic Development in Urban Poles (RUnUP) thematic network is primarily directly engaged in the improvement of innovation and the knowledge economy, and at a secondary level, the promotion of entrepreneurship.

The RUnUP network and the engagement of URBACT Local Support Groups (ULSG) in each of the nine partner cities has addressed 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. RUnUP partners consider this task fundamental in supporting clusters in line with the innovation drive of European policy.

RUnUP has aimed to support all relevant stakeholders in all areas of urban development to ensure participation, investment, and continued movement towards achieving sustainable economic growth in all regions of the European Union.

This final report highlights the key conclusions of the RUnUP network, focussing on the approaches of the project partners to: the understanding of economic transformation and the governance of innovation; the role of universities and local authorities in supporting local economic clusters and competencies; and the strengthening of triple-helix cooperation to improve knowledge exchange and technology transfer.

In the area of understanding economic transformation and the governance of innovation, the work of RUnUP has concluded that:

- Leadership at a local level is crucial to developing the knowledge economy.
- Political influences need to be balanced to ensure a continuation of activity and progression.
- A visionary approach is required to support future economic growth.
- An economic development strategy is fundamental to support transformation.

As a result of RUnUP, it is recommended that:

- Local and municipal governments above all need to provide strong political engagement and drive operational change if their urban areas are to establish a strong profile in the knowledge economy.

In the area of the role of universities and local authorities in supporting local economic clusters and competencies, the work of RUnUP has concluded that:

- Universities need to identify the importance of business and local society collaboration within their mission and vision.
- Universities need to understand and map their strategic relationships.
- Traditional research and development commercialisation approaches need to be recognised as limited for supporting economic development within urban areas.

As a result, it is recommended that:

- European funding programmes need to recognise the wider role that universities can support in urban development and the role of local and municipal government in innovation and research and development-led economic development.
- National Member States need to recognise the importance of business and community engagement alongside the education and research activities of their universities.

In the area of strengthening triple-helix cooperation to improve knowledge exchange and technology transfer, the work of RUnUP has concluded that:

- Platforms need to exist where local actors can come together and where the challenges of local SMEs can be addressed through triple-helix partnership.
- Appropriate conditions need to be created by local triple-helix partners for the stimulation of knowledge based activities.
- There is a need for knowledge intermediaries to transfer knowledge to business.

Overall, the adoption of an economic development perspective within RUnUP which has examined the needs of the local economy, its modernisation, transformation, transplantation, and new sector creation, has established common ground where local priorities can be articulated and the role of the university can be openly explored, with suitable knowledge transfer approaches defined in support of triple-helix development.

THE URBACT II Operational Programme

1. Improving the Effectiveness of Sustainable Integrated Urban Development Policies

1.1 Introduction

Cities have a vital role to play in the achievement of the Lisbon and Gothenburg strategy aims. The Leipzig Charter offers common principles and strategies for urban development policy. The URBACT II Programme facilitates this task by allowing cities to exchange experience on key urban policy fields. The overall objective of URBACT II is to 'improve the effectiveness of sustainable integrated urban development policies in Europe with a view to implementing the Lisbon-Gothenburg Strategy'.

The URBACT II Programme brings together key actors at local and regional levels to exchange experience and learning in a wide range of urban policy themes, which focus on achieving the main objective of improving the effectiveness and impact of such policies at urban level. The Programme includes a strong capitalisation and dissemination element, with a view to defining action plans that can be included in mainstream programmes and to communicate the results as widely and effectively as possible.

For more information on URBACT II Operational Programme visit: http://URBACT.eu

1.2 URBACT II and the knowledge economy

The URBACT II Operational Programme is based on two thematic axes: Cities, Engines of Growth and Jobs; and Attractive and Cohesive Cities. The focus on Cities as Engines of Growth includes prioritisation of networks that address the promotion of entrepreneurship, the improvement of innovation and the knowledge economy, and employment and human capital.

The Role of Universities for Economic Development in Urban Poles (RUnUP) thematic network is primarily directly engaged in the improvement of innovation and the knowledge economy, and at a secondary level, the promotion of entrepreneurship.

As outlined in the URBACT Operational Programme, the EU Member States have placed innovation and knowledge at the very heart of the European strategy for growth and job creation.

Cities are in a position to contribute to this strategy, and to benefit from it in terms of sustainable urban development, by giving a significant role to those sectors where added-value is largely linked with ideas, innovations, knowledge, and new information and communication technologies (ICT).

Introduction to the RUnUP Thematic Network

2. Role of Universities for Economic Development in Urban Poles

2.1 Network partners

LEAD PARTNER: Gateshead Council (United Kingdom)

PARTNERS: Águeda (Portugal), Barakaldo (Spain), Campobasso (Italy), Dunkirk (France), Leszno (Poland), Patras (Greece), University of Potsdam (Germany) Solna (Sweden)

LEAD EXPERT: Clive Winters (United Kingdom) Coventry University Enterprises Ltd

2.2 Network overview

The URBACT II Programme recognises the urban contribution to growth and jobs and that cities are home to innovation, entrepreneurial spirit, and economic growth. Priority Axis 1 of the Operational Programme in particular recognises the important themes of promoting entrepreneurship and improving innovation and the knowledge economy, and the development of triple-helix structures as catalysts to promote innovation structures and entrepreneurial spirit.

Medium sized cities as 'Urban Poles' are critical to driving forward EU economic performance and innovation competence within the context of the Lisbon Strategy. The strategic development and exploitation of endogenous potentials is crucial and universities are critical to this innovation process. A specific issue facing Urban Poles is that they cannot make sufficient use of existing knowledge and competencies of their universities to support economic development and encourage entrepreneurship.

In support of this, the RUnUP (The Role of Universities in Urban Poles) network and the engagement of URBACT Local Support Groups (ULSG) in each of the nine partner cities has addressed 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. RUnUP partners consider this task fundamental in supporting clusters in line with the innovation drive of European policy.

RUnUP has aimed to support all relevant stakeholders in all areas of urban development to ensure participation, investment and continued movement towards achieving sustainable economic growth in all regions of the European Union.

2.3 RUNUP outputs and deliverables

RUnUP has produced a wide range of outputs and deliverables:

- A Baseline Study - exploring the starting position of each partner city in RUnUP, detailing the state of the art in university-urban cooperation and highlighting the key challenges that needed to be addressed by RUnUP.
- Three Study Visit Reports - highlighting the role of universities in three European cities in Finland, the Netherlands, and the United Kingdom.
- Three Thematic Event Reports - reporting on thematic events in the RUnUP Partner cities of Águeda, Potsdam, and Barakaldo that focussed on Triple-helix Co-operation, Science-Business Marketing, and Talent Attraction and Retention.
- Two Conference Reports - reporting on the opening and closing conferences of RUnUP which took place in the Lead Partner city of Gateshead.
- Nine Local Action Plans - developed by each of the RUnUP Partner Cities that address in detail the actions they will deliver to enhance the role of their local universities in their urban areas.
- A Compendium of Best Practice - highlighting case studies from each of the RUnUP partner cities on approaches to university-city cooperation
- A Best Practice Paper on URBACT Local Support Group Development - highlighting the development of URBACT Local Support Groups and good practice approaches established by the partner cities of RUnUP in line the guidance from URBACT on ULSG development.
- Two Hot Topic Articles - written by the RUnUP Lead Expert on the role of universities in times of economic crisis and the role of universities in open innovation.

PART A

3. General conclusions

3.1 Introduction

Cities are widely recognised as playing a fundamental role in the promotion of the knowledge economy, but most research and policy has focussed on large cities with World-class educational and research institutes and advanced clusters of economic activity.

There are clear and significant gaps in the knowledge of how smaller-sized cities, with different levels and types of knowledge institutions and different levels of economic activity, can compete within the knowledge economy - yet such cities are recognised within European Union policy as playing a vital role.

For a local economy, engagement in knowledge-based industries (although they do not fully represent the scope of the knowledge economy) can have a significant impact. Understanding the dimensions of the knowledge economy is critical, as the profitable utilisation of knowledge can have a significant impact on the modernisation of existing industries through technology adoption, the diversification of existing industries into new economic sectors, the transplantation of industry (inward investment), and creation of new indigenous industries.

Part A of this final report highlights the key conclusions of the RUnUP network, highlighting the approaches of the RUnUP project partners to the understanding of economic transformation and the governance of innovation, the role of universities and local authorities in supporting local economic clusters and competencies, and the strengthening of triple-helix cooperation to improve knowledge exchange and technology transfer.

3.2 Understanding economic transformation and the governance of innovation

To a large extent, the local government organisations of Europe see universities primarily as vehicles for education and research & development, and expect them to support the enhancement of their local economy by default - although universities operate in regional, national, and international markets and are not entirely (if at all) aligned to local priorities.

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.

3.2.1 The governance of innovation

Since the early 1990s, European Policy has focussed on the enhancement of innovation and competitiveness at a regional scale. At a geographical-level, a region represents a 'manageable' territorial scale where policy measures and strategies can be effectively developed, implemented, and managed. As such, regions have been a core focus of activities including: Regional Innovation Strategies; Regional Innovation and Technology Transfer Strategies; Regions of Knowledge; and importantly, the delivery of European Structural Funds.

This has provided a platform where the role of universities can be addressed - in particular their role in research & development, knowledge and technology transfer, and skills development. However, this has established a gap between the university and its immediate geographical area, e.g. the City/ Municipality area where the interaction may be limited.

- **Leadership at a local level is crucial to developing the knowledge economy**

The URBACT II network methodology emphasises the importance of Local Support Groups as a key driver for the development and implementation of actions at a local-level. The ULSG approach is particularly important in developing the role of universities within our urban centres and creating a triple-helix of local authority (municipality), university/ higher education institutes, and the business community.

The RUnUP baseline study highlighted that universities play a critical role in the creation, development, and dissemination of knowledge, and that the focus of universities can be multi-geographical with operations at a global, national, regional, and local-levels.

As a result, it is clear that organisational leadership is crucial to the development of local triple-helix partnerships and the ongoing leadership of innovation. As identified in the baseline study, local authorities and municipalities are generally the only stakeholders with a unique focus and emphasis on the development of the city. As a result, cities need to prioritise and widen their economic development activities and services to establish deeper and more targeted relationships with their universities and knowledge based partners, whose activities and expertise align most appropriately to their key economic transformation activities. They also need to act as the primary actor and facilitator in linking the resources of knowledge-based organisations with businesses.

Innovation and entrepreneurship are, to a great extent, built upon the effective exchange and absorption of knowledge. The partners in the RUnUP network need to enhance their individual and organisational knowledge of their local and regional knowledge-based institutions. Only by understanding the structures, key contacts, key research and educational themes, and existing approaches of universities to working with their local economy, can they support the development of triple-helix structures and the alignment of university activity to local economic development priorities.

The RUnUP network cities of Águeda, Barakaldo, Dunkirk, Gateshead, and Leszno, have adopted strong leadership approaches where they have committed to enhancing and mainstreaming their economic development approaches above and beyond the continuation of the ULSG following the completion of the RUnUP network.

In Águeda, one of the most important aspects of the RUnUP network has been the establishment of the Local Support Group composed of major stakeholders, which although not unprecedented in Águeda, has been important for strengthening the formal and informal networks that underpin the triple-helix approach.

In Barakaldo, Inguralde (the public agency for economic development) has produced an economic strategy with the support of universities and enterprise. Enterprises will provide know-how and product and services needs, and the university will provide training plans, research know-how, and materials. Through the collaboration of stakeholders, it is expected that Barakaldo will develop innovative strategic actions which produce outcomes that generate wealth and employment in the city.

In Gateshead, the URBACT Local Support Group has been approved as a sub-group of the Economy, Skills, Housing and Transport Partnership. Acting as the Business and Innovation sub-group, the ULSG will monitor and amend the delivery of the Local Action Plan after the completion of the RUnUP project.

For Leszno, the experience gained through co-operation within the triple-helix structure that was established through RUnUP, has shown that sharing information and knowledge among the representatives of business, local authorities, and universities, is necessary and contributes to the creation of opportunities in the development strategy of the city. These structures will be extended to the whole of the local sub-region with the addition of specialised partnerships that will ensure the successful transfer of knowledge to support local economic development and growth.

In Dunkirk, the Greater Dunkirk Council has for a considerable time supported and invested in the development of its local economy. It has done this through providing services, materials, and scientific research in key areas: employment; economic promotion; help for start-ups; and university development.

- **Political influences need to be balanced to ensure a continuation of activity and progression**

The URBACT II network and working group methodology recognises the need that to ensure effective delivery at a local-level, political support at the highest-level is required. From a governance of innovation perspective, there is a need to ensure a long-term approach to collaboration and economic development, in which continuation and progression of activity is assured. Without this, the role of the local authority and municipality is extremely limited.

The delivery of RUnUP has highlighted that an over-reliance and emphasis on political engagement can cause delivery issues where a change of Mayor or governing political party occurs. Where activity and commitment has not been mainstreamed, this often means that activity is delayed or suspended. The collaboration between the city and its partner universities represents a politically-neutral activity that should be supported by all, regardless of political affiliation.

At the opposite end of the spectrum, RUnUP has seen a minority of cities where limited political engagement has occurred. While Local Action Plans have been developed in these cities without full political support, there remains an ongoing doubt regarding the sustainability of the triple-helix approaches established for RUnUP with local stakeholders and the mainstreaming of delivery activity.

As a result, to successfully deliver innovation and economic development activity building on triple-helix co-operation, there is a requirement to balance the need for political engagement with the requirement to mainstream economic development approaches and triple-helix co-operation. The RUnUP cities of Águeda, Barakaldo, Gateshead, and Leszno, highlight best practice in this area.

In Águeda, the Mayor has taken an active role in the delivery of RUnUP, engaging in the delivery of activities at a local-level alongside leading a thematic event and participation in the final conference. However, day-to-day activities were delivered by officers of the municipality. While the Local Support Group undertook a decision-making role and actively participated in project activities, a working group was established to deliver on the actions. The creation of this working group represented the formalisation of the local triple-helix, strengthening the institutional relationships between the representatives of the municipality, university, and business, leading to the development of other parallel joint projects.

Similarly, in the City of Barakaldo, the local municipality has allocated the role of leading the development of triple-helix relationships to its economic development organisation - Inguralde - which has responsibility for employment and training, entrepreneurship, and business and trade.

The continuity of activity has been secured through the establishment of a triple-helix partnership between the local administration, university, and business. This partnership included Barakaldo City Council and Inguralde (Municipal Independent Body for Local Development); Higher Technical School of Industrial Engineering, Technical School of Mining and Public Works, and the Faculty of Economics and Business (University of the Basque Country); Bilbao Chamber of Commerce and Industry; Leroy Merlin; IKEA; Xupera; and Innovalab.

In Gateshead, political engagement has been secured by regular briefings to elected members, the involvement of the Leader of the Council in the RUnUP conferences, and participation of elected members in URBACT events. Alongside this, the governance of innovation and economic development at the local-level has seen the URBACT Local Support Group approved as a Business and Innovation sub-group of the Economy, Skills, Housing and Transport Partnership.

This group has a focus on developing a triple-helix structure and encouraging economic development through the exploitation of innovation. Through the Business and Innovation sub-group, the Local Action Plan will be delivered, with a continual review and refreshing of the programme as the priorities within Gateshead change.

Political engagement has also been strong in Leszno, where the President of the City appointed the members of the Local Support Group which included business, university, and municipality representation. An independent Chair of the Group was elected from business, with Deputy Chairs from the Regional Chamber of Industry and Commerce, and the Centre for Innovation and Technology Transfer.

3.2.2 Understanding economic transformation

The delivery of the RUnUP baseline study highlighted that local authorities and municipalities often deliver services that do no take account of local economic transformation, and that they do not mobilise knowledge and innovation based partners to support local economic development priorities. The result is local economic development that fails to take full advantage of university expertise and lacks clarity of what the actual local economic drivers are. The key to gathering and exploiting support at local level is to be aware of, and distinguish the state of, economic transformation within urban poles. This will lead to an understanding of the governance of innovation and the transfer of knowledge, and will also help to inform and shape economic development strategy.

- **A visionary approach is required to support future economic growth**

The articulation of a vision for a city is a critical point for its economic transformation. It defines the direction of travel and the key dimensions of the city to be addressed. As highlighted in the application of the RUnUP partner city of Potsdam in their application for European Capital of Culture, "It is from visions that the city and its citizens gather fresh energy. It is from the knowledge of visionary actions of the past, that they take courage for the future". The vision for the City of London, as articulated by the Mayor, provides a good example:

Over the years to 2031 and beyond, London should excel among global cities, expanding opportunities for all its people and enterprises, achieving the highest environmental standards and quality of life, and leading the world in its approach to tackling the urban challenges of the 21st century, particularly that of climate change. Achieving this vision will mean making sure London makes the most of the benefits of the energy, dynamism and diversity that characterise the city and its people; embraces change while promoting its heritage, neighbourhoods and identity; and values responsibility, compassion and citizenship

From an articulated vision, the key objectives of the city can be defined, the starting position established, and actions defined to meet the city objectives and long-term vision. For cities such as those in RUnUP who are looking to compete in the global knowledge economy, a clear articulation of their direction of travel, alongside a detailed understanding of their current position, is vital for identifying the most appropriate actions to be delivered and their implementation. Across the RUnUP partnership there is a cross-section of vision statements that have been established.

The policies adopted for Águeda in recent years have led to a cultural change, where issues relating to innovation have gained a new meaning and provided a new dynamic. In this context, the image that has been created as a local brand is, "Águeda: industry and city at the service of innovation and entrepreneurship" which reflects the support for research, development, and innovation, and the improvement of the quality of life for its residents. This is strongly reflected not only in the economic development strategy and actions, but in the approach and conviction of municipality staff.

For Gateshead, their vision is set out in the Sustainable Community Strategy (Vision 2030) and focuses on people and place. It seeks for local people to realise "their full potential enjoying the best quality of life in a healthy, equal, safe and prosperous and sustainable Gateshead".

By 2030, the aim is to make Gateshead an economically thriving city that is focused on people and unlocks the potential of local residents by giving opportunities and nurturing aspirations, increasing the GVA of the authority area. The Gateshead vision encompasses the complete dimension and perspectives of the city, however, it provides a limited statement on the direction of travel, but this is balanced within the Vision 2030 document for the city which provides a wider context.

A more balanced approach has been taken in Leszno, reflecting the needs for the city environment and city residents with a focus on the knowledge economy and economic development. Their vision has been articulated as, "Leszno is a medium-sized city offering its residents excellent conditions for living and good work places, especially in knowledge based economy, and it is also the services centre for the region with a wide offer in the area commerce, finances, science and higher education, education, culture, information, recreation and sport."

The development of a coherent and challenging vision for a city is a complex activity that is dependant on the city and its stakeholders having a clear understanding of their history, current activities, and future direction. The RUnUP partner city of Potsdam highlights this with the activities in its Local Action Plan, based on the "Vision for Potsdam" established in 2010 for its application for European Capital of Culture.

This identifies the visions that have shaped the city historically. The action plan developed for the city includes measures that build on this, helping to shape the city's profile as a science city, enhancing cooperation and communication between local actors, and enabling the city to utilise growth effects of the knowledge economy for both city and region.

In a similar context to Gateshead, the established vision of the City of Solna is to develop "Sustainable Solna", a city combining strong economic growth with respect for the environment and sound social development. While the drive for "Sustainable Solna" provides a clear view of where the City wants to be, it lacks the perspective on a direction of travel, but this is achieved through its articulation of target areas: economic growth; living environment; security; safety and care; and knowledge and lifelong learning.

From the RUnUP perspective of enhancing the role of universities in our urban areas, it is clear that having a clearly articulated vision for a city of what it wants to be and what it wants to deliver is critical. Three out of the five cities highlighted - Águeda, Leszno, and Potsdam - have articulated visions that encapsulate their focus on knowledge economy development and the importance of enterprise and innovation. This provides a real focus and direction that is clear and precise.

Our two other profiled cities have a clear commitment to enterprise development and to enhancing the role of higher education in their cities, however, this is balanced among other city priorities within the City vision.

- **An economic development strategy is fundamental to support transformation**

In order for the role of universities to be defined at a local-level, there needs to be a clear articulation of the economic direction of urban areas. For areas with strong university institutions, e.g. the RUnUP City of Solna, it is often the case that the institutional strategy of the university will drive the economy alongside the economic plans for the city. In other cases, where there is no institution within the city, then it is the role of the city authority to identify its strategic direction and link into regional universities and other knowledge actors to support economic transformation.

Essentially, there is a need for urban centres to understand:
Where their economy is now
What are the most important sectors?
- What state of transformation are they in?
- What is the data that supports this position?
- Is there agreement on the position of the city now?
- Where the city wants to be

What economic activities does the city want to be involved in?
- What are the drivers for this strategic direction?
- What alignment is there to city and regional strengths and capabilities?
- What structure is required to manage the 'economic development perspective' on an ongoing basis?); and
- What transformational activities need to be undertaken

What are the fundamental gaps between where the city is now and where it wants to be?
- What role do the key stakeholders have in this transformation process?.

Overall, the context here is that if a city authority or municipality is keen to engage with universities, then they need to be clear on exactly what they are engaging them about. Involving universities in the data gathering and current view of economic transformation is a good starting point in engaging them in the transformation of the economy.

In the delivery of the RUnUP network, a key issue at the outset was the lack of coherent information on the state of local economies, lack of clarity on drivers for change and transformation, and a lack of usable local data. The RUnUP partners have brought together representatives of their key triple-helix organisations to develop a joint response to these challenges. A comprehensive 'economic picture' has been developed to inform policy development and identify successful arrangements for the governance of innovation and economic transformation.

The development of the economic strategy in Águeda, from an analysis of the business community and the knowledge of the University of Aveiro and the School of Technology and Management of Águeda, (ESTGA), evidenced that there are strong relationships that can be established and identified the areas of high-potential for the formation of innovation networks. From this analysis emerged a set of clusters - namely habitat, mobility, tourism, and culture - that have a significant presence in the socio-economic fabric in the structure of the territory and cooperation between the business community, universities and local government.

Similarly, in the city of Barakaldo, strategic sectors have been established after an economic analysis. An intensive analysis, conducted by the URBACT Local Support Group, identified the strategic sectors of the current economy in Barakaldo as the energy sector, logistics, naval, tourism, sanitary and commerce. The immediate priority is seen to be support for the sanitary, logistics and commerce sectors, and these are supported by actions identified in the local action plan. Key challenges include cooperation of small enterprises, innovation, internationalisation, training, the development of new enterprises linked to knowledge, entrepreneurship promotion, and talent attraction.

Economic diversification is seen as the key challenge in Dunkirk, where the university contribution to the economy is seen as insufficient and the reliance on the energy sector for the local economy makes the future particularly uncertain, given the current global climate.

The focus in this case is on the diversification of companies into new knowledge economy areas linked to the environmental sector and sustainability, with particular links to the environmental research centre and developing entrepreneurial support services of the university. Specifically, the Greater Council of Dunkirk considers the development of a cluster of sustainable technology, supported by the involvement of the university in technology transfer and logistics, as a key development.

In addition, the development of an entrepreneurial and innovation culture is particularly important. In this context, the Council sees the importance of a strategy that targets: the development of emerging and potential new economic sectors; the creation of an entrepreneurial university campus; the attraction and retention of students, graduates, researchers and businesses; the establishment of an innovation culture; environment for SMEs; and the development of research & development projects with large and multi-national businesses.

Gateshead Council has undertaken a wide-ranging assessment of the local economy to help develop a better understanding of the issues facing the local economy and plan more effectively for the future. The assessment builds upon the aspirations of the Government's Local Growth White Paper, which explicitly states the central role of local authorities in supporting the economic development process. The overall aim of the Council and its partners is to create a better, well-paid economy, producing good quality jobs for skilled people.

Gateshead's population is predicted to rise to around 204,900 by 2033 - an increase of around 15,000. Long-term recovery scenarios predict a growing, more specialised, labour market with around 24,000 new jobs in Gateshead by 2037. Growth sectors are expected to include retail and construction, public administration and defence, wholesaling, hotel and catering, and business services, while machinery, equipment and paper, printing and publishing, are predicted to see the largest decline in jobs.

The evaluation of the status of economic transformation of Leszno confirmed the city's position as a services and industrial centre of the sub-region. Industrial production represents the main part of the city's economy, indicated by the number of economic entities, income structure and investment expenditure as well as employment. The city's production industry is mostly based on traditional sectors with low added value. It is desirable and realistic to further modernise this industry, develop innovative products and services in existing companies, and establish new enterprises both locally and through external investment.

The Municipality of Patras indirectly affect the economy through policies or by acting as catalysts for local interventions or initiatives. Historically, there have been sustained activities seeking to link the activities of Municipality of Patras with the knowledge community and academic sectors. The transformation of the local economy has to focus on the diversification of the businesses in the primary and secondary sectors, and support the creation of new businesses and the upgrading of existing ones in the tertiary sector. The main target is the attraction of new investment and venture capital and increasing the competitiveness of local businesses.

In Potsdam, existing policy frameworks already recognise science as one of the central columns within the city's strategic development plan. However, this is under-represented in both the city's image as well as in its self-awareness. With the exception of culture, administration and business, the academic and science world has no activity delivered from Potsdam city centre. The strengthening of triple-helix partnerships is seen as essential to enhancing the potential for innovation and employment and the sustainable economic growth of Potsdam.

The City of Solna has adopted four prioritised target areas: economic growth; living environment; security, safety and care; and knowledge and lifelong learning. Each target area has a number of orientation objectives which are measured by corresponding outcome objectives. The major orientation objective is to be Sweden's most business-friendly municipality and offer good preconditions for a growing business sector.

The corresponding outcome objectives are to keep the top position in the ranking of business friendliness undertaken by the Confederation of Swedish Enterprise, and to improve the rate of service satisfaction among businesses measured by Stockholm Business Alliance (SBA). SBA is a partnership between 49 municipalities in an enlarged Stockholm- Mälar valley region, focusing on attracting foreign investment.

Other outcome objectives relate to the business community's satisfaction with the city's handling of applications and permits. In addition, Solna will be a city that puts focus on knowledge and learning. There shall be a diversified supply of education possibilities to give children, youths, and adults the best possibilities for further education and employment, as well as meeting the demands of the business community for a skilled workforce.

Corresponding outcome objectives relate to the percentage of pupils qualified for upper-secondary school and higher education. The other major orientation objective is that Solna will be an attractive city of learning, offering a varied range of courses and education at different levels and in different fields.

In the review of the state of the art, the RUnUP baseline study reviewed the work of Richard Lester (2005) from MIT on university engagement in the economy and the support that universities can provide for new industry creation, industry transplantation, diversification of industry, and the upgrading of new industries. In order for universities to actively support such transformation, there needs to be a clear articulation on the economic direction of the city. Establishing an economic development framework and strategy in this context, is critical.

The RUnUP partner cities of Águeda, Barakaldo, Dunkirk, Gateshead, and Leszno, have each articulated the economic transformation they seek to achieve. From this, there is a clear link based on the work of Lester to defining appropriate actions. The cities of Patras and Potsdam, in comparison, have not articulated to the same level their key priorities. In this context, there are two key challenges. In an economic environment of uncertainty and an increasing lack of public sector financing, prioritisation is vital to ensure that an appropriate level of resource is targeted at strategic areas over a medium to long-term period.

This approach was evident in the RUnUP study visit to Tampere, detailed later in this final report. But additionally, and importantly, a failure to articulate the economic transformation of the city limits the extent to which real triple-helix cooperation can be developed and enhanced. The relationship between a university and its city needs to be defined by common areas of interest and a common and shared vision - failure to reconcile this severely inhibits the development of the triple-helix.

3.3 The role of universities and local authorities in supporting local economic clusters and competencies

The knowledge economy relies on the transfer of knowledge from those who generate it, to those who use it and can build on it. For a local economy, engagement in knowledge based industries can have a significant impact.

Universities are traditionally seen as environments that are the centre of the research and teaching systems; the training institutions for our future researchers; a point where frontier knowledge meets practical applications; and the school and library of the knowledge society.

RUnUP has served to reinforce both the challenges and opportunities presented to cities close to major capitals. On the one hand, these cities are close to major economic centres and can potentially benefit from knowledge-based interactions. On the other hand, the major capitals often 'pull' both people and business investment from RUnUP partners. The development of interventions aimed at taking advantage of the unique geographical positioning and internal composition of cities, in particular the development of incubator centres and marketing on economic sectors, will contribute to providing the framework for increased economic sustainability and competitiveness.

3.3.1 Extending the Role of Universities in Urban Development

Universities have seen the growth of standard models (e.g. external liaison offices, research and development offices and technology transfer offices) as central mechanisms for linking academia with the economy, particularly focusing on: contributing to faster and better commercialisation of research results; improving innovation performance and accelerating the dissemination of new technologies; better management of intellectual property and research capacities of public research organisations; identifying specific research requirements through dialogue with enterprises; and helping companies grow and become more competitive.

Such support mechanisms, which are designed to raise research and development levels, are likely to be most appropriate for, and successful in, those economic areas where levels of innovation in product, process, and service developments are already high.

RUnUP has highlighted that the role of universities is often narrowly defined to providing specific services to specific stakeholders, such as university based start-up enterprises. In addition, it was shown that the attention of university work is often not focused on the local-level, but is instead geared towards wider concerns such as international markets and research.

RUnUP has also shown that local authorities are strategically positioned to manage economic transformation at a local-level, but do not mobilise knowledge and innovation-based partners to support local economic development priorities. The result is local economic development that fails to take full advantage of university expertise and is not driven by local authorities.

- **The need for Universities to identify the importance of business and local society collaboration within their mission and vision**

The RUnUP baseline study specifically identified that universities are seen as environments that are the centre of the research and teaching systems, the training institutions for our future researchers, a point where frontier knowledge meets practical applications, and the school and library of the knowledge society.

European Commission policy has sought to support the engagement of universities with civil society to support the uptake of innovation[1], the build up concrete synergies between universities and surrounding society[2], and support the recommendation that exchange of knowledge with industry and within society is not the responsibility of the universities alone. Companies, national, regional and local authorities, business promotion agencies, private and public joint venture investors, and other stakeholders, must be active in creating the appropriate infrastructure and surrounding environment.

In order to achieve appropriate levels of engagement and synergy, on the part of universities, there needs to be not only recognition within the mission statement of the institution but also supporting structures that can enhance linkages with the wider civil society. Across Europe, this issue represents a particular challenge with many universities, particularly in Southern and Eastern Europe, focussed on educational delivery and the production of research papers. The RUnUP partner cities of Campobasso, Leszno, and Patras, highlight this challenge.

For Leszno - at a regional-level - the scientific potential of Wielkopolska is strong and significant on national scale, but it is mostly concentrated in Poznan. In Wielkopolska, there are 28 higher education institutions: 19 of which are located in Poznan. This is also the location of the Polish Academy of Science, which has 24 centres and 27 branches and research institutions.

The rising interest in higher education since the 1990s has been a stimulus to establish new private schools functioning alongside reputed state universities. In Leszno, there are three Higher Education schools: the Jan Amos Komenski Higher Vocational State School, Stanisław Leszczynsk i Higher School of Humanities, and Higher School of Marketing and Management.

In comparison to other cities of similar size in Wielkopolska, Leszno boasts the highest number of students per head of population. The proximity of academic centres in Poznan and Wrocław ensures direct contact with their scientific and academic facilities. The existing universities in Leszno focus on educational delivery. However, their educational programmes are perceived to not meet the demand from students for appropriate training and skills, and similarly, from business in training appropriately qualified and job ready graduates.

Across all of the higher education schools, there are no mechanisms which stimulate establishing business-university cooperation between businesses and entrepreneurs, e.g. additional grants, scholarships etc. Students are not offered extra entrepreneurship classes outside of the faculty of economics and students and staff seeking entrepreneurial advice and guidance for setting up a business currently have no support.

The strength of the academic and services sector in Patras was recognised within the original URBACT II RUnUP declaration of interest. However, the key challenge and problematic is that, apart from the work of the Patras Science Park, no links exist between universities and the local businesses and industrial sectors in Patras.

With two universities, a technological institution, and a plentiful number of research institutes, the City of Patras is an important scientific centre with a field of excellence in technical education. However, the academic institutions do not focus on industrial liaison activities and their capacity needs to be further developed with reference to models of knowledge-based enterprise support and entrepreneurial development within universities across Europe.

1 European Commission; Delivering on the modernisation agenda of universities: Education, Research and Innovation; May 2006.
2 Universities Role in the Exchange and Transfer of Knowledge with Industry and Society; European Universities: Enhancing Europe's Research Base

The integration of services for enterprises and entrepreneurs linked to knowledge and technology transfer in particular connections with universities and research centres is a key challenge for Campobasso. The municipality is home to two universities, the public University of Molise and the private Catholic University of the Sacred Heart operating alongside other knowledge-based partners including the Chamber of Commerce and Innovation Point, located at the Cittadella dell' Economia. The key challenge for the municipality is to mobilise these universities to support its economic development priorities in particular to support the development of new economic sectors around Bio-Medical, Bio-Technology and Sustainability (Energy and Construction) and enhancement of support for the agricultural industries of Campobasso through the work of the Scientific and Technological Park of Molise.

While the situation in Campobasso, Leszno, and Patras, identifies a key problematic for our urban areas, the situation in Solna and Barakaldo (as well as Águeda, Dunkerque, Gateshead, and Potsdam) highlights the positive interaction that can take place.

In Solna, the role of the city authority is to create and stimulate good conditions to enable different businesses to prosper within the city boundaries.

The City cannot support innovation systems, incubators or start-up companies financially, but constantly works to maintain and develop positive attitudes, smooth administrative processes, and easily accessible arenas for communication and interaction between the City, academia, and local businesses.

The Karolinska Institutet, located in Solna, collaborates with the City of Solna in a number of areas:

- KI Health Management, the City, and a number of leading Solna companies, have initiated the project "Healthy Companies in the Healthy City" where research results from KI are used to inspire companies to promote a healthy lifestyle.

- KI is member of the board of the City of Solna Care Services Academy. The aim of the academy is to ensure a continuous quality development of care services to elderly and disabled citizens. The Academy is a forum for on-going collaboration with universities and research centres in order for the city and elderly and disabled citizens to benefit from research results in the area.

- Collaboration with Solna Upper-Secondary School in science education focusing on medicine to attract more students to medical professions. The students undertake study visits to various education programmes at KI, attend lectures and experiments, meet university students from KI, and receive individual education guidance.

- Collaboration in an equal opportunities project with AIK Solna football team to increase young men's interest for care and medical professions.

In the specific case of Barakaldo, while its development company (Inguralde) has worked for a long time with the companies in the town, its relationship with the university had historically consisted of occasional contact.

While Barakaldo only has one faculty of the University of the Basque Country in the town, and there being no "Barakaldo University", this has not posed a problem in the university becoming involved in the project, as three areas of the University of the Basque Country have taken part in the URBACT Local Support Group, therefore showing an interest in exploring the possibilities of collaboration.

The Mining Faculty in Barakaldo, although it belongs to the University of the Basque Country, has always had a close relationship with the development of the town and its large tradition of industry. The Higher Technical School of Engineering in Bilbao has also taken part in the project as a member of the group, in order to study potential collaboration in developing more technical projects relating to the design of new equipment and infrastructure in the town. The multidisciplinary University Group of the Economic and Business Faculty of Bilbao, has contributed to providing knowledge on the strategic sectors where a drive could be made for their development in Barakaldo.

- **The need for Universities to understand and map their strategic relationships**

Universities are large organisations. Alongside local authorities and municipalities they represent some of the biggest organisations located in an urban area. The structure of universities with academic faculties alongside central support functions, e.g. finance, research and commercialisation, careers service, presents a complex organisation with multiple areas of interface with external organisations and stakeholders.

To understand how universities can extend their role in urban development requires an understanding of not only what relationships exist, but also the distinctive nature and impact of the interaction.

The study visit undertaken by the RUnUP partners to Coventry highlighted a particular best practice in this field. As a leading business-facing institution, Coventry University particularly values the partnerships it develops and believes in investing time and effort to strengthen these relationships, and turn 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.

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 (such as BT and Cisco), to smaller project-based collaborations with SMEs. These are not only with commercial organisations, but also with public sector bodies and government organisations such as Coventry City Council and the Department for Business, Innovation and Skills (BIS).

The University has produced a simple partnership development process and methodology, aimed at promoting a culture of knowledge sharing and improved partnership working. The aims of which are to: implement the partnership development framework at all levels of the University; formalise the multi-touch and strategic collaborations; increase the number of partners at all partnership development phases; improve knowledge sharing, regarding current and future partnerships; improve current knowledge management systems to increase internal communication; and work towards a culture of information sharing and improved partnership working.

3.3.2 Enhancing Knowledge Integration with the Local Economy

At the commencement of the network, the RUnUP Project Partners had a limited perspective of the capability of universities to support economic development. Through the network, the triple-helix partners have worked together to link existing organisational goals and targets. Essentially, from the perspective of the city authority, it is critical to find out more about the workings of universities above and beyond individual perspectives, from being a student or joint meetings where university staff is represented.

For local authorities and municipalities there is a need to understand: the university capability related to economic transformation in the city, linked to education and skills, research, and business support; how universities operate, what is or would drive university engagement in local activity, who the key contacts are within relevant universities, what areas of activity that form part of the strategic transformation for the city are the universities not involved in; what commitment there is from the university around joint activities and projects in support of local economic priorities; and the gaps in university understanding regarding their role in economic development .

- **The limitations of traditional Research and Development commercialisation approaches**

The RUnUP partner City of Solna has a unique perspective within the network, as it has a world-class research infrastructure immediately on its doorstep. Three universities: Karolinska Institutet; Stockholm University; and KTH Royal Institute of Technology, have complementary disciplines and together they cover all areas of higher education. They are located less than 2 kilometres from one another, have more than 47,000 full-time students, and more than 4,000 researchers.

Both Karolinska Institutet and Stockholm University are among the 100 top universities in the world in the ranking made by the Jiao Tong University in Shanghai. Becoming a member of the Stockholm Science City foundation has strengthened the City of Solna's contacts with all three universities, which all have education and research related to life-sciences and health.

The university located in Solna is Karolinska Institutet, one of the largest medical universities in Europe. It is the largest centre for medical training and research in Sweden, yearly awarding the Nobel Prize in Physiology or Medicine. Karolinska Institutet accounts for over 40 per cent of the medical academic research conducted in Sweden and offer the country's broadest range of education in medicine and health sciences.

Karolinska Institutet has two campuses: one in Solna adjacent to the Karolinska University Hospital; and one in Flemingsberg, adjacent to Karolinska University Hospital, Huddinge and Novum Research Park. Its mission is to improve people's health through research, education, and global collaboration. Another goal is to become Scandinavia's foremost innovation centre in Life Sciences and leading in Europe in exploiting new scientific data. Karolinska Institutet places great value on close cooperation between the commercial and the academic sectors.

In May 2010, the Karolinska Institutet Science Park was officially inaugurated, including the Science for Life Laboratory (SciLifeLab) where Karolinska Institutet, Stockholm University, and KTH Royal Institute of Technology work together in advanced research. SciLifeLab Uppsala, organised by Uppsala University, is associated to SciLifeLab. The Science Park is an important part of the Karolinska Institutet strategic development plan, linking the institute closer to the business community fostering commercialisation.

The Swedish Government has launched an initiative to strengthen the innovation systems in order to make best use of research results and promote growth. Eight universities, of which Karolinska Institutet is one, have been given funds to create 'Innovation Offices'.

The roles of the offices are to inspire, inform, and stimulate researchers to innovations and create preconditions for these innovations to become of use for the society. The office provides support and services to researchers regardless of at what stage of the innovation process they are in.

While the situation in Solna has been successful, as highlighted in the RUnUP state of the art report, such approaches can be limited. Mechanisms designed to raise research & development levels are likely to be most appropriate for and successful in, those economic areas where levels of innovation in product, process, and service developments, are already high. While such approaches are generally accepted and widely adopted, there remain concerns regarding their long-term effectiveness.

There is evidence of a linear relationship between the volume of research and commercialisation success. It is therefore the quality and size of the research base that is a driving factor, rather than the quality of an institutional industrial opportunities team.

- **The need for knowledge intermediaries to transfer knowledge to business**

To support the development of their local economy, urban stakeholders need to examine how knowledge is transferred into the economy. Urban areas in Europe have large numbers of micro-sized companies and Small and Medium-Sized Enterprises. In this context, the 'absorptive capacity' of companies plays a key role in determining their capability to access and make use of external knowledge, in particular through external collaboration with other companies (e.g. suppliers, customers, and partners) or with universities and technology centres.

In several RUnUP cities, mechanisms have been established that support the capability of companies to acquire knowledge through connections with external organisations (including universities) in line with the industrial transformation of the economy.

Three RUnUP partner cities (Gateshead, Dunkirk, and Águeda) provide significant best practice on how new relationships and approaches can be established to support knowledge transfer and economic development.

The lack of a university in the Borough of Gateshead is not seen as a barrier to economic development. The North East region is home to a strong group of varied universities: Newcastle University; Northumbria University; University of Sunderland; University of Teesside; and Durham University, operating alongside knowledge transfer partners such as, RTC North.

Gateshead is also home to the regional headquarters of the Open University. Gateshead Council recognised the need to collaborate with universities and other educational institutions in the region, rather than competing against them, to support economic development priorities and linkages to the private sector. To create and develop links with local universities, Gateshead Council has through RUnUP included Newcastle University, Northumbria University, and RTC North, as key partners in the URBACT Local Support Group.

The North East region, in which Gateshead is located, is developing a set of 'innovation connectors' with a geographical focus, enabling the development of world class facilities, new approaches to integrating business and universities, engaging with the community through education, and access to employment initiatives.

The North East is home to pockets of design and creative excellence: however there is a need to foster more collaborative working. Perceived barriers for businesses working together for mutual benefit need to be removed and instead, increase knowledge transfer opportunities, especially in science, engineering and technology.

One NorthEast, Terrace Hill, and Gateshead Council, are building the Northern Design Centre (NDC): a four-storey building to provide over 4 000 sq. m of space for creative businesses at Baltic Business Quarter. The Northern Design Centre has been highlighted as one of several ERDF innovation connectors, having the greatest potential for using innovation to stimulate economic regeneration across the region. The innovation connector will enable public/private and university co-operation in pursuit of innovation and economic development in a way that serves the needs of their respective communities of interest.

In a regional environment that is also seeing huge investments in science, new and renewable energies, process industries, healthcare, and printed electronics, it is an exciting time to be launching the Catalytic Design Initiative. It is hoped the NDC will be a shining example of how a broad range of complementary businesses will work together and benefit from being located in such a creative place.

In comparison to Gateshead, the Nord-Pas de Calais region is the second largest academic centre in France, with seven universities, 23 engineering schools, and more than 150,000 students. Dunkirk had no higher education system until 1988. The University of the Opal Coast (ULCO) opened in 1991, and the following year linked to Lille III University (Human Sciences and Management).

The Greater Dunkirk Council is one of the most important stakeholders in its development and the main campus of the university is based in Dunkirk, where there are more than 6,800 students. This commitment is the result of an agreement signed between ULCO and the Greater Dunkirk Council. The second stage of the convention corresponds to the period, 2000-2006 during which the Greater Dunkirk Council provided 4.6 million EUR in funding.

A new agreement for 2009-2013, encourages the development of an entrepreneurial culture in collaboration with the other local partners (Flandre Création Association, the Local Committee for Projects Support, etc). The Greater Dunkirk Council has funded university projects including; refurbishment of a former tobacco warehouse (Entrepôt des Tabacs) on the docks of Dunkirk, a student's services office (Maison des Etudiants), ISCID (international business school) and the Enterprise Hub, and the financing of two new positions focused on employability.

This support has enabled ULCO to become a key economic player in the Dunkirk area regarding socio-economic decisions directly linked to the University. As ULCO is a relatively new university, its training and research programmes are directly oriented towards local industries and economic priorities, such as industrial environment and safety, erosion and flooding, renewable energy, and port logistics.

The Greater Dunkirk Council and ULCO are in the process of setting up projects linked with increasing the level of private and public R&D expenditure and projects, promoting entrepreneurial spirit, fostering the creation of knowledge intensive jobs, and upgrading scientific and technology performance of existing higher education institutions. Through these projects, the Greater Dunkirk Council aims to reinforce its links with ULCO and make the university a major territorial partner that contributes to economic development.

A similar collaborative approach can be seen in the Portuguese RUnUP partner city of Águeda. The development of a local triple-helix has been the result of a process of constant interaction and co-operation, initially between local and regional knowledge centres, the Municipal Authority of Águeda, and local and regional businesses. Since its inception in 1974, the University of Aveiro has sought to distinguish itself by creating "innovative degrees in areas not explored by traditional higher education institutions and in areas which correspond to the regional and national productive structure", such as environment, industrial management, music, tourism, materials engineering, industrial chemistry, and new technologies. This approach was complemented with services for the transfer of knowledge, technology, and innovation to the business community.

The development of a local triple-helix originated from the relationship between the Municipality of Águeda and the University of Aveiro as a result of the Strategic Plan of Águeda, which was developed in 2001. The Network for Innovation and Competitiveness was a core component of the Strategic Plan and involved the University as a member of the networks "Strategic and Prospective Group", helping to enrich and validate knowledge to be disseminated to the business community and to identify the best and most feasible ideas for continuation projects including the development of the Lighting Living Lab (LLL).

It is within the implementation of the LLL that the University of Aveiro has taken a greater role in the production and close support for the production of knowledge. It is expected that this role will be maintained by some of its departments and research centres. The School of Technology and Management of Águeda (ESTGA) is a branch of the University of Aveiro and played a pivotal role in promoting the LLL, and it is also a reference partner in other projects to be deployed.

Considering the existing relationship between the Municipal Authority of Águeda, the University of Aveiro, and ESTGA, the challenge ahead relates to the need to find ways to bring together university and companies, using common projects including RIC Águeda or the LLL, moving towards the creation of less formal networks, but more operational, where the local administration takes a role in defining local development strategies that integrate both universities and companies.

In Campobasso, the integration of services for enterprises and entrepreneurs linked to knowledge and technology transfer in particular connections with universities and research centres has been a key challenge. The engagement of GAL Molise verso il 2000 (Social Enterprises Incubator) within the ULSG has helped to support new business development and innovation given its role in incubation.

The three RUnUP partner cities of Águeda, Campobasso, Dunkirk, and Gateshead, highlight how our urban areas can address the limitations of traditional university research and development commercialisation approaches by understanding and developing new approaches that enable knowledge transfer to business in new and dynamic ways.

In Águeda, this can be seen in the development of its strategic plan and its network for innovation and competitiveness, which has led to the establishment of a Lighting Living Lab and provided a strong platform for the work of the Municipality and University and the design and development of the Local Action Plan within RUnUP.

In Gateshead, this approach has been conceptualised through the adoption of an 'innovation connector' which has been promoted at a regional-level and implemented at a local-level in Gateshead in the building of the Northern Design Centre.

In comparison, in Dunkirk it has been the significant funding that has been provided by the Greater Council of Dunkirk to the University that has driven a change of perspective and approach to drive forward both public and private research and development projects, and the initiation of enterprise and entrepreneurship provision within the university.

3.4 Strengthening triple-helix cooperation to improve knowledge exchange and technology transfer

The RUnUP network has brought together stakeholders from the academic, business, and public sectors together to boost economic development in small-medium sized cities. Recognising the all-encompassing nature of economic development, RUnUP has been inclusive in nature: reaching out to all sectors of the economy to inspire and support entrepreneurship and innovation.

RUnUP has been uniquely positioned to take full advantage of the alignment between the URBACT methodology, which has at its core, the establishment and mobilisation of a Local Support Group and the delivery of a Local Action Plan with the core activities of the network.

RUnUP itself has been driven by the need to enhance the impact of universities in urban areas and has seen the creation of triple-helix relationships within all the partner cities, and the development of core actions that will improve knowledge exchange and technology transfer.

3.4.1 Creating triple-helix partnerships

The triple-helix is positioned within the context of regional innovation as a key driver for economic development, where the quality of human capital, research activity, innovation performance and the ability of companies to absorb knowledge is particularly important. In this environment, the dialogue between business, higher education institutions, and government is critical.

Traditional approaches are either demand-side or supply-side oriented, focussed on clusters or value chains linked to the end-market or based on the scientific or technological interests of business. However, there are a range of private sector and public sector barriers that hinder the successful adoption of triple-helix strategies. As a result, it is fundamental that a platform exists where local actors can come together and that the challenges of the wider community of SMEs that make up the economic fabric in most cities are addressed through triple-helix partnership.

- **Platforms need to exist where local actors can come together and where the challenges of local SMEs can be addressed through triple-helix partnership**

The RUnUP Partner City of Águeda highlights, perhaps among all the network partner cities, its adoption of real triple-helix collaboration and cooperation. The development of its Local Action Plan recognises that the realisation of triple-helix networks, in any type of situation, is more important than the establishment of specific partnerships in triple-helix. They recognise that the success of triple-helix partnership, in many cases, is due to the personal relationships and informal contacts established between those who work in the various spheres of the helix structure.

Águeda highlights that the success of a triple-helix often depends on the existence of common interests between the various spheres. In this context, the local municipality has operated as the connecting link between universities and businesses, resulting in formal agreements that encourage joint projects. In the case of Águeda, these agreements have been separated in different areas through technology transfer, skills development, and incentives for entrepreneurship, and are grounded with sound financial resources.

In Águeda, the formalisation of triple-helix partnerships has been contextualised in the Local Action Plan in a set of actions that aim to be a catalyst for local development: namely the creation of a Centre for Innovation in Triple-Helix; an Online Platform for Innovation; and three projects (Global Casting, Step-UP and Inspiring).

As an integral part of the Águeda Local Action Plan, it was considered essential to find a new way to promote innovation, entrepreneurship, and triple-helix-linked co-operation. The LAP proposes the creation of a Centre of Innovation in Triple-Helix, which will provide a physical space for cooperation between companies and knowledge centres, operating in areas where public policies have greater impact. The principle of the Centre is to address business issues, e.g. development of a product, technology or process through a formalised engagement with university expertise.

The Online Platform for Innovation aims to create additional direct links between companies and knowledge centres, utilising an internet platform. The platform will operate through the submission of business challenges, e.g. design, production, technology, or process by companies for solution by a young graduate, researcher, or university student, linked to the platform in partnership with the company. The platform will also allow for young graduates, researchers, or students to put an idea or product concept on the platform for potential adoption and implementation by a company in the market.

These actions are the result of the development of the RUnUP Project, giving them a high-degree of importance as they emerge as statements of need from the major actors in local development. The proposed actions in the action plan focus on four key areas: support for entrepreneurship; strengthening innovation and competitiveness; networking establishment; and building of physical infrastructure.

These projects complement the existing strategy in Águeda to build networks and partnerships, and establish synergies between the proposed actions and other existing projects. These will strengthen the local municipality, making it more attractive and competitive and contribute to accelerating the development of an entrepreneurial, local government, and university triple-helix culture, rooted in the development of common strategies that will contribute to the competitiveness of Águeda locally, regionally, nationally, and internationally.

In comparison to the incremental development that RUnUP has supported in Águeda, in the Polish City of Leszno, the network has supported transformational activity aimed at stimulating economic development. Local stakeholders have agreed on the vision for the city and recognise the need to contribute to its fulfilment through cooperation between local authorities, business support organisations, universities, and companies, for the development of an economy based on knowledge.

The formation of a triple-helix partnership has contributed to a precise diagnosis of the needs of the local economy and the definition of key strategic objectives. These objectives have led to the formation of new project ideas which, to date, have already received financing from the European Regional Development Fund and European Social Fund of PLN 11.6 million (2.9 million EUR). These projects are aimed at providing infrastructure for business and to support entrepreneurship and innovation in key sectors.

A key dimension of the Leszno Local Action Plan is the establishment of an incubator. The idea of building the incubator has been taken up by the Local Support Group, which was formed as part of the RUnUP project. The Group consists of representatives of the triple-helix structure from local authorities, universities, and the business community. In June 2009, the Programme Board of the Entrepreneurship Incubator was appointed as an advisory body, whose task is to chart directions of the incubator's development.

The Board consists of representatives of the local business community, universities, and local authorities. There have also been study visits to the incubators already functioning in Kalisz and Poznan. The Municipality of Leszno commissioned expert evaluations to analyse the needs of key sectors for Leszno. On this basis, the Board developed the definitive model for the functioning of Leszno's incubator.

On 4 January 2010, the Leszno Business Centre Ltd. (a company with 100% of Municipality capital) was established. LBC Ltd. submitted the project entitled "The Building of Entrepreneurship Incubator in Leszno" to Wielkopolska Regional Operational Programme within the framework of action 1.4 "Support for Investments linked to Regional Strategy for Innovation". The project received positive feedback and on 14 June 2010, the agreement to fund 40% of the cost of investment was signed.

For Leszno, the experience gained in the delivery of the RUnUP project has helped to establish a core capability which will be used in the future activities of the Local Support Group. This will include the monitoring of the Local Action Plan and the extension of the Local Support Group to encompass the Leszno sub-region. The creation of a network of cooperation among the towns located in this sub-region of Wielkopolska will enable Leszno to use experience gained in the project to strengthen the competitive position of the sub-regional economy.

In the German City of Potsdam, existing policy framework have recognised science as one of the central features within the strategic development plan for the city. The URBACT Local Support Group in Potsdam has developed this further to identify activity areas and specific delivery actions. To show the perspective of a city where science, the local economy, and the public administration share a common goal and act in concert, the ULSG has defined the following activity areas within its local action plan:

- Institutional and conceptual networking
- Communication and visibility
- Innovation and knowledge transfer
- Academic urban life

In particular, the concept of a "House of Knowledge" has been articulated within the Local Action Plan as a central meeting point, predominantly for university staff and researchers, local entrepreneurs, and business professionals, providing a venue for congresses and conferences. In addition, it will be used to provide office spaces for science related start-ups.

The Local Action Plan defines a number of measures that have yet to be taken. From the early stage of the delivery of network activity at a local level, it became obvious that success and support from local stakeholders could only be achieved by integrating the work of RUnUP with the city's economic development strategies.

The most important benefit from RUnUP has been the formation of the URBACT Local Support Group, bringing together over the medium-term of a stakeholder group from different spheres of the triple-helix who have shared a common goal.

The RUnUP baseline study for Potsdam identified a number of issues connected with triple-helix interaction. Following the completion of the network activity, none of these issues have been completely eliminated, and while some may have been diminished, the overall consensus persists. RUnUP has established a true basis for improving the situation. The Local Action Plan in this context provides the strategic background and a clear list of actions for local and regional decision makers.

For Potsdam, continuation of RUnUP activity will include the implementation of the actions in the Local Action Plan by the partner members of the ULSG and maintaining the momentum that has been achieved locally through the RUnUP network. To achieve this, the importance of triple-helix co-operation has to be recognised by the key stakeholders at a local-level.

The RUnUP partner cities of Águeda, Leszno, and Potsdam, provide a continuum of experience in triple-helix development. The City of Águeda has directly benefitted from RUnUP as a result of the maturity of its approach to triple-helix co-operation. It highlights the real timeframe over which the development of such structures and relationships need to take place, and identifies that energy is required to maintain and develop this on an ongoing basis.

For Leszno, RUnUP has provided the initial momentum for triple-helix co-operation at a local level. It has provided the catalyst for change and with the Local Action Plan and approval of funding from the European Structural Funds, a visible outcome for the work that has been delivered. A key challenge for Leszno will be to maintain the energy and enthusiasm for this co-operation in the long-term that is already evident in Águeda.

The delivery of RUnUP in Potsdam highlights the complexity of establishing triple-helix co-operation, particularly in larger urban areas and where there are large numbers of knowledge based institutions.

The successful experience of both Águeda and Leszno highlights that for successful triple-helix frameworks and co-operation to be established, there needs to be a strong political commitment at the highest level and at an operational level a real drive for change.

3.4.2 Creating appropriate conditions for stimulating knowledge based activities

An integral component of the URBACT II programme methodology is the establishment of a Local Action Plan by each partner city as the principal output of its participation in a network. As highlighted in the URBACT ULSG toolkit, they are intended to improve the impact of transnational exchange activities providing outputs from the networking activities of URBACT II and be a catalyst for further change. The action plans developed by each partner city provide a roadmap and an identifiable list of actions that will deliver solutions to the challenges faced in each urban area.

In the context of the RUnUP thematic network, these plans will include a series of tangible actions to be undertaken by triple-helix partners after the closure of the network. These actions, when implemented, will provide for the RUnUP partner cities the mechanism for creating appropriate conditions for stimulating knowledge based activities.

- **Appropriate conditions need to be created by local triple-helix partners for the stimulation of knowledge based activities**

In the Lead Partner City of Gateshead, the URBACT Local Support Group has remained committed to the opportunities recognised in the baseline study that was established in the development phase, and this is reflected in the actions that have been agreed. The actions identified set out a clear path to support a cultural shift to foster the growth of new industrial sectors driven by knowledge and skills development, innovation and creativity, entrepreneurship, and ICT.

These actions fall in to four key areas:

- Economic Partnership
- Entrepreneurship and Innovation
- Advanced Manufacturing and Engineering
- Creative and Design

The Local Action Plan also recognises the strategic context in which it will operate, in particular supporting the delivery of the 1Plan; the North Eastern Local Enterprise Partnership proposal and emerging business plan; and tackling the challenges set out in the 2011 Gateshead Economic Assessment, principally:

- Redevelop the town centre and the wider urban core as a catalyst for the economic regeneration of NewcastleGateshead;
- Reduce the long-term impact of the recession by helping skilled people return to work and businesses return to growth;
- Support business specialisation to create higher value sustainable jobs;
- Diversify and increase the size of the business base, especially knowledge businesses, to increase the competitiveness of the borough and promote GVA growth;
- Encourage entrepreneurship, including self-employment and social enterprise to develop economic capacity and create employment;
- Exploit the economic potential of green growth and the low carbon sector; and
- Ensure that the skills needs of local people meet the needs of business by improving the skills levels of all residents whilst attracting and retaining talented individuals.

Each action seeks to strengthen the work undertaken by the URBACT Local Support Group to date by developing innovative ways to deliver new approaches at a Gateshead-level. The actions are practical interventions that the Council and its partners will implement in the future to ensure an accelerated economic transition.

This commitment is demonstrated by the development of Northern Design Centre (NDC), marking a £9.9 million investment as an 'Innovation Connector' with an anticipated opening in January 2012, and the commissioning of a Knowledge Transfer Network that is promoting knowledge transfer between science, engineering, design, and business within the region.

NDC's principal role is to deliver strategic priorities for product development, innovation, and design in the North East, and to foster integration and interdisciplinary working within and between business and the knowledge base in design, science and innovation, engineering, and technology. In order to achieve this, NDC will be the physical hub for a Knowledge Transfer Network and the focal point for design in the North East of England.

To increase the sustainability of a knowledge economy, a key aim for Gateshead will be to focus on SME development rather than large organisation attraction, as SMEs are often established by local people, and money will be reinvested in the local area. The majority of local jobs are created from SMEs and these local businesses and industries provide the products, services, and amenities, that help maintain and improve the quality of life residents enjoy.

One of the key weaknesses in the under performance of the North East economy is the low rate of graduate retention. One way of addressing this issue is to encourage graduates to start-up their own businesses and become involved in small businesses locally.

UK universities are recognised internationally for the strength and quality of their research base, and can contribute to the local and national economy and business needs by commercialising their intellectual property and innovation. In recent years, expertise and research generated and nurtured by universities has been often 'spun out' as fully fledged companies.

Newcastle University's Enterprise Centre is dedicated to equipping all its graduates with the necessary skills and confidence to make any business successful; either the business they work for or their own. The Enterprise Centre offers advice, information, resources, and incubator accommodation to students exploring enterprise opportunities. Northumbria University's Enterprise Campus assists full and part-time students, recent alumni (university graduates), researchers, and associates, to plan and assess their business idea and to take the first steps to begin trading. The Enterprise Campus provides basic 'hatchery' incubator space, including free ICT and telephone access on site.

However, it is difficult for the universities to provide accommodation to these businesses once they start trading as a commercial enterprise. In addition, demand for incubator accommodation and support in a commercial environment is high and increasing year upon year.

In March 2010, Gateshead Council and Newcastle and Northumbria Universities identified an opportunity to support graduate enterprise and university spin out activity in Gateshead from the supported environment of the Council's business incubation centres. Space within the Council's business incubation centres is provided under licence to Northumbria and Newcastle Universities for the provision of free accommodation for up to a year to new businesses formed by graduates and university spin outs, and delivery of support to appropriate occupiers and students.

To achieve its ambitions, Gateshead needs to think differently about competitiveness. To improve and maintain competitiveness in Gateshead, it is clear a move towards a knowledge industry is necessary. However, for this to be effective, Gateshead must take a sustainable and innovative approach to economic development.

The growth of a knowledge economy will be linked to the redevelopment of the town centre, an emerging business district. Ambitious plans for regeneration will develop it into a 21st Century town centre. "Fit for a City", the regeneration delivery strategy created by the Council and One NorthEast, focuses on drivers of creative, independent and niche retailing; new forms of housing, becoming a new urban destination; and being 'green' physically and sustainability through construction and energy.

The action plan will be under constant review by the Business and Innovation sub-group, with new actions related to the vision for Gateshead being developed as the initial ones are completed. This will enable milestones to be achieved, whilst future changes in economic circumstances can be taken into account.

In the Basque Country City of Barakaldo, participation in the RUnUP project has provided an opportunity for the local administration to establish contacts, and improve and establish collaborative relationships with key companies in Barakaldo and the University of the Basque Country.

The greatest challenge in Barakaldo has been the establishment of triple-helix collaboration among stakeholders, given the various perspectives, dynamics, and ways of working of the public administration, companies, and the university. The absence of a 'Barakaldo University' has not prevented the University of the Basque Country taking part in the project, and representatives of three faculties have been involved, exploring the opportunity for becoming involved in actions for local development.

Participation in RUnUP at a local-level in Barakaldo has provided those taking part with the opportunity to make contact, establish relationships and communication channels, and analyse opportunities for joint action.

A Local Action Plan has been defined, aligned with local strategies, and with various stakeholders committed to local development in Barakaldo taking part in its development and implementation.

The plan includes a series of actions in specific fields deemed to be of interest by the URBACT Local Support group:

- Cooperation among companies: Amongst those located in large shopping centres and small, local businesses.
- Innovation: In the network of local businesses, especially commercial and services.
- Training: Relationship between companies and training centres, going beyond the practical programmes (research, joint projects, etc).
- Promotion of entrepreneurship and attracting talent: Creation of a town 'brand' to attract professional and entrepreneurial talent.
- Local support for promoting New Technology: In the social and business fields starts from viewing the technology as very suitable tools to promote development and innovation, both for people and organisations.

The plan is structured into two key areas: the identification of strategic development opportunities and the delivery of key actions. The first area of action is designed to understand the sectors and companies whose activities are considered strategic to the socio-economic development of Barakaldo, and as a strategic monitoring and prospecting tool for businesses on sectors, markets, and technology.

The second area of action supports the development of strategies for attracting and retaining talent, including the promotion of improved competitiveness and innovation capacity, and the application of new technologies, including disseminating, promoting, and facilitating the resources needed for active use of Information and Communication Technology (ICT) among Small and Medium-Sized Enterprises.

The Campobasso Local Action Plan aims to have a significant impact on the territorial dimension of employability. In particular, the medium to long-term aim is to promote and disseminate a new employment culture. From an economic perspective, the LAP aims to strengthen the local economy through a focus on traditional sectors with significant knowledge and know-how that could be lost as a result of an ageing society. In addition, it aims to support development of sectors with high growth potential. Specifically for tourism, this will include the establishment of a new model focused on identity and authentic culture.

Linked to this economic perspective the Campobasso LAP has a particular focus on support for entrepreneurship. This includes support for business incubators linked to the trade, craft and cultural sectors; access to finance support for business start-ups; and the participation of disadvantaged groups in new business creation. From a social perspective, the LAP recognises the value and role of informal networks to promote local development, create conditions for equal opportunity, and as a means to provide additional services and improve access to existing services.

For the French City of Dunkirk, the Local Action Plan has been developed from its established Local Plan for Economic Development and in particular, its focus on: helping companies to develop in key emerging areas, developing innovation potential and encouraging new activities, and developing an entrepreneurial spirit.

In this context, four key actions have been identified:

- The creation of a pole of regional economic excellence concerning the industrial environment and energy;
- The creation of an entrepreneurial university campus and support for students starting up or taking over a business;
- The establishment of a central laboratory for air quality; and
- The establishment of a research and technology transfer centre focussed on the application of cold technology.

The Nord Pas de Calais region hopes to encourage students to set-up companies and take over existing business. For this purpose, the region is financing the creation of an EPI (Espace Projet Initiative) in certain regional universities (ULCO included).

Moreover, the Nord-Pas de Calais region supports the staging of events concerning entrepreneurship in ULCO and financially contributes to the creation of the "Campus de l'Entrepreneuriat" project. In addition, the Greater Dunkirk Council (and other regional territories) faces the problem of company transmission and takeover.

An experimental project, inspired by a model from the Université de Laval in Quebec, could be developed in ULCO in Dunkirk with the Council's support and the Nord-Pas de Calais region. The objective of this project is to identify volunteer company bosses who wish to sell their business and work with a future entrepreneur who is studying in ULCO.

The Campus de l'Entrepreneuriat is home to the "Centre for Entrepreneurial studies" (CEL) of ULCO and the Espace Projet Initiative. It is a key element of the "Entrepôt des Tabacs" building project which also includes the "Institut Supérieur de Commerce International de Dunkerque" (ISCID) the business school within ULCO), "la maison des étudiants" (students services) and the "Campus de l'Entrepreneuriat".

The Campus of Entrepreneurship will be a resource centre, raising awareness among students and monitoring those who have a company creation project or have an "entrepreneurial profile". This area will be a convivial and a functional space with phone and internet access. Dunkirk will be the second EPI in the Région (a total of five to be funded over the coming years).

The objective of the Campus de l'Entrepreneuriat is to develop an entrepreneurial culture in the ULCO Dunkirk pole to respond to one of the main focuses of the regional programme for economic development, making the Dunkirk area an entrepreneurial territory. The purpose is to encourage students to set up their own companies during or at the end of their studies. This preoccupation is linked with the global objective of the Council, the employment of graduates.

The Greater Dunkirk Council, with the support of Département du Nord and Nord Pas-de-Calais region, identified a wish to strengthen the development and the implementation of innovative technology companies within the territory.

A project for the creation of a technology transfer centre is being investigated in cooperation with the regional public research centres. This Centre aims to provide pilot installations to researchers to validate at larger scale laboratory developments, whilst also being at the disposal of companies so pre-investment development tests can be carried out.

The Centre could also fulfil an incubation function for innovative creators. It is important to note that this project is still conditioned by the decision of French Government to confirm the building on the port area of a natural gas terminal.

The Innocold Project came about as a result of the construction of a Methane Terminal in Dunkirk. The terminal stores liquefied natural gas at a temperature of -163°C which can be utilised for industrial processing. This project would enable the region to stand out in the field of cold technology and innovation. The Project, resulted from a public and private co-venture, consists in Research and Development, technology transfer and a training centre specialising in industrial implementations of cold technology.

The City of Patras Local Action Plan recognises the city as a commercial port and a nodal commercial and touristic centre that links Greece with the rest of Western Europe, and is an important academic city with universities, institutions, and a science park with experience in applied sciences and new technologies. The action plan recognises the importance of supporting the mature economies of the city while creating new economic opportunities.

The Patras LAP identifies that the mature economies of the city could be upgraded through education and skills development in the agricultural and manufacturing sector, supported by consultancy and applied research, alongside best practice scanning and foresight or horizon scanning exercises.

The creation of new economic opportunities in the Local Action Plan is centred on the development of sustainable industries (e.g. informatics and communications, environmental management and protection) where the University of Patras is active, support for the growth of entrepreneurial businesses linked to the innovation and knowledge developed at the University of Patras, the development of entrepreneurial services (e.g. incubation, start-up support), and the establishment of an informatics & communications and environmental management protection industry identity for the city.

ICT activity in the University of Patras has developed significantly during the last 30 years. Several businesses have been established, either to service the public and private sector of the Region of Western Greece, or to provide international products or services. Although there is a highly ICT-skilled human potential in the city of Patras and at the same time, the results of the research activities in ICT field are recognized internationally, the academic sector is isolated and the links between the research community and local businesses are very limited.

The need for collaboration and joint working in order to give added value to existing ICT products or services is an essential requirement for the growth of the local economy. Patras Municipal Enterprise will extend its role as the initiator of activities that bring together local businesses, researchers, and skilled people, by hosting targeted meetings and workshops that highlight emerging ICT sectors and technological trends that will be adopted from business sector, with the support of research groups or communities.

In relation to environmental sector, academic institutions, particularly the University of Patras and the Technical Educational Institute of Patras, have focussed on environmental protection and management, including new types of Green Energy, renewable energy sources, and energy efficiency of buildings and industries.

A complete and innovative approach has been proposed from the University of Patras to develop activities and new infrastructures that will allow the University to operate in an environmentally friendly way, reducing the electricity consumption on the University campus. A new solar park, the largest in the urban area of Patras, will be constructed for that purpose and in parallel new technologies will be adopted in order to renovate existing University buildings.

The ULSG members have agreed that there is an existing gap between the University's activities with the methods currently used in primary sector, and more specifically in manufacturing, agricultural production and the biggest part of food industry production.

The Chamber of Commerce as a member of the ULSG will take the role of bridging this gap by organising several thematic seminars, workshops and conferences for the local SMEs. In these meetings, technological advances in manufacturing, agriculture and food industry sectors will be presented from selected scientific groups of the academic community, allowing the local businesses to be educated and adopt new methods of production.

Overall, for the city of Patras, their engagement in RUnUP has provided a new instrument for the strategic development of the city and a complementary mechanism for the development and initiation of new actions and activities that support the revitalisation of the local economy. The city's participation in URBACT II has provided an opportunity to coordinate economic development activity with stakeholders including the University of Patras, Chamber of Commerce, Hellenic Open University, and the Technological Educational Institute.

The Solna Action Plan consists of five actions. The first three focus on the development of hard and soft infrastructure in the new city district Hagastaden, and life science activities under the international brand "Stockholm Life Solna-Stockholm". One of these actions is the project "Powerhouse Stockholm Life", which aims to developing tailor-made tools and processes to improve the co-operation and knowledge transfer among small and medium life science companies, academic, and healthcare spheres. Such tools and processes aim at making it possible for companies to reach collaboration opportunities, clients, capital, closing of contracts, reach their markets faster, and increase the efficiency of their operations. The project will last three years and is funded from EU structural funds by approximately 10 million SEK.

The fourth action concerns the possibilities to broaden the innovation system, strengthen the commercialisation process, and develop collaboration between universities and SMEs through the development of an 'Innovation Office'. The role of the Innovation Office is to inspire, inform and stimulate researchers to innovations and create preconditions for these innovations to become of use to the society. The aim is to broaden the innovation system and include all innovations, improvements and discoveries that can be commercialised.

The fifth action is a project developed as a result of enhanced collaboration between Solna and Karolinska Institutet, where new areas of common interest have been identified. Health can be a competitive advantage for companies. KI Health Management, the City, and a number of leading Solna businesses have initiated the project "Healthy Companies in the Healthy City" where research results from Karolinska Institutet Health Management are used to inspire companies to promote a healthy lifestyle and a healthy management structure.

Employees are of great importance for the companies' competitiveness in a globalised world. Both research and practical experience show that working to improve the health and well-being of employees has a direct impact on work climate, efficiency, and profit. A series of seminars are organised to highlight the correlation between health and profit, profitable investments in human resources and how to create a healthy and profitable company.

The process initiated by RUnUP has now found its long term sustainable form. The Stockholm Science City Foundation, in which Solna plays an active part, is the natural long-term basis for the continued work to develop Stockholm Life Solna Stockholm to a world-leading life science area. The Local Action Plan will be under constant review as part of the regular activities of the Stockholm Science City Foundation and by the stakeholders involved in developing Stockholm Life Solna- Stockholm and the new city district Hagastaden.

The development of appropriate conditions for knowledge exchange and technology transfer is an important factor in the long-term sustainability of the triple-helix partnerships that have been established through the URBACT Local Support Group methodology.

The range of actions identified by each RUnUP partner varies significantly, but they all highlight the wider range of activity that can be undertaken by universities in our urban areas. The review of triple-helix co-operation highlighted the strong experience of Águeda and Leszno, which has been driven by strong political commitment and a drive for change at an operational-level. This is evident again in reviewing the cities of Gateshead, Barakaldo, Patras, and Solna.

In this context, Gateshead and Barakaldo share a common structural challenge in having no university within their authority or municipality area. As a result, they have had to commit extensive resources to establishing relationships, developing new activity and maintaining a momentum.
In comparison, the City of Patras has an established university which has a relatively strong education and research profile, but a limited range of activity that supports the development of the local economy.

While RUnUP has provided an agenda for change at a local-level in Patras through the establishment of the Local Action Plan, to some extent - in the opinion of the RUnUP Lead Expert - the status quo has been maintained as there has not been the same level of political commitment or drive for change at an operational-level that has been evident in other partner cities. Solna, similarly, provides a different perspective.

With a World-Class university in their city and an approach to supporting business competitiveness based on lower taxation, the work of Solna has been driven through its active engagement in Stockholm Life Solna-Stockholm.

PART B

4. Synthesis of RUnUP Study Visits

4.1 Introduction

This section of the RUnUP final report provides a comparative assessment of three cities visited as part of the URBACT II thematic network RUnUP (The Role of Universities for Economic Development in Urban Poles).

The City of Tampere in Finland was visited between the 13th and 14th October 2009, the City of Enschede in the Netherlands was visited between the 24th and 25th of March 2010, and the City of Coventry was visited between the 25th and 26th May 2010. This section explores three common factors between each city that makes them case studies of good practice for other urban centres.

Tampere

Tampere is located in the southern part of central Finland, some 170 km northwest of Helsinki. Its roots as an industrial centre date back to the early 19th Century. The City of Tampere has about 200,000 inhabitants and the size of the whole urban region is around 300,000. It is the second biggest urban concentration after the Helsinki region and the biggest in-land city in the Nordic countries.

More recently, Tampere has also become known as a student city, having over 23,000 university students in several major educational institutions. Tampere is the centre of Finnish industry today. Versatile research and education and cooperation between companies and universities have maintained and further developed the competitiveness of the region's industry.

Enschede

Enschede is a municipality and city in the eastern Netherlands in the province of Overijssel, in the Twente region. The early history of Enschede is largely unknown, but a settlement existed around the Old Marketplace in early medieval times. The name of this settlement is mentioned as Anescede or Enscede meaning either "near the border" (with Bentheim) or 'near the Es'and sported a church, a marketplace and a fortified aristocratic house.

Enschede was granted city rights in 1487 by Gerard Besselink, the Bishop of Geometrica and henceforth was allowed to protect itself with a wall. Because a stone wall was too expensive (since stone had to be imported), Enschede had a system of ditches, palisades and hedges instead, which is still reflected in the street-names Noorder-hagen and Zuiderhagen (North Hedge and South Hedge, respectively).

The city plan of this era is still recognisable in the street-pattern. Because the medieval city was largely built of wood and stone houses were the exception, fire was a constant risk and a series of fires in 1517, 1750 and again on 7 May 1862 earned the people from Enschede the nickname Brandstichters (arsonists).

Coventry

Coventry is a city and metropolitan borough in the county of West Midlands in England. Coventry is the ninth largest city in England and the 11th largest in the United Kingdom. It is also the second largest city in the English Midlands, after Birmingham, with a population of 300,848 although Leicester and Nottingham have larger urban areas.

The population of Coventry has risen to 309,800 as of 2008. Coventry is situated 95 miles (153 km) northwest of London and 19 miles (30 km) east of Birmingham, and is farthest from the coast of any city in Britain. Although harbouring a population of almost a third of a million inhabitants, Coventry is not amongst the English Core Cities Group due to its proximity to Birmingham.

Coventry's motor industry boomed during the 1950s and 1960s and Coventry enjoyed a 'golden age'. During this period the disposable income of Coventrians was one of the highest in the country. The 1970s, however, saw a decline in the British motor industry and Coventry suffered badly. By the early 1980s, Coventry had one of the highest unemployment rates in the country. In recent years, the city has recovered with newer industries locating there, although the motor industry continues to decline.

4.2 City and university history

The first factor in our making each city a case study of good practice is their city or university history.

Conclusion 1: Urban areas may be predisposed through their history to have strong city-university linkages.

Enschede

During the 1970s, textile production in Enschede came to a halt due to fierce competition mainly from the Far East. This had a profound effect on the population. Enschede became one of the poorest municipalities in the Netherlands and (de facto) went bankrupt. Large areas of industrial wasteland came to mark the city. With the support of the national government, this property was acquired and rebuilt. The city centre was rendered a car-free zone and the importance of Enschede as a Euregional Centre was stimulated.

A key driver for the city was the development of the University in Twente. At the University of Twente (UT) there has been an active support for business development from the early 1980's for graduates entering the entrepreneurial path; start-up companies using University of Twente knowledge; and innovative, small and large regionally, nationally, and internationally operating companies. The University of Twente is considered the entrepreneurial research university in the Netherlands. The university's focus is to support and provide technological development and its management in the knowledge society.

In the 18th and 19th Centuries, Coventry became one of the three main UK centres of watch and clock manufacture and ranked alongside Prescot, near Liverpool, and Clerkenwell, in London. As the industry declined (mainly due to competition from Swiss-made clock and watch manufacturers) the skilled pool of workers proved crucial to the setting up of bicycle manufacture and eventually the motorcycle, automobile, machine tool, and aircraft industries. In the late 19th Century, Coventry became a major centre of bicycle manufacture, with the industry being pioneered by Rover. By the early 20th Century, bicycle manufacture had evolved into motor manufacture, and Coventry became a major centre of the British motor industry.

It was this evolution as a major industrial centre that led to the formation of local colleges of technology in the early 20th Century in both Coventry and Rugby linked directly to the needs of local companies. Subsequently, these colleges merged and in 1970 were recognised with 'polytechnic' status and in the early 1990s became a university.

Tampere

The City of Tampere was established by King Gustav III of Sweden in 1779, on the bank of the Tammerkoski rapids. Tampere has been an industrial pioneer in Finland since the very beginning. Finland's first paper mill started operation in 1783, and the first paper machine was engaged at the J.C. Frenckell & Son's factory in 1842.

The cotton factory established in 1820 by James Finlayson grew to become the country's first large-scale industrial establishment. The first electric light in the Nordic countries was also lit in Finlayson's modern production facilities in 1882. The city's engineering industry was bolstered by the manufacturer of grinding machines and water turbines, which was established on the upper reaches of the Tammerkoski rapids in 1861. By the beginning of the 20th Century, Tampere was the largest industrial city in Finland.

The traditional economy of Tampere is based on specialised industries namely, metal; automation; and engineering. Local expertise is particularly well-developed in mobile heavy machines, e.g. mobile mining, mobile forestry, where companies can co-exist as they are operating in different markets with restricted competition, but where they have been able to take advantage of technological innovation and business restructuring.

The founding of the Tampere University of Technology was one of the steps of the city and the local business life in bringing higher education to the region. The university was founded in 1965 as a branch of Helsinki University of Technology and became an independent university in 1972.

The University has grown to become a significant influence on technology in Finland and abroad. TUT plays a pivotal role as an advocate of business life, internationalization, and well-being in the Tampere region and western Finland as a whole. The University is the fifth largest employer in Tampere.

Implications for Urban Areas

Clearly, a city cannot recreate its history to provide a 'turning point' in the development of a university and its local linkages and indeed there will be universities that have become well-established in a city where there has been no 'turning point'. However, it is important for cities to recognise the strategic-level relationship that can exist with its local universities, rather than transactional single projects or single activities which occur.

Our study visit cities show that historically, cities and their business leaders have driven the establishment and location of a university in its urban area and inherently have a strong strategic relationship as a result. This is validated in the work of the URBACT I network STRIKE, which identified that, "the quality, quantity and diversity of the universities, other education institutes and R&D activities determine for a large extent the starting position of a city in the knowledge economy".

4.2 Societal impact

The second factor in making our study cities a good practice case is the remit of each university beyond traditional education and basic research.

Conclusion 2: Universities with an applied research and business interaction remit as part of their organisational mission and with defined operational approaches in this field of practice have enhanced strategic level relationships with their local cities and industry.

Enschede

According to the law in the Netherlands, each university has three different tasks: education; research; and service to the community. This last aspect includes knowledge and technology transfer. The process of knowledge and technology transfer should bridge the gap between fundamental research (the core activity of a university and research institutes), applied research (the research that is tailor-made for industry), and society. In practice, the transfer of knowledge obtained by research is easier with the larger companies that can afford to invest in new knowledge and technology and in most cases have a research-laboratory of their own, than it is too Small and Medium Sized Enterprises (SMEs).

The University of Twente places great emphasis on the useful application of knowledge in society. Patents, life-long learning programmes, and spin-off companies, testify to this commitment, as does the university's intensive involvement in research programmes that enhance knowledge infrastructure in the Netherlands. So far, it has produced 600 spin-off companies - more than any other Dutch university.

The University of Twente see 'entrepreneurs as a bridge between university and industry'. Their entrepreneurial university journey began in 1980, with an initial study of graduate enterprise which identified that 50 people with 43 businesses were enterprise active, while 80% of staff were supportive of enterprise development. As a result, the overwhelming consensus was that within the university 'people who develop new companies should be supported'.

Coventry

At a national-level, through the Higher Education Funding Council for England (HEFCE), UK universities are actively encouraged to contribute to economic and social development through innovation, enterprise, and skills. In particular, they encourage new relationships between higher education and employers that supports business growth, through developing the knowledge and skills of employees.

Coventry's success as a business-facing university is based in part around the development and implementation of key structures, including the University Business Development Group, Coventry University Enterprises, Applied Research Institutes, and the University Employer Engagement Company ACUA.

The Business Development Group is formed of three linked teams: Corporate Partnership Unit; Business Development Team; and Business Development Support Office. 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 too business solutions are supported by the latest thinking and research from industry-leading names at the University.

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 such as BT and Cisco, to smaller project-based collaborations with SMEs. These are not only with commercial organisations but also with public sector bodies and government organisations, such as Advantage West Midlands, and the Department for Business, Innovation and Skills (BIS). Coventry University has produced a simple partnership development process and methodology aimed at promoting a culture of knowledge sharing and improved partnership working.

Tampere

The societal impact of Tampere University of Technology is based on its principal tasks: research and education. The University is a sought-after cooperation partner in industrial research and development projects. It is also a strong generator of innovation and new research- and knowledge-based companies. Its graduates provide a valued workforce in industry, business life and other facets of society.

The University openly transfers knowledge based on research conducted for the benefit of society. The transfer of research results to industry and business takes mainly place in collaborative research and development projects, which are of great societal and financial significance.

Implications for Urban Areas

The RUnUP baseline study specifically identified that universities are seen as environments that are:

- The centre of the research and teaching systems
- The training institutions for our future researchers
- A point where frontier knowledge meets practical applications
- The school and library of the knowledge society

European Commission policy has sought to support the engagement of universities with civil society to support the uptake of innovation[3], the build up concrete synergies between universities and surrounding society[4]. It supports the recommendation that exchange of knowledge with industry and within society is not the responsibility of the universities alone. Companies, national, regional, and local authorities, business promotion agencies, private and public joint venture investors and other stakeholders must be active in creating the appropriate infrastructure and surrounding environment.

Our study visit cities show that in order to achieve appropriate levels of engagement and synergy, there needs to be not only recognition within the mission statement of universities, but also supporting structures that can enhance linkages with the wider civil society. As highlighted in the RUnUP baseline report, this goes beyond an emphasis on technology transfer. Universities have seen the growth of standard models, e.g. external liaison offices, research and development offices, and technology transfer offices as central mechanisms for linking academia with industry.

The introduction of a model, (established within RUnUP) for mapping the transition of local economies with university roles, provides a structure for debate between municipalities and universities on how to drive forward and support their local business community in line with the principle of the triple-helix of university-industry-government relations.

4.3 Infrastructure investment and absorptive capacity

The third factor in making our study cities a good practice case is the investment by the state, region, city, or university in linked infrastructure and the impact of this on the capacity of companies to engage in knowledge and technology transfer.

Conclusion3: Cities wanting enhanced collaboration between local partners and universities need to establish new infrastructure and innovation intermediaries that support the creation of knowledge exchange clusters.

Enschede

The Twente Business and Science Park was developed in 1989. The park is a high-value industrial park for knowledge intensive companies, businesses that specialise in services, as well as for the University of Twente which is directly adjacent to the park. The park measures 40 hectares and is situated on the edge of Enschede, between the two largest cities of the region, Enschede and Hengelo.

The success of the park is based on its unique location, outstanding facilities, an intensive and active knowledge exchange, and an atmosphere that encourages mutual beneficial co-operation. The Technical University of Twente (UT) plays an active role in the park through an intense cooperation with science companies, including facility and laboratory sharing and exchanges of personnel. The combination of university study, high-tech knowledge-based industry, and business services generates both ideas and jobs and has proven to be a very strong magnet for like-minded companies and investors.

3 European Commission; Delivering on the modernisation agenda of universities: Education, Research and Innovation; May 2006.
4 Universities Role in the Exchange and Transfer of Knowledge with Industry and Society; European Universities: Enhancing Europe's Research Base

A significant development of similar standing is the establishment and operation of Kennispark. Kennispark builds on the history of the University of Twente as an entrepreneurial university and is a joint development between the University, City of Enschede and Province of Overijssel. It has a key focus on the commercialisation of university knowledge (Kennis), alongside the stimulation of student entrepreneurship and local area development, with a core agenda on commercialisation, innovation, and entrepreneurship as a driving force in addressing the need to establish 10,000 new high-end jobs by 2020. In this context, it is recognised that the University cannot do it alone, and that the City recognises the University is a key development partner.

Kennispark serves provincial goals, by providing money and support as a donator and catalyst, but with no long-term obligations. Meanwhile, for the City, the focus is on the need for jobs, area development, and planning and support for infrastructure development. The University of Twente provides and supports knowledge and training, cooperation with commercial partners, alongside its role as an entrepreneurial university. The partnership is linked through an affiliation contract who commit with each other for the realisation of the master plan. Kennispark, in this context, can be seen as three partners with three perspectives, with three languages - all operating with their own complex structure.

Kennispark delivers this through the operation of three key programme areas: facilitating the starting and growing of businesses; stimulating innovation in existing companies; and developing an inspiring area for innovative businesses. Economic development and area development are mixed and from a partner perspective, there are potentially different perspectives on what Kennispark is.

In entrepreneurship development a particular focus is on: awareness, education, and training; business development; financing networks; and incubator development. Alongside this, support for innovation is strong with support for open innovation clusters based on research programmes; high technology facilities and facility sharing; access to knowledge through commercial and societal portals with a particular emphasis on thermoplastic composites, high technology factory (nano production), virtual reality and serious games, telemedicine and medical imaging.

Kennispark Twente is also an area based development activity which supports inward investment, a master plan for area development (200,000m2), alongside building redevelopment and talent attraction and retention activities. This includes the redevelopment of a university building to provide a 50,000 m2 business incubator, and the redevelopment of the road between the university campus and Kennispark location at a cost of 40 million EUR.

Tampere

Capital infrastructure investment has been a key component of the development of Tampere. In particular, developments at the universities and polytechnics and science & technology park has been critical.

The Main Campus of the University of Tampere extends over the area between the streets Kanslerinrinne and Kalevantie, within easy walking distance of the city centre. The principal buildings are the Main Building (1960) and the buildings Pinni A and Pinni B, which were completed in 1993 and 2003.

At Hermia Science Park, there are a variety of business premises solutions available for companies at different stages and with different needs. Hermia's premises offer a wide range from basic solutions to state-of-the-art offices, meeting any demand. The Hermia office hotel provides services for small companies and start-ups and leases out small office premises. Companies in the Hermia office hotel have access to comprehensive office services, allowing them to concentrate on their core business. Hermia also has premises suitable for larger companies.

Finn-Medi is a unique concentration of health and biotechnology expertise in Tampere. It is a network of multidisciplinary, technological, bioscience and medical expertise in an efficient environment, which brings together training, research, business and healthcare experts and services. Finn-Medi is a compact and growing development environment and a close campus. The surroundings and the closeness of different organizations foster creativity and productive ideas. It includes modifiable premises and all the services needed for developing a successful business.

Technopolis Yliopistonrinne offers an ideal environment for the establishment and development of a successful business focused on expert services. Yliopistonrinne will be completed in three phases. The first 11,000m^2 section was completed in spring 2010. The core of the technology centre provides the facilities for lobby and client services, a restaurant and conference rooms in conjunction with the innovation centre. The upper floors offer flexible premises for small, medium-sized and large companies. When completed, the technology centre will have a total floor area of 30,000m^2.

Coventry

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.

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.

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.

Implications for Urban Areas

Despite the creation of technology and knowledge transfer support mechanisms within universities, the strategic challenges and key issues regarding knowledge transfer which are often underlined at a strategic level include:

- Little co-operation between firms and R&D Institutions
- Low level of SMEs participating in knowledge transfer activities
- Companies are more focused on distribution and assembling than on R&D activities
- Low technology transfer rates and a weak entrepreneurship culture
- Low creation rate of spin-offs

To support the development of their local economy, municipalities and urban stakeholders need to examine how knowledge is transferred into industry. The 'absorptive capacity' of companies plays a key role in determining their capability to access and make use of external knowledge, in particular through external collaboration with other companies (e.g. suppliers, customers and partners) or with universities and technology centres.

Knowledge for innovation must be absorbed through interaction and cooperation with the networks available to the company. Specific knowledge is required for the development and implementation of new business products, processes, or services. Where this information cannot be found within the knowledge base of the company, the company can decide to either develop knowledge themselves or obtain knowledge from the external environment.

To enhance the absorptive capacity of firms, the range of 'innovation services' offered to SMEs should be extended to assist them in engaging with innovation support agencies and in developing longer-term relationships with the science base. Such services need to be translated through the work of 'non-academic' business support specialists who can work with SMEs on a needs-driven basis within the framework of approved projects and programmes integrating with academic staff as appropriate.

The development of infrastructure and the subsequent roll out of innovation services provides a crucial dimension in enhancing the knowledge transfer process. The issues of knowledge proximity and of knowledge translation are ones that can be delivered through the availability of key infrastructure and appropriate knowledge intermediaries.

4.4 Study Visit concluding remarks

There are many factors that impact the relationship between a university and its urban area. The RUnUP study visit cities highlight that it is not just the nature of a university's educational course profile, research interests, or commercialisation approach that drives forward collaboration and partnership.

The study visit cities highlight that for the relationship between an urban area and its universities to work, there needs to be a strong reliance, interdependence, and need between the city stakeholders and university. Historically, cities and their business leaders have driven the establishment and location of a university in its urban area and inherently have a strong strategic relationship as a result. In a period of economic downturn, the opportunity to establish this bond may present itself for many urban areas. Our study visit cities highlight that where this bond has been established that long-term and advantageous relationships can be created as a result.

For universities themselves, there is a need to recognise the importance of their societal impact that can be delivered through enhanced interaction with urban stakeholders. In order to establish enhanced strategic level relationships with their local cities and industry, universities need to define their organisational mission and operational approaches in applied research and business interaction.

A critical dimension for cities seeking enhanced collaboration between local partners and universities is the creation of clusters of knowledge or knowledge integration communities where a neutral space can be created to support knowledge transfer. The development of new and enhanced infrastructure integrated with innovation intermediaries that support the knowledge exchange process is vital for ensuring the operational success of relationships between a university, their city, and local industry.

PART C

5. Synthesis of RUnUP Thematic Events

Alongside the RUnUP study visits, three thematic network events have been delivered at partner city locations. These events targeted key thematic areas outlined within RUnUP, with participation extending beyond the project partners and ULSG members to involve stakeholders at a local, regional, national, and European level.

5.1 RUNUP thematic event explores how cities can harness The Triple-helix as a motor of Local Development

The RUnUP network undertook its first Thematic Network Event in June 2009 in the partner city of Águeda in Portugal. 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.

As Mayor Gil Nadais opening the conference highlighted, "RUnUP provides an important mechanism for understanding the triple-helix, connections to universities and entrepreneurial conditions and for enhancing the quality of life within the city".

The Mayor was actively supported in the opening ceremony by Ricardo Abrantes from the Business Association of Águeda who also highlighted the importance of the theme of triple-helix and the fundamental role of the University to stimulate innovation and entrepreneurship within this time of knowledge.

From the university perspective, the Pro-Rector of the University of Aveiro, Professor Artur da Rosa Pires stated the importance of the triple-helix theme and the need to" build a relationship with the future". Águeda is doing this and the University has been specifically challenged by the Mayor to locate in Águeda. For the University of Aveiro and its activities he highlighted five key issues:

- For the University to be aware of its dynamics and skills and ability to undertake other activities and to do things in a new way;
- To be aware of the work of new companies, what they do and the requirement to develop new competencies;
- To understand the needs of society and how the University can meet these needs;
- To reflect changes in public policy, the gathering of skills and doing things in a different way; and
- The importance of partnerships developed on a global basis.

In conclusion, the Professor highlighted that RUnUP as a network will transcend itself, gathering knowledge outside of the network as well as benefiting from partner knowledge.

In concluding the opening ceremony, Vitor Campos, General Director of the Cabinet of Territorial Planning and Urban Development highlighted the importance of URBACT as "a significant instrument for consolidating and communicating territorial development approaches within the Lisbon strategy". He highlighted the need for innovative approaches to territorial development and the active participation of Águeda and 11 other Portuguese cities in the URBACT II programme.

Role of universities for economic development in urban poles

One of the successes of the thematic event held at the School of Technology and Management of Águeda (University of Aveiro), which attracted 150 delegates, was the participation of stakeholders from across Portugal who were keen to discuss how they can more actively use the principles of the triple-helix in a practical way at a local level.

Because of the importance of understanding how knowledge is transferred into the economy, RUnUP has bought together nine cities from across Europe under the URBACT II programme. As specifically outlined in the presentation by Chris Wilson, RUnUP Project Manager from Gateshead Council, these cities need to develop with partners from their URBACT Local Support Groups their own local action plans. For RUnUP, this will include mechanisms that support the capability of companies to acquire knowledge through connections with external organisations (including universities) in line with the industrial transformation of the economy.

Linked to this in his presentation, the Lead Expert for RUnUP, Clive Winters, explained how moving forward into the implementation phase of the network that the partners need to "enhance their individual and organisational knowledge of their local and regional knowledge based institutions". Clive highlighted the importance of the role of cities in the knowledge economy and the state of the art in the role of universities in Urban Poles.

In this context, Alicja Szczepinska, from the town of Leszno in Poland, provided a background to the economy of Leszno and its work in RUnUP in her presentation. In particular, this has included mapping the state of economic transformation, establishing a focus on the metal/machining industry, construction, food industry, and entrepreneurship.

A key development has been the agreement by stakeholders of a mission for the town based on the knowledge economy, and a declaration of co-operation between key stakeholders to create and develop triple-helix partnerships.

Fostering the Triple-helix at a Local Level

The URBACT II programme recognises the urban contribution to growth and jobs and that cities are home to innovation, entrepreneurial spirit, and economic growth. Priority Axis 1 of the Operational Programme in particular, recognises the important themes of promoting entrepreneurship and improving the innovation and the knowledge economy and the development of triple-helix structures as catalysts to promote innovation structures and entrepreneurial spirit.

For the University of Aveiro technology transfer and knowledge valorisation represents a critical activity. Jose Paulo Rainho of the University's Technology Transfer Office presented on their approach for supporting business innovation, technology-based entrepreneurship, intellectual property management, collaborative research, technology licensing, and spin-outs and start-ups.

Promotion represents a key activity in technology transfer operations and the University of Aveiro in this context are promoting collaborative research, which includes working with research units and associated laboratories; the identification of competences among researchers, academics and students; the valorisation of research; prototype development; and research and development activities. In addition, while technology transfer can occur from research, it can also occur from the development of entrepreneurship and result in the creation of spin-outs and start-ups.

The university deliver entrepreneurial courses, seminars, and conferences to students, academic members of staff, and researchers, to create a change in cultural mindset. Following this, the stimulation of entrepreneurship is facilitated through an ideas competition, business planning, and completion of feasibility studies. Over a three-year period, this activity has engaged with 394 participants, including 50 research units and 40 business mentors, generating 58 business plans, seven entrepreneurial projects and three license agreements.

Supporting this intellectual property management is a significant activity that will include knowledge dissemination, investment management, cost benefit analysis, commercialisation of intellectual property, and formal IP protection. Beyond this, technology licensing represents the generation of income with market research consisting of a licensing plan and licensing negotiation.

The theoretical perspective on the triple-helix and its linkage to innovation development at the local-level was explored by Associate Professor Domingos Santos from the Polytechnic Institute of Castelo Branco in his presentation. He addressed four key questions: why the triple-helix is important, how triple-helix models are organised, the barriers for success, and what policy measures can be adopted strengthen relations in the triple-helix.

The importance of the triple-helix was positioned within the context of regional innovation, where the quality of human capital, research activity, innovation performance and the ability of companies to absorb knowledge is particularly important. In this environment, the dialogue between business, higher education, and government is critical.

Associate Professor Santos explained that traditional approaches were either demand-side or supply-side oriented, focussed on clusters or value chains linked to the end-market or based on the scientific or technological interests of business. However, there are a range of private sector and public sector barriers that hinder the successful adoption of triple-helix strategies. In conclusion, it is fundamental that there is leadership at a regional-level with power delegated to local and regional governments, that a platform exists for regional and local actors to come together, and that the challenges of the wider community of SMEs that make up the economic fabric in most cities are addressed by triple-helix partnership.

In closing the second parallel session, Associate Professor Rui Gama from the University of Coimbra highlighted the importance in society of information, knowledge, learning, and the organisation at a strategic-level of supporting such activities. The production of knowledge and innovation are considered the most important in establishing competitive advantage. This demands the participation of all stakeholders and actors, alongside flexible forms of organisation, so that local stakeholders can respond in real-time to the constant changes of society and the economy.

Given the different types of knowledge (analytical, synthetic, and symbolic) and of the process of innovation, localisation of activities is particularly important. The existence of a common vision among key stakeholders, the definition of a clear strategy and objectives, the identification and allocation of the roles and responsibilities for each local partner and the existence of an assumed leadership, are the essential elements for success.

In this context, the University is one of the main actors with responsibilities in knowledge production, having a central role in the development and functioning of innovation systems, the development of human capital, and for the impact of the university activities on the local economy and society. Relationships between science and industry are an essential element for understanding the dynamics of innovation at a local-level.

The University of Coimbra has had a significant impact on its own local economy through education and the transfer of knowledge. In Coimbra, a relation between the University and the economy is one of the essential measures in the development and valuation of knowledge and in the stimulation of innovation. In addition, the provision of business incubation and support for companies, alongside quality infrastructure, complement the strategy of development of the territory of Coimbra.

Triple-helix: from concept to practice

Reflecting on the importance of triple-helix, João Pedro Estima de Oliveira, Director of the School of Technology and Management in Águeda highlighted the practical approach of the Lighting Living Lab. The Lighting Living Lab mission is to promote innovation and the development of research in new technologies and applications in the field of lighting, focused on the concepts of smart lighting and eco-friendly lighting, and, supported by the ICT sector, giving birth to new services/systems/products and business opportunities.

The user-driven approach is necessary to change the current paradigm of the lighting usage: to pass from lighting seen as a mere utility (supporting the human activity in a context of insufficient illumination), to lighting seen as a mean to achieve objectives like, for instance, to enhance the sense of comfort and enable further personalization of environments. This implies behavioural changes which only the Living Lab user driven methodology can achieve.

The Lighting Living Lab will contribute to the implementation of the European Sustainable Energies Policy, in line with the conclusions of the 2007 Spring European Council, which sets out an ambitions EU approach to energy issues and climate changes aiming to ensure the security of energy supply, the increase of energy efficiency and the reduction of carbon dioxide (CO2) emissions. But, as the challenge it maybe, it carries also a brighter side, constituting an opportunity for the development of new products/services/applications, with embedded Information and Communications Technologies, to create new business and market opportunities. This constitutes the problem/opportunity to be addressed by the Lighting Living Lab.

Beyond this, the Lab is viewed as space of interaction between the Aveiro region main stakeholders and an opportunity to develop the concept of triple-helix - an interactive, rather than linear, model of cooperation and innovation process between the university, the enterprises and the government. Furthermore, the Living Lab concept improves and enriches this concept by introducing the users/citizens in the innovation process. The idea for the Lab in itself is a direct consequence of a first experience to develop a triple-helix process in the Aveiro region, centred on the Águeda municipality.

Continuing the theme of triple-helix, João Carlos Moura, President of the Biocant Centre of Innovation in Biotechnology presented on the work of Biocant as an applied research and development centre in life sciences. BIOCANT promotes the development of R&D in consortium with national and international companies to the creation of new products and services and encourages and endorses Portuguese bio-entrepreneurship.

The Centre drives technology transfer between fundamental research centres of known competence and biotech companies. BIOCANT is the R&D centre of BIOCANT PARK, the first Portuguese technology park dedicated to Biotechnology. The Centre assists the companies of the park in their research and development activities as well as in service provision.

BIOCANT performs R&D in biotechnology applied to Life Sciences, developing its own initiative projects or projects in consortium with companies or fundamental research centres. They provide innovative services to public or private health providers, research centres, to pharmaceutical, environmental, food and agriculture industries.

BIOCANT has a portfolio of projects and technologies, which evolved from projects developed in collaboration with fundamental research centres and other institutions. BIOCANT's Laboratorial Units have independent scientific co-ordination working together in several types of projects: intramural projects where research is conducted by BIOCANT's human resources and supported by BIOCANT; and contracted Research and Development (R&D) projects as a funding mechanism by which BIOCANT provides specific research services.

These are negotiated contracts which may be funded by private companies, associations or others entities; consortium projects whereby a research project is carried out by BIOCANT and one or more legally separated organizations. Under this type of agreement, BIOCANT usually must perform a substantive role in the conduct of the planned research.

BIOCANT develops intramural R&D projects for the creation of innovative products and services to be exploited or adapted by national and foreign companies. BIOCANT also develops tailor-made R&D for national and foreign companies looking for business-oriented technological solutions. BIOCANT also carry out research in consortium with fundamental research centres to the resolution of scientific problems that might lead to the creation of new biotechnological solutions. BIOCANT assists the scientific validation of innovative ideas and business projects in biotechnology by granting access to laboratorial space and advanced scientific consultancy.

Recognising the importance of industry within the triple-helix, Paulo Rodrigues, General Secretary of the ABIMOTA Laboratory presented on the work of his organisation in supporting industry. Abimota (Associação Nacional das Industrias de Duas Rodas, Ferragens, Mobiliário e Afins) is the Association of the Portuguese Two-Wheeler, Building Hardware, and Furniture Industries.

The different departments within the association concentrate on: legal, economic and fiscal dossiers; sportive activities; technical standards; professional training; exhibitions; and laboratorial activities. In its own laboratory, LEA - Laboratório de Ensaios da Abimota - tests are performed on the level of materials, surfaces, chemicals, metallurgy, dimensional metrology, vehicles, and motors.

Changing industry into telecommunications, Artur Calado, Executive Director of Innova RIA, presented on an innovation network of telecommunications companies based in Aveiro that contribute to the creation and consolidation of a telecommunications cluster, promoting regional development and competitiveness.

Among its members are NEC, Nokia Siemens Networks, Ericsson, and Portugal Telecom Inovação. However, the majority of the associates are SMEs, active in delivering telecommunications and information systems products and services.

The combination of favourable stakeholders and activities has enabled the innovation network to be well established in Aveiro, supported by the existence of a university with a strong reputation in telecommunications, two technology transfer institutions, and the presence of industrial actors. The objectives of the Association encompass the promotion of innovation, the collaboration effort in research and development, training, marketing and internationalisation, and the attraction of investment to the region.

The richest asset of Inova Ria are the competences held by the associated companies, which enables the offer of a wide spectrum of products and services:

- to contribute to the creation and consolidation of companies in the field of telecommunications;
- to contribute to the creation and sustainability of qualified employment in the region of Aveiro;
- to promote innovation in the field of telecommunications;
- to promote cooperation between the companies, namely in the areas of research and development, training, marketing and internationalisation;
- to provide services to the associated companies, contributing to their development and competitiveness;
- to promote investment capture for the region of Aveiro, in the field of telecommunications; and
- to contribute to consolidate the leadership of the region of Aveiro in the field of telecommunications at national level and to foster its worldwide visibility.

Keynote speaker

Mika Kautonen, Ph.D., is a Senior Researcher and the Head of the Innovation Studies at the Unit for Science, Technology and Innovation Studies, University of Tampere, Finland. He has conducted and been in charge of numerous research projects focusing on innovation systems and environments and their spatial dynamics; territorial innovation models and theories, especially the regional innovation system approach; firms' innovation processes and related interactions, knowledge-intensive services and innovation policies. He has consulted and lectured internationally, nationally and regionally in these issues and has more than 60 scientific publications related to his research interests.

His current research activities are particularly related to publishing the primary outcomes of a research programme that focused on the role of knowledge-intensive business services in innovation systems. In connection with this, he studies the changes occurring in modes and organization of innovation activities (e.g. service innovation, innovation communities) which combine both close geographical proximity and access to worldwide competences.

Tampere is located in the southern part of central Finland, some 170 km northwest of Helsinki. Its roots as an industrial centre date back to the early 19th Century.

The City of Tampere has about 200,000 inhabitants and the size of the whole urban region is around 300,000. It is the second biggest urban concentration after the Helsinki region and the biggest inland city in the Nordic countries. More recently, Tampere has also become known as a student city, having over 23,000 university students in several major educational institutions. Tampere is the centre of Finnish industry today. Versatile research and education and cooperation between companies and universities have maintained and further developed the competitiveness of the region's industry.

Traditionally, Finland's competitive ability has been strong and Finland must continue to maintain quality education, sizeable investments by enterprises and the public sector in research & development, and well-functioning institutions. This solid competence basis, created by Finland through investing in education and research, must be preserved, and further reinforced. However, current strengths will not suffice to meet future challenges.

To attain Finnish strategic goals, the innovation environment must be able to create novelty and make choices. Therefore, the innovation strategy focuses on completely new topics and measures, or ones requiring a distinct change. The strategy reviews innovation activity and the required development measures via four basic choices:

- Innovation activity in a world without borders: In order to join, and position itself within, global competence and value networks, Finland must actively participate and exert influence and be internationally mobile and attractive.

- Demand and user orientation: Innovation steered by demand, paying attention to the needs of customers, consumers and citizens in the operations of the public and private sector alike, requires a market with incentives and shared innovation processes between users and developers.

- Innovative individuals and communities: Individuals and close innovation communities play a key role in innovation processes. The ability of individuals and entrepreneurs to innovate, and the presence of incentives, is critical success factors of the future.

- Systemic approach: Exploitation of the results of innovation activities also require broad-based development activities aiming at structural renewal, and determined management of change.

To a significant extent, the new Finnish Innovation Strategy recognises that paradigms are changing in relation to the individual, value creation, globalisation, demographics, services, and knowledge. At a local-level, this has seen a significant change in the Tampere innovation model, which is viewed as a risky step as it is seen as a new policy development for the local area, rather than one based on lessons learnt from elsewhere.

A central feature of this development is Demola, which is a 'demo factory' - a multidisciplinary open innovation environment where researchers and students can co-create to 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, carry out trials and analyses, and create business models.

Students are encouraged to create a personal profile on Demola's web site and choose the projects that they are interested in. Students then contact Demola staff and together, they search for team members in collaboration with universities and colleges. Once a project is started, partner companies give continuous guid¬ance - about two hours a week - to the project team through weekly meetings, workshops, and 'one-on-ones'.

Demola staff are on hand to provide support as well about topics such as project management, development models, and working methods. Companies will actually implement some of the projects if they are worthy, or the projects could potentially generate new start-up businesses.

The shared physical workspace on Demola's premises 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 toward new working methods and continuous interaction with the various teams, companies and researchers.

Teams are working with unproven concepts, so they might run into unforeseen technical problems that need novel solutions. This reinforces the importance of a shared space because of how it enables teams to tap into the Demola community for problem solving and creation of new ideas. Best practices can be identified and distributed to other teams as well in such a close working environment.

In many teams, there are students from several universities or colleges. Having a neutral location that is conveniently located in the city centre has enabled unbi¬ased and constructive collaboration among people from different academies and organisations.

Closing ceremony

After an interesting and informative day, the closing session of the conference included input from Alfredo Rodrigues Marques, President of the Regional Co-ordination and Development Commission of the Centro Region, Gil Nadais, Mayor of the Municipality of Águeda and João Ferrão, Portugese Secretary of State for Spatial Planning and Cities.

In this session, the President highlighted the fact that Águeda is distinguishing itself in urban regeneration and development, and is at the frontline, moving in the right direction with the right partners.

In conclusion, the Secretary of State highlighted the RUnUP network as a triple-helix with three key dimensions: knowledge, cooperation and coordination, in favour of organisation and technological innovation. He highlighted three important aspects for the project namely, selectiveness (based on a strategy with goals and results), continuity (continuation of coordination), and durability of effect (where the issues are taken on board by the agencies involved in the network).

5.2 RUnUP thematic event explores the role of knowledge city marketing in economic development

The RUnUP network undertook its Second Thematic Network Event in the partner city of Potsdam in Germany in February 2010.

It was of particular interest that the network event was held at the GO:In Golm Innovation Centre on the Potsdam-Golm Science Park with the institutes of the Max Planck and Fraunhofer society, which are two of the most important research organisations in Germany, the University of Potsdam, and research based companies.

The GO:INcubator is the central point for new companies on the Potsdam-Golm Science Park and is where scientists who wish to convert their ideas and research into innovative products and services can obtain comprehensive service from a single source.

GO: IN offers new technology based companies a variety of office and laboratory spaces in a single building, a wide range of different services together with optimal monitoring for a successful start. GO:IN aims to attract entrepreneurs in research, development and services, new companies looking for an innovative environment in which to expand their business and start-up project groups.

One of the successes of the thematic event, which attracted 40 delegates, was the participation of stakeholders from across Potsdam and Golm, who were keen to discuss how they can more actively promote Potsdam as a Science (Knowledge) City in a practical way at both a local level, national and international level.

Introduction

The thematic event included introductory speeches from Julian Röpcke from the University of Potsdam, representing the local RUnUP partner, who welcomed the international RUnUP partners and the local attendees from Potsdam to the event, and highlighted the importance of the GO:INcubator and the Potsdam-Golm Science Park as a good example of triple-helix implementation. Julian's University colleague Kathleen Rozanski then introduced the agenda for the event and the description of the parallel sessions.

Following this, and continuing with the discussion, Friedrich Winskowski, Managing Director of the Science Park highlighted the importance of the Science Park, its location on the edge of a nature conservation area with access to a high quality of life in the city of Potsdam, and the surrounding area which is extremely family friendly.

The Science Park is professionally managed and developed through targeted expansion of infrastructure and combining the strengths and interests of all institutes, organisations and businesses at the Park. Overall, the Science Park covers an area of 50 hectares with 2,500 staff, of which 2,000 are scientists and researchers, and home to 8,800 students.

Specifically located on the Science Park are the Fraunhofer Institutes for Applied Polymer Research and Biomedical Engineering. The Applied Polymer Research Institute specialises in the targeted development of sustainable processes and materials based on natural and synthetic polymers.

They are the basis for the development of new, efficient and sustainable materials, functional materials and additives. The Biomedical Engineering Institute works in the areas of biomedical and medical technology with focus on methods and technologies of molecular and cellular biotechnology. The research and development activities located in Potsdam include nano-/ biotechnology, molecular bioanalytics, biochip systems, and extremophile research as well as biodata banks.

In addition, the Science Park is home to three Max Planck Institutes which perform basic research in the natural sciences, life sciences, and social sciences in the interest of the general public.

The Max Planck Institute for Gravitational Physics (Albert Einstein Institute) undertakes research investigating Einstein's relativity and beyond: mathematics, quantum gravity, astrophysical relativity, gravitational wave astronomy, data analysis and cosmology.

The Max Planck Institute of Molecular Plant Physiology studies the dynamics of plant metabolism in the context of the plant system as a whole. The combination of traditional biological methods and modern procedures is making it possible to obtain a holistic understanding of the structure, function, dynamics and regulation of the plant genome, proteome and metabolome under different environmental conditions and at different times. The Max Planck Institute of Colloids and Interfaces was founded in 1992. Research in Colloid and Interface Science is widely covered by the following Departments: Biomaterials, Biomolecular Systems, Colloid Chemistry, Interfaces as well as Theory and Bio-Systems. Current research topics are polymeric films, membranes, micro-capsules, organic and inorganic nano-structures, biomineralisation, nano- and micro-reactors, molecular motors and filaments, as well as chemistry and biology of carbohydrates.

The RUnUP Partner the University of Potsdam is also located on the Potsdam-Golm Science Park and houses the Faculty of Mathematics and Natural Sciences and the Human Sciences Faculty alongside a number of its institutes. The University was founded in 1991. The institutes based here carry out research into the biosciences, chemistry and geosciences, physics and mathematics, but also in education, psychology and music. Close collaborations exist between the Faculty of Mathematics and Natural Sciences, and the non-academic institutions on the science park through jointly-appointed professorships and numerous research projects.

Because of the importance of understanding how knowledge is transferred into the economy, RUnUP has bought together nine cities from across Europe under the URBACT II programme. As specifically outlined in the presentation by Chris Wilson, RUnUP Project Manager from Gateshead Council, these cities need to develop with partners from their URBACT Local Support Groups their own Local Action Plans. For RUnUP, this will include mechanisms that support the capability of companies to acquire knowledge through connections with external organisations (including universities), in line with the industrial transformation of the economy.

Following this Dr Simone Leinkauf from Pro-Science Potsdam welcomed everyone on behalf of the Mayor of the City. Simone highlighted the importance of Potsdam as Science City. In particular, Potsdam is a city with a high number of scientists. Out of a population of more than 150 000, almost 5,000 Potsdamers work with the city's scientific institutions.

More than 21,000 students are enrolled at Potsdam University, the University of Applied Sciences (Fachhochschule), the Film and Television Academy "Konrad Wolf", the newly founded Babelsberg Film School, and the University of Management and Communication (UMC). In addition, more than 40 other research institutions are located in this region.

Since 2004, Pro-Science Potsdam has been driven to promote science and research and to enhance cooperation between universities, research institutes, the business community, political and cultural institutions, and the City and citizens of Potsdam and its surroundings. The distribution of the science locations across the city with no central university campus means that science is not entirely visible within the city

As a result of the Pro-Science projects and activities, the participating institutions have become more widely known raising awareness of Potsdam's importance as a city of knowledge. Through joint activities (festivals, school projects and public events) with other institutions they strive to make science a part of daily life.

The keynote speaker for the RUnUP thematic event was Professor Thomas Baaken from the University of Münster. Professor Baaken (PhD, MA) has been a Full Professor in Technology Marketing and Science-to-Business Marketing at the Münster University of Applied Sciences (MUAS) since 1991. During the period 1998-2003, he held the position of the Deputy Vice Chancellor (Vice-Rector) Research and Tech-Transfer at MUAS.

He was responsible for Research Strategies and Programs, industrial liaison, entrepreneurial activities, links to the European Community, technology transfer, and the marketing of the university research as well as relationships and networks. Since 2002, he has run a government-funded Science-to-Business Marketing Research Centre, based at MUAS.

Prof. Baaken began his presentation by highlighting that "if we want to co-operate more and offer services then it is a market and we need to use marketing tools... doing what the business sector does." The Science-to-Business Marketing Research Centre at the Münster University of Applied Sciences commenced in Autumn 2002 following the approval by the German State of North Rhine-Westphalia (NRW) of the University's proposition for the Research Centre "Science Marketing".

It developed the first strategic approach worldwide for the marketing of research competencies, capacities, and results with its concept of Science-to-Business Marketing.

The objective of the Research Centre "Science Marketing" is to develop, test and provide new models, instruments and proceedings for research commercialisation that enable universities to market their research more effectively. They are recognised across Europe for their strategic approach to commercialisation through partnering, and worldwide for leading the research area of Science-to-Business Marketing.

Prof. Baaken highlighted that a key component of the work of the centre is the advisory activities provided to universities, national, and regional authorities on a global basis to understand the nature of science marketing and the alignment of activities to the market place. This is particularly important as new collaborations can generate a win-win-win for business, universities, and public administration.

Many countries fail to recognise the importance of innovation commercialisation and the reasons behind this are that the development processes are closed too early, when the market is not ready. In comparison, Japanese companies are more prepared to take up technologies in development.

Prof. Baaken explained, that in order to enter a market you need marketing. Marketing is promotion and you need to be visible in the marketplace. Each university, each location, needs its own approach. There is a need for focussed marketing that defines customers their needs and expectations. In the concept of science-business marketing, there is a difficulty in thinking about brands. Important factors include the role of processes and structures, internal, and external marketing.

In this context, Prof. Baaken highlighted the significant differences in approach between Northern and Southern Europe. Northern Europe he argued was more aligned to the needs of business in this area with an increasing level of importance given to the role of business development within universities and the role of business development professionals.

He highlighted the importance of a strategic approach linking science, technology and industry, and the need for involving industry in early stage market-entry particularly through scientists collaborating with business. Yet there are perception gaps between a business view of a university and the university view of itself and there is a need to balance expectation and performance.

The lessons learned from Prof. Baaken's presentation were clear and significant: university management has to be involved in science marketing, marketing must be driven by the needs of target clients groups and specific objectives; there has to be incentives for academic staff to work with business and there is a need for promotion through success stories and bringing unusual new ways of marketing.

Parallel Session 1: Knowledge /Science City Marketing

- What is Science/Knowledge Marketing and what can it achieve?
- What role can it play in the overall communication strategy of a location?
- How do cities without a dominant higher education sector benefit from knowledge marketing?
- Are there any best practice examples we can learn from?

In this first session, chaired by Matthias Von Popowski from Complan gmbh, the focus was on the wider perspective of science and knowledge marketing. Matthias was joined for this parallel session by Prof. Thomas Baaken, Prof. Dr Gilda Antonelli from the University of Campobasso in Italy (a RUnUP city partner) and Dr Clive Winters, the Lead Expert for RUnUP.
In his opening statement, Clive Winters highlighted that when we look at Knowledge/Science City Marketing, we are working with three distinctly different concepts: knowledge marketing; city marketing; and knowledge/ Science City marketing.

He highlighted that within RUnUP, we are working with the concept of Knowledge Cities, which are promoting a pivotal change in the Knowledge Economy with particular impacts on the economy, the social perspective and intellectual benefits. The theme of Knowledge/Science City Marketing relates directly to actions within RUnUP and it is important that we understand the perspective of this.

When we use the term Knowledge Marketing or Science Marketing, we are effectively focussing on the activities of the university or research institute and its selling of knowledge or technology transfer - be it through educating students, research projects, licensing, consultancy, spin-outs etc. - but this is driven by the university.

He added that when we look at Knowledge/Science City Marketing, we are effectively looking at 'place shaping' developing a high quality of place and providing a distinctive offer around culture, redevelopment and marketing within an educational context.

Within this, it is important to map the joint priorities of the city and the university in four key areas:

- Economy: What impact do we want to have, how do we build on what we already have and what do we specialise in?
- Leadership: What are the missions for the city and the university? What is the distinctive vision for the city
- Place: What are the Built environment and infrastructure requirements? How do we leverage connectivity
- People: How do we invest in communities to link economy and regeneration?

Clive concluded his opening statement by highlighting that this is about understanding the common elements of interest of the city and the university. There will not be common interest across the whole of the organisations, but it is important to understand the dimensions of interest that both organisations share.

This was followed by the opening statement of Gilda Antonelli, who highlighted the issues facing small and medium-sized cities without a dominant higher sector. She stated that, in the era of brand and image to sell a city or a place, you need to use territorial marketing strategies. This is more true with new technologies and the internet, enabling in a quick way the presentation of a location and its specific peculiarities. Speaking in general, brand is a very powerful concept to attract investments, retain talents, and market cities - even when the aim of the transaction is knowledge and innovation know-how.

But she questioned what happens in a small city? The problem is the multi-brand strategies which characterise cities and the design of different brands dependant on the topic being promoted. In this context, every city has a touristic brand: one to catch the attention of business and private investments, another to attract and retain talent, and to foster innovative and knowledge based activities and so on.

This multi-brand approach can create confusion in a small city that is not able to distinguish between such approaches and the diverse nature of the target audience, potentially compromising the whole image of the city. It is also difficult to implement the knowledge city brand strategy in a culture of policy makers who are not innovative, and find it difficult to look beyond a local brand which is not based solely on tourism.

This is particularly true in a city such as Campobasso, in which the two universities are not focal points and are not significantly research-active. A winning strategy in branding these cities can be to point out the quality of life; the branding of innovation; the chance to have all services to support innovation transfer and innovative start-up creation in just one place, the Citadel of Economy (in Campobasso). In this way, it is possible to attract and support entrepreneurs based on the quality of life for entrepreneurs.

Parallel Session 2: Knowledge / Science Marketing in Potsdam

- What role does communicating knowledge city qualities play so far in Potsdam?
- Which key actors have to be activated to design and implement such a knowledge marketing strategy?
- How may triple-helix collaboration help achieving this?
- Which role do you see location marketing playing in tackling fundamental challenges such as talent retention?
- Are their specific cases Potsdam can learn from?

In this second session, also chaired by Matthias Von Popowski from Complan gmbh, the focus was on the wider perspective of science and knowledge marketing. Matthias was joined for this parallel session by Prof. Thomas Baaken, Dr Simone Leinkauf from Pro-Science Potsdam, Mareike Doepner from the City of Potsdam, and Dr Clive Winters, the Lead Expert for RUnUP.

The discussion in this second section was initiated with the question of "What was it that Potsdam wanted to achieve and who were the target groups?" It was intimated that a key driving influence was the impact on the population of Potsdam and their economic prosperity in terms of wealth and quality of life. Yet it was suggested that the initial starting point should be making the city more aware of its science infrastructure, and in particular its young people, which is one of the aim of the Pro-Science Initiative.

The attraction of knowledge workers was then discussed with important issues, such as the need to qualify factors such as the quality of life, but also the attraction of a location, its environment, resources, and image, but perhaps most importantly how can these knowledge workers 'do their science'?

It was recognised that science had been developing well within the city, but that this was not an automatic development and that there was a need to 'raise the flag', and in this context the position of Potsdam as a Science City was gaining prominence. Particular emphasis was placed on the issue of awareness of location and the lack of a university campus within the city: the Potsdam/ Golm Science Park being located outside the city.

It was recognised that the driving factors for attracting target groups need to be aligned between the city stakeholders. In particular, the focus of the key economic sectors, e.g. life sciences, pharmaceutical, and the need to attract scientists and investors.

Concluding Remarks

The concept of knowledge or Science City Marketing is relatively new. In essence, it highlights the importance of the triple-helix relationships and strong relationships between a city authority and its university or knowledge based institutions that RUnUP is trying to create.

Yet in many ways, it is the case that universities are unclear as to their own knowledge or science marketing activities and the impact and perception that is held of them by their customers and clients. This was particularly highlighted in the presentation of Prof. Baaken within the thematic event.

For cities, the dilemma is equally difficult. For those cities with limited experience in this area, there is the need to balance a knowledge city marketing approach with the marketing approach of a city which is historically based around touristic and inward investment targets. Yet in a city with a rich scientific history and significant future development potential, such as Potsdam, there are other challenges including the basic questions: Who are we marketing to? What do they want? and how do we share a common vision among our stakeholders?

Perhaps, most importantly, it is understanding the common areas of interest that the stakeholders in the city share and having a common vision for their future development and marketing approach.

5.3 RUnUP thematic event explores the role of local strategies for talent attraction and retention

The RUnUP network undertook its Third Thematic Network Event in the partner city of Barakaldo in Spain in June 2010.

It was of particular interest that the network event was held at the Innobak Business Centre, Beurko, Barakaldo. The Innobak Business Centres are a wide network of centres under the same brand, generating an image of Barakaldo linked to high quality services and a strong business offer for companies. As a public: private partnership, it enables a wide range of premises to be offered with very competitive conditions in terms of price and services.

The location for the RUnUP thematic event was the Innobak Audiovisual Centre, which is a collaboration between Inguralde (the local economic development company for Barakaldo) and the Institute of Professional Training Tartanga. It provides a mechanism for knowledge attraction and generation and is specifically aimed at companies in the audio visual sector interested in collaboration and networking. It offers 600m^2 of space through 15 offices.

Introduction

The thematic event included an introductory speech from Antonio Rodriguez, Mayor of Barakaldo, representing the local RUnUP partner, who welcomed the international RUnUP partners and the local attendees from the Basque Country to the event, and highlighted the importance of developing and retaining talent in our towns and cities and the need to develop modern, sustainable advanced cities where there is a strong co-operation between government, universities, and business.

Clive Winters, the Lead Expert for RUnUP introduced the work of the network and its impact in local transformation. Clive highlighted the example of Barakaldo: changing from a strong iron and steel heritage with impacts on contaminated land alongside a lack of facilities and green areas, into a city with enhanced quality of life and job creation based on a new model for economic development.

This city transformation was seen as supporting the ideals of the URBACT II programme and an example of the impact that change in a city can have. Following a review of the URBACT II programme and an overview of RUnUP, Clive highlighted the importance of Local Action Plan development as a core aim of URBACT in particular assisting city policy makers and practitioners to define and put into practice action plans for sustainable urban development.

Clive concluded by highlighting that the thematic event, with a focus on talent attraction and retention, would provide a unique opportunity to exchange practice between cities and a mechanism to explore economic development actions supporting the work of URBACT Local Support Groups and the development of Local Action Plans.

Talent Attraction and Retention Strategy

Following on from the introduction to URBACT and RUnUP, Andrew Tate from Gateshead Council (the RUnUP Lead Partner) gave a presentation on the Talent Attraction and Retention Strategy for Gateshead.

The Sustainable Community Strategy for Gateshead (Vision 2030) focuses on people and place. It seeks for local people to realise "their full potential enjoying the best quality of life in a healthy, equal, safe and prosperous and sustainable Gateshead". By 2030, the aim is to make Gateshead an economically thriving city that is focused on people and unlocks the potential of local residents by giving opportunities and nurturing aspirations, and increase the Gross Value Added of the borough.

Alongside this has been the development of the 1Plan, which will be publicly launched in June 2010. The 1Plan is the Economic Masterplan for NewcastleGateshead which sets out the economic and spatial strategy for the next 20 years. The plan's aims include the expansion of financial and business services and the acceleration of new firm creation, alongside a need to provide a stronger commitment to innovation, and to pioneer new forms of sustainable urbanism.

The 1Plan sets out a vision for the city of NewcastleGateshead as a city of science, technology and innovation, developing and commercialising a new generation of products and services which will address global challenges of economic, demographic, and environmental change, with science, creativity, skills, and enterprise, driving economic growth.

The importance of building a knowledge economy is highlighted as the only viable and sustainable way forward for NewcastleGateshead. This represents a significant challenge for Gateshead. The UK Competitiveness Index 2008 highlights that only 14.7% of firms within Gateshead operate in knowledge-based sectors. This is below the national (20.5%) and regional (16.1%) averages and is the lowest proportion of all of the Tyne and Wear Boroughs.

The 1Plan identifies the need for intervention for ten 'key steps' and four 'big moves'. These actions are broadly in alignment with the strategic challenges for Gateshead identified by the Local Support Group in the baseline study, e.g. to create new knowledge based industries, especially around design and creativity, and modernise existing manufacturing and engineering sectors of the economy and promote entrepreneurship.

Focusing on innovation-based, high-order, high-productivity activities will encourage economic vitality and improve quality of life for the resident population, both of which are depended upon for making a successful transition to a knowledge economy. Whereas traditional industry economies have locality issues as a central role, the knowledge economy is driven by:

- Knowledge and skills development - skilled and adaptable workforce
- Innovation and creativity
- Entrepreneurship - raising aspirations, providing support
- Information and communications technology (ICT)

The knowledge economy represents a cultural shift within the economy rather than the growth of new industrial sectors.

A key element of this is talent attraction and retention, and in particular the aims are to attract talented people to Gateshead to develop businesses, especially knowledge based businesses or access the employment created by such businesses, and to retain talented people, such as graduates/skilled people who can support such activities, whilst maximising opportunities for employment in these sectors by supporting local people to develop higher-level skills.

The strategy will aim to maximise the skills of young people; develop the skills of the existing workforce; attract people with higher level skills to Gateshead; support the families of people who move to the borough to work; retain graduates to live and work locally; and to develop new businesses and attract new businesses to the borough.

The interventions fall into four main categories:

- People: Ensuring the right skills mix to meet the future needs of the economy
- Place: Making the borough a more attractive place to live, work and spend leisure time
- Business: Creating an environment that encourages business success and financial stability
- Communication: Maximising economic regeneration through enhanced communication.

Lea Artibai Regional Strategic Plan

Lea-Artibai is an administrative area (comarca) in the north eastern part of the Biscay province, in the autonomous community of Basque Country in Spain with 26,000 inhabitants. It occupies the valleys of the Lea River and the Artibai River and is divided into eleven municipalities.

The area of Lea-Artibai has a total area of 206 km². It is bordered by the areas of Durangaldea in the south, Debabarrena (Guipuscoa province) in the east, Uribe in the west and the Cantabrian Sea in the north.

Ainara Basurko from the Lea Artibai Development Agency highlighted the work of the programme "esperanza 2013" (Hope 2013) with its focus on innovation and entrepreneurship and its aim of contributing to the competitiveness of the region, based on co-operation and collaboration, in particular through the creation of new economic activities and the diversification of existing businesses. Since 2006, there has been a key focus on supporting innovative business initiatives, support for product development, the development of research and innovation projects and support for innovation management within companies.

During the period 2007 to 2009, particular emphasis was placed on a regional management model between the Regional Development Agency, Azaro Foundation and Leartiker. Alongside this, was emphasis on the offer of services and internal organisation, in particular the development of innovation projects, technological service, sector expertise and the establishment of an observatory for new business initiatives, and the building of space for new business initiatives and innovation and research projects for companies and supporting services.

Now in its second phase, the programme has four key challenges: to increase the number of companies who are innovation active; to improve business competitiveness through the use of the entrepreneurship and innovation building; to develop an entrepreneurial support service; and to deliver a strategy for the fields of health, aquaculture and tourism.

Goierri Innovation Pole

The Goierri Region is a small region in the inland part of Gipuzkoa, situated 40 kilometres from the coast and from the provincial capital, Donostia. It lies in the heart of Gipuzkoa province and is 271.3 square kilometres in size. The Goierri region is made up of 18 municipalities (Altzaga, Arama, Ataun, Beasain, Gabiria, Gaintza, Idiazabal, Itsasondo, Lazkao, Legorreta, Mutiloa, Olaberria, Ordizia, Ormaiztegi, Segura, Zaldibia, Zegama and Zerain) with a population of around 42,000 inhabitants.

Iker Galparsoro from the Development Agency of Goierri highlighted in his presentation that economic activity takes place mainly within the industrial sector. At present, approximately 50% of employment is concentrated in the industrial sector and 46% in the services sector, within which tourism has become a growth industry in recent years.

However, besides providing a high level of support to industrial activity, the development agency offers its services in other areas, such as the region's burgeoning tourist industry, the service for new business ideas and social activities, and Agenda 21, all of which are so important for socio-economic development in the region.

In the industrial sector, metal-mechanical products predominate and 78% of employed people work for ten companies. Most other businesses are of the micro enterprise type (SMEs characterised by their small size). In short, there is a high level of concentration with regard to both employment and types of business activity.

Goieki is Goierri's Regional Development Agency, whose capital is contributed by the 18 local councils which make up the Goierri region. It was set up in 1993 with the aim of beginning the roll-out of the Regional Strategic Plan. Goieki is made up of five departments:

- Zerbitzualdea, the department which helps regional industry.
- The Incubator, the department whose function is to provide help for business start-ups.
- GOITUR S.L., whose function is to promote tourism in the region.
- The Social department, whose functions are social in nature.
- The department responsible for Local Agenda 21 and sustainable development

Other services:

- Business centre for Local Councils
- Streamlining of regional public transport and co-ordinating committee.
- Financial assistance for the elderly
- Innovative ideas competition

The innovation pole of Goierri has been designed with three key uses in mind: as a location for high tech companies, as a location for existing research and development companies, and as a location where entrepreneurs can develop and implement their business ideas.

The pole as a public private partnership is designed to bring to its economic area a long-term emphasis and orientation towards innovation driven by knowledge transfer between businesses; the university and technology centres; and the creation of new businesses in new business sectors. The pole has five priority actions, namely:

- The development of a physical location with university, technology centres and businesses sharing a common location to encourage collaboration and improve competitiveness
- The interaction of staff and students between the university and businesses located at the pole.
- The development of new Research and Development workspaces for technology based companies linked to the innovation centre of Goierri.
- . The development of joint research projects
- The creation a forum to promote entrepreneurship and innovation and to exchange experience

Talent Attraction and Retention (Solna)

Solna with a population of 65,000 people is located in the east central Sweden, part of the capital Stockholm metropolitan area. Monika Rosenqvist from the Municipality of Solna highlighted that during the early 1990s Sweden suffered an economic crisis, during which Solna was impacted with high levels of unemployment as a result.

In 1997, politicians from all political parties in Solna agreed upon a strategy to become the most business friendly municipality in Sweden. Since then, the number of companies has almost doubled to about 8,500 and there are slightly more jobs (67,000) than inhabitants in Solna. The economy has been transformed into a service and knowledge intensive economy – there is virtually no larger scale manufacturing industry left in Solna.

Expansion has intensified the past years and will continue until the year 2025, when the population is expected to reach above 90,000, with an equal number of work places. Solna then encompasses five new city districts, including the "Arena City" with the new National Arena for football and Scandinavia's biggest shopping mall, the Mall of Scandinavia.

The major sectors of the Solna economy are life science, ICT, corporate services, food, and construction. Food and construction are represented by the fact that almost all major construction and food companies have their headquarters in Solna. In the ICT and corporate services sectors, smaller companies dominate, although some of the larger consultancy firms in the Stockholm region are moving into Solna.

Public sector work places are found at the Karolinska University Hospital and the Karolinska Institutet (KI) University, along with the city employees. KI is a medical university, frequently present in global top 100 rankings, the site of the Nobel Prize awards and Sweden's top ranked university in 2007. With a staff of 3,700, 3,000 graduate students and 6,000 students, it is the largest medical university and the leading research faculty in Sweden.

By 2015 a new university hospital (New Karolinska Solna – NKS) will be constructed in Solna. NKS will replace the current university hospital in Solna and become integrated with the new urban district designed to become the borderline between Stockholm and Solna.

Solna aims at building a sustainable city combining strong economic growth with respect for the environment and sound social development. Growth creates the necessary resources to increase living standard and services to the citizens. Solna shall be an attractive city for citizens, businesses and visitors.

The City of Solna has a strategic location in the Stockholm Region on the road from the Stockholm city centre to Stockholm Arlanda international airport. The city has 67,000 inhabitants, 8,000 companies with approximately 65,000 work places. The number of companies in comparison to number of inhabitants is very high and having almost as many workplaces as inhabitants is rather unique from a Swedish perspective.

Solna is part of the Stockholm region metro and commuter train network. 62,000 persons commute in to Solna every day and 26,000 Solna residents commute out of the city. The day population is considerably larger than the night population.

Six new city districts are planned/under construction and in 2025, the number of inhabitants is estimated to be 85,000, with the number of workplaces 85,000. Investments are being made in strategic city development and infrastructure projects. These projects cover everything from roads and railways to investments in workplaces, housing, and hotels. New city districts always combine housing areas with office premises and service facilities to create a good and vivid living environment around the clock.

One of the new city districts will emerge around Karolinska Institutet (KI) and the Karolinska University Hospital on the border of Stockholm. The border area between Stockholm and Solna, which today is an old railway station and a number of motorways, will be covered and new housing, offices and research units will be built on top.

The two cities will be joined together and the life science profile of the area will be further enhanced inviting new life science companies and researchers to establish their base here. A new university hospital – New Karolinska Solna – with highly specialised care will replace the old one and be opened in 2015. The institute and the hospital will be joined more closely together and their cooperation strengthened.

Another City district is "Arenastaden" (Arena City) where the new Swedbank Arena for 50,000-65,000 spectators is being built. It will be the National Arena for football, but also a multifunctional arena for concerts and other events. The district will include Scandinavia's biggest shopping mall, a hotel, housing, and offices. The tourism industry with the arena, Film City creative cluster, hotels, restaurants, shops and tourist sites is of growing importance in Solna. The new arena will naturally attract a lot of visitors.

The Swedish Football Association, in co-operation with a number of Swedish cities, has applied to host the Women's World Cup in 2013. If the application is approved, the final will be played at Swedbank Arena. The Swedish Crown Princess and her husband have chosen Haga Palace in Solna for their future home, which will attract a new group of visitors to the city.

There are other business sectors important for Solna's economic development. All big Swedish construction companies such as NCC, Skanska, JM, and PEAB, have their Head Offices in Solna and are among the city's biggest employers. The two main Swedish food retail companies, ICA and COOP, have their Head Offices in Solna, as well as Unilever Sweden. A number of international ICT companies have their Swedish Head Offices located there and Solna has been recognised as Sweden's most business friendly municipality the last three years in a row and five times in total since year 2000.

Innobak Business Centres

Javier Rodiguez from Inguralde, the host of the network event highlighted the development and work of the Innobak Business Centres. These are a wide network of centres under the same brand, generating an image of Barakaldo linked to high quality services and a strong business offer for companies. As a public-private partnership, it enables a wide range of premises to be offered with very competitive conditions in terms of price and services.

The Innobak Audiovisual Centre is a collaboration between Inguralde (the local economic development company for Barakaldo) and the Institute of Professional Training Tartanga. It provides a mechanism for knowledge attraction and generation and is specifically aimed at companies in the audio visual sector interested in collaboration and networking. It offers 600m^2 of space through 15 offices.

Faculty of Mining in Barakaldo and its future challenges

The University of the Basque Country (EHU-UPV) is a public institution educating 48,000 students. It has campuses over the three provinces of the autonomous community: in Leioa, Bilbao, Portugalete and Barakaldo, in Biscay, Donostia-San Sebastián and Eibar in Guipuscoa, and in Vitoria-Gasteiz, in Alava.

The University offers a broad range of studies including medicine, the sciences, fine arts, law, economics, business studies and industrial engineering. The University offers 78 different degrees in more than 1,300 subjects of study, with 43% of courses delivered in the Basque language. The University is now recognised as one of the foremost in Spain, both in terms of the number of degrees offered and the quality of the typical degree awarded.

Blanca Caballero from the University of the Basque Country highlighted in her presentation the work of the Faculty of Mining and its future developments. The study of Technical Engineering has its origins in the Basque Country at the Escuela de Capataces y Facultativos de Minas (College for Mining Foremen and Professionals), which was founded in Bilbao in 1913, with the aim of addressing the demand for trained people arising from the growth of mining and of industry in general.

In 1972, the College became part of the University and was then known as the Escuela Universitaria de Ingeniería Técnica Minera (University College of Technical Mining Engineering), with its courses lasting three years. This programme remained in place until 1982, when the courses at the University Colleges of Technical Engineering of the UPV/EHU (University of the Basque Country) were modified, with the degree being extended to a four-year course, the first year of which was common to all specialities and of a selective nature.

Concluding Remarks

Talent attraction and retention is a multi-dimensional subject including the issues of transport, housing, health services, education and training, salary levels, career opportunities, and lifestyle, which impact on individuals in cities in differing ways.

The thematic network event provided some unique insights into this subject from the Basque Country and the transnational partners of the RUnUP network. Talent, by its very nature, is individualistic and in this regard, the event highlighted the work of Gateshead with its strategy on targeting specific groups, e.g. local residents, young people, as a mechanism to enhance the skills base available to businesses and to enhance the number of knowledge based businesses in the city.

At the opposing end of the spectrum, the event heard of the experience of Solna where the number of jobs available is well in excess of the city population and where attraction is important to develop the city community to increase the population by 20,000 but also to meet the requirements of the businesses located there as in excess of 60,000 people commute into the city on a daily basis.

In the context of the RUnUP network, the thematic event was - to some extent - one-dimensional, addressing the issues of business competitiveness, innovation, and the link between universities and industry, as highlighted in the experience of Lea-Artibai and Goierri, which were specifically addressing the business attraction and retention dimension.

A significant challenge for Barakaldo in this field is the transfer of the Faculty of Mining from the University of the Basque Country into a student accommodation facility.

The issue of talent attraction and retention is of significant importance to cities exploring their role within the knowledge economy. There is the importance of attracting students to local universities to undertake courses that meet the needs of local employers in the local economy, the promotion of the city to students through its accommodation, nightlife, transport and its career development and income generation potential.

The retention of graduates within the city following the completion of their studies. Yet there is a need for a high quality physical infrastructure as highlighted in the development of Solna and also in the establishment of a high quality innovation pole in Goierri.

In conclusion, the network event highlighted the importance of talent attraction and retention and in doing this there is a recognition that the multi-dimensional aspects of the subject at a city level have not been fully explored and developed and that innovation, creativity and triple-helix interaction rely on additional dimensions of city activity and infrastructure the implications of which at a city level should be the subject of further work.

Part D

6. Recommendations

From the general conclusions highlighted in Part A, it is clear that there is a desire among urban areas to enhance their development of knowledge economies. Universities clearly play a core role in this initiative, yet the involvement of local authorities and city municipalities has been highlighted within the work of the RUnUP network as adding a new dimension to the relationship that universities have with our urban areas. However, the desire of our local and municipal governments to engage in such activity on its own is not enough.

The work of RUnUP highlights that there is often a clear divide in the available resources and activities of our universities and our local and municipal governments. For real triple-helix co-operation and economic development to take place, the degree of separation between these organisations needs to be reduced. The actions required to achieve this need to be undertaken at a European, Member State, and local-level. Three key recommendations are highlighted from the activities of RUnUP, and one further recommendation is provided in relation to the URBACT programme.

- **European funding programmes need to recognise the wider role that universities can support in urban development and the role of local and municipal government in innovation and research and development led economic development.**

Both universities and local/ municipal governments are major recipients of funding at a European, Member State, and local-level. While a significant proportion of these funds are pre-allocated to the delivery of education and services for citizens, both types of organisations are able to access additional funds either through their own budgets or through bidding to funding programmes.

It is at the level of the funding programmes where clear linkages need to be made regarding the role of universities in the urban centres of Europe. The structural funds programmes, for instance, separate out priorities for research and development, business support, and community development, resulting in proposals and contracted activities that address only either one or two of the spheres of the triple-helix.

Similarly, at a European-level, a significant proportion of the research programmes are allocated to universities and research centres in relative isolation from the spheres of business and local government. This is equally true - to some extent - of programmes including Interreg and URBACT, where local and regional authority participation is actively encouraged. Funding programmes such as Regions of Knowledge, which specifically request and evaluate real triple-helix cooperation, should become more prominent if we are to address the large degree of separation that exists between universities, local and municipal governments and our business communities.

- **National Member States need to recognise the importance of business and community engagement alongside the education and research activities of their universities.**

The RUnUP baseline study highlighted that European policy approaches to the knowledge economy, for the most part, take universities as their point of reference regarding competitive research and their contribution to the European Research Area. In particular the European Commission publication "European Universities: Enhancing Europe's Research Base"[5] identifies the entrepreneurial role of universities as a source of spin-offs and start-up companies and their role in knowledge and technology transfer.

The increasing emphasis on the role of the university in economic development has been driven by a small number of success stories, e.g. Cambridge, UK; Silicon Valley, Boston, USA; that have impacted the local economy and the success of high-profile 'blockbuster' licensing agreements on university developed and patented technology. This has led to the traditional view of the university role in innovation and competiveness in the local economy driven by technology transfer. In this context, universities have seen the growth of standard models, e.g. external liaison offices, research and development offices, technology transfer offices, as central mechanisms for linking academia with industry.

At the European Member State-level, there are clear differences between Northern and Southern Europe in extending the role of universities to encompass increased interaction between universities with businesses and the community.

5 European Commission, European Universities: Enhancing Europe's Research Base, May 2005

Several of the universities engaged in the delivery of RUnUP at a local-level have focussed on educational delivery and research. The emphasis in these institutions has been on the production of research papers, receiving awards at conferences, and increasing the number of citations for academic staff. Where external activity has been considered, it is limited within external liaison offices that promote licensing and spin out development.

Our study visits, and several of the RUnUP partner cities, show that in order to achieve appropriate levels of engagement and synergy there needs to be not only recognition within the mission statement of universities, but also supporting structures that can enhance linkages with the wider civil society to enable real triple-helix collaboration to take place.

While individual institutions can increase their level and nature of business and community engagement, it is going to take the commitment and drive of national ministries of education to implement change that sees this as a core component of university activity alongside education and research.

- **Local and municipal governments above all need to provide strong political engagement and drive operational change if their urban areas are to establish a strong profile in the knowledge economy.**

The RUnUP cities have highlighted the importance of a triple-helix approach at a local-level to economic development. It also emphasised the opportunity for cities to develop local activity through the use of the URBACT network methodology. In this context, recognition should be given to implementing structures and approaches that last beyond the lifetime of RUnUP and can be used not only in exploring the role of universities in our cities, but in other development areas.

Critical to the successful engagement of universities in our local economies is the need to drive real and effective change. Both for the RUnUP partner cities and other urban areas, having a 'real catalyst for change' is key to the development of university activity in our cities. This catalyst can be both a drive for economic transformation and the appointment of an individual to lead the transformation process at a political or operational-level.

The local authorities engaged in RUnUP need to continue an open dialogue with their local universities. Not all of the project partners took the opportunity to engage fully their local universities and other stakeholders in RUnUP and this needs to be addressed for the successful implementation of the action plans in each city. The action plans present an initial starting point, a platform for development that should be used by the project partners and their local stakeholders for enhancing their relationships, and developing more detailed and comprehensive actions of a larger scale.

- **The URBACT network methodology can be enhanced through further support to local support group development and consideration of a reduced network life time and increased revenue support for project partners.**

The URBACT methodology provides a relatively unique opportunity in European-funded programmes to truly establish a project proposal and consortium. The development phase and baseline study has identified the real need of cities at a local-level and how transnational working can support exchange of knowledge and experience, leading to a strong implementation phase application and enhancing the project development process.

The core components of the URBACT methodology - the Local Support Groups and Local Action Plans - drive an agenda for change at a local-level, while the transnational activities offer new insights for project partners into new approaches and ways of thinking.

Given the context and delivery of the RUnUP thematic network, it is recommended that consideration be given to further support the mobilisation of URBACT Local Support Groups.

While the ULSG Guide and Summer School address this for networks approved following the First Call for proposals, consideration needs to be given to the leadership at a local-level provided by URBACT project partners to support the mobilisation of the ULSG and the development and delivery of the Local Action Plans.

In this context, based on the experiences of RUnUP, thought should be given to reducing the network implementation phase to a maximum of two years in order to maintain the emphasis and commitment of the project partners and increasing the budget available to project partners.


ÁGUEDA
CÂMARA MUNICIPAL


Dunkerque
Grand Littoral
COMMUNAUTÉ URBAINE


LESZNO
SPREAD YOUR WINGS


Gateshead
Council


ΔΗΜΟΣ ΠΑΤΡΕΩΝ


Universität
Potsdam

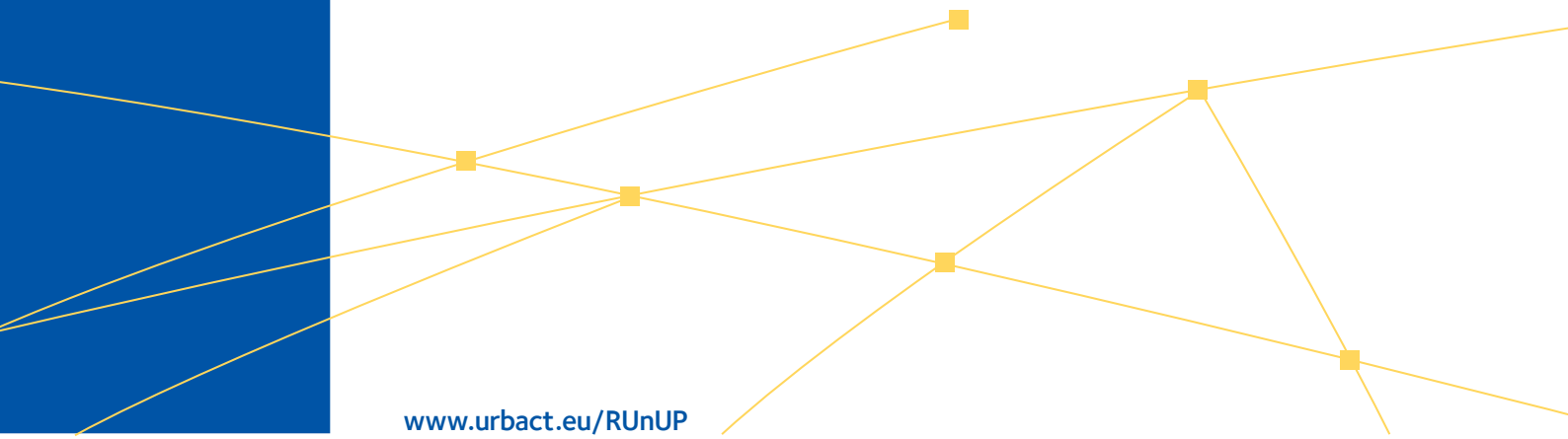

inguralde


BARAKALDOKO
UDAL GORENA
ILUSTRE AYUNTAMIENTO
DE BARAKALDO


CITY OF SOLNA

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 181 cities, 29 countries, and 5,000 active participants



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