The URBACT II Operational Programme (2007 – 2013)

The Role of Universities for Economic Development in Urban Poles

RUnUP Thematic Network

BASELINE STUDY

Thematic Network: The Role of Universities for Economic Development in Urban Poles
Acronym: RUnUP

Lead Partner: Gateshead Metropolitan Borough Council, UK
Lead Expert: Dr Clive Winters, Coventry University Enterprises, UK

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I EXECUTIVE SUMMARY

Since the Lisbon European Union Spring Council of 2000 set a strategic goal for the European Union to become the most dynamic and competitive knowledge based economy in the world by 2010 there has been significant research, policies and projects on how to stimulate the knowledge economy and importantly the importance of Universities within Triplex Helix Structures.

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 in the implementation of the Lisbon agenda.

The URBACT II Thematic Network 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.

The partners within the RUnUP network cover cities with populations between 50,000 and 200,000 inhabitants, with either; no university, an underperforming university or a world class university and education system. In each case the fundamental reason for their participation in RUnUP is consistent, namely to enhance the role of the university within the city and its direct and indirect benefits to local economic development.

This baseline report is the result of 6-months work during the development phase of the network in which the state of art has been produced highlighting the importance of the knowledge economy, the role of universities and research centres and the changing remit of municipalities and local authorities in triple helix structures. The partner profiles are the result of significant work and communication between the lead partner, lead expert and network partners. Each has been produced with information from each partner and edited following the visit of the lead expert to each city during the development phase.

As a result of this work it is evident that the RUnUP network has a distinctive approach, which has and will continue to enable:

- The understanding of the concrete needs of each partner city in relation to its existing economic base and the 'absorptive capacity' of its firms, allowing us to map out strategies for the partner cities each with different economic starting positions.

- The alignment of university activity to economic transformation. Recognising that the traditional linear model of seeing universities as producers of knowledge from research and conversion into technology transfer and developing spin-outs is extremely limited. Universities can undertake much wider roles in local economies many of which are more aligned to the focus of small and medium-sized cities. The activities of RUnUP will extend and highlight the range of alternatives regarding the role of Universities in such environments.
- A focus on the practical role that local authorities can play in Small and Medium-Sized Cities as the vital interface between the needs of economic actors and the knowledge base.
- An approach for studying good practice both within and outside the RUnUP partners which will allow the network to provide practical guidelines for city managers while at the same time producing general policy recommendations to strengthen a vital component of the Lisbon Strategy.

Moving forward into the implementation phase at a local level it is recommended that 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. In parallel with this the partners as a prerequisite to the design of new schemes and approaches for university–business interaction need to consider defining their sector priorities and the state of economic transformation.

In addition It is recommended that the partners with the inclusion of URBACT Local Support Group members need to be taken to see models of best practice highlighting the new approaches of particular European Universities to university-business interaction e.g. University of Twente, in the medium-sized city of Enschede with regard to Spin-Outs. This should be further supported by the delivery of Run-UP workshops and seminars that can highlight wider European best practice resulting in the development of a series of themed case books supporting capitalisation at the network and programme level.

The RUnUP network has a unique opportunity to explore the role of universities in medium-sized cities and to develop local actions in 9 cities from 9 member states across the European Union bringing together triple-helix actors in support of economic and urban development. The results of the network in its implementation phase will provide a clear policy approach for municipalities and local authorities while providing a significant influence to European Policy in support of urban and regional development and its integration with education and research.

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1.0 INTRODUCTION

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.

The URBACT I-project STRIKE, within its academic output and strategic documents identified that internationally connected metropolitan areas are the driving force in the global economy and in particular the knowledge economy which they often dominate. 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 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 network and the engagement of URBACT Local Support Groups (ULSG) in each of the 9 partner cities will address 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 within the Lisbon Strategy.

RUnUP aims 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 baseline study is a core output of the RUnUP 6-month project development phase which has included lead expert visits to all 9 medium-sized city partners in 9 European Union member states. It provides a basis for the RUnUP phase II application through its review of the state of the art, individual partner profiles, and partner comparison and network synthesis.

2.0 RUnUP: STATE OF THE ART

2.1 Introduction

Since the Lisbon European Union Spring Council of 2000 set a strategic goal for the European Union to become the most dynamic and competitive knowledge based economy in the world by 2010[1] there has been significant research, policies and projects on how to stimulate the knowledge economy and importantly the role of Universities within Triplex Helix Structures.

In this context the Knowledge economy relies on the transfer of knowledge from those who generate it to those who use it and can build on it. Research represents a key component of this approach and the role of universities is particularly important as actors in research, education and training. Universities account for 20% of European Research, 80% of fundamental research and employ one third of European researchers[2]. They transmit knowledge through education and training and have an increasing role in innovation and economic development at the regional level. In support of this the 2005 Lisbon mid-term review explicitly highlighted the importance of the role of universities in the creation, dissemination and transfer of knowledge[3].

In this innovation and economic development role it is recognised that links and synergies between universities and local society (e.g. Industry, Chambers of Commerce, and Local Government) should be enhanced[4]. 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 in the implementation of the Lisbon agenda. In this regard medium-sized cities of between 50,000 and 200,000 people with universities are at a considerable advantage and can gain from strong localisation economies if they have a strong knowledge base and innovation culture.

The RUnUP network 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.

[1] Lisbon European Council 23 and 24 March 2000
[2] European Commission, European Universities: Enhancing Europe's Research Base, May 2005
[3] European Commission, Communication to the Spring European Council, Working Together for Growth and Jobs: A new start for the Lisbon Strategy, February 2005
[4] European Commission, European Universities: Enhancing Europe's Research Base, May 2005

To support the network and its partners in beginning to address these issues this review explores the importance of an integrated approach to industrial transformation with the role of universities and economic development partners at a local level in particular utilising a general framework from Massachusetts Institute of Technology (MIT) which allows us to understand the specific challenges faced by cities much more clearly while at the same time providing a structure for comparison and the drawing of general policy conclusions. In addition the State of the Art highlights best practice approaches from medium-sized cities to enhancing knowledge based entrepreneurship and knowledge transfer.

In particular the State of the Art highlights the distinctive characteristics of the RUnUP approach; namely:

- The understanding of the concrete needs of each partner city in relation to its existing economic base and the 'absorptive capacity' of its firms, allowing us to map out strategies for the partner cities each with different economic starting positions.
- The alignment of university activity to economic transformation. Recognising that the traditional linear model of seeing universities as producers of knowledge from research and conversion into technology transfer and developing spin-outs is extremely limited. Universities can undertake much wider roles in local economies many of which are more aligned to the focus of small and medium-sized cities. The activities of RUnUP will extend and highlight the range of alternatives regarding the role of Universities in such environments.
- Focusing on the practical role that local authorities can play in Small and Medium-Sized Cities as the vital interface between the needs of economic actors and the knowledge base.
- By studying good practice both within and outside the RUnUP partners the approach will allow the network to provide practical guidelines for city managers while at the same time producing general policy recommendations to strengthen a vital component of the Lisbon Strategy.

2.2 The Knowledge Economy

Defining the knowledge economy has been the subject of significant debate and while a number of general definitions have been articulated no single definition has been able to capture all aspects of the commodity that is knowledge[5]. Given this confusion an alternative argument has emerged that the knowledge economy is not a new phenomenon and that "the economy has always been driven by knowledge leading to innovation and technological change and knowledge based institutions have helped store and share knowledge for centuries. What we see today is essentially more of the same but operating on a bigger scale and at a faster pace".

[5] Defining the Knowledge Economy, Knowledge Economy Programme Report, Ian Brinkley, The Work Foundation, July 2006

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[6], between 1995 and 2005 employment in knowledge based industries in the European Union went up by 23.9% in contrast with 5.7% for all other industries. In particular while manufacturing employment overall in the period between 1995 to 2005 declined by 5.6% on average across the EU only 2.4% of employment losses were from technology based manufacturing. In comparison knowledge based services have seen significant employment change of 30.7% across the decade in comparison to 13.5% for less knowledge intensive services.

For the partners in the RUnUP network 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.

Brinkley, in his Knowledge Economy Report, Defining the Knowledge Economy[7] summarises the key features of the knowledge economy and knowledge economy organisations:

- The Knowledge economy represents a "soft discontinuity" from the past; it is not a "new" economy operating to a new set of economic laws.
- A growing share of GDP devoted to knowledge intangibles compared with physical capital
- Knowledge economy organisations reorganise work to allow them to handle store and share information through knowledge management practices
- The knowledge economy is present in all sectors of the economy , not just the knowledge intensive industries
- The knowledge economy has a high and growing intensity of ICT usage by well educated knowledge workers
- The Knowledge economy consists of innovating organisations using new technologies to introduce process, organisational and presentational innovation.

2.3 The Traditional role of Universities in the Competitiveness of the Local Economy

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[8] European Universities: Enhancing Europe's Research Base identifies the entrepreneurial role of universities as a source of spin-offs and start-up companies and their role in knowledge and technology transfer. In this context universities are seen as environments that are:

[6] Source: Eurostat.

[7] Defining the Knowledge Economy, Knowledge Economy Programme Report, Ian Brinkley, The Work Foundation, July 2006

[8] European Commission, European Universities: Enhancing Europe's Research Base, May 2005

- 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

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, with a particular focus on[9]:

• Contributing to faster and better commercialisation of research results;
•Improving innovation performance and accelerate 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;
• Helping companies grow and become more competitive.

Despite the creation of technology and knowledge transfer support mechanisms the strategic challenges and key issues regarding the knowledge transfer topic which are often underlined[10] at a strategic level include:

- Little cooperation 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

Such support mechanisms designed to raise R&D 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.

[9] Knowledge Transfer Strategies for Regional Development and Competitiveness, IRE Knowledge Transfer Working Group, Final Report, June 2008
[10] Knowledge Transfer Strategies for Regional Development and Competitiveness, IRE Knowledge Transfer Working Group, Final Report, June 2008

2.4 Understanding the needs of the economic base

To support the development of their local economy the partners in the RUnUP network need to examine how knowledge is transferred into Industry. The RUnUP partners operate in urban areas with generally a large number 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.

Absorptive capacity[11] refers to the ability of the company to support problem solving and development using innovation processes. The knowledge to enable the company to do this is often "provided" to the organisation from the external environment rather than from within the company itself. 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. Generally it is accepted that in most cases knowledge will be sought from the external environment looking for solutions to problems. Through its absorptive capacity the organisation learns from this external information.

To enhance the absorptive capacity of firms it is argued[12] that the range of "innovation services" offered to SMEs should be extended to assist them with 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 current role of many industrial liaison offices and technology transfer offices does not support the development of such activities.

To support growth in the knowledge economy the RUnUP partners need to develop with partners from their URBACT Local Support Groups 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.

2.5 The Interrelationship between universities and the economic base

Seeking to address the performance issues of universities in supporting innovation and competitiveness in local economies in 2002 the Industrial Performance Centre of Massachusetts

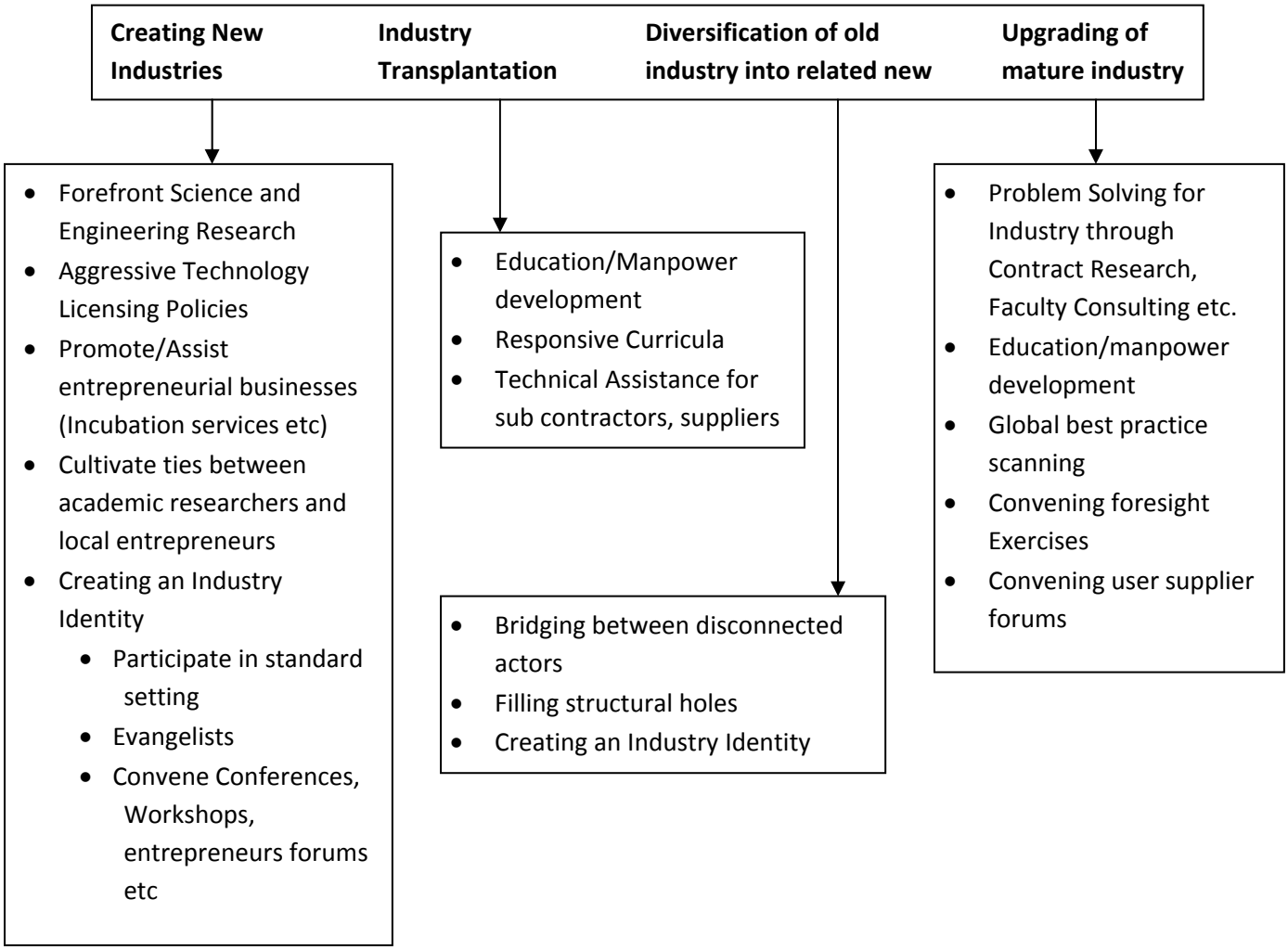
[11] Cohen, Wesley, M. & Leventhal, Daniel A.; Absorptive Capacity: A New Perspective on Learning and Innovation, ASQ, 35 (1990),

[12] Innovating Regions of Europe; Co-operation and partnerships between the world of business and science as an instrument for enhancing innovation, "Blueprint" for Science-Industry Co-operation; June 2006

Institute of Technology began a research programme[13] examining the role of universities in supporting industrial development through participation in innovation projects and activities.

Their research adopted an "outside-in" perspective of the role of the University describing and contextualising the local economy as a set of industries that changes over time (Figure 2.5). This approach directly meets the requirements of the RUnUP partners which are either local municipalities or councils by providing a framework in which the economic activity of the urban area can be categorised and a model that recognises the issue of enhancing the absorptive capacity of SMEs (see section 2.4) is vital if local companies are to continually adapt to new market and technology opportunities and introduce new products and processes. Significantly the approach of the MIT research was driven by exploring the role of the local university in supporting local companies to take up technology and new knowledge and apply this profitably.

Figure 2.5 University Roles in Alternative Regional Innovation Led Growth Pathways (Reproduced from Universities, Innovation and the Competitiveness of Local Economies, Richard K Lester, MIT IPC Working Paper IPC-05-010, December 2005)



[13] Universities, Innovation and the Competitiveness of Local Economies: A Summary Report from the Local Innovation Systems Project – Phase 1, Richard K Lester, MIT IPC Working Paper IPC-05-010, December 2005

By adopting an industrial perspective consideration is given to situations in which the University can contribute in additional ways to local economic development, engagement is not limited solely to the creation of spin-out companies or licensing agreements, it addresses situations in which the University may not be a key economic player and takes an external perspective with consideration of the transformation of local economies over time.

This approach is core to the work in the implementation phase of the RUnUP thematic network and provides a mechanism through which local authorities can become actively engaged in defining and delivering their local approach to engage business in the knowledge economy and influencing the role of local and regional universities.

This aligns well with European Commission policy that seeks to support the engagement of universities with civil society to support the uptake of innovation[14], the build up of concrete synergies between universities and surrounding society[15] and supports the recommendation that exchange of knowledge with industry and within society is not the responsibility of the universities alone and that 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

A "cultural change" is required to highlight the importance and value of SMEs working with universities and research centres and the impact on long-term company profitability. The focus of university expertise on transfer of research to industry is distinctly different to many of the innovation requirements of SMEs who require basic support in marketing, sales and training. In this field training and mentoring services for companies are critical and existing tools for supporting companies need to be embedded within the offer to companies. At the regional and local level support needs to be co-ordinated and activities clustered to support easier access to companies.

Similarly there is a requirement to "Stimulate SMEs to innovate". This needs SMEs to be challenged to extend their perspective of innovation and the development of innovation activities within the business. In the scope of science-industry linkages this can be improved through the adoption of business mentoring, continuous education and utilisation of schemes that place experienced academic staff and graduate students in industry e.g. UK Knowledge Transfer Partnerships[16].

[14] European Commission; Delivering on the modernisation agenda of universities: Education, Research and Innovation; May 2006.
[15] Universities Role in the Exchange and Transfer of Knowledge with Industry and Society; European Universities: Enhancing Europe's Research Base
[16] Innovating Regions of Europe; Co-operation and partnerships between the world of business and science as an instrument for enhancing innovation, "Blueprint" for Science-Industry Co-operation; June 2006

2.6 The Role of Medium-Sized Local Authorities and Municipalities

The URBACT I network STRIKE[17] identified that urban areas are focal points in the knowledge economy and that larger cities in particular are well placed as they are locations where knowledge is created, developed and commercialised, have higher levels of educated staff, have well developed infrastructure and are well networked in the Global Economy.

In particular the large cities of Helsinki, Copenhagen, Stockholm, Lisbon and Madrid are well recognised as cities which emphasise economic development and the development of processes and methods[18]. These cities highlight the direct benefit of investing resources into co-operation with Universities. Helsinki, Copenhagen and Stockholm present a technology oriented co-operation model where one of the main goals is to create new business enterprise, whereas Lisbon and Madrid present models for organising co-operation and best practice in different fields of research and services. But while medium sized-cities and large cities face some common challenges there are clear differences purely based on their size[19].

The STRIKE network established a framework for analysis to understand the position of urban regions in the knowledge economy with distinctions between knowledge foundations and knowledge activities. Utilising this framework the distinctive challenges faced by medium-sized cities in the development of their knowledge economy can be articulated.

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 and is the first foundation stone of the STRIKE framework. The RUnUP network partners face 2 of the most common challenges in this context in having no university within the city (Gateshead, Barakaldo) or having a university whose potential for knowledge transfer and transfer of skills have not been developed to support economic development.

The second foundation stone, the economic base, determines for a large part the economic possibilities and restrictions, but also the difficulties for an urban region, within the knowledge economy. For medium-sized cities there are challenges in devising economic development strategies and a distinctive offer in particular if they have reduced industry specialisation. In this context medium sized cities need to identify what their core strengths are and actively work to these.

Within this context there are significant examples of approaches to innovation led growth adopted by universities in support of their local economy.

The City of Enschede, located in the east of the Netherlands with a population of 155,000 highlights a particular best practice in the creation of new industries through the dynamic role of the University

[17] URBACT I Thematic Network STRIKE, Discussion Paper, Cities in the Knowledge Economy: New Governance Challenges, Willem Van Winden & Leo van den Berg, September 2004

[18] Co-operation and Local partnerships between Cities and Universities, Experiences of European Union Capital Cities; The Union of the Capitals of the European Union

[19] Enabling Cities in the Knowledge Economy, Department for Communities and Local Government, UK. The Work Foundation, October 2006

of Twente who is committed to making an economic and social contribution to the region of the Netherlands where it is based. The University was founded in 1961 within a local economy that needed a boost to compensate for the dwindling textile industry and actively supports local economic development through its patents, lifelong learning and spin-out companies developed through its TOP programme[20]. It has as its objectives the development of knowledge based companies from graduates, staff and local industry linked to the faculties of the university and including financial support, incubation space, advice and connections to University research.

In the area of industry diversification and modernisation it is recognised[21] that Public Research Organisations are one of the less important sources for supporting innovation in SMEs. However the role of universities in technical change in this context should not be seen as limited to pursuing research 'at the frontier' but, instead to make accumulated knowledge available as and when there is a need for it[22]. In support of this the Innovating Regions of Europe, Knowledge Transfer Working Group[23] identified that "voucher systems, training courses, mentoring, selection of brokers and signposting SME entry points to the knowledge transfer network (higher and further education as opposed to universities) can help meet the challenge of helping increase the take up by SMEs of knowledge transfer services". Best practice innovation cases are well publicised in Europe and can be adapted to meet specific local economic development requirements.

In support of problem solving for industry (linked to the upgrading of mature industry in the economy) an example includes the Research Voucher Scheme[24] launched in Limburg aimed at increasing the level of knowledge and improving the competitiveness of small and medium-sized enterprises by creating and developing a "knowledge market" in the region, which would allow SMEs to call on external sources to supply the know-how required to develop their business.

Related to education and manpower development (linked to industry modernisation and industry transplantation) the Swedish region of Västra Götaland has introduced the Better Concept[25] to promote the training of employees within SMEs through the provision of distance learning courses delivered by University Colleges. The programme is demand driven with students applying the knowledge learnt in the courses to the real life problems faced in their SME companies.

Such approaches are not unique; the Innovating Regions of Europe[26] provides a comprehensive database of 180 schemes focussed on the implementation of innovation within European regions.

[20] The TOP Programme, University of Twente
[21] Firm Size and Openness: The Driving Forces of University-Industry Collaboration, in Y. Caloghirou, A. Constantelou and N.S. Vonortas (eds.), Knowledge Flows in European Industry: Mechanisms and Policy Implications, London: Routledge, 2004
[22] Universities and industrial transformation: An interpretative and selective literature study with special emphasis on Sweden, Staffan Jacobsson, June 2002
[23] Knowledge Transfer Strategies for Regional Development and Competitiveness, IRE Knowledge Transfer Working Group, Final Report, June 2008
[24] Research Voucher Scheme, Limburg
[25] Knowledge Transfer Strategies for Regional Development and Competitiveness, IRE Knowledge Transfer Working Group, Final Report, June 2008
[26] www.innovating-regions.org

2.7 Conclusions

The state of the art review has identified the importance of the knowledge economy within Europe and its importance in European Commission policy. For medium sized cities with populations between 50,000 and 200,000 inhabitants the challenge is a critical one as they often lack the foundation of a university, commonly found in large cities that are strong in research and integration with the local economy. As a result of their size they also lack economic development strategies that has been fully articulated and debated and are unable to fully identify their economic strengths and distinctive offer.

In response to this challenge such medium-sized urban areas seek to work and integrate universities into their economic activities but often take a "classic perspective" of universities focussed solely on technology transfer and spin-out activity linked to research. The introduction of a model 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[27].

The RUnUP network provides a new framework for small and medium-sized local authorities and municipalities for engaging with and supporting universities in supporting innovation at the local level. The activities of RUnUP will extend and highlight the range of alternatives regarding the role of Universities in such environments. As a result the network will be able to highlight through individual partner case studies and actions and through reference to other cities the case for extending European policy regarding the role of universities and highlighting how local authorities and municipalities should adapt their local economic development policies and to support a wider engagement of their local universities with its local economies.

[27] The transformation of University-Industry-Government Relations; Loet Leydesdorff & Henry Etzkowitz; Electronic Journal of Sociology, 2001.

3.0 RUnUP PARTNER PROFILES

3.1GATESHEAD, UNITED KINGDOM

3.1.1 Introduction

Figure 3.1.1 The North East Region of England

Gateshead with a population of 190,500 people is located in the North-East Region of England (see figure 3.1.1) alongside the City of Newcastle on the River Tyne.

Gateshead has undergone significant economic transformation from traditional manufacturing industries, although this still accounts for 17.6% of employment, into a more service sector based economy with major employment in Public Administration, Education and Healthcare (25.5%), Distribution, Hotels and Restaurants (21.0%) and Banking, Finance and Insurance (16.3%). Alongside this regeneration Gateshead has seen significant positioning around the cultural and creative sector with physical developments including the Baltic, the Sage Gateshead and the famous Angel of the North sculpture. This positioning is reflected in the 2030 vision for Gateshead which includes aspirations for the development of Creative Gateshead and status as the City of Gateshead.

While Gateshead has its own Further Education College which has recently invested €43.75m in a new campus at the Baltic Business Quarter, the town has no Higher Education (University) Institution located in its metropolitan borough. The North-East region of England is home to a strong and complementary group of universities; Newcastle University, Northumbria University, University of Sunderland, University of Teeside and Durham University operating alongside other knowledge-base partners including RTC (Regional Technology Centre) North and the North East BIC.

Immediately identifiable issues include that as the principle actor in economic development, Gateshead Council needs to develop a strategy that supports the modernisation (upgrading of existing economy) and diversification (old economies into related new industries) of its existing manufacturing base. As well as this, Gateshead Council is already examining the potential for the creation of new economic activity around the cultural and creative sector, possibly focusing on a design led economy linked to the Design Centre for the North – the viability and impact of such a focus must be examined. Also, as Gateshead has no Higher Education presence the council through its business development team needs to mobilise its regional university and knowledge base partners to support its economic development priorities and linkage to the industries of Gateshead.

3.1.2 Gateshead Profile

3.1.2.1 Gateshead Metropolitan Borough Council

Gateshead is the largest in area of 5 Tyneside local authorities that cover Gateshead, Newcastle, North Tyneside, South Tyneside and Sunderland and occupies a central position in the Tyneside conurbation alongside the City of Newcastle on the South bank of the River Tyne.

The development of Gateshead and provision of public services is the responsibility of Gateshead Council, the lead partner in the URBACT II network RUnUP. Gateshead is effectively a unitary authority and operates a Cabinet form of government. The full Council consists of 66 local ward councilors that choose a Leader and Cabinet. The Cabinet operates on the basis of collective responsibility and decision making; however each Cabinet member has areas of special interest - known as portfolios, which are allocated to them by the Leader of the Council. Management of the Council is the responsibility of the Chief Executive who leads and has authority over all other employees and is responsible for:

- Providing strategic advice and arranging other advice to the Council, Cabinet and all other council bodies.
- The strategic management of the local authority providing advice and support to elected members.
- Developing and maintaining key relationships with strategic partners and other agencies and bodies.

The Council's services are delivered through five groups:

- Community Based Services
- Development and Enterprise
- Learning and Children
- Local Environmental Services
- Central Services

Within each of the five groups are a number of services, each run by a Head of Service who takes responsibility for the day to day running of the service and the management of employees.

Figure 3.1.2.1 Images of Gateshead

Specifically related to the work of the URBACT II network RUnUP, the council through its Development and Enterprise Team and Economic Development Service operate a Business Development team with 15 employees that support businesses located or those wanting to locate in Gateshead and individuals creating new businesses. It works with public and private sector partners to ensure the interests of businesses are served. More specifically it:

- Manages four business centres to provide new and young businesses with affordable, low risk managed workspace in a supportive environment with onsite services.
- Provides an enquiry service with direct support or with access to support from other agencies such as Business Link (The national business support agency). Meetings take place with businesses to discuss their needs, deliver support and develop plans.
- Liaises with agents, organises viewings and works alongside businesses until needs are met and works alongside developers and landowners to influence the provision of accommodation for businesses.
- Gathers information on premises and land from property agents, owners and developers and maintains a database on the Council's website. Enquirers access this information directly and are given more detailed information as required.
- Works with regional (e.g. One North East) and sub regional (e.g. Tyne and Wear Development Company) agencies, to attract investment and deliver schemes for the benefit of the local economy e.g. work with universities to support graduate enterprise.
- Administers the Northern IT Research Ltd Grant scheme for businesses in Tyne and Wear undertaking TI research and development projects.
- Produces a quarterly newsletter for businesses and organises events to provide information and offer businesses the opportunity of putting forward their views.

3.1.2.2 Gateshead Economic Structure

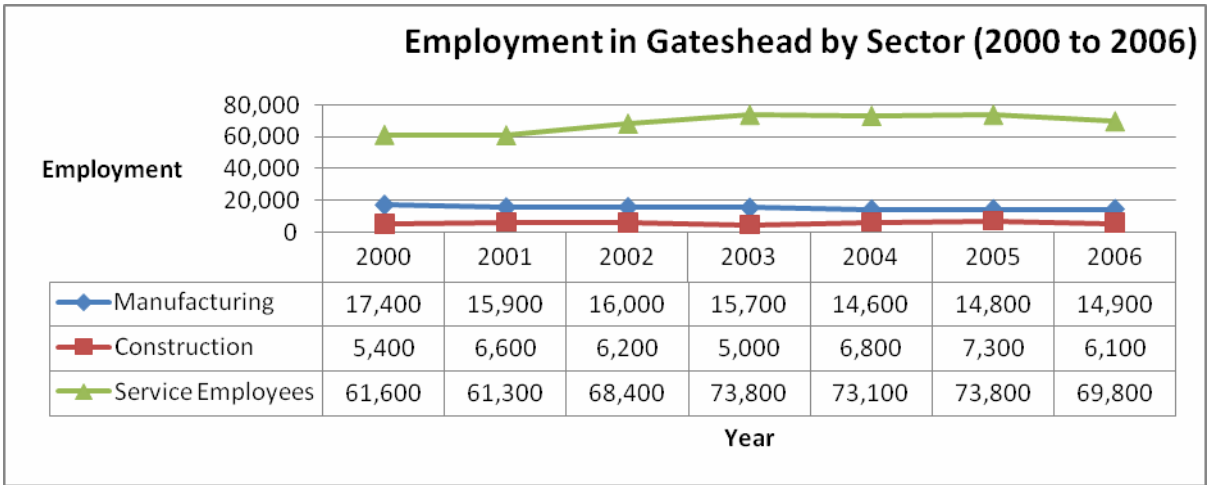
Although significant areas of the borough are classified as suffering from multiple deprivation, unemployment (6.3% in 2006) compares favourably to the rest of the North East (6.7% in 2006) although this is significantly higher than the UK average of 5.2% in 2006.

In recent decades Gateshead's economy has undergone significant structural changes – from traditional manufacturing industries towards more service sector businesses. Despite these shifts and the fact that the industrial composition of Gateshead is still progressively changing, the borough is still home to a high number of manufacturing and engineering businesses that in response to global competition, have invested in process, plant, machinery and people to now supply high value products to high growth markets both in the UK and overseas.

While employment in the manufacturing sector in Gateshead has declined from 17,400 to 14,900 it still represented 17.6% of employment in 2006 (see figure 3.1.2.2). We are able to break this down at a higher, city region level where we find that at the Tyne and Wear City Region level 81% of manufacturing[28] is represented by Transport Equipment, Machinery and Equipment, Basic Metals and Rubber and Plastics which are the most competitive areas of the manufacturing sector and additionally Food and Drink and Electrical and Optical industries. Unfortunately it is not possible to break down employment further than by general sector at the Gateshead level, highlighting a key problem facing stakeholders – the lack of transferrable data to inform policies and interventions.

Analysis of stakeholder's documents as well as interviews with key representatives of major organisations highlights the fact that the key issue facing the manufacturing sector is availability of skills particularly among young people. In addition, interaction between knowledge based providers of support and the manufacturing industry is considered as limited, with the culture and mindset of businesses as well as the use of academic terminology and lack of knowledge on university capability highlighted as key barriers to university-industry engagement.

Figure 3.1.2.2 Employment in Gateshead by Sector (2000 to 2006)



	2000	2001	2002	2003	2004	2005	2006
Manufacturing	17,400	15,900	16,000	15,700	14,600	14,800	14,900
Construction	5,400	6,600	6,200	5,000	6,800	7,300	6,100
Service Employees	61,600	61,300	68,400	73,800	73,100	73,800	69,800

The sub-national review[29] will give local authorities a greater responsibility regarding economic development and education, including skills development. The URBACT II network RUnUP and the Local Action Plan for Gateshead will look to explore how skills development can be linked to industry modernisation and diversification. To support this, the URBACT local support group needs to include SEMTA, the sector skills council for science, engineering and manufacturing, Manufacturing Advisory Services and North East Productivity Alliance.

While there is a clear need to focus on modernisation and transformation of existing industries Gateshead has used creativity and culture to lead its regeneration based on the impact of the Sage Gateshead (Music and Arts Centre), the Angel of the North (Sculpture) and the BALTIC (Centre for

[28] Source: Manufacturing Performance in Tyne & Wear and the City Region 2001-2005, June 2008
[29] Source: Sub-National economic development and regeneration review, July 2007

Contemporary Art). Gateshead Council hopes that this can lead to an increase in the importance of the creative sector for its local economy, with strategic reports pointing to a future strategy for this area of economic development. Previous public investment in the creative sector may well provide a platform for the development of a new 'creative economy' but many of the most visible cultural and creative icons such as the Angel of the North or BALTIC have indirect as opposed to direct economic impacts.

Any future creative economy should be based on creativity in its widest sense, focusing on new forms of production such as new media or advertising. Indeed, it has been recognised[4] that the creative industry subsectors of Advertising, design and brand communication; new media, games and software; film, TV and video account for 76% of employment in the sector and 79% of turnover, along with the majority of the sector's GVA. Gateshead does have some instances of such sectoral representation but these are relatively isolated and will not necessarily lead to a sectoral shift.

Yet Gateshead itself is developing an Innovation Connector that could underpin the development of Gateshead's new economy – the Design Centre for the North. The Design Centre concept will focus on product development, innovation and design in the North East. It aims to foster integration and interdisciplinary working between business and the knowledge base in design and science, engineering and technology – a tangible example of the triple helix working promoted by RUnUP. The proposal comprises the creation of the Network for Design which will in general ensure greater exploitation of current regional strengths in design, raise awareness of design as a means to improve business competitiveness within the region and facilitate development of skills and capacity for design and innovation within business. Most importantly, it will promote cross disciplinary working between academia, the design community and businesses to identify and resolve real-life business issues relating to design of products and processes, and foster beneficial collaborative links within the region, UK and internationally.

It is planned to ultimately house the Network in the prospective physical Design Centre building within the Baltic Business Quarter in Gateshead. It is felt that the building will give unique strengths to the concept, providing a visible hub and focal point for design in the region, permanent showcasing space for the best of regional design, appropriate/neutral space and facilities for shared design projects and a resource library for design-related material. It also allows for the generation of income to support the Design Centre objectives, clear synergy through co-location of other regional design initiatives and design-related businesses, and will benefit from the availability of the highly appropriate location and the opportunity to create a building of high quality design & sustainability.

Given the way in which design is fundamental to all aspects of the modern economy, the development of the Design Centre for the North does not mean Gateshead must pursue a 'design economy'. Instead it gives the opportunity for Gateshead's local economy to be positioned as a 'service economy' to actors based outside the borough, as well as potentially enticing organisations from a variety of sectors to be based in Gateshead's locality. In this sense Gateshead's economy would be multi-sectoral but design focused – a local economy underpinned by great design services as opposed to a design led economy.

Beyond the Innovation Connector's development in Gateshead, it is evident that appropriate support for the creation of new industrial sectors is particularly important. It has been recognised[30] in a study of entrepreneurs in the North-East and North-West of the UK that it is difficult for universities to address the requirements of post-start-up support for fully trading graduate businesses. To address this issue it was acknowledged that partnerships between universities and local authorities essential for "the creation of new knowledge based businesses and their effective integration into regional economies". The particular stated requirement of entrepreneurs included; hatchery space not so connected with the university, affordable space for creative businesses, connectivity and integration in business start-up support.

3.1.3 The role of Universities and Knowledge Transfer Partners in Gateshead.

The lack of a "Gateshead University" and development of a knowledge economy was seen as the key problematic in the original URBACT II RUnUP declaration of interest but this should not be seen as an impediment to successful economic development. The North-East region of England is home to a strong and complementary group of universities; Newcastle University, Northumbria University, University of Sunderland, University of Teeside and Durham University operating alongside other knowledge-base partners including RTC (Regional Technology Centre) North and the North East BIC. The key challenge for Gateshead Council is not to focus on replicating or competing with existing universities by developing an actual 'Gateshead University', but instead to mobilise its regional university and knowledge base partners to support its economic development priorities and linkage to the industries of Gateshead.

In this context Gateshead metropolitan borough council has included Newcastle University, Northumbria University and RTC North as key partners in its URBACT local Support Group.

Newcastle is a top 20 UK university with more than 18,000 students and 4500 staff. Like most UK universities they provide support to industry through the delivery of a range of services including;

- Bespoke consultancy delivered through Knowledge House North East, a collaborative approach by North East Universities to highlight their skills, expertise and resources to industry;
- The delivery of commercial services including research centres for Engineering Design and the Resource Centre for Innovation and Design an engineering consultancy activity focussing on mechanical, electrical and electronic systems design and engineering, product development and software engineering.
- Training and Skills, including Continuing Professional Development
- Access to students and graduates.

[30] Integrating Graduate Enterprises into Regional Economies: Developing Effective Support. Partnerships, Universities, Enterprises and Regional Economies

In addition to its work with industry the university is also a significant provider of support for student entrepreneurs. The Careers Service at Newcastle University[31] supports undergraduates, taught and research postgraduates and alumni who want to start their own business. This includes the provision of Business Start Up workshops include a series of master classes and clinics; networking society; enterprise competition; business advice and support and access to an ideas incubator (hatchery).

The University of Northumbria located on two sites in Newcastle with 27,000 students. Through its commercial arm Northumbria Commercial Enterprises (NCE) it offers a wide range of problem-solving and knowledge support tools for business including consultancy, applied research, short courses, customised training and development, Knowledge Transfer Partnerships (A UK best practice programme) , workshop and laboratory facilities and testing, student enterprise start up support and commercialisation. Its support to industry is linked to the university's academic schools:

- Graduate School
- Newcastle Business School
- School of Applied Sciences
- School of Arts & Social Sciences
- School of Built Environment
- School of Computing, Engineering & Information Sciences
- School of Design
- School of Health, Community & Education Studies
- School of Law
- School of Psychology & Sport Sciences

In particular this includes Northumbria University Design and Innovation Lab (nuDIL). nuDIL captures and develop world-class practice and make a significant contribution at regional and national levels to the generation, and harnessing, of creativity in UK business through excellent design. It combines elements of research-led learning and teaching, together with knowledge transfer, working across the boundaries of design, engineering and business.

nuDIL brings together diverse communities of professional practice in design, embracing multinational corporations and small firms, so that students and academic staff are able to work on live projects in a flexible and versatile environment. nuDIL is complementary to the Design Centre for the North (DCfN), a major capital-led project being led by One Northeast as part of the Northern Way strategy and to be based in Gateshead, with Northumbria University as a key academic partner.

[31] Source: Careers Service at Newcastle University

The university's commitment to supporting Student Enterprise is delivered through its Enterprise Campus programme that has provided advice, support and tangible assistance to students and graduates wanting to start or develop their own business. Supporting over 70 businesses in a 2-year period the programme offers:

- Assistance with compiling a business plan
- Free office space
- Free use of computers, internet and telephones
- Free access to meeting and administration areas
- Specialist industry advice from business mentors
- Grants and financial assistance depending on business status

In addition to the universities of Northumbria and Newcastle the North-East region is home to the Knowledge Based Business Support provider RTC North.

RTC North is an independent innovation agency committed to helping business and society manage change. Excelling in the areas of technology transfer, business growth and innovation management, RTC North has worked with thousands of organisations since 1989 to create jobs, wealth and a better quality of life for the people of Northern England. Today the company employs over 60 people and has offices in Sunderland, Liverpool and Leeds. RTC North has worked extensively with the knowledge economy since its inception in 1989. Indeed, the company was originally a spin-out of Newcastle University and has maintained its strong links with the research base, having 5 Northern Universities represented on its Board of Directors.

3.1.4 Moving Forward

The industrial transformation of Gateshead linked to the knowledge Economy can only move forward through relationships with key regional Partners. The core ULSG for Gateshead[32] will include the following organisations.

- Gateshead Metropolitan Borough Council
- Newcastle City Council
- Newcastle University
- ONE North East[33]
- University of Northumbria
- RTC North
- North East Chamber of Commerce
- Engineering Employers Federation

[32] Information: THE ULSG for Gateshead met in shadow form during the RUnUP network development phase on 17th June 2008 with the Lead Expert and met a further 2 times during the development phase.
[33] Information: One North East is the Regional Development Agency for the North East region of England and the Managing Authority for European Structural Funds for the region.

This partnership will be enhanced by a number of specialist organisations who will add value to delivery of the Local Action Plan.

The opportunities and challenges identified in section 3.1.5 link well into the North East ERDF Competitiveness Programme[34] which has an established aim by 2015 to have made the region a more cohesive, ambitious and attractive place in which to invest and work. This will be based on the creation of a modern, innovation focused economy that is well placed to exploit the economic and social opportunities associated, in particular, with renewable energies and technologies that contribute towards a healthy environment. The competitiveness programme will strengthen the region's entrepreneurial culture and grow North East England's business base, resulting in an outward facing economy and society that is self reliant and confident of its ability to compete in the global market place.

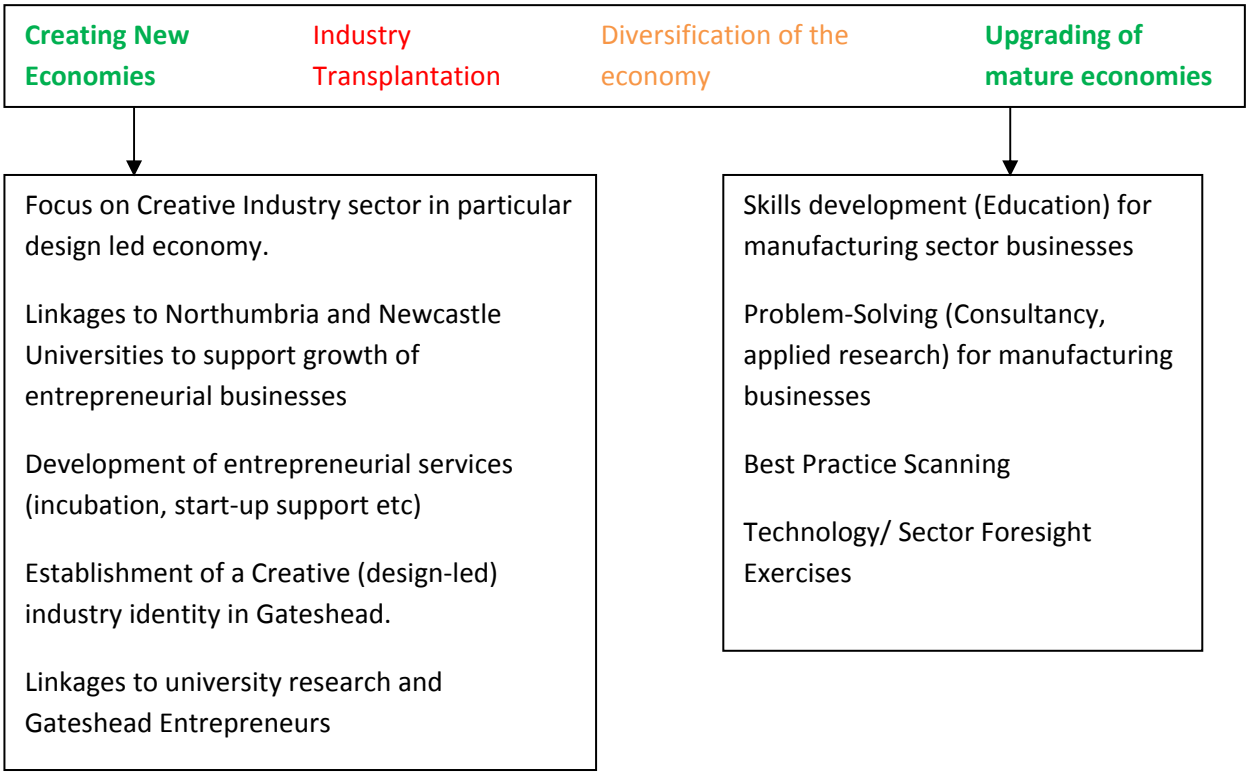
In particular the challenges and opportunities for Gateshead articulated into a Local Action Plan can be delivered through actions related to innovation connector projects, Innovation focused, tailored support geared towards the needs of SMEs with high growth potential and their supply chains, Revenue actions by Centres of Excellence and innovation connectors in delivering technology support to key sectors, including new product development processes and direct support to SMEs to build capacity linked to science and design base. In addition the programme offers support for the development of an entrepreneurial culture in particular amongst young people, promoting enterprise as an alternative career path, including through the provision of packages of support, opportunities to research and test out ideas, coaching and mentoring provision. In particular this will be delivered through support to start-up business, including social enterprise, including pre-start-up guidance and advice, assistance with business planning, business systems and processes and exploitation of ICT applications including e-commerce.

3.1.5 Key Challenges for Gateshead

The RUnUP thematic network seeks to maximise the economic, innovation and entrepreneurship potential of medium-sized urban poles. The challenge facing Gateshead within this context is that because it has no university located within its metropolitan borough, there is a clear need to work closely with the excellent range of nearby university institutions, and to ensure that their focus is increasingly aligned to the needs of the Gateshead economy. To date partnership working in projects between the council and universities has been limited so this will represent a key challenge in driving forward the Local Action Plan for the RUnUP network. It is the role of the council to identify its innovation-driven local growth and development strategy and to identify the required role of its regional universities and knowledge based enterprise support providers in supporting this development.

[34] Source: Structural Funds Priorities

Figure 3.1.5a University / Knowledge Based Partners role in innovation-led growth for Gateshead



In delivering innovation led growth for Gateshead the relationship between the Council and its knowledge based partner's needs to be redefined. The state of the art report has identified how European policy has taken the University as its point of reference for the knowledge economy. At a local level in Gateshead while the Business Development Team of the Council has good relationships with its knowledge based partners, it is the needs of the economy and its transformation that must be taken as the point of reference (figure 3.1.5b) rather than the traditional approach of universities in technology transfer. In this context the Council is the only actor with a fully exclusive focus on the needs of Gateshead and the motivation to mobilise universities and knowledge based partners to support its economic development.

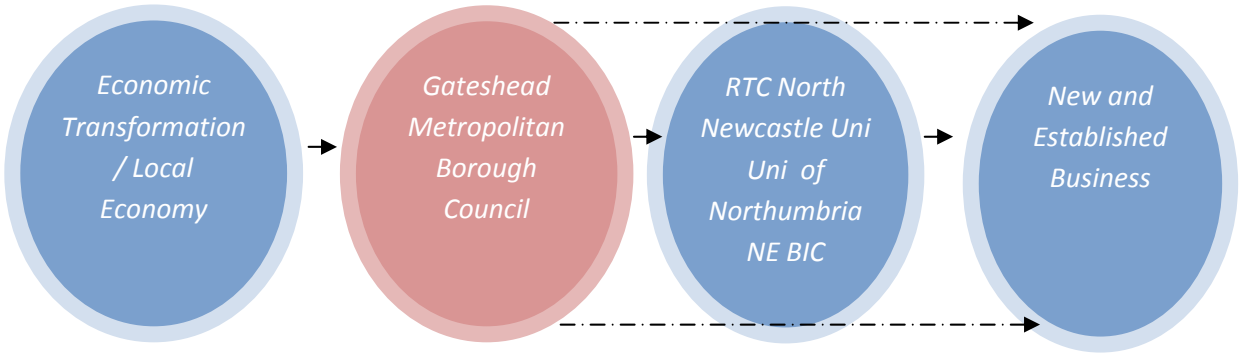
Within the RUnUP Thematic network Gateshead Council needs to address the following challenges to take full advantage of the knowledge economy:

- **Fully articulate the state of transformation in its local economy**. While the development of a creative Gateshead has been promoted[35] and there is significant energy around developing the Design Centre for the North there has been no evidence presented during the baseline study of the potential regarding this being a new sector of the economy for Gateshead. The current focus on Creative Industries needs to be fully articulated as the current developments of the Sage, Baltic and Angel of the North indirectly impact upon the economy to a limited degree and an economic development approach is required that supports high-value jobs, new business start-ups and economic growth. Similarly while the

[35] Source: Vision 2030 Sustainable Community Strategy for Gateshead

needs of manufacturing businesses have been articulated regionally there is no specific information on the manufacturing sector in Gateshead and its needs. This potential and appropriate action by Gateshead Council and its RUnUP partners is highlighted in figure 3.1.5a.

Figure 3.1.5b Economic Transformation relationships in Gateshead



- **Adapt the work of its Business Development Team to align to the focus of economic Transformation and the Knowledge Economy.** The team currently has a delivery based remit focused on business premises and business support. To support new economic development and transformation the team needs to act as the primary actor and facilitator in linking the resources of knowledge based organisations with businesses around the activities identified in figure 3.1.5a. This is particularly important as to date collaboration and partnership working between the council and its knowledge based partners has been limited.

- **Fully understand how its knowledge based partners deliver activity in support of economic transformation.** In line with an adapted role in supporting economic transformation the business development team and the wider council as appropriate needs to establish a deeper, targeted relationship with the Universities and Knowledge Based Partners in its region whose activities and expertise align most appropriately to their key economic transformation activities. This will maximise the benefits of relationships as clear opportunities for joint working emerge.

- **Deliver new knowledge-based collaboration activity in line with economic transformation requirements.** Both the University of Northumbria and Newcastle University have significant enterprise support programmes operating for students. The RUnUP network will enable new opportunities for collaborative working to be explored to address location specific problems (e.g. lack of incubation space could be addressed by utilisation of vacant premises owned by the council) or the creation of an identity linked to the marketing of Gateshead and the offer of its university partners.

3.2 ÁGUEDA, PORTUGAL

3.2.1 Introduction

Águeda is located in the central region of Portugal, in the NUT III Level area of Baixo Vouga. Its territory covers 335.2 km^2 and is therefore the largest municipality of the Aveiro district. The main access routes are the A25 (east-west), which is the main access roads from Spain, and the EN1 (north-south), which crosses the municipality. The territory is also served by the Vouga Valley Train Line, which connects the cities of Aveiro and Espinho.

The economic structure of Águeda is dominated by the metal processing industry, representing 55% of industrial employment and 33% of total employment in the municipality overall. In addition the sectors of textiles, clothing and materials for construction of ceramic and articles of stoneware and earthenware are significant for Águeda in employment. Between 1991 and 2001 the city has seen a growth in employment in furniture with reductions in employment in textiles, metallurgy and agriculture. Alongside this manufacture of motorcycles and bicycles which has been a dominant feature of the Águeda economy has been restructured, leading companies to diversify their activities in particular into the manufacture of components and accessories for motor vehicles.

The city of Águeda is home to two Higher Education institutions, the University of Aveiro and the School of Technology and Management of Águeda. These have played a key role in Águeda's development and growth, through knowledge transfer, entrepreneurial development and the development of a student community within the city.

The Municipality of Águeda is characterised by an industrial tradition with an endogenous entrepreneurial capability, which are the major factors that have contributed to the economic success of the city during the twentieth century. However, changes in the demand patterns of international markets, as well the economic crisis that took place due to these changes, affected Águeda's economic environment forcing it to rethink its approach to economic development and innovation.

Águeda as a result has established projects to stimulate innovation and competitiveness. In this context, it is natural that the municipality of Águeda is a partner in 2 URBACT networks, including "Greening SME´s" related to the development of policies that stimulate the creation of sustainable businesses the and RUnUP network, in which the main theme is the role of universities in economic development of urban centres. It is also natural that that these projects are part of the same strategic approach as company sustainability will have to be achieved through innovation and knowledge transfer centres, including universities.

3.2.2 Águeda Profile

3.2.2.1 Municipality of Águeda

As mentioned in the profile introduction the Municipality of Águeda is located in the NUT III area of Baixo Vouga and also part of NUT II level Centro Region. The municipality is also in AMRia – Ria de Aveiro Municipalities Association and in GAMA – Grand Metropolitan Área of Aveiro, which is composed of 11 municipalities, all organized around Ria de Aveiro. The municipality has twenty parishes and of these Águeda is dominant for having the biggest urban centre and for being the Council capital. Águeda is managed by the municipality, which in turn is managed by a Municipal Executive. This Executive is lead by the Mayor and a team of six elected councillors.

The municipal executive is overseen by the Municipal Assembly that consists of 41 elected councillors. The Municipal Executive has a mandate to plan and manage the municipal territory within 4 year electoral cycles. Its mission is related to social-economic, environment and territorial development and to financial investment management in the Municipality. As a result its actions are directed towards the needs of its local community, namely considering social-economical development, spatial planning, public supplying, basic sanitation, healthcare, education, culture, environment and sport.

Figure 3.2.2.1 Images of Águeda

The municipality employs 370 people and financially it receives the majority of its income from the state budget (through taxes, such as IMI6 or FEF7), or from additional funds secured through applications to the National Strategic Reference Network (NSRF8) or to Community Funds, individually or in association with other municipalities (AMRia and GAMA) or with development agencies.

Relating directly to the work of the URBACT II network RUnUP, the council operates an Administrative Organization, Planning and Modernization Cabinet and Strategy and Planning Division supporting strategic planning and economic development. These services work directly to the Presidency in terms of creating politics and actions linked to socio-economic and territorial development. They also manage the relations with external entities, namely universities, together with the Municipal Executive.

The Administrative Organization, Planning and Modernization Cabinet and Strategy and Planning Division have significant relationships with both businesses located in the municipality and the university. This is mainly delivered through the Cooperation Network for Innovation and Competitiveness in Águeda which was established in 2007. The network aims to improve dynamism the participation of local enterprise and intermediary organisations in the creation of a formal

cooperation network that can help council companies to overcome their competitive difficulties and to maximize their potential through innovation[36].

Partnership in the network includes representation from Education and the companies of Águeda, namely the University of Aveiro (UA), the Technology and Management Superior School of Águeda (ESTGA), and the Águeda Enterprise Association (AEA). The network provides a connection between the enterprises of Águeda to the city's local universities and knowledge centres.

In addition collaboration between the municipality, university and businesses can be seen in the following major initiatives:

1. The Living Lab project: Linking the knowledge and capability of major national lighting companies to the technologic innovation from universities.

2. Eco-Sustainable Enterprise Parks: Promoting local entrepreneurship through the development of enterprise incubators with access to common services.

Overall, the municipality is involved in a significant portfolio of projects which promote and support their interaction with business and universities and as a result the Municipality is considered to be the main catalyst for change.

3.2.2.2 Águeda Economic Structure

Águeda has developed as an industrial economy built upon a community of locally owned and managed Small- and Medium-Sized Enterprises operating in the sectors of Ceramics, Metallurgy, Furniture and the Construction and Retail Trade.

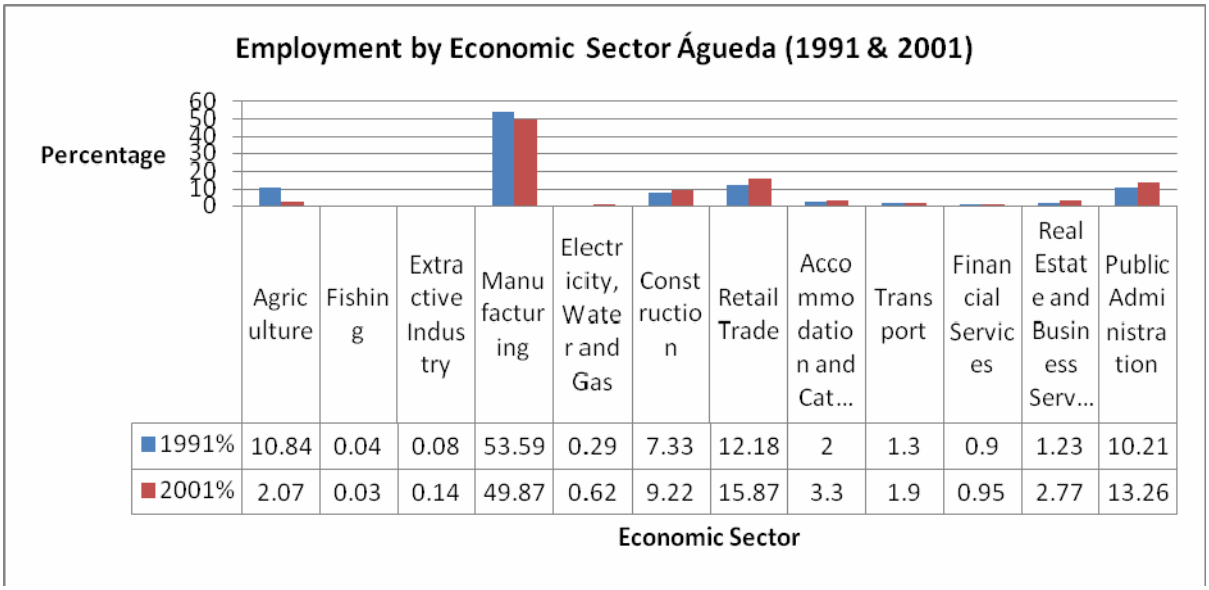
The economic structure of Águeda is dominated by the metal processing industry, representing 55% of industrial employment and 33% of total employment in the municipality overall. In addition the sectors of textiles, clothing and materials for construction of ceramic and articles of stoneware and earthenware are significant for Águeda in employment. Between 1991 and 2001 the city has seen a growth in employment in furniture with reductions in employment in textiles, metallurgy and agriculture. Alongside this manufacture of motorcycles and bicycles which has been a dominant feature of the Águeda economy has been restructured, leading companies to diversify their activities in particular into the manufacture of components and accessories for motor vehicles. These structural changes can be seen in the reduction of overall manufacturing employment from 53.6% to 49.9% between 1991 and 2001 while there were relative increases in construction, trade and community services.

The service sector while growing in 2001 represented only 3.9% of employment. This highlights the under-representation of activities that support the business sector namely; expert consultancy, quality, environment, design and financial services.

[36] Cooperation Network for Innovation and Competitiveness in Águeda

The County of Águeda has sustained its manufacturing activities from the 1970s and 1980s with a large cluster of small and medium-sized enterprises established locally. Overall the manufacture of ceramic products, the manufacture of components and accessories for motor vehicles and their engines and the manufacture of furniture showed positive net changes between 1991 and 2001 in excess of those of other branches of the secondary sector. Significantly the manufacturing sector overall has seen international competition increase with the key drivers being design, image, marketing and continual innovation whereas the focus of business in Águeda has been driven by standardised products with a limited range and low cost.

Figure 3.2.2.2 Employment in Águeda by Sector (1991 and 2001)



	Agriculture	Fishing	Extractive Industry	Manufacturing	Electricity, Water and Gas	Construction	Retail Trade	Accommodation and Cat...	Transport	Financial Services	Real Estate and Business Serv...	Public Administration
1991%	10.84	0.04	0.08	53.59	0.29	7.33	12.18	2	1.3	0.9	1.23	10.21
2001%	2.07	0.03	0.14	49.87	0.62	9.22	15.87	3.3	1.9	0.95	2.77	13.26

Águeda has always enjoyed a high level of business activity compared to the average of the Centre Region and Portugal, which has been reflected by a low unemployment rate over many years. In particular this is driven by a high level of entrepreneurial skills and initiative, availability of highly specialised skills and local synergies in particular niche markets.

3.2.3 The role of Universities and Knowledge Transfer Partners in Águeda.

The city of Águeda is home to two Higher Education institutions, the University of Aveiro and the School of Technology and Management of Águeda. These have played a key role in Águeda's development and growth, through knowledge transfer, entrepreneurial development and the development of a student community within the city.

As a result partnership working between the University and Municipality is strong and to date has included:

- The Strategic Plan of Águeda,
- The Cooperation Network for Innovation and Competitiveness of Águeda
- The future enterprises incubator

The Strategic Plan for Águeda was the first engagement by the University in the future of the Municipality and represented a primary example of the collaboration by the University in the planning, economic, social, territorial and environmental development of Águeda with the municipality.

The Cooperation Network for Innovation and Competitiveness in Águeda, led by the Municipality of Águeda aims to create conditions for boosting the innovation capacity of local business through the creation of partnerships around common objectives, involving companies from different economic sectors and knowledge centres. The main objective of the network is to increase the participation of local business and business support intermediaries through the creation of a cooperation platform to help identify and implement actions and innovative projects.

Established in November 2007, the network brings visible benefits specifically for companies and for the University. The network offers opportunities for companies to increase their competitiveness through innovation, in particular the improvement of processes and new product development, design, marketing, and finance. As a result the University has had the opportunity to involve researchers from various disciplines in the creation and sharing of knowledge and in the strengthening of the university-industry interface.

In the medium to long term the project will help to create favourable conditions for innovation and creativity culture in the city, stimulating partnerships that produce new solutions with added value. Additionally it will help to create the necessary critical mass to exploit opportunities for business support currently available and within reach of those who prove to have a strategic vision and network organization ability.

The third example of university-municipality partnership is the development of an incubator network in which the central pole will be the established Enterprise Incubator of the University of Aveiro. The incubator network will have 8 centres including a facility in Águeda which will be of particular significance given the industrial fabric of the city and the focus of the centre on environmental technologies. The incubator will be located in Águeda's Municipality buildings with an initial capacity for 15 companies. It will encourage entrepreneurship for students, graduates and staff of the university but additionally individuals from the local community. The overall aim of the incubator is to encourage the creation of new companies to commercialise innovative ideas in a sustained manner, with the lowest risk and the greatest probability of success. Linked to the development of the Enterprise Incubator network is UAtec, a unit of the University of Aveiro to transfer knowledge to enterprises within the County.

Linked to the development of the Environmental Incubator is the House of the Future programme, aimed at supporting the design and construction of futuristic housing, through advanced processes, concepts and products. The programme brings together interests and aspects of different companies alongside a cooperation network fostering technology and knowledge transfer between companies and the University of Aveiro.

In summary, the municipality of Águeda and University of Aveiro have established a variety of mechanisms for knowledge and technology transfer with local business. However, it is necessary to further strengthen the linkages between these stakeholders and local actors to develop a culture of mutual trust in the development process, taking into account that the municipality should play a pivot role in strategic development.

3.2.4 Moving Forward

The industrial transformation of Águeda linked to the knowledge Economy can only move forward through relationships with key regional Partners. The core ULSG for Águeda[37] will include the following organisations.

- Municipality of Águeda
- University of Aveiro
- Cooperation network for Innovation and Competitiveness of Águeda
- Superior School of Technology and Management of Águeda
- Business Association of Águeda
- National Association of Two Wheels Industries

This partnership will be enhanced by a number of specialist organisations who will add value to delivery of the Local Action Plan. The opportunities and challenges identified in section 3.2.5 link well into the Regional Operational Program (PO) for the Centre region for 2007-2013 which is an instrument of the National Strategic Reference Framework (QREN), applicable only to the Centre region, were Águeda's County is located, and which is financed by the European Fund for Regional development (FEDER).

Related to RUnUP, Priority 1 of the fund aims to improve competitiveness, innovation and knowledge in the Region, as well as the promotion of entrepreneurship, innovation and competitiveness in small-sized enterprises, development of the knowledge society, boost the scientific and technological system, promotion of the planning and qualification of the enterprise location spaces and of transfer of knowledge, as well the promotion of renewable energies.

3.2.5 Key Challenges for Águeda

The Municipality of Águeda is characterised by an industrial tradition with an endogenous entrepreneurial capability, which was assumed to be one of the major factors that contributed to the economic success of the city during the twentieth century. However, changes in the demand patterns of international markets, as well the economic crisis that took place due to these changes, affected Águeda's economic environment forcing it to rethink its approach to economic development and innovation.

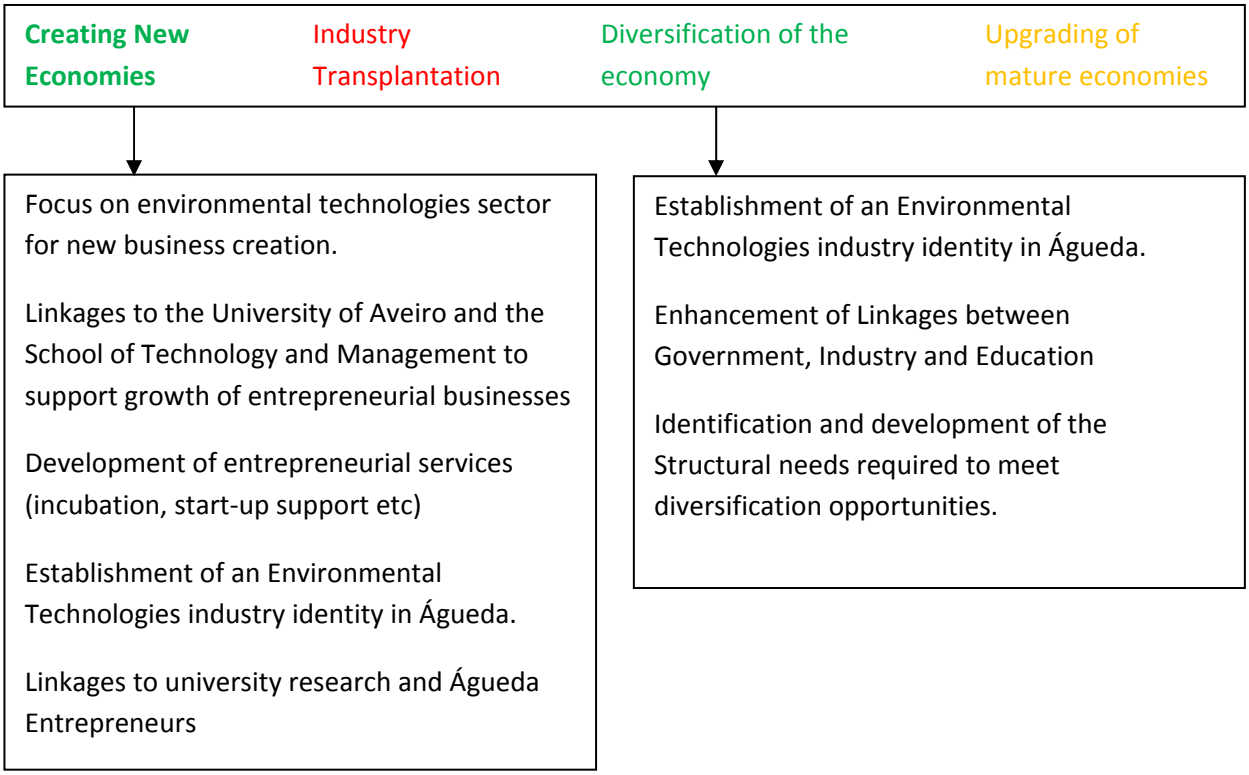
Águeda as a result has established projects to stimulate innovation and competitiveness. In this context, it is natural that the municipality of Águeda is a partner in 2 URBACT networks, including

[37] Information: The Lead Expert met the key organisations of the Agueda ULSG during the expert visit undertaken during the 17th to 19th September 2008.

"Greening SME´s" related to the development of policies that stimulate the creation of sustainable businesses and the RUnUP network, in which the main theme is the role of universities in economic development of urban centres. It is also natural that that these projects are part of the same strategic approach as company sustainability will have to be achieved through innovation and knowledge transfer centres, including universities.

In addition there is a requirement to focus on entrepreneurship development on which the city of Águeda has grown but is now in need of revitalisation to reduce unemployment and improve the social and economic prosperity of the city and its population. Factors including entrepreneurial capability, the existence of a technical culture based on traditional knowledge and a large variety of small and medium enterprises in Águeda provide a framework for sustained development and an improvement in competitiveness.

Figure 3.2.5a University / Knowledge Based Partners role in innovation-led growth for Águeda



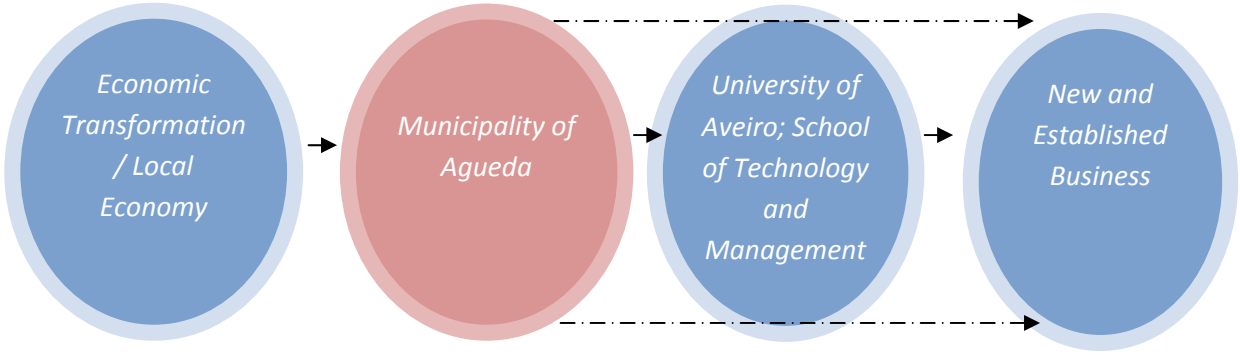
Águeda's economic strategy is based on the construction of a sustainable and competitive economy, considering environmental concerns, following a set of guidelines that the Greening SME´s network will help create through the exchange of experiences with other cities of Europe. To do so, understanding the role of universities in the process of readjustment of industrial structure, from a "heavy" base to a "green" base, is considered essential.

For Águeda, the RUnUP network provides a mechanism for developing activities that stimulate capacity and innovation, know-how and human resource support for local businesses. The focus of the Municipality of Águeda in the RUnUP network is:

1. The requalification of human resources, including unemployed graduates, developing new courses in essential areas for economic development e.g. environmental management. The aim is to enhance skills, adapting them to market needs to act as a catalyst for process improvement and product development.

2. The creation of a new generation of entrepreneurs accessing university knowledge and expertise (e.g. UATEC and the incubator), focusing on new market opportunities, related with state-of-the-art environmentally sustainable technologies, creating a new local and regional cluster, which may be linked to municipality projects including the "lighting living lab" project.

Figure 3.2.5b Economic Transformation relationships in Águeda



The expectation of the Municipality of Águeda within the RUnUP network is that their local university and research centres, enterprises and industrial associations will promote the creation of a sustainable social-economic environment, where the emergence of new business opportunities, as well as new employment activities will result from the positive engagement of universities in the knowledge transfer process.

In conclusion, the overall aim is to create the "Innovation, Development and Culture of Águeda", stimulating the creation of an attractive city, associated with innovation and competitiveness at a regional, national and international level, based on entrepreneurship, skills development and business diversification.

3.3 BARAKALDO, THE BASQUE COUNTRY

3.3.1 Introduction

Barakaldo with a population of 98,000 people is located in northern Spain, in the Autonomous Community of the Basque Country (see figure 3.3.1), which is divided in three provinces (Álava, Bizkaia and Gipuzkoa). Barakaldo is situated in Bizkaia.

Barakaldo has undergone significant industrial transformation and economic regeneration. Historically the town was a central part of the region's economy linked in particular to the mining and processing of iron leading to a significant increase in the population of the town. With the eventual decline of the iron industry, restructuring left an economic situation and urban environment with high levels of unemployment, in excess of 32% a decline in investment and a legacy of contaminated industrial land. In the last ten years Barakaldo has seen large-scale improvements in terms of urban planning, environment and society. This new economic resurgence has been driven through the location of new industries, supported by the development of the Port and the Airport, and economic activities that are compatible with a residential environment and located on former industrial land.

Figure 3.3.1: The Basque Country

While Barakaldo has undergone significant economic transformation and economic regeneration to date this has not included the development of knowledge based economy activities and this is the core problem for Barakaldo as outlined in URBACT II RUnUP declaration of interest. In particular Barakaldo has only a small campus location of the University of the Basque Country with no direct engagement with the technology transfer and spin-out activities of the university.

Within the URBACT II network RUnUP the Municipality of Barakaldo through its economic development agency Inguralde as the principle actor in economic development needs to develop a strategy that supports the creation of new economic sectors linked to the research activities of its university and technology centres and support existing sectors of the economy namely business services and construction. In this context, for example, Inguralde has got some business infrastructures which could be used to deliver new activities linking research into the generation of spin-out companies and entrepreneurial activity and linkages with local economy. The RUnUP network will enable new opportunities for collaborative working to be explored to address specific problems (e.g. creation of new models of integrated education, knowledge transfer and

entrepreneurship models) or the creation of a new identity linked to the marketing of Barakaldo and the offer of its university partners.

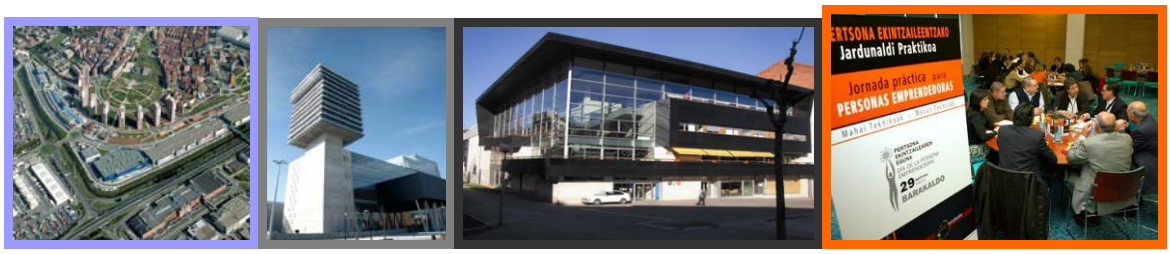
3.3.2 Barakaldo Profile

3.3.2.1 Municipality of Barakaldo

Barakaldo is located in the autonomous community of the Basque Country. The Community enjoys a high level of self-government in health, education, security, housing and taxation. The autonomy to decide its own organisation stems from the Statute of Gernika, approved by referendum on 25 October 1979, which recognises the existence of a Government with executive powers and a Parliament with general legislative capacity. The Basque Country also has two bodies inherited from the traditional Basque codes of rights in each territory or province - the General Assembly, with regulatory and operational capacities similar to parliament, and the Provincial Councils, their executive institutions. Their existence gives the Autonomous Community a decentralised organisational structure, making it almost a confederation.

The Provincial Councils (Bizkaia, Gipuzkoa and Alava) are one of the principal institutions of the Autonomous Community of the Basque Country. The government of each province is the "Diputación" (Provincial Council). It is headed by the Diputado General (Chief Councillor), who is supported by a team of councillors who take responsibility for the various areas of government. They have a broad range of powers covering issues such as town planning, roads and public works, the environment, cultural heritage and social welfare. The three Basque historical territories are entirely equal within the political and administrative structure of the Basque Autonomous Community. The association between the institutions mentioned above and the Basque Government gives the Autonomous Community a confederal organisational structure. The development of Barakaldo and provision of public services is the responsibility of the Municipal government shared with the regional government in matters of health and education. Both the central and the regional governments may delegate additional powers to municipalities. Because of the degree of authority that has been devolved to the autonomous communities from the central government, local institutions are politically dependent on these communities; however, they remain to a large extent financially dependent on Madrid.

Figure 3.3.2 Images of Barakaldo



Government at the municipal level is administered by a Municipal Council, the members of which are directly elected. Each Municipal Council is headed by a mayor, who is elected following local elections, from among the council members, and who, in most instances, serves as the leader of the majority party in the council. In addition to being chairman of the council, directing municipal

administration, heading the municipal police force, and exercising extensive powers of appointment, the mayor plays a major public relations role and enjoys a great deal of prestige.

Specifically related to the work of the URBACT II Network RUnUP the municipality has established Inguralde (the partner in the RUnUP network) a municipal service company for training, employment and the economic promotion of Barakaldo. It was founded in 1992 in order to promote policies of employment and local development.

Inguralde works on three main fields:

- Creation of new enterprises
- Creation of Employment
- Promotion and Support of Enterprises

Regarding the 'Creation of new enterprises", Inguralde provides everyone who wants to create an enterprise with the necessary information and tools; offers advising, guiding and training services; and has also some incubator centres in the city. Within the "Creation of Employment", Inguralde provides information services, an employment centre, workshops on new technologies, information on job vacancies and support in undertaking professional qualifications. In the "Promotion and support of enterprises", Inguralde offers information and guidance on economic incentives and existing funds for helping enterprises and support for management improvement activities.

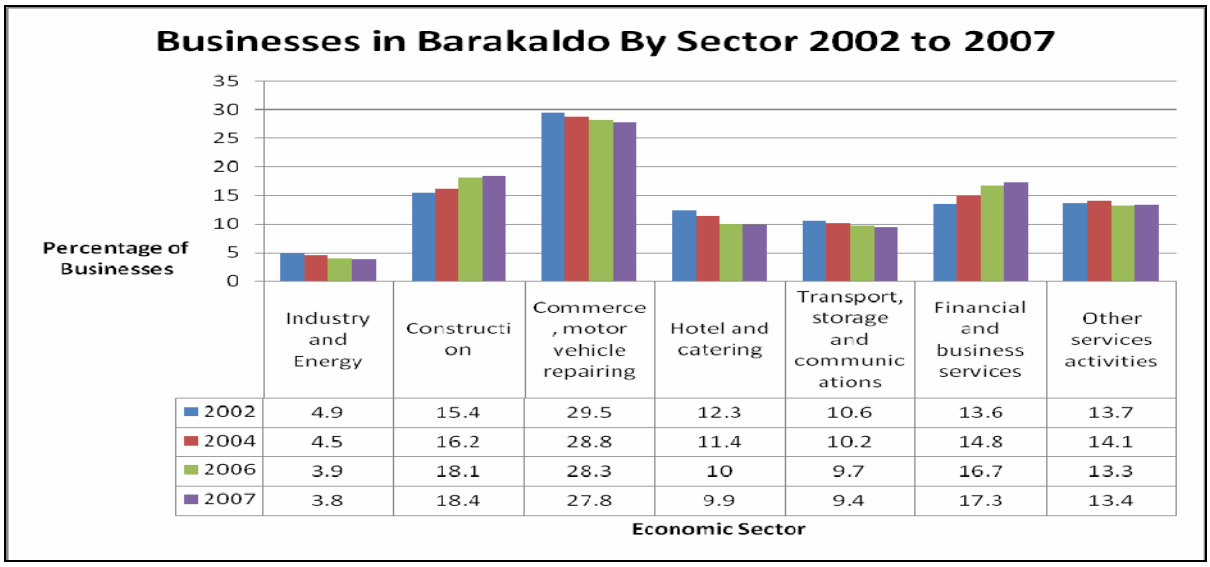
In line with this strategy, Inguralde has carried out several European projects, in the context of initiatives like URBAN, ADAPT and EQUAL.

3.3.2.2 Barakaldo Economic Structure

For over 100 years, the Basque Country has been one of the most important industrial areas in the Spanish State and represents one of the most significant financial centres in the European Atlantic axis. In 2007, 10.7% of the industrial turnover of the Spanish State was generated in the Basque Country, which is a much higher percentage compared to the figures that would result if the situation were based on criteria of population (4.7%) or geography (1.5%). In addition, employment in the Basque Country has grown by over 30% in the last ten years; and employment has fallen from 21.7% in 1995 to 4.1% in 2006, while the average in the Spanish State fell from 18.4% in 1995 to 8.5% in 2006. Thus, together with Madrid and Catalonia, the Basque Country leads the way in terms of employment growth in Europe between 1995 and 2005.

As stated in the introduction to the profile Barakaldo has undergone significant industrial transformation and economic regeneration. Historically the town was a central part of the region's economy linked in particular to the mining and processing of iron leading to a significant increase in the population of the town. Economic and industrial restructuring in the 1960s and 1970s impacted greatly all the towns, including Barakaldo, located on the left Bank of the Nervión River in Greater Bilbao with the eventual decline of the iron industry upon which the economy of these municipalities was totally based. This industrial restructuring left an economic situation and urban environment with high levels of unemployment, in excess of 32% in some municipalities, a decline in investment and a legacy of contaminated industrial land.

Figure 3.3.2.2a: Businesses in Barakaldo by Sector (2002 to 2007)



	Industry and Energy	Construction	Commerce, motor vehicle repairing	Hotel and catering	Transport, storage and communications	Financial and business services	Other services activities
2002	4.9	15.4	29.5	12.3	10.6	13.6	13.7
2004	4.5	16.2	28.8	11.4	10.2	14.8	14.1
2006	3.9	18.1	28.3	10	9.7	16.7	13.3
2007	3.8	18.4	27.8	9.9	9.4	17.3	13.4

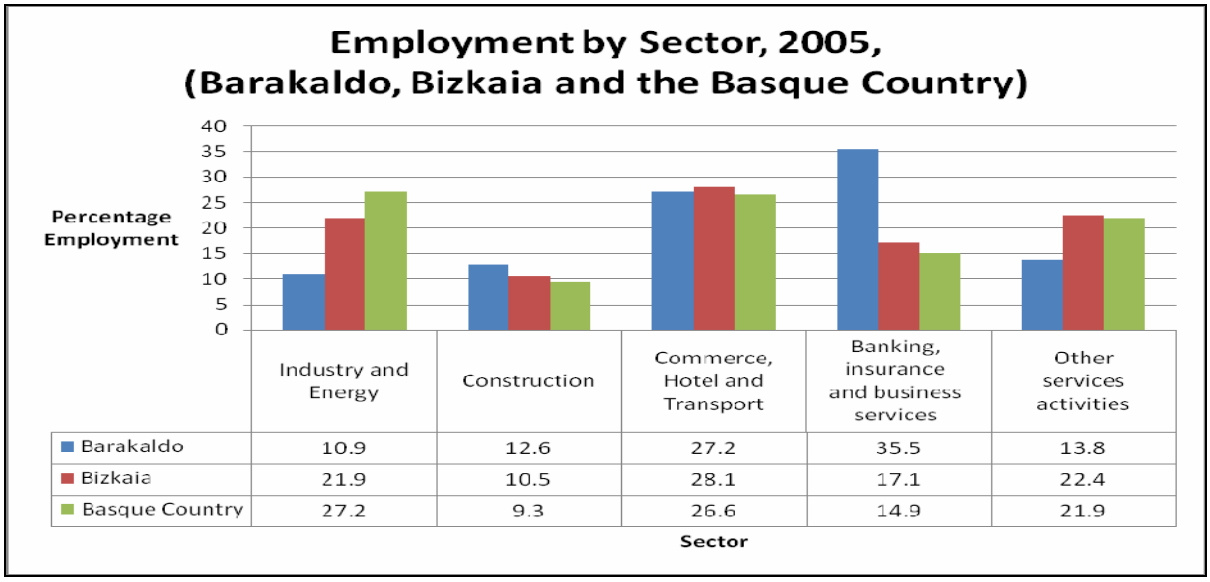
In the last ten years Barakaldo has seen large-scale improvements in terms of urban planning, environment and society. The city has undergone a remarkable transformation, towards a new economic and productive model, a new urban environment and a better way of living for its inhabitants. This new economic resurgence has been driven through the location of new industries, supported by the development of the Port and the Airport, and economic activities that are compatible with a residential environment and located on former industrial land. In particular this has included the choice of Barakaldo as the site of the Bilbao Exhibition Centre and the opening of large shopping centres (Megapark) and other amenities, and the subsequent transformation of the areas around them.

In delivering this economic and urban regeneration public institutions have contributed to the development, commitment and promotion of economic activity; including the development of new sectors and service industries; employment; and the adoption of new technologies by companies in non-iron based sectors to support the modernisation of production processes in order to adapt them to the new market economy and maintain high optimum levels of competitiveness.

As a result of this transformation Barakaldo has seen a growth in new businesses of 5.7% between 2000 and 2005 and an increase in employment of 11.1% in the same period with significant growth in the construction (34%) and financial and business services (31%) sector companies.

In Barakaldo the biggest proportional growth in business according to sectors (Figure 3.3.2.2a) appears in financial and business services (13.6% out of the total number of businesses in the city in 2002; 17.3% in 2007). Alongside this construction has also increased. In comparison, 4 sectors have suffered a slight reduction: Industry and Energy; Commerce and motor vehicle Repairing; Transport, Storage and Communications; and Hotel and Catering.

Figure 3.3.2.2b: Employment by Sector, 2005



Barakaldo cannot be considered an industrial city, although it is still regarded as so locally. Industry only generates 1 out of 10 jobs in Barakaldo (figure 3.3.2.2b) with 10.9% of total employment generated by Industry and Energy, while Commerce, Hotel and Transport supporting 27.2% and Banking, insurance and business services 35.5%. These two sectors and other services accounting for 3 out of 4 jobs in Barakaldo.

In this new environment Barakaldo is one of the most important business, services and industrial location in the Basque Country. It is an area with an important industrial tradition but with new facilities that will attract service sector based companies. Its location near the port, the airport, the A8 highway and the city of Bilbao provides a strategic location for the development of logistics industry and significant potential for the development of high-growth sectors including energy.

3.3.3 The role of Universities and Knowledge Transfer Partners in Barakaldo.

While Barakaldo has undergone significant economic transformation and economic regeneration to date this has not included the development of knowledge based economy activities and this is the core problem for Barakaldo as outlined in URBACT II RUnUP declaration of interest. In particular Barakaldo has only a small campus location of the University of the Basque Country with no direct engagement with the technology transfer and spin-out activities of the university.

The 2007-2010 plan for the University system in the Basque Country[38] identifies clear challenges and objectives regarding relationships between Basque Universities and business. In particular the number of active researchers working in business related areas or in delivering projects for business has remained at the same level between the period 2004 to 2007. In response the 2007-2010 plan recognises that economic growth needs “fluent” relationships between university and enterprise. In

[38] University Plan 2007-2010 For the University Basque System, Department of Education, Universities and Research, Basque Government

this context the plan articulates the following actions to integrate the work of Basque Universities into their social, natural, economic and cultural environment:

- The development of programmes of collaboration with companies.
- The improvement of the communication and information between universities and the society.
- The promotion of the entrepreneurship and setting up projects that promote the entrepreneurial spirit and support new business ideas.
- The development of innovative technologies, use of new technologies by the companies and offer of solutions for the social demands in general, and for the enterprises' in particular.
- The strengthening and consolidation of permanent adult education programmes.

In line with principles of the RUnUP network the plan takes as its point of reference the "innovation spiral" driven by the triple-helix integration of university, enterprise and government.

The Basque Country has four universities divided into 28 faculties or schools, 3 higher technical schools and 11 university schools, in which over 4,000 professors provide instruction for the more than 91,000 students.

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.

Alongside its delivery of educational programmes the University of the Basque Country operates support activities to facilitate the creation of spin-out companies through the exploitation of the research results in particular offering space for company development at all of its 3 campuses, economic resources, expert consultancy, support for company start-up and training of entrepreneurs. The promotion of entrepreneurial activity is supported by workshops, conferences, seminars and competitions.

In support of knowledge transfer the University's Office for the Transfer of the Research Results (OTRI) is responsible for the management of contracts and patents and relationships between the university and industry in particular the promotion and generation of new ideas and the management and development of industrial projects.

In addition to this the University of the Basque Country is a founding partner in the University Company Research Foundation (Jakintza Lanezko Ikerkuntza) EUSKOIKER[39], which was established in 1979 with the three Regional Governments and the three Chambers of Commerce in the Basque Country. Directly aimed at fostering university-business relationships the foundation is a member of the Basque Technology Network and is a founder member of the Spanish Network of University-Company Foundations. At an operational level the foundation provides a "meeting point" and serves as a link to promote mutual awareness of the different collaboration options between companies/institutions and the University of the Basque Country facilitating the establishment of relationships with researchers and university professors.

In addition to the public university, the University of Deusto has two campuses, in Bilbao and in San Sebastián. The Basque Country hosts also the University of Mondragón. This institution, created under the auspices of the industrial group of the same name, is the first "cooperative university" in Europe.

Operating alongside the Universities, the Basque Country has pioneered the setting up of Technology Parks in Spain. Currently four parks form part of an integrated Network combining the location of high-profile companies, Universities, and Research and Technology Transfer Centres with environmentally high standard, sustainable environment.

The philosophy of the Basque Country Technology Park Network[40] is to coordinate the four Parks, with a strategy of orientation towards complementary technological areas, and with a telecommunications Intranet setup that links all of the companies operating in the Parks.

The Basque Country has an innovation policy that sets the foundations for the integration of the Science-Technology-Company System, which is market demand oriented. The Technology Parks have prompted a substantial increase in R+D in the Basque Country that has placed the autonomous region on the path to convergence with the European Union in that field. As a result, the R+D activities carried out by the companies, technology centres, and universities located in the Parks account for 30 percent of the autonomous region's total expenditure in R+D and 50 percent of company expenditure in R+D.

3.3.4 Moving Forward

The creation of new knowledge based industrial sectors in Barakaldo can only move forward through relationships with key regional Partners. The ULSG for Barakaldo will include the following organisations.

[39] Further Information: EUSKOIKER
[40] Further Information: Basque Country Technology Park Network

- Municipality of Barakaldo
- Inguralde – Municipal Autonomous Organism for Local Development
- University of the Basque Country:
    - School of Advanced Industrial Engineering (Bilbao)
    - School of Technical Engineering of Mining and Public Works (Barakaldo)
    - Multidisciplinary University Group (Bilbao)
- Chamber of Commerce and Industry of Bilbao
- Private companies located in Barakaldo:
    - Leroy Merlin
    - Xupera

The opportunities and challenges identified in the final section of the baseline, section 3.3.5, link well into the ERDF Competitiveness Programme. On 28 November 2007, the European Commission approved an operational programme for the Autonomous Community of Basque Country covering the period 2007-2013. This operational programme comes under the "Regional competitiveness and employment" objective and has a total budget of around €500 million. The funding provided by the European Community via the European Regional Development Fund (ERDF) amounts to some €241 million, which represents about 0.7% of the EU's total investment in Spain under the cohesion policy 2007-2013.

The development strategy is based on the accumulation of assets which are part of the region's strengths, particularly its science and technology network and its substantial investment outlay on research and development (R&D). The programme has particularly strong synergies with the Run-UP network with substantial support for the knowledge economy, innovation and business development (more than 77% of resources).

In particular the challenges and opportunities for Barakaldo articulated within its URBACT Local Action Plan can be delivered through actions related to Priority 1: Knowledge economy, innovation and business development, where emphasis will be placed on boosting the potential of the Basque system of innovation, support for businesses' investment in R&D&I and the spread of new information and communication technologies. The work of the RUnUP network particularly aligns to the proposed actions to stimulate research and innovation, technology transfer, cooperation between enterprises and their diversification and the development of entrepreneurship.

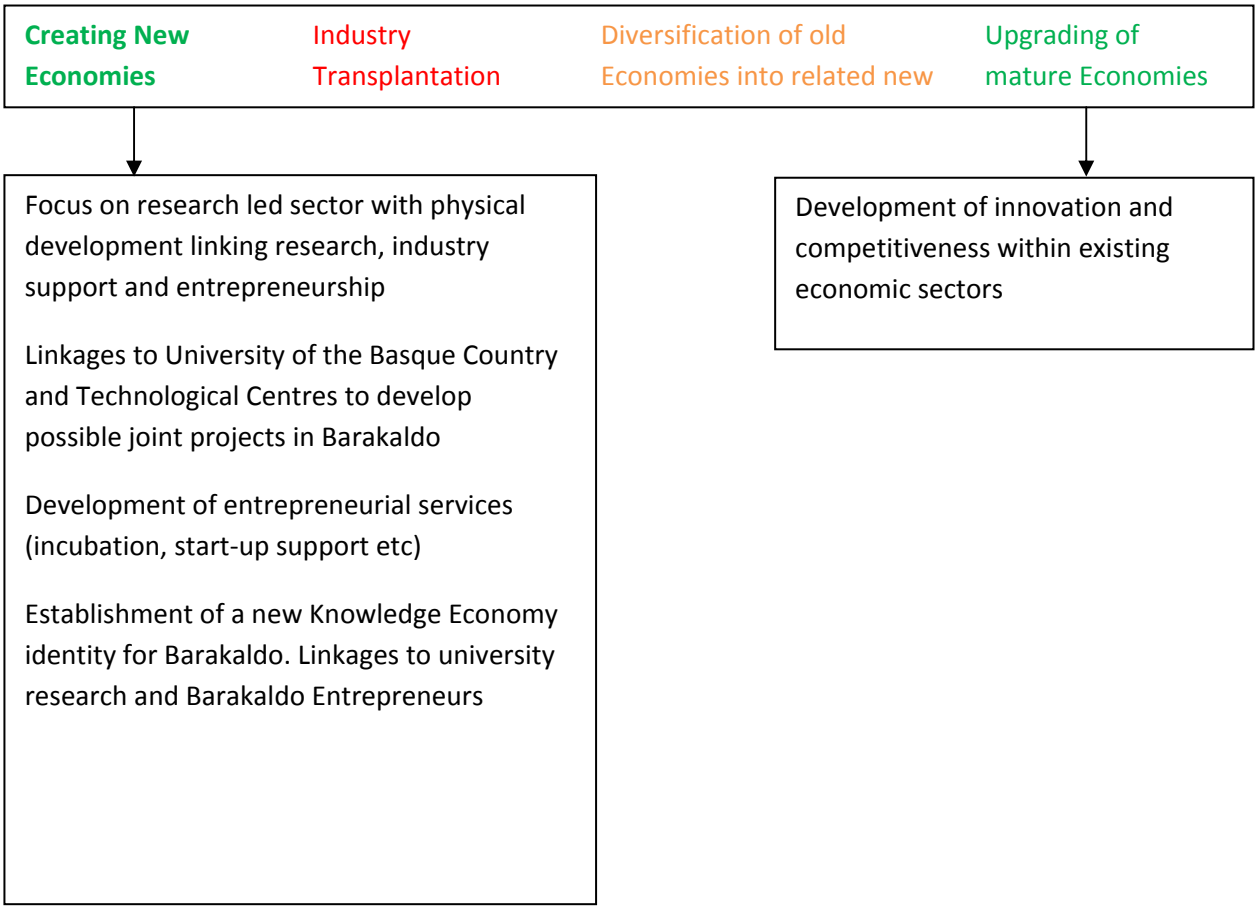
3.3.5 Key Challenges for Barakaldo

The RUnUP thematic network seeks to maximise the economic, innovation and entrepreneurship potential of medium-sized urban poles. The challenge facing Barakaldo within this context is that it has only one campus of the university of the Basque Country located within the municipality and its economic structure has changed significantly in particular around the service sector and to date partnership working in projects between the municipality and universities has been limited so this will represent a key challenge in driving forward the Local Action Plan for the RUnUP network.

As has been outlined in state of the art review there is no one-size-fits-all approach to the role of universities in economic development. In the case of Barakaldo due to the lack of a 'Barakaldo University' it is the role of the municipality through its economic development organisation Inguralde to identify how new knowledge based economic sectors can be developed within the economy while supporting the developing of its existing business service sectors and the role of the universities and technology centres of the Basque country in this context.

In delivering innovation led growth for Barakaldo the relationship between Inguralde and the universities and technology centres of the Basque Country needs to be defined. The state of the art report has identified how European policy has taken the University as its point of reference for the knowledge economy, at a local level in Barakaldo it is the municipality and its focus on creating a new knowledge driven sector of the economy that should be the point of reference (figure 3.3.5b) rather than the traditional approach of universities in technology transfer and spin-out activity. In this context the municipality is the only actor with a fully exclusive focus on the needs of Barakaldo and the motivation to mobilise universities and technology centres to support its economic development.

Figure 3.3.5a University / Knowledge Based Partners role in innovation-led growth for Barakaldo

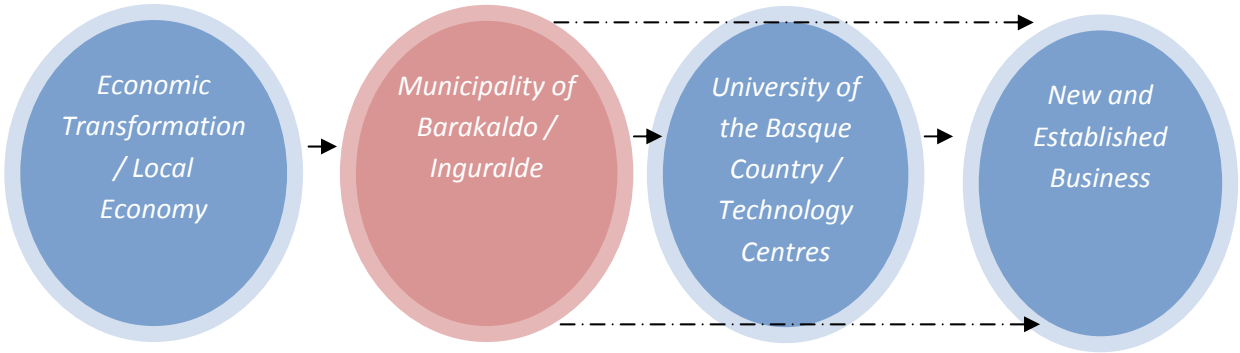


Within the RUnUP Thematic network Barakaldo needs to address the following challenges to take full advantage of the knowledge economy:

- **Fully articulate the state of transformation in its local economy**. Barakaldo has undergone a significant physical and economic regeneration moving from heavy industry into a service sector driven economy. In seeking to develop new knowledge driven areas of the economy consideration needs to be given to the exact sector in which the municipality would like to develop further. This must be led by the municipality through Inguralde in partnership with local actors as highlighted in figure 3.3.5a.

- **Fully understand how its knowledge based partners deliver activity in support of new economic activity creation.** In line with a new role in supporting the development of new economic activities in the knowledge economy Inguralde acting with the support of the municipality needs to establish a deeper, targeted relationship with the Universities and Technology Centres in its region. In particular identifying those activities and expertise that align most appropriately to their new economic objectives. This will maximise the benefits of relationships as clear opportunities for joint working emerge.

Figure 3.3.5b Economic Transformation relationships in Barakaldo



- **Deliver new knowledge-based collaboration activity in line with the Creation of new economic sectors.** Possible joint projects could focus on linking research into the generation of spin-out companies and entrepreneurial activity and linkages with local industry. The RUnUP network will enable new opportunities for collaborative working to be explored to address specific problems (e.g. creation of new models of integrated education, knowledge transfer and entrepreneurship models) or the creation of a new identity linked to the marketing of Barakaldo and the offer of its university partners.

3.4 CAMPOBASSO, ITALY

3.4.1 Introduction

Campobasso with a population of 53,321 people is the capital of the central Italian region of Molise (see figure 3.4.1.1) bordered by the Sannio and Matese mountains and the Adriatic Sea.

The economy of the municipality and province of Campobasso and region of Molise is based on Agriculture and Trade. The business population is mainly composed of Small and Medium-Sized Enterprises and this along with a high rate of unemployment was seen as the key problematic in the original URBACT II RUnUP declaration of interest

The integration of services for enterprises and entrepreneurs linked to knowledge and technology transfer in particular connections with universities and research centres was seen as the key challenge in the original URBACT II RUnUP declaration of interest. The Municipality of Campobasso is home to 2 universities, the public University of Molise and the private Catholic University of the Sacred Heart operating alongside other knowledge-base partners including the Chamber of Commerce and Innovation Point located at the Cittadella dell' Economia in Campobasso.

Figure 3.4.1.1: The Region of Molise

The RUnUP thematic network seeks to maximise the economic, innovation and entrepreneurship potential of medium-sized urban poles. The challenge facing Campobasso within this context is that its existing industry structure is dominated by the agriculture sector. The Scientific & Technological Park of Molise (Molise Innovazione) is supporting businesses operating in this sector but is limited in its current level of engagement and support for businesses. Its operations and approach to working with business need to be further developed and enhanced.

In addition and significantly within the URBACT II network RUnUP the Municipality of Campobasso needs to articulate a strategy for the development of new economic sectors around sustainable industries and bio-medical/biotech. As Campobasso has 2 universities and a technological park located in the city it is the role of these organisations supported through RUnUP and the development of their local action plan to enhance their knowledge of business development in a university context and to enhance their capacity and capability around entrepreneurship and incubation development.

3.4.2 Campobasso Profile

3.4.2.1 Municipality of Campobasso

The Italian Republic consists of Comuni (municipalities), Province (provinces) Città Metropolitane (metropolitan cities), Regioni (regions) and the National State. Municipalities, provinces, metropolitan cities and regions are autonomous bodies having their own statutes, powers and functions in accordance with the principles laid down in the Constitution.

The development of Campobasso and provision of public services is the responsibility of the Province of Campobasso and the Municipality of Campobasso who is the partner in the URBACT II network RUnUP. The province is an autonomous body working between the municipality (comune) and regional (regioni) levels and is responsible for:

- environmental protection and exploitation
- cultural heritage promotion
- road system, road works, mobility and transport
- nature resources, parks, water protection
- hunting fishing
- waste disposal organization at provincial level
- social services assigned by state and region laws
- tasks regarding secondary education, professional training and school buildings
- data collecting and processing to support municipalities, especially the smaller ones, with new technologies
- tourism

The Province of Campobasso encourages and invests in partnerships and projects with other Italian and international organisations within the economic system, with a view to improving the quality of its own services and to exploiting the economic resources of the Province. In particular it fosters co-operation among smaller municipalities in order to improve the management of services, territorial marketing initiatives, entrepreneurial development and services to enterprise.

Figure 3.4.2.1 Images of Campobasso

The development of the City of Campobasso is the responsibility of the Municipality. The governing body of the local authority is the council, the executive and the President who are elected for 5-years. At municipal level the Mayor is the head of the town. The municipality has primary responsibility for the provision of social services and town planning.

Specifically related to the work of the URBACT II network RUnUP the municipality is involved in the development and management of the "Cittadella dell'Economia" an integrated business support centre providing training and innovation support and access to incubation facilities and a dedicated exhibition centre. A joint development initiative, through the integration of business support and economic development services the centre works to support:

- the competitiveness of businesses
- the enhancement of human capital
- the promotion of the production system
- the development of information society

The centre is a catalyst for project development and a neutral-environment in which economic development partners can share, integrate and design activities and services for the development of the municipality, province and the region. Supporting improvement in the competitiveness of business the centre offers support in technological innovation, International trade, market development and access to finance.

Located at the Cittadella dell'Economia is the Innovation Point service operated by Chamber of Commerce. It supports the development of knowledge-based companies; technology transfer to the companies; supplying services to promote an entrepreneurial culture.

Innovation Point has been created as a technology transfer centre which fosters links between businesses and the academic community to facilitate the transfer of technology. Innovation Point is also a reference point for new and existing enterprises and for those with innovative ideas. It accompanies the enterprises of the Molise Region with the aim of encouraging innovation and competitiveness which will in turn promote an interactive network between businesses and researchers.

Innovation Point supports and advises companies by:

- Resolving specific and individual problems through visits to the companies and through technological reports;
- Activating consulting expertise
- Guiding inventors in the patent process and trademark coverage throughout the PatLib service;
- Updating the financial opportunities available in the innovation sector and seeking for project partners with the Euro Info Centre office of Unioncamere Molise;
- Managing and sharing innovative knowledge

Innovation Point aims to build an ideal environment for the technology transfer and it works closely with private and public organizations, such as Area Science Park, Molise University, "Cattolica of Sacro Cuore" University, "Moliseinnovazione" Science and Technological park, "Sviluppo Italia

Molise", ENEA, "Consorzio di Sviluppo Industriale" (Industrial Development Association) and other well-known national and international associations.

3.4.2.2 Campobasso Economic Structure

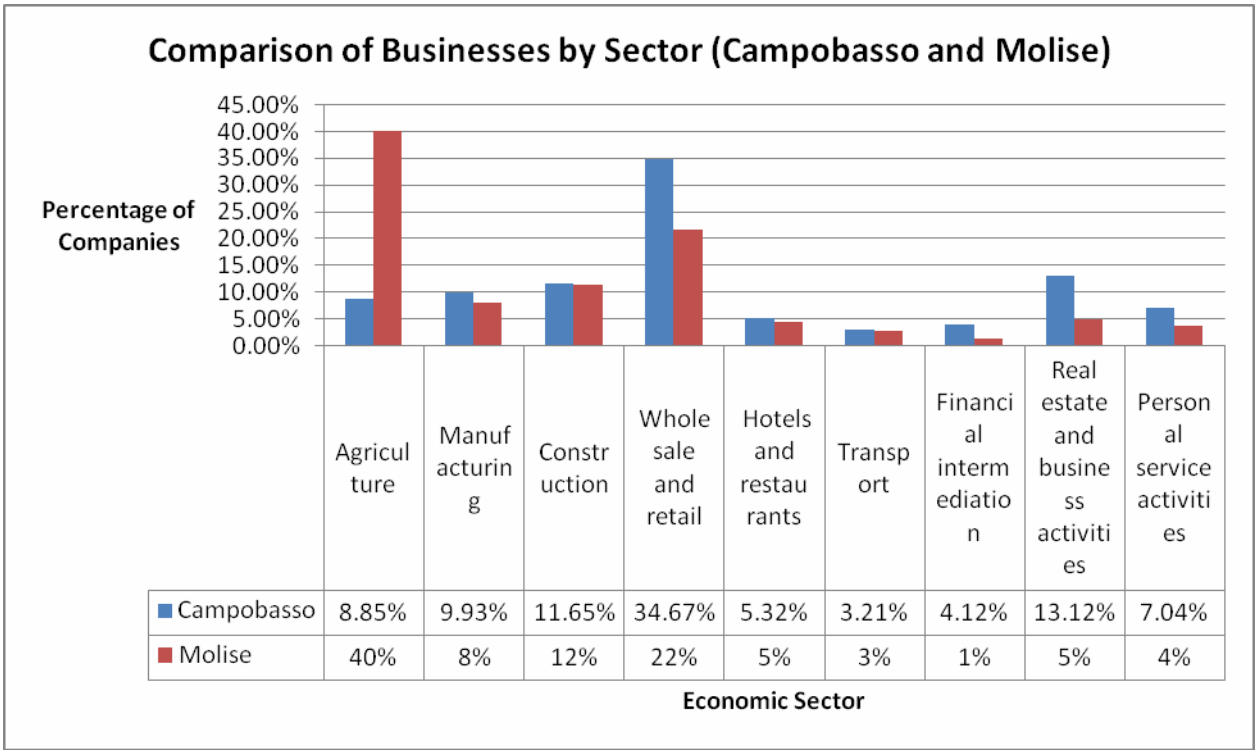
As stated in the introduction to the profile Campobasso the economy of the municipality, province and region is based on Agriculture and Trade. The business population is mainly composed of Small and Medium-Sized Enterprises and this along with a high rate of unemployment was seen as the key problematic in the original URBACT II RUnUP declaration of interest.

The most important sectors for the economic development of Molise are agriculture which accounts for 34% of all businesses (2007 data), the wholesale and retail trade sector (22%), construction (12%) and manufacturing (8.6%).

In Molise, the Agro-food sector provides employment to 14,000 people, mainly concentrated on the primary sector (9,600, 8% of the total of the region). There are 33,973 agro-enterprises occupying a total surface area of 296.177 ha and a SAU of 214.941 ha (more than 400 enterprises have no SAU). Between 1990 and 2000 (the last period between the last two census periods) the number of enterprises decreased by 18%. 32.1% of the enterprises occupy an area of less than a hectare, 95.5% of the enterprises are managed directly from the owner and in 87.2% of enterprises on family members are employed.

Despite the small size of the enterprises located in Molise the agro food sector is very important for the economy of the Region. It contributes 9% to the production of the added value (in Italy the average contribution is 5.1%). Recent trends indicate that the agro food industry has an increasingly important role despite the fact the first phases of the supply-chain are decreasing in their importance. The added value to the basic prices of agricultural products increased during the periods 1995-1999, and decreased (-13.2%) in the first half of the last decade.

Figure 3.4.2.2, Employment in Campobasso and Molise by Sector



Working productivity (ratio between added value and working unit) is growing both in agriculture (above the National average) and in the manufacturing sector. Agricultural production earned 349.2 M€ (0.8% national total). Cereal production represents 43.7 % of the total, while 38.6 % can be assigned to the sector for meat production (4/5 of which is poultry production).

Overall the number of companies registered in Molise has seen a reduction of 154 in 2007 with new business registrations at 5.7% well below the national average of 7.2% with a significant reduction in the number of businesses involved in Agriculture.

Companies operating in the Molise region are generally small and medium enterprises, mainly sole proprietors (74%), with registered companies accounting for 12% of the total business population. Overall the economic position of the Molise region is impacted by low competitiveness, high production costs and high taxes that impact significantly on businesses trading in national and international marketplaces.

Access to finance is particularly difficult with high-interest rates making business investment more expensive in a culture where Italian entrepreneurs are loathe to invest their own capital preferring to access public seed capital and funding for the initial and start-up phases of a company.

3.4.3 The role of Universities and Knowledge Transfer Partners in Campobasso.

The integration of services for enterprises and entrepreneurs linked to knowledge and technology transfer in particular connections with universities and research centres was seen as the key challenge in the original URBACT II RUnUP declaration of interest. The municipality of Campobasso is home to 2 universities, the public University of Molise and the private Catholic University of the

Sacred Heart operating alongside other knowledge-base partners including the Chamber of Commerce and Innovation Point located at the Cittadella dell' Economia. The key challenge for the municipality of Campobasso 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.

In this context the Municipality has included the public University of Molise, the private Catholic University of the Sacred Heart and the Scientific and Technological Park of Molise as key partners in its URBACT local Support Group.

The University of Molise, a publicly funded University, was founded in 1982 and currently has 10,000 students across eight faculties; Economics, Agriculture, Law, Health Sciences, Natural Sciences, Human and Social Sciences, Engineering, Medicine and Surgery and a specialist centre for teacher training with the faculties of Economics, Law and Human and Social Sciences being the 3 largest faculties based on student numbers.

The University is located in Campobasso and over three other sites, Termoli (course of Tourism, faculty of Engineering), Isernia (Course of Political Science, Courses of Literature and Heritage), and Pesche (Faculty of Natural Sciences).

Linked to the local economy of Campobasso and the modernisation of its existing sectors, the Faculty of Agriculture delivers first degrees in Agricultural Engineering, Agricultural Sciences, Animal Production Science, Food Science, Forest Sciences and specialist degrees in Agricultural Sciences, Agroalimentary Engineering, Food Science, and Forest Sciences.

Linked to the development of potential new sectors the Faculty of Natural Sciences delivers first level degrees in Biology, Environmental Sciences, Informatics, Optics and Optometry and a specialist degree in Biology. The University Faculty of Medicine and Surgery delivers first level degrees in Medicine and surgery, Dietetics, Nursing Sciences, Obstetrics Sciences, Prevention in Work Places and Psychiatric Rehab Techniques.

Alongside these faculties the university has specialists working in the following departments:

- Department of Science and Technology for the Environment and Territory
- Department of Animal Plant and Environmental Sciences
- Department of Agro-Alimentary, Environmental and Microbiological Sciences and Technologies
- Department of Health Sciences

The work of the University with industry is at an early stage of development but particular importance is being placed on the work of the Industrial Liaison Office (ILO) of the University of Molise which has a particular remit to:

- Initiate and foster systematic relations with the economic and productive actors, in particular SMEs, to disseminate research results of the universities;

- Promote appropriate forms of cooperation with the business sector to deal with issues related to the technology transfer and support of spin-offs.

The ILO at University of Molise was established, together with ILOs from other Italian Universities (Cassino, Viterbo and Salerno) with the wide objectives of:

- Protect and enhance intellectual property and patenting;
- Create a culture base on innovation, disseminating knowledge and innovative tools;
- spread the culture of entrepreneurship, strengthening the interaction between academia and business;
- Disseminate the results of research and exploit resources at the University of Molise;
- create clusters based on technologies and know-how of university, from academic spin-offs;
- Disseminate scientific studies and new technologies interacting with the various stakeholders in the region;
- Promote networking with universities and research institutes, business entities, institutions and local authorities;
- Transfer techniques and share best practices and know-how;
- Encourage and support the creation of spin-offs from research.

Its current actions have been limited to a pilot project that involved 5 Professors and researchers with 4 PhD students from University of Molise and 4 external collaborators. The main aim of the University of Molise within the project is to organize and implement a research database, to make it available for queries on the internet and to share this experience with the 3 partner Universities as best practice. At the moment it is available to search for key words on researcher, research project and research products. The database is being implemented with new information and new search criteria.

Supporting entrepreneurial development the University of Molise has managed a Start cup competition from 2007 with the aim of promoting research and innovation on the regional territory. The competition aims to foster the emergence of innovative enterprises giving them the opportunity to the winners to come in touch with ideas and people who are already involved in business and finance, and to be assisted by a team of experts during the start up of the business.

In support of spin-off companies the University of Molise has an internal regulation which states the rules for start up of a new spin off company and the relationship with the university. University of Molise cannot have a participation of more than 30% of the capital. Professors, PhD students, young researchers and also administrative which have been in relations with the University of Molise during the last three years can apply for being a spin off company. So far three companies have been founded as spin off companies of the University.

Operating alongside the University of Molise in Campobasso is the Scientific & Technological Park of Molise. Molise Innovazione is a public-private capital company devoted to the creation of a network of contacts within universities, research centres, public bodies and entrepreneurial associations. It was founded in 1994 and operational from 1999 and has 40 partner organisations from companies, institutes, laboratories for research and advanced services of local and regional governments to private enterprises. The presence in the consortium of companies with different know-how and core business, supply to the Scientific Park a wide area to draw on skilled capacity for the development of research projects in a wide range of sector.

Molise innovazione is a support organisation for companies in the food and agriculture sector that need technical support for the scientific design and construction of industrial research projects or even simple advice. Alongside the agro-food department Molise innovazione supports companies in vocational training, project management, internationalisation, the agro-food department of Molise innovazione is made up of three innovation centres working on:

Cereals*:* The laboratory is equipped to support product and process innovation and for technology transfer. The centre is able to perform, on demand, analysis on raw material, intermediate and end products, it can check and set up customised solution to satisfy specific needs in terms of cereals applied research. The Centre is well equipped with machinery and equipment specific for analysis and research in milling, pasta, and bread products sectors.

Milk: The Centre operates in the service of several dairy companies offering exclusive services for the territory such as analysis and setting up of innovative technologies, technological customised kit to satisfy specific needs. One of the main targets of the Centre is to strengthen existing collaborations with dairy industries which produce buffalo mozzarella, and to develop new ones.

Meat: The main target of this Centre is to develop a chain protocol for the production of typical products identifying a genetic breed, optimal rearing conditions, methods for product transformation and seasoning to increase the value of the products.

In addition the Scientific Park operates in the sector of environment and renewable energies in collaboration with the University of Molise around sustainable development, environment protection, food safety, life quality and energy production from renewable sources.

The private Catholic University of the Sacred Heart, John Paul II is the 2nd university located in Campobasso and was inaugurated in November 2002. The Research laboratories of the university undertake scientific research, training and dissemination activities in the field of cardiovascular disease and tumours. The epidemiological and basic research main topic is the so called common soil for both cardiovascular disease and tumours, considered as an expression of common mechanisms of development, from the cellular growth to the mediators of chronic inflammatory reactions, from the risk factors (smoking, obesity etc) to the variability of the therapeutic response (antithrombotic drugs resistance or antitumoral therapy).

Research activity is performed within international projects, some of them funded by the European Union, but also considering the expectations of the regional productive sector, with particular regard to the agro alimentary and winery sector. Some studies consider the beneficial effects of a correct diet for human health and the development of the typical products of the Mediterranean diet peculiar for the presence of substances active for prevention of cardiovascular disease and tumours.

The research laboratories of the university contribute both to the high specialization and qualification of the Centre within the national health system and to the Centre's privileged role in promoting health and in prevention of diseases, by an original approach within Italy.

3.4.4 Moving Forward

The industrial transformation of Campobasso linked to the knowledge Economy can only move forward through relationships with key regional Partners. The ULSG for Campobasso[41] will include the following organisations.

- Municipality of Campobasso
- Province of Campobasso
- University of Molise
- Science and Technology Park of Molise (Molise Innovazione)
- Catholic University of the Sacred Heart
- Chamber of Commerce

The opportunities and challenges identified in the final section of the baseline study, section 3.4.5, link well into the ERDF Competitiveness Programme which is aligned to the strategic goals of Lisbon. In response to the business environment of the region of Molise and changes in the world economy the structural funds programme provides particular support for industrial research and innovation processes in order to promote sustainable competitiveness and renewal of the regional economic system.

Innovation therefore has a fundamental role in supporting the competitiveness of the entire economic system. Productive regional support must be developed through initiatives that support the application of research and innovation. Through intense awareness territorial will increase awareness on the part of SMEs in the central role of research and innovation as a competitive advantage to accompany the paths of renewal and ensure the proper functioning of a unitary system of governance.

In particular the challenges and opportunities for Campobasso articulated into a Local Action Plan can be delivered through actions related to axis 1 of the structural funds programme focussed on "R & D, innovation and entrepreneurship" directed at:

[41] Information: The ULSG for Campobasso met in shadow form during the RUnUP network development phase on 24th June 2008.

- Strengthening the capacity of regional RTD and innovation by supporting competence centres operating on specific technologies,
- By promoting cooperation networks, through specific investments and through a better access to credit, in order to promote the creation of new firms,
- Supporting the aggregation between SMEs, particularly with regard to the development of systems, sectors, sectors and branches high specialisation.

In addition the programme offers support for the development of businesses in industrial research, development and industrialisation of experimental results; Investment aid for innovation; support for the use of clean technologies in SMEs; incentives for the start-up of innovative and support processes of spin-offs; the internationalization of enterprises; the society for SMEs and a guarantee fund.

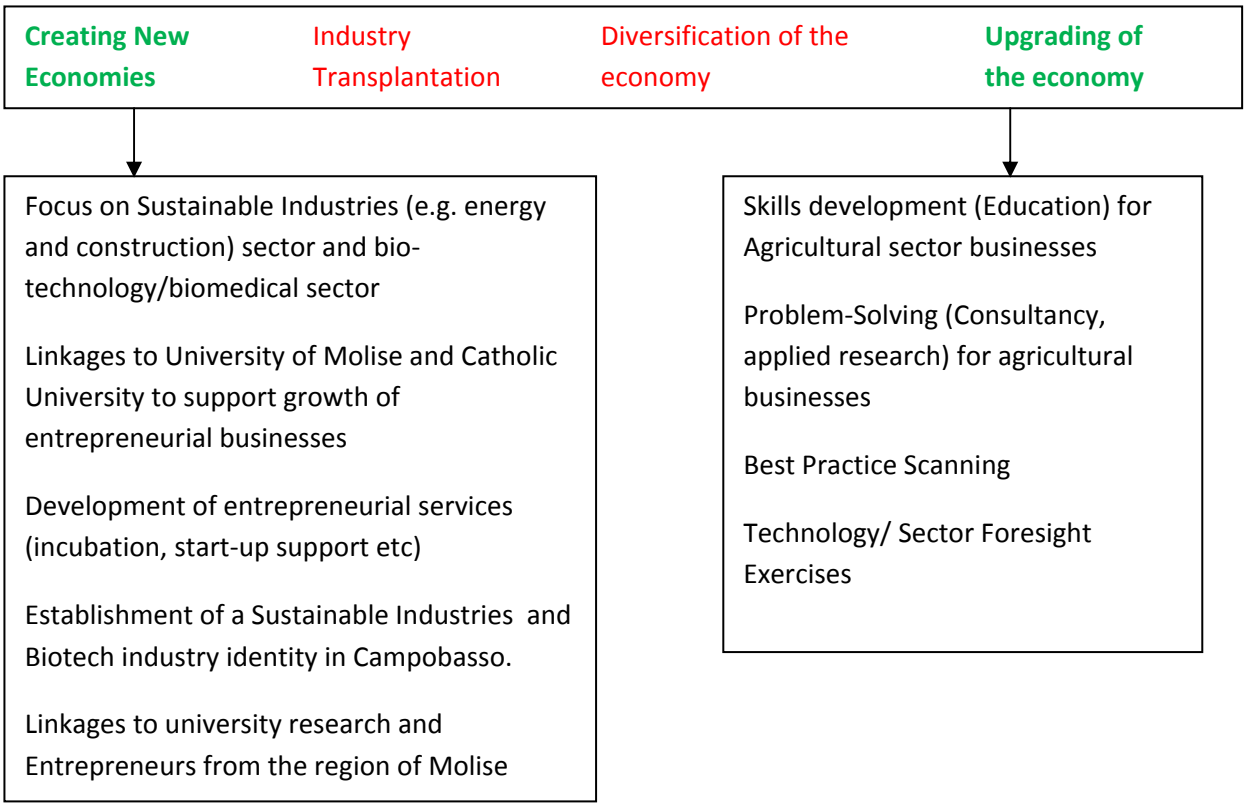
3.4.5 Key Challenges for Campobasso

The RUnUP thematic network seeks to maximise the economic, innovation and entrepreneurship potential of medium-sized urban poles. The challenge facing Campobasso within this context is that its existing economic structure is dominated by agriculture. The Scientific & Technological Park of Molise (Molise innovazione) is supporting businesses operating in this sector but is limited in its current level of engagement and support for businesses. Its operations and approach to working with business need to be further developed and enhanced. Significant importance is being placed on the role of the Science and Technological Park of Molise. While it has significant expertise in the agricultural sector it is recognised that its business engagement activities need to be enhanced and capacity developed further. It does not represent a classic science or technology park development that supports and develops knowledge based businesses, fostering entrepreneurship and incubating new innovative companies[42].

The creation of new industries within the economy need to be supported through the development of dedicated programmes (not just education) for entrepreneurship with the University of Molise and Catholic University. Fundamental to this is the creation of an entrepreneurial culture, currently only those companies achieving success in the start-up cup receive significant support with access to the incubation facilities at the Citadella dell' economia, which at the time of the expert visit was not fully occupied despite only having 8 units. The work of the Innovation Point is not sufficiently developed to further support entrepreneurial growth in the municipality and the province. The development of companies of this nature needs to be significantly extended.

[42] Source: International Association of Science Parks

Figure 3.4.5a University / Knowledge Based Partners role in innovation-led growth for Campobasso



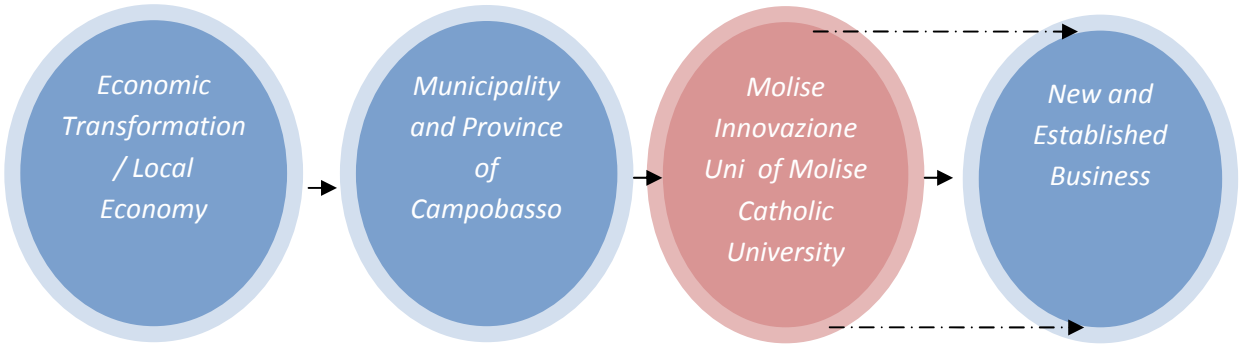
Consideration and best practice exchange of approaches with the social enterprise incubator "Incontra" located in Campobasso[43] should be evaluated as this is a model of best practice that can be adapted to high-growth research led start-ups and innovative businesses linked to the Citadella dell' economia and the University of Molise and Catholic University.

Within the RUnUP Thematic network the Municipality of Campobasso and its local partners need to address the following challenges to take full advantage of the knowledge economy:

- **Fully articulate the state of transformation in the Campobasso local economy**. There is a clear requirement to support the modernisation of the agricultural sector and this can be delivered by Molise Innovazione with enhancement of activity around business engagement and improvements in capacity. The development of the Bio-tech / bio-medical sector and sustainable industries sector has not been fully articulated. In particular the research capability of the universities in these fields has not being fully assessed and the development potential for spin-off and knowledge based businesses considered. The Municipality has a key role in articulating a knowledge-Based Development Strategy for Campobasso linked to the transformation of its economy. This potential and appropriate action by the Municipality and its RUnUP partners is highlighted in figure 3.4.5a.

[43] Information: Incontra Social Enterprise Incubator

Figure 3.4.5b Economic Transformation relationships in Campobasso



- **Enhance delivery capacity and capability within Knowledge Based Partners.** The Municipality of Campobasso currently has no direct remit in supporting local companies. To support new industry development and industrial transformation the knowledge base (University of Molise, Catholic University and Molise Innovazione) need to act as the primary actors and facilitators in linking their resources with industry around the activities identified in figure 3.4.5a. This requires them to design, develop and implement approaches (based on international best practice) that fit the need and demand of the Municipality and Province of Campobasso and Region of Molise

- **Develop the Business Development Knowledge of Knowledge Based Partners.** The state of the art identified the limitations of the traditional model of university engagement with the economy through technology transfer and establishment of Spin-Off companies. As the key actors (see figure 3.4.5b) in taking forward the strategy for knowledge based industrial transformation strategy into implementation the universities and the technological park need to encourage and develop business development skills and capabilities within their university staff (e.g. Industrial Liaison Office) to support longer term strategy implementation.

3.5 DUNKERQUE, FRANCE

3.5.1 Introduction

The Greater Dunkerque Council consists of 18 towns, located in the region of Nord Pas de Calais that stretch from the Belgian border to the Calais region with 210 000 inhabitants. The Greater Dunkerque district is an industrial and seaport conurbation, marked by the establishment of an internationally-important iron and steel centre in the 1960s. During that period, the population doubled, mainly as a result of immigration. In the late 1980s, it went through a major economic crisis that resulted in a sharp increase in unemployment and that weakened the economic fabric with resultant negative effects on social and urban life.

The resulting urban, social and economic challenges were clearly substantial. In 1989, a new integrated and comprehensive strategy was adopted with contribution from national and European Union Structural Funds helping in managing a long period of economic recession. Then, after the year 2000, they facilitated diversification and development of the Dunkerque region. Since then, over 300 new businesses have started operations with investments totalling €2.7 billion. About 8,500 direct jobs have been created in the last 20 years. However unemployment is currently 10.9% 2007 with 33% of private employment in the industrial sector.

In line with the Urbact II thematic network, RUnUP, Greater Dunkerque Council, together with local and regional partners, has launched a strategy to promote "Lisbonisation" supporting SME development, increasing the level of private and public R&D expenditure and projects, promoting entrepreneurial spirit, fostering the creation of knowledge intensive jobs, upgrading scientific and technology performance of existing high education institutions and creating a collaborative platform to support innovation in enterprises and cluster based incubators.

Figure 3.5.1 Images of Dunkerque

Currently a new phase of development is being established, expanding on the Lisbon-Gothenburg strategies for relationships between Greater Dunkerque Council, Université du Littoral and businesses. This new phase of financing will stress the importance of entrepreneurship, innovation and job creation. In particular its activities are directed at the development of an entrepreneurial culture in collaboration with the others local actors (e.g. Flandre Création Association, Graines d'Affaires, the Local Committee for Project Support), enterprises and business incubators.

Economic Diversification is seen as the key problematic in relation to Dunkerque where the university contribution to the economy is seen as insufficient and the linkage of the local economy to the energy sector 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.

3.5.2 Dunkerque Profile

3.5.2.1 Greater Dunkerque Council

The Nord-Pas de Calais region covers 12,414 km^2 or 2.3% of the French surface area. The region is home to 4 million inhabitants accounting for approximately 6.5% of the national population. Main urban centres are Lille (the capital with more than 1 million inhabitants), Valenciennes, Dunkerque, Calais, Arras and Boulogne. The region has 350km of border with Belgium and 100 million inhabitants within a 300 km radius. Trade between Great Britain and continental Europe has given rise to the large seaports of Calais, Boulogne and Dunkerque.

Greater Dunkerque Council, the partner in the Urbact II RUnUP thematic network is a public body for inter-city cooperation consisting of 18 towns. Established in 1969, the council comprises 80 members, mayors and councillors, appointed for 6 years. Its activities are focused on the implementation of policies and services in relation to the environment (e.g. waste and water management, risk management, energy supply, eco-construction, green areas), land and urban planning, housing, transport and mobility, economic development, social cohesion, tourism, culture, health, information and communication technologies, training and higher education.

Greater Dunkerque Council has addressed the issue of sustainable development increasingly over the last two decades and as a result of its work was awarded the first European prize for sustainable development in 1996. Since then, sustainable development has been an integrated priority in all local strategies; e.g. Urban Strategic Plan, Development Agreements and Urban Mobility Plan. As a result, sustainable development is now incorporated into all public policies (e.g. health, transport, education, culture, water, energy, waste, economic development, city planning), promoting long-term and economic development of the council area

In line with the Urbact II thematic network, RUnUP, Greater Dunkerque Council, together with local and regional partners, has launched a strategy to promote “Lisbonisation” supporting SME development, increasing the level of private and public R&D expenditure and projects, promoting entrepreneurial spirit, fostering the creation of knowledge intensive jobs, upgrading scientific and technologic performance of existing high education institutions and creating a collaborative platform to support innovation in enterprises and cluster based incubators. In this context a series of measures are planned for implementation with the view to support the development of innovative clusters, namely:

1. Implementation of an "innovation platform" to coordinate and capitalise on existing initiatives, to share knowledge, to facilitate contacts between stakeholders and monitoring and to implement innovative activities (e.g. business incubators).
2. Implementation of support measures to identify the development requirements of SME's and SMI's in innovation, support access to finance and develop an innovation culture
3. Develop poles of excellence in the Industrial Environment

In implementing these measures the council works with a range of key stakeholders including:

- Conseil Régional
- Conseil Général
- Chamber of Commerce and Industry
- Universities and Higher Education (EPID, ISCID)
- International groups : Arcelor, Air Liquide, Ascometal, EDF, ESCOs…
- Dunkerque Technologies
- Dunkerque promotion
- Job centers (Maison de l'Emploi, Entreprendre Ensemble)
- Entrepreneurship facilities (Flandres Initiative, Flandres Création, Graines d'affaires, ruche d'entreprises…)

In conclusion it can be seen that Greater Dunkerque Council has public leadership on institutional and economic governance and partnerships (e.g. national level, regional level, departmental level, chamber of commerce, economic agency, urban development agency, port authority, jobs centres). Within this environment the Council, the University and local enterprises are at a turning point in their relationships, reinforcing the importance of developing triple helix relationships that are a key feature of the RUnUP network.

3.5.2.2 Dunkerque Economic Structure

The Nord-Pas de Calais regional economy is dynamic and diversified. It ranks first as host region for foreign companies with its 1,500 companies with foreign equity. The region ranks third in France in the number of businesses with over 500 employees. The traditional sectors of coal-mining, metal-work and textiles have undergone a major economic and social re-structuring in the last 25 years. Six clusters of national and international dimension are identified in Nord-Pas de Calais which represent the core of the regional economy: technical textiles ("Uptex"); trade industries; health, nutrition and longevity; transport; domestic materials; and halieutics and fish. All of these clusters bring together public and private research for the development of innovations.

In the Greater Dunkerque Council area industrial employment accounts for 33% compared with 16% and 22% at national and departmental level respectively. Since 1998, the number of jobs in industry has fallen by 3 points, whilst jobs in services have risen by the same amount. The same trend can be observed at national level. Services are less developed than in the rest of the department and in France 45% of jobs in the council area are in the service industry compared with 51% and 63% in the region and in France respectively. This illustrates the strong influence of industrial employment within the Dunkerque Council area and its continuing importance with regard to other areas of

France. Industry at regional level, however, is generally more affected than at a national level with a 14% decrease in employment.

With an unemployment rate of 10.9% in the second quarter of 2007 in the Dunkerque employment zone, the area has a structural gap 2 to 3 points higher than the national average, which shows no evidence of a sustainable reduction. Conversely, the unemployment rate is structurally lower by an average of 0 to 1 points compared with regional and national levels. Since the first quarter of 2006, the Dunkerque employment zone has seen a sharper drop in the unemployment rate compared with the regional average.

At a local level the business requirements in terms of workforce training are changing significantly. In particular in the logistics, transportation, materials handling industries there are increasingly complex roles that involve Information Technology, Machine operators and Process operators. In the industrial sector there are increasing constraints in terms of flexibility and concentration of production in France for complex products and processes. As a result there is a need for increasingly versatile and qualified personnel boosting recruitment at BAC Pro (professional baccalauréat) and BTS (vocational training certificate) level. In particular skills areas where companies have identified a need include hydraulics, technicians, heating mechanics and metallurgists.

The number of new businesses being created in the Dunkerque Council area remains below that at regional level. In particular the business creation rate is two points lower than at regional level for all activity sectors. This is particularly true in the services sector, which, in terms of structure, forms the basis for the majority of new business creations at national level. Significantly there is a strikingly low creation rate in industry and transportation and low levels of expansion among Large Enterprise, due to the concentration of employees in pure production activities and additionally low levels of innovation within Small and Medium-Sized Enterprises.

Overall in local economic development terms the Dunkerque Greater Council area has strengths related to its industrial culture and specifically its capacity to accept and manage associated risks and a flexible workforce and good social environment. As a result of its industrial culture the area also benefits from a high concentration of skills and expertise, supported by the strong local foothold of large enterprise and the activities of the Port Authority and boasts distinctive skills: maintenance, industrial safety and environment and chemistry which have being continually developed through themed training courses directly linked to the area's economic specialisations. In addition the council area has seen the development of effective economic development tools, namely. Dunkerque Promotion, Créimmo and the St Pol sur Mer incubator.

However the Dunkerque Council area lacks the Research and Development and business service activities that are normally associated with the location of Large Enterprises. Related to this is the risk increasingly identified by SMEs of their dependence on these Large Enterprises alongside their lack of creativity and innovation. Overall the area has seen a slight decrease in employment with an unemployment rate that remains above the national average. Key issues include the mismatch between employment opportunities and appropriately qualified staff and the appeal of the area and the property offer for the relocation of staff.

Despite these weaknesses the Dunkerque Greater Council area has major project opportunities with development potential which include the LNG terminal, agro-food industrial park, technological platform and I-Trans etc. The area provides a favourable climate in the energy and maintenance sectors in particular around nuclear energy, fuel-cell technology and bio-fuels. Alongside this are developments in structural facilities capable of improving Dunkerque's position in the logistics and transportation industry, in particular Barreau de Saint-Georges (a new spur track), with indirect benefit for the Seine - North Europe Canal.

3.5.3 The role of Universities and Knowledge Transfer Partners in Dunkerque.

The Nord-Pas de Calais region is the second largest academic environment in France, with seven universities, 23 engineering schools and more than 150,000 students. 10% of the French engineers are educated in the region. 6,500 researchers, 300 public research centres and 85 corporate R&D sites prove the high concentration of R&D resources in the region.

The Greater Dunkerque Council is one of the most important stakeholders in the development of the Université du Littoral Côte d'Opale (ULCO), which was established in 1991. Dunkerque is the main campus location of ULCO, which is a split-site multi-disciplinary university with 11,000 students on four campuses located in Boulogne-sur-Mer, Calais, Dunkerque and St. Omer. As part of the University physical and people infrastructure there are 7 research laboratories, one Institute of Research in Industrial Environment (IRENI) and a project for the creation of a technology transfer centre.

In the period 2000-2006 the Greater Dunkerque Council provided 4,600,000€ of finance to the University to support:

- the development of research (co-financing of research bursaries, conference organisation etc);
- international co-operation;
- professional and social development of students (counselling and information, campaigns for enterprises creation, etc);
- cultural organisation (development of public cultural events)

Currently a new phase of development is being established, expanding on the Lisbon-Gothenburg strategies for relationships between Greater Dunkerque Council, Université du Littoral and businesses. This new phase of financing will stress the importance of entrepreneurship, innovation and job creation. In particular its activities are directed at the development of an entrepreneurial culture in collaboration with the others local actors (e.g. Flandre Création Association, Graines d'Affaires, the Local Committee for Project Support), enterprises and business incubators.

In this development the council aims the creation of an entrepreneurial platform in the University involving the mentoring and coaching of both students and academic staff. Currently 400 students participate in this programme that delivers between 2 and 30 hours each year per individual dedicated to support in enterprise creation. To 2010 the aim is to engage with 1000 students per year delivering 7000 hours of support across all academic disciplines.

3.5.4 Moving Forward

The economic transformation of Dunkerque linked to the knowledge Economy can only move forward through relationships with key regional Partners. The core ULSG[44] for Dunkerque will include the following organisations.

- Conseil Régional
- Conseil Général
- Chamber of Commerce and Industry
- Universities and Higher Education (EPID, ISCID)
- Dunkerque Technologies
- Dunkerque promotion

This partnership will be enhanced by a number of specialist organisations who will add value to delivery of the Local Action Plan.

The opportunities and challenges identified in section 3.5.5 link well into the Nord-Pas-de-Calais Regional Operational Programme (2007-13). The programme outlines the current low level of private R&D expenditure, together with insufficient entrepreneurial spirit and lack of knowledge intensive jobs. As a result it aims to boost regional clusters and constituting academic poles of excellence and to create innovative enterprises (cluster based incubators). As during previous programming periods, the region of Nord-Pas-de-Calais benefits significantly among the French regions, receiving approximately 1.1 billion euro of which 700 million is ERDF and the remainder ESF.

In particular the actions for Dunkerque articulated into a Local Action Plan can be delivered through Axis 1 of the programme relating to Research and Development, Innovation and Business Policies. With 267 million euro budgeted over the period 2007-2013 Axis 1 represents by far the most important axis of the operational programme. The Axis has 4 interrelated priorities:

1. To strengthen the governance of regional policies for R&D and innovation, support for the innovation regional platform and the enhancement of research
2. To strengthen the international attractiveness of research and training
3. To support companies in innovation and the R&D process and support projects of innovation
4. To support R&D projects with poles of competitiveness and excellence

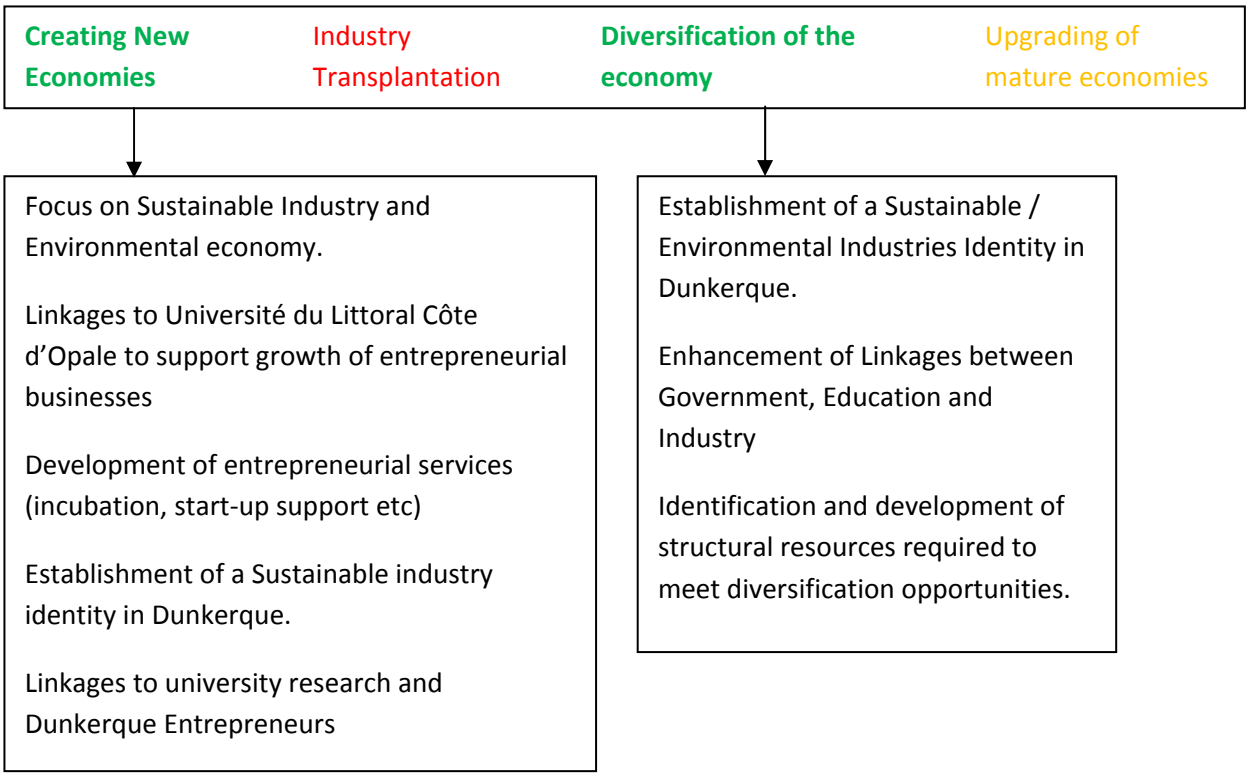
3.5.5 Key Challenges for Dunkerque

Economic Diversification is seen as the key problematic in relation to Dunkerque where the university contribution to the economy is seen as insufficient and the linkage of the local economy to the energy sector 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.

[44] The expert visit to Dunkerque as part of the URBACT II development phase was undertaken between the 31st July and 1st August 2008.

Figure 3.5.5a University / Knowledge Based Partners role in innovation-led growth for Dunkerque



In particular there is a requirement to enhance the level of innovation by developing partnership working between businesses to maintain and develop industrial employment. The potential impact of concentration on Large Enterprises for employment is well recognised and there is a requirement to maximise the position of the council area as a transport and logistics hub.

Specifically the Greater Council see the development of a cluster of sustainable technology supported by the involvement of the university in technology transfer and logistics as key development.

The development of an entrepreneurial and innovation culture is of particular importance. In this context the council see 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 and environment for SMEs
- The development of Innovation and Research & Development projects with large enterprise

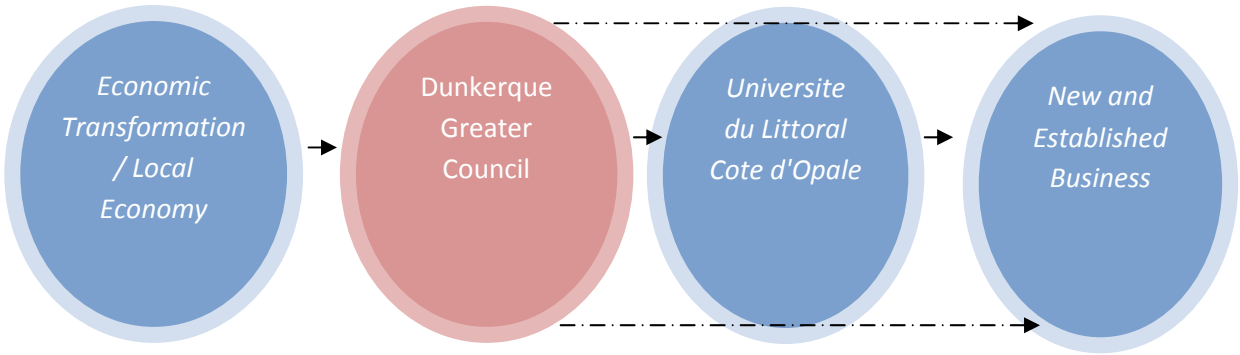
In delivering innovation led growth for Dunkerque the relationship between the Council and its knowledge based partner's needs to be redefined. The state of the art report has identified how European policy has taken the University as its point of reference for the knowledge economy. At a local level in Dunkerque while the Economic Development Team of the Council has good relationships with its knowledge based partners, it is the needs of the economy and its

transformation that must be taken as the point of reference (figure 3.5.5b) rather than the traditional approach of universities in technology transfer. In this context the Council is currently the only actor with a fully exclusive focus on the needs of Dunkerque and the motivation to mobilise universities and knowledge based partners to support its economic development.

Within the RUnUP Thematic network Dunkerque Council needs to address the following challenges to take full advantage of the knowledge economy:

- **Fully articulate the state of diversification in its local economy**. While the development of sustainable industries and technology has been promoted alongside the work of the University and its environmental research centre there has been no evidence presented during the baseline study of the physical (place) and people infrastructure required to support the diversification of SMEs and inclusion of Large Enterprises within the transformation process.

Figure 3.5.5b Economic Transformation relationships in Dunkerque



- **Fully understand how its knowledge based partners deliver activity in support of economic transformation.** In line with an adapted role in supporting economic transformation Dunkerque Greater Council as appropriate needs to establish a deeper, targeted relationship with the Universities and Knowledge Based Partners in its region whose activities and expertise align most appropriately to their key economic transformation activities. This will maximise the benefits of relationships as clear opportunities for joint working emerge.

- **Deliver new knowledge-based collaboration activity in line with economic transformation requirements.** The RUnUP baseline study has clearly identified the importance of the Université du Littoral Côte d'Opale as a mechanism for technology transfer and entrepreneurship. The RUnUP network will enable new opportunities for technology transfer in support of industry diversification to be supported alongside the further development of entrepreneurial resources and capability within the University and other public sector partners.

3.6 LESZNO, POLAND

3.6.1 Introduction

Leszno with a population of 63,955 people is located in Central West Poland, Wielkopolska region between the economic centres of Poznań and Wrocław.

Leszno is a major commercial and industrial centre with a diverse range of companies operating in industrial and service sectors and a mix of micro-companies through to large multinational companies. Employment is significantly (50%) based in industrial sectors of the economy namely machinery, furniture, metal, clothing and food production. While representing 50% of employment the industrial sector accounts for 10% of registered businesses.

The role of the state and private higher schools in supporting innovation and economic development in the local economy of Leszno is seen as the key problematic in relation to the activities of the URBACT II thematic network RUnUP. At a regional level the scientific potential of Wielkopolska is strong and significant in the country, and is mainly concentrated around Poznań. The increasing interest of young people in higher education, particularly in economics, has been an incentive for the establishment in new private schools operating alongside the well-established state universities. In Leszno this has seen the development of the Jan Amos Komeński State School of Higher Vocational Education and the establishment of the private Higher School of Humanties and Higher School for Marketing and Management. However despite the creation of these Higher Schools interaction with industry in Leszno remains limited to the delivery of skills development based education with no consultancy, exchange of best practice or foresight activity undertaken in support of local industrial modernisation.

The challenge facing Leszno within this context is that the economy is based on traditional industries with low levels of productivity. In delivering innovation led growth for Leszno through the modernisation of its existing industrial base and the creation of new companies a new relationship between the municipality and business support organisations in Leszno needs to be established. Similarly the role of the higher schools in Leszno needs to be maximised to look simply beyond the role of skills development through education into examining their potential for supporting businesses through consultancy, best practice scanning, technology/foresight exercises and in creating new areas of the economy by supporting the development of entrepreneurial services e.g. incubation to students, graduates and the wider community.

Given the domination of Poznan within the regional context closer relationships need to be established with innovation actors operating at the regional level. Particularly expertise can be drawn from Poznan Science and Technology Park who have a recognised track record in the development of a Regional Innovation Strategy, design and delivery of innovation programmes, European best practice exchange and delivery of technology transfer e.g. Innovation Relay Centre, Enterprise Europe.

3.6.2 Leszno Profile

3.6.2.1 Municipality of Leszno

Situated in Central West Poland, the Wielkopolska Region covers the area of 29, 826 sq. km, which makes it the second largest region in the country. With a population of 3.4 million, it is also the third most densely populated region in Poland. Almost 58% of its inhabitants live in cities and towns. The administrative structure of the region consists of 35 poviats (Districts) that includes Leszno as one of four major cities and 226 communes.

Maximising the traditional values of the Wielkopolska region, in times of growing competition, Leszno is a town whose authorities, economic units and inhabitants cooperate, with the intention to make a better use of local resources as well as other opportunities resulting from the size and location of the town. This is designed to lead to:

- an increase in the attractiveness of the town
- an improvement in the standard of living
- a more dynamic economic development

The municipality of Leszno, who is the partner in the URBACT II network RUnUP is managed by a Town Council of 23 elected councillors. The Town Council is responsible for the provision of services in the following areas; Public Utilities and Environment Protection; Transport; Emergency Management and Population Protection; Housing Management; Tourist Information; Culture and Sport and linked to the RUnUP network Promotion and Development which within this context includes; promotion, inward investment, international co-operation and strategy development. Significantly, Leszno was one of the first towns in Poland which established economic self-government in 1991. In 1999 the President of Leszno appointed the President's Business Council whose aim is to integrate the business community in Leszno and support the town authorities in the field of economy.

The work of the municipality through these departments is driven to achieve the following strategic aims:

- Reducing level of unemployment by increasing dynamics of local economy and attracting new investment. Creating the basis for sustainable economic development.
- Improving the quality of life for the population of the town through improvement in public services and creating conditions for better fulfilment of community needs.
- Establishing the position of the town as a centre of public service for the sub-region.

Figure 3.6.2.1 Images of Leszno

The Promotion and Development Department of the Municipality as the partner in the RUnUP network has particular responsibility for the development strategy for Leszno that includes:

- The economic development of the town.
- The coordination of development initiatives
- Integration of the local community in the development of the town
- Resource Utilisation
- Access to new sources of funding to support the development of local enterprise

3.6.2.2 Leszno Economic Structure

Leszno is a major commercial and industrial centre with a diverse range of companies operating in industrial and service sectors and a mix of micro companies through to large multinational companies. Employment is significantly (37%)[45] based in industrial sectors of the economy namely machinery, furniture, metal, clothing and food production. While representing 37% of employment the industrial sector accounts for 9% of registered businesses, with the following companies being the main employers in the town:

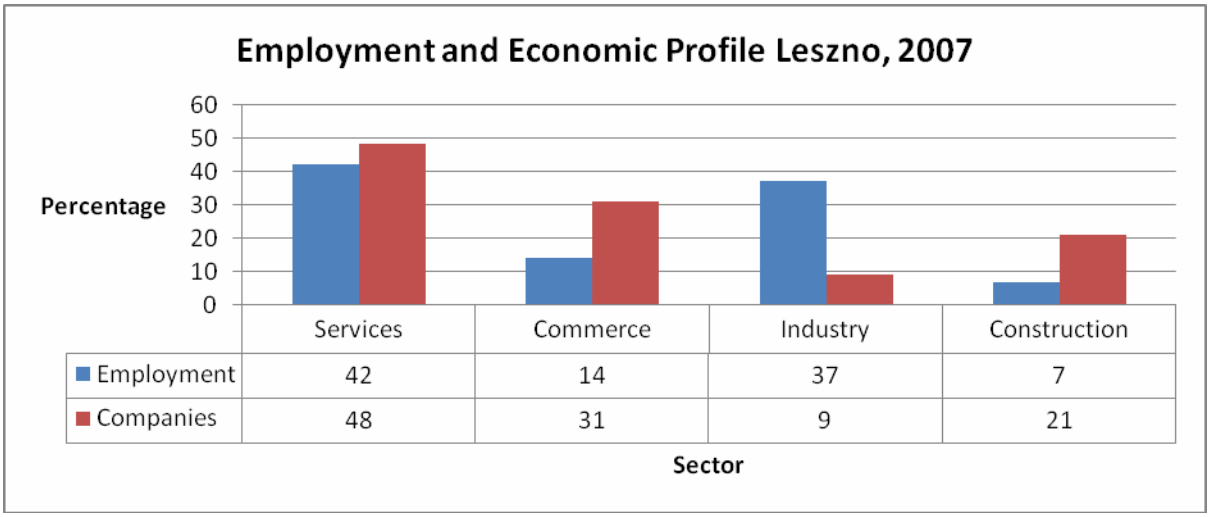
SEWS-P Sp. z o.o.	Production of automotive wiring harnesses
Metalplast LOB S.A.	Production of security devices, construction and furniture fittings
Leszczyńska Fabryka Pomp	Production of pumps and castings
"Akwawit Brasco" S.A.	Fermentation industry company
"Spinko" Sp. z o.o.	Pressure casting of aluminium alloys
"SEKPOL" Sp. C.	Production of furniture
"Lespin" Sp. z o.o.	Production of clothing
Leithäuser Sp. z o.o.	Production of Clothing
EuroComfort	Production of bedclothes
Euroline	Production of upholstery furniture

In the structure of business activity the leading type of companies are services (48%), then commerce and repair services (31%), and construction (21%) followed by industry (9%). In the period of 2000-2004 the number of companies rose dynamically followed by a more stable period in more recent years. Particular emphasis in Leszno is given to the 31% of companies which operate in the field of commerce and repair services, while representing a significant proportion of the business community and the business voice this represents 14% of employment within the town.

[45] Source: www.leszno.pl

In Leszno the most common businesses are micro companies i.e. those employing up to 9 people. They constitute 94% of the companies registered in the National Economy Register; small companies employing 10 to 49 people constitute 5% of all the companies in Leszno. Medium companies employing 50 to 249 people constitute 1%, with a few large companies (14) employing 250 people or more constituting the remainder of the business population

Figure 3.6.2.2 Employment and Types of Business by Economic Sector in Leszno, 2007



Leszno has been ranked as one of the best towns for business investment and business location best places for investment[46],[47]. The town's major asset is the highly valued climate that favours the development of business. The climate is fostered by town authorities and a network of institutions supporting business. In the town there are 17 banks and 40 insurance companies.

The development of the industrial and service sectors in Leszno has led to a lower level of unemployment of 5.2% in 2008 against a national average of 9.6%, within a context of falling employment overall in Poland.

Support for business in Leszno is delivered through the Regional Chamber of Commerce and Trade (Regionalna Izba Przemysłowo-Handlowa); the Centre of Innovation and Transfer of Technology (Centrum Innowacji i Transferu Technologii); the Association of Leszno Merchants and the Leszno Association of Merchants "Starówka".

The Regional Chamber of Industry and Commerce was established in 1991 as a business self-government institution of the Leszczyński region. This is one of the largest business support organisations in the region supplying companies with a range of services including; promotional activities of member companies; assistance in the acquisition of EU funds; training; consultancy; and the organisation of fairs and economic missions. The Chamber has 150 members and membership is voluntary. While significantly engaging with its business community its provision of activity is limited

[46] Centre of European Regional Studies, Warsaw University, February 2003
[47] Professional Commune favouring Investors, 2003

with most business support being provided through mentoring sessions for companies of 30 minutes, operating well outside established European best practice standards for business support.

The Centre of Innovation and Technology Transfer was established as a limited liability company following the completion of a European Union funded project supporting regional innovation strategies and knowledge transfer. Initially the company was owned equally between the Municipality of Leszno and the Higher Vocational State School, although majority ownership is held by the Leszno Pump Factory (50%), with the Municipality and Higher Vocational State School each holding a 25% share. The centre offers enterprise support, disseminating and implementing innovation and new technology, providing a platform between small and medium-sized enterprises and research & development institutions. With a particular focus on training and improving the awareness of innovation the centre employs 2 people delivering support to approximately 200 companies per annum.

The Association of Leszno Merchants was registered in 1994, with 50 members, the main aim of this association is integration of local merchants and cooperation with local authorities concerning conditions of business activity. The Association of Tradesmen "Starówka" ("old Town") was established in 2002 to bring together local merchants of the old Town. The main aims of this association are representation and protection of its members interests, propagation of good trade traditions, cooperation with local authorities, support of the citizens' economy and cooperation in business activities.

3.6.3 The role of Universities and Knowledge Transfer Partners in Leszno

The role of the state and private higher schools in supporting innovation and economic development in the local economy of Leszno is seen as the key problematic in relation to the activities of the URBACT II thematic network RUnUP. At a regional level the scientific potential of Wielkopolska is strong and significant in the country, and is mainly concentrated around Poznań. In the Wielkopolska Province there are 28 universities and schools of higher education (excluding 6 religious schools), and 19 are located in Poznań. It is also the seat of the Polish Academy of Sciences, with its 24 centres, 27 branch institutes and research institutes. Their work is mostly focused on agriculture and forestry environment, wood technology, natural fibres, metal working, applied chemistry and installation technologies. In Wielkopolska there are approximately 155,000 students, which has doubled since the early 1990s. In addition there are over 6,700 academic staff and 1,500 research staff employed.

The increasing interest of young people in higher education, particularly in economics, has been an incentive for the establishment in new private schools operating alongside the well-established state universities. In Leszno this has seen the development of the Jan Amos Komeński State School of Higher Vocational Education and the establishment of the private Higher School of Humanties and Higher School for Marketing and Management.

Jan Amos Komeński State School of Higher Vocational Education in Leszno is a new institution established in 1999. As a local institution it provides young people from small towns and villages

close to Leszno the opportunity to study. The Higher Vocational State School with 3,861 students offers bachelors and engineer studies in eight faculties:

- Production and management in agriculture
- The economics of small and medium-sized companies
- Social pedagogy
- Electrical engineering with technical computing
- Machine exploitation and diagnostics
- Physical education with corrective and compensatory gymnastics
- Music education with caring pedagogy
- Tourism and recreation

The school has signed agreements of cooperation with institutions of higher education in Poznań: Poznań University of Technology, Agricultural University of Poznań, Academy of Music in Poznań, University School of Physical Education, and the Poznań University of Economics. The college offers both full and part-time education. Graduates of the college are awarded with bachelor's degree or engineer's degree, which allow them to start their careers in a given profession or continue their MA, MSc, or MBA studies. Its research profile includes ; Educational sciences, physical education, sport, tourism and recreation, agriculture and management in agriculture, electrical engineering, informatics, technologies and machine diagnostics, economics and organisation of small and medium-sized companies.

The Higher School of Humanities is a non-public university with 2,609 students, which was established in Leszno in 2001 and offers three forms of studies; full-time, part-time, and post-graduate and their main specialisations are pedagogy and sociology education.

The Higher School of Marketing and Management with 562 students is also a non-public university, which was established in Leszno in 1993 and offers part-time studies specializing in marketing and management, management of administration, management of human resources, management of logistics, financial management, tourism management and equestrian studies.

3.6.4 Moving Forward

The industrial transformation of Leszno linked to the knowledge Economy can only move forward through relationships with key regional Partners. The ULSG for Leszno[48] will include the following organisations.

- Muncipality of Leszno
- Higher Vocational State School (Państwowa Wyższa Szkoła Zawodowa)
- Centre for Innovation and Technology Transfer
- Regional Chamber of Industry and Commerce
- Higher Education School of Marketing and Management (Wyższa Szkoła Marketingu i Zarządzania)
- Leszczyńska Fabryka Pomp

The opportunities and challenges identified in section 3.6.5 links well into the European Structural Funds in particular the Wielkopolska Regional Operational Programme for 2007 to 2013 and the Human Capital Operational Programme operating over the same time period. In particular the challenges and opportunities for Leszno articulated into a Local Action Plan (LAP) can be delivered through actions related to activity 8.2, transfer of Knowledge within the Human Capital Programme that specifically supports improving the transfer of knowledge and strengthening links between the education sector and enterprises for the economic development of the regions. In addition the LAP can also be supported through the regional operational programme, in particular actions 1.4 and 1.6 addressing the issues of support for enterprises linked to the Regional Innovation Strategy and the development of networks of co-operation respectively. These specifically target improving the potential of the research and development sector and institutions supporting business and improving the innovation of enterprises in the region through joint activities of companies cooperating with one another and institutions supporting business, research and development centre's, higher schools, local authorities and entrepreneurs.

3.6.5 Key Challenges for Leszno

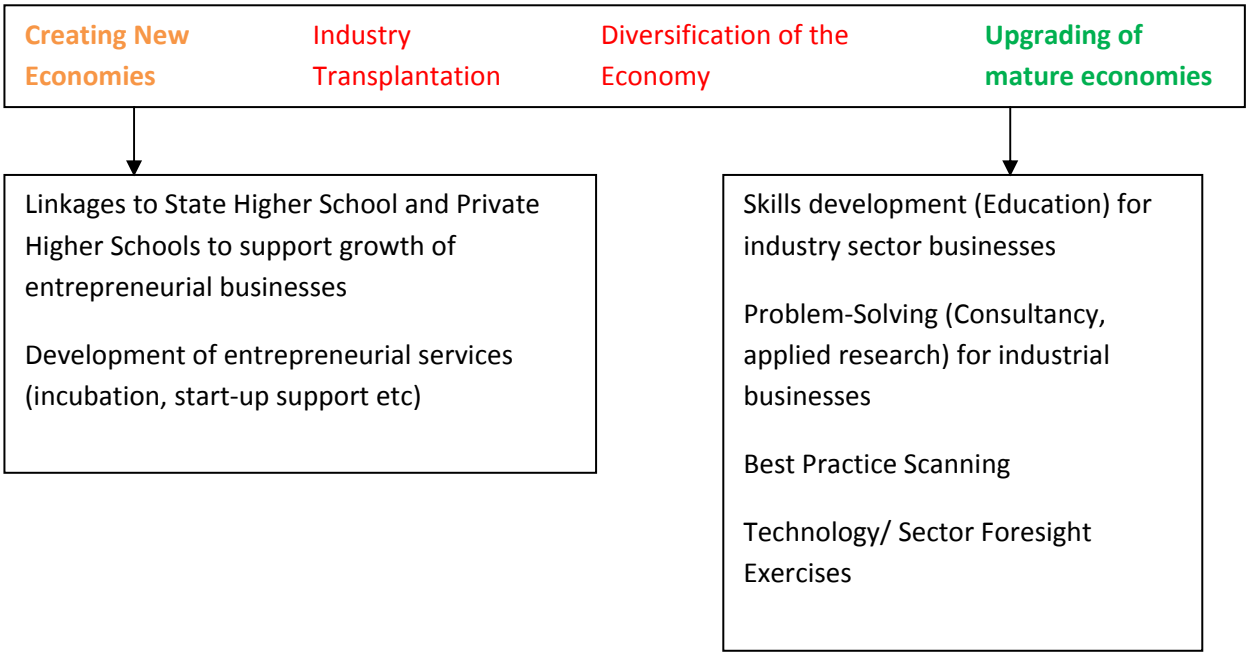
The RUnUP thematic network seeks to maximise the economic, innovation and entrepreneurship potential of medium-sized urban poles. The challenge facing Leszno within this context is that the economy is based on traditional industries with low levels of productivity[49]. The dominance of Poznan within the district of Wielkopolska influences population migration, working patterns e.g. academic staff from Poznan teaching in Leszno higher education schools and economic development.

It is noted from the expert visit that there is a lack of "real" partnership working between business support organisations in Leszno, with these organisations each with small numbers of staff (averaging between 2 and 4) seeking to engage with a significant industrial base and in certain cases duplicating activity and operating outside of established European standards of practice for business

[48] Information: Individual Members of the ULSG were consulted during the expert visit undertaken between 28th and 30th of July 2008.
[49] Eurostat Regional Statistics

support. In addition engagement with regional organisations based outside of Leszno is minimal and there is no referral or transfer of knowledge or capability from the universities or knowledge transfer institutions located in Poznan to support innovation and economic development within Leszno.

Figure3.6.5a University / Knowledge Based Partners role in innovation-led growth for Leszno



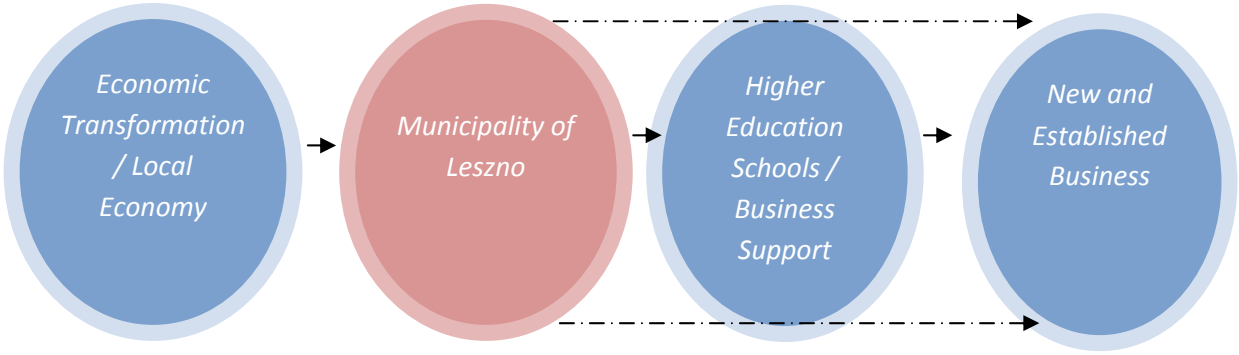
In delivering innovation led growth for Leszno through the modernisation of its existing industrial base and the creation of new companies a new relationship between the municipality and business support organisations in Leszno needs to be established. In this context the "citadella dell' economia" established in the RUnUP partner City of Campobasso represents a suitable model that could be adapted to meet the local context of Leszno where it is vital that the business support organisations are physically centred, integrated to maximise their resources and capabilities and able to jointly enhance the capability of their business support offer for the companies of Leszno in-line with established European practice.

Similarly the role of the higher schools in Leszno needs to be maximised to look simply beyond the role of skills development through education into examining their potential for supporting businesses through consultancy, best practice scanning, technology/foresight exercises and in creating new areas of the economy by supporting the development of entrepreneurial services e.g. incubation to students, graduates and the wider community.

It is the integration of business support services and the development of an increasing role for the Higher Schools in Leszno to support modernisation of the economy (see figure 3.6.5b) that is the key challenge that they need to address through their participation in the RUnUP network. The expert visit identified the importance of the commercial services sector to the town of Leszno in particular through the representation of the Association of Merchants and Association of Tradesmen, however while representing 32% of businesses they represent 9% of employment and as industrial activity is

responsible for 50% of employment this has been determined as the focal point for the work of Leszno in the RUnUP network.

Figure 3.6.5b Economic Transformation relationships in Leszno



Given the domination of Poznan within the regional context closer relationships need to be established with innovation actors operating at the regional level. Particularly expertise can be drawn from Poznan Science and Technology Park who have a recognised track record in the development of a Regional Innovation Strategy, design and delivery of innovation programmes, European best practice exchange and delivery of technology transfer e.g. Innovation Relay Centre, Enterprise Europe.

Within the RUnUP Thematic network the Municipality of Leszno needs to address the following challenges to take full advantage of the knowledge economy:

- **Fully articulate the state of transformation in its local economy**. The needs of the local economic base in Leszno have not been fully defined. In order to support its transformation a wider survey of industry needs should be undertaken. It was articulated during the expert visit that particular expertise is required to support industry in the form of production engineers, ICT specialists, process control engineers, design engineers etc and that transformation of the economic base in this context is driven by the uptake of new technologies by larger companies, the transfer of staff knowledge between companies and co-operation between businesses. Once the needs of the industrial sector are fully identified the municipality and its local partners can begin to evaluate the most appropriate schemes and programmes to support local transformation of the economy. This potential and appropriate action by the Muncipality of Leszno and its RUnUP partners is highlighted in figure 3.6.5a.

- **Fully understand how its knowledge based partners deliver activity in support of economic transformation.** In line with an adapted role in supporting economic transformation the Municipality, Chamber of Commerce, Centre of Innovation and Technology Transfer as appropriate needs to establish a deeper, targeted relationship with the Higher School in Leszno (in particular the State Higher School and School of Marketing and Management) and significantly the Universities and Research Centres of the Wielkopolska region whose activities

and expertise align most appropriately to their key economic transformation activities. This will maximise the benefits of relationships as clear opportunities for joint working emerge.

These findings and conclusions are significantly in-line with the Regional Innovation Strategy for Wielkopolska developed through the European Commission project "Innovative Wielkopolska" (2002-2004)[50]. The analysis undertaken to support the development of the strategy identified that in the field of entrepreneurship and innovation regarding the needs of regional enterprises the main problems are short-term thinking and lack of financial measures for innovation as well as unwillingness of regional enterprises to collaborate with each other. As far as research and education supply is concerned it was identified that this could be a driving force for economical development of the region however its activity should be more market-oriented and the mutual links between science and industry require strengthening. In addition and impacting directly on the work undertaken in Leszno, intermediary services and financing existing support instruments despite their multitude and diversity do not support the needs of innovative enterprises and require coordination. Another observation of the strategy was that in less developed areas some local innovation leaders identified that they still they require stronger involvement of local authorities in pro-innovation activities.

[50] Innovative Wielkopolska, Creating an Innovation Friendly Environment, Poznan, 2004

3.7 PATRAS, GREECE

3.7.1 Introduction

The City of Patras with a population of 171,616 people is the capital of the Peloponnese region of Western Greece and Prefecture of Achaia.

In line with the economy of Greece international sea transportation and commerce are important elements of the economy of the Achaia prefecture with transportation accounting for 7.2% of gross value added recognising the importance of Patras as an important gateway to the markets of the European Union. Activities in agriculture and manufacturing remain of significant importance although activities in these primary and secondary sectors have declined by 2% and 7.5% respectively between 1995 and 2001.

Figure 3.7.1: The region of Western Greece

The RUnUP thematic network seeks to maximise the economic, innovation and entrepreneurship potential of medium-sized urban poles. The challenges facing Patras within this context is that it has no focus on the transformation of its existing sectors of the economy (agriculture, food manufacturing) either through modernisation or diversification with no economic strategy or economic development activity at the municipality level. A lack of data at the city level means that the identification of business need and the development and delivery of business support is being based on the needs of the prefecture and the region rather than local demand.

In addition given the high level of unemployment of 16.1% with business start-up rates below both the national average and convergence regions of the European Union and decline in economy activity within the primary and secondary sectors it is particularly important to consider the development of new industries within the economy potentially around Informatics and Communications and Environmental Management and Protection.

In the context of the URBACT II network RUnUP the challenges facing Patras are clear and significant. The municipality has no strategy for supporting economic development of existing or future sectors, its economic development capacity needs to be established so that the linkages between the knowledge based economy and its demand for skills, physical space and political support can be fully articulated and widely communicated. The University of Patras has no industrial liaison activity, its capacity and capability needs to be established with reference to models of knowledge based

enterprise support and entrepreneurial development within Universities across Europe. Moving forward the Patras Science Park and Business Innovation Centre must play a significant role in supporting the development of economic strategy and leading the implementation of significant activities with the Chamber of Commerce and the University and Technological Institute around industrial modernisation and industry creation.

3.7.2 Patras Profile

3.7.2.1 Municipality of Patras

The organisation of primary level local authorities in Greece is based on a two-type typology of rural and urban communities. The specific types of local authorities are:

- Municipality – Unity of Villages
- Municipality – Semi-rural settlement
- Urban Municipality
- Municipality – Island
- Municipality – Urban Planning Group
- Municipalities – Sections of Metropolitan Areas

Every municipality will have the following authorities:

1) The Mayor, the Town Council, the Municipal Committee.

2) Five-Member Local Councils with a President, in each ex-Local Authority with more than 500 inhabitants, to be represented at the Town Council.

3) Three-Member Local Councils with a Municipal Deputy, in each ex-Local Authority with less than 500 inhabitants, to participate in the Meetings of the Town Council.

Each Local Council will have the following responsibilities:

1. The maintenance of the local infrastructure (water supply, sewage, irrigation, roads, common areas etc.)
2. The organisation of cultural and sporting events and programmes
3. The management of valleys and forests and (under specific preconditions) of the legacies and the local resources.

The decisions of the Local Councils will be executed after their ratification by the relevant Municipal Body.

The Municipality of Patras is one of the major actors concerning the development of local economy. The Municipality along with its partner organisations are directly and indirectly influencing the local economy of the city. One of the most important direct activities of the Municipality of Patras that improves the local economy is the development of the Small Industry and Handicraft Park where more than 100 businesses have been established. In addition several public buildings have been assigned to local businesses using the Public-Private-Partnership model. Indicative examples are the

Veso Mare complex that includes 8 cinema halls, 1 Bowling Centre, 3 restaurants and 2 bars, the Politeia Arts & Culture area, the Marine and Hill Restaurant and Bars etc.

The Municipality of Patras is also the main organization that manages the licences and develops the taxation policy for the local retailers and businesses and consequently has a major impact to the development of these kinds of businesses. The indirect activities that play a significant role in the development of the local economy are the involvement of the Municipality of Patras in the organization of large-scale events like part of the Olympic Games of 2004, the Cultural Capital of Europe 2006 and the World Rhythmic Gymnastics Championship 2007 for example and also the annual Summer festival and famous Carnival of Patras that attract hundreds of thousands of visitors.

Finally, the Municipality supports organisations like Patras Social Enterprise that undertakes activities related with the support of unemployed people in poor areas of the city, support of unemployed or young people to be linked with the local businesses and support for disadvantaged groups.

Specifically related to the work of the URBACT II network RUnUP the Municipality of Patras is a partner in the E.C. Business and Innovation Centre of the Region of Western Greece, a private non-profit Company, which was established in 1989, as BIC Patras**.** The BIC is established and operates inside the Chamber of Achaia building, in close vicinity and collaboration with the Centre for SME Support (KSMMEDE), and the Electronic Commerce Centre for Western Greece (HKE). The building is placed at a strategic geographic location, right at the centre of the city of Patras, near the port, the municipality, railway and bus stations. Operating inside the Chamber of Achaia provides several advantages, including sharing of Chamber facilities. Furthermore, close cooperation with the other hosted organisations and the Chamber provides several synergetic effects, arising from exploitation of the highly skilled and experienced personnel, and creating mutual advantages to all organisations.

Figure 3.7.2.1 Images of Patras

In addition the Municipality works with the chamber of commerce for the Achaia Region. Currently the chamber has approximately 21.000 members, with 7500 members in the commercial sector, 9000 members in professional sector, 5000 members in handicraft sector and 100 in the industrial sector.

Indicative activities of the Chamber of Commerce of Achaia include the establishment of the Achaia Cooperative Bank, the establishment of the Business Innovation Centre, the establishment of the Enterprise for the Management of European Programmes of Peloponnese, Ionian Islands, West Sterea Hellada, the establishment of the Support Centre for SMEs of Western Greece, establishment along with Municipality of Patras, Achaia Prefecture and other local authorities of the Enterprise for Touristic Development of Achaia and Centre of E-commerce of Western Greece.

3.7.2.2 Patras Economic Structure

The primary sector while having the lowest Gross Value Added in the Prefecture of Achaia remains important as it employs 20% of those people who are economically active and contributes 11.6% of Gross National Product for the Prefecture. Overall economic activity in the primary sector has declined by 2% between 1995 and 2001.

The sector of fishery is important in the prefecture. Its professional fishing fleet is comprised of 243 vessels for medium and coastal fishing, which are active in the areas of the Patraikos and Korinthiakos gulfs, as well as in the Ionion Sea. The sale and distribution of fish of the Prefecture is done in the fish-pier of Patras. The fish-pier is also used as a place for the reception and distribution of imported fish from the EC countries or other countries, as well as of fish from other areas of the Greek territory. In the fish-pier of Patras more than 3.000 tonnes of fish are annually distributed.

Agriculture in the coastal area and in Western Achaia is well developed due to the good fertility of the territories but mainly because of the climatic conditions, that give the possibility for production of an important number of agricultural products with possibilities of export e.g. oil production, the viniculture, the citrus fruits, the horticultural, the spring potato.

The manufacturing sector in the prefecture has undergone significant recession in particular between 1984 and 1992 with significant impact in Patras and in addition overall economic activity in the secondary sector has declined by 7.5% between 1995 and 2001.

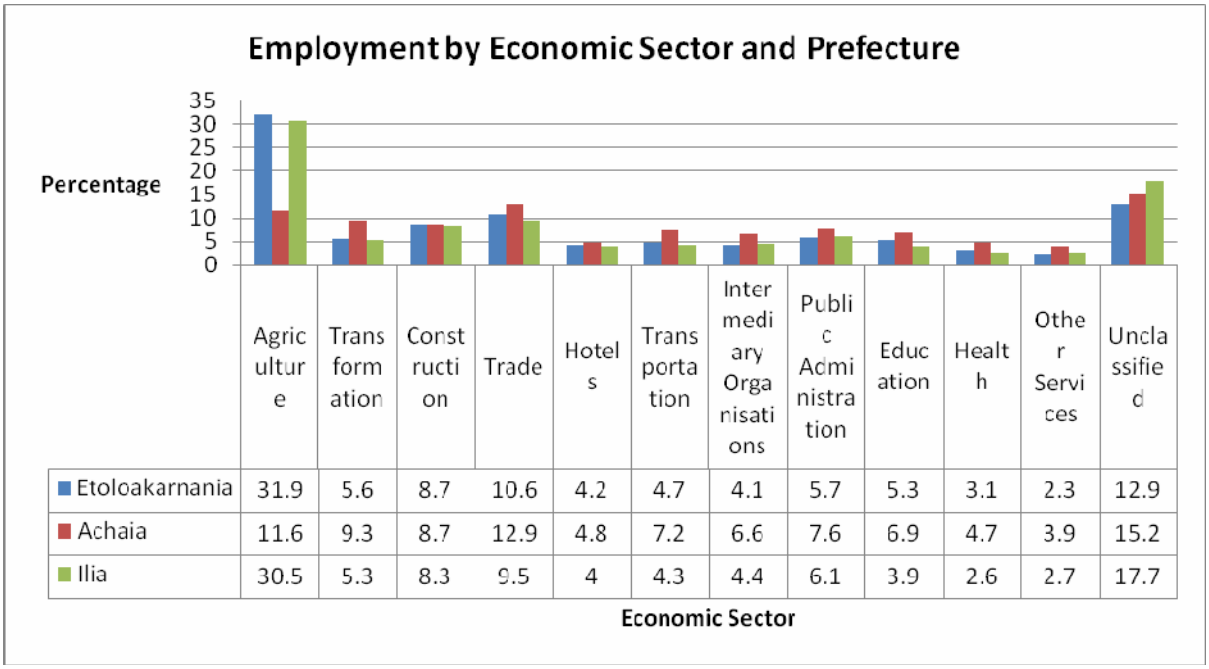
Despite this significant deindustrialisation the secondary sector in the Prefecture of Achaia remains the 3rd largest in Greece, producing 3.4% of the Greek Gross National Product in manufacturing. The sector of manufacturing is particularly developed in the prefecture of Achaia (accounting for 9.3% of Gross National Product for the Prefecture) and especially in the area of Patras and the wider region, with a focus on the sectors of food and beverages, textile, clothing, non metal minerals and in the sector of machinery and equipment. In addition the construction sector is a significant industry accounting for 8.7% of gross value added. Importantly the Prefecture of Achaia consists of 17.4% of manufacturing businesses in sectors that have been developing dynamically during the last 5 years, while 40% of manufacturing businesses in the Prefecture are concentrated in sectors that are in recession at the National level. As a consequence, the majority of the manufacturing industries of the Prefecture of Achaia do not belong in sectors with current growth potential.

The tertiary sector is the largest in the economy of the prefecture with growth from 61.6% to 71.1% between 1995 and 2001. In line with the economy of Greece international sea transportation and commerce are important elements of the economy of the prefecture with transportation accounting

for 7.2% of gross value added recognising the importance of Patras as an important gateway to the markets of the European Union.

In parallel with these sectors, Patras shows a great development in the sectors of health services, education, research and development, as well as in the productive services. An analysis of Gross National Product per Capita region in Western Greece highlights that it is lagging behind, both on a national and European level. In particular,, for the year 2003, the regional GNPPC for Western Greece corresponded to 77.3% of the Greece GNPPC and to 62.7% of the average European GNPPC in PPP (EU-25=100). Nevertheless, this region grew (GNP shift) at a higher rate than the community average (both EU-25 and EU-15) for the period 2000-2003, and consequently the per capita product difference with the European Union has gradually decreased[51].

Figure 3.7.2.2 Employment by Economic Sector and Prefecture



	Agriculture	Transformation	Construction	Trade	Hotels	Transportation	Intermediary Organisations	Public Administration	Education	Health	Other Services	Unclassified
Etoloakarnania	31.9	5.6	8.7	10.6	4.2	4.7	4.1	5.7	5.3	3.1	2.3	12.9
Achaia	11.6	9.3	8.7	12.9	4.8	7.2	6.6	7.6	6.9	4.7	3.9	15.2
Ilia	30.5	5.3	8.3	9.5	4	4.3	4.4	6.1	3.9	2.6	2.7	17.7

The Prefecture of Achaia has good potential for the further development of research and technology services and the provision of innovative services to the local SMEs in particular linked to the University of Patras, the Technological Educational Institute of Patras and Patras Science Park. There are also important Research Centres and Institutes that contribute to the production of knowledge and innovation to the benefit of the local productive companies (e.g. BIC of Western Greece, CTI, etc), and have scientific and research potential with a specialization in sectors of high-value adding technologies.

[51] European Territorial Cooperation Programme Greece – Italy, Programming Period 2007 – 2013, Athens, October 2007

3.7.3 The role of Universities and Knowledge Transfer Partners in Patras.

With two universities and a technological institution with research institutes the City of Patras is an important scientific centre with a field of excellence in technical education. These institutions attract more than 30.000 students from other Greek or foreign areas that study and live in Patras. The strength of the academic and service 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 (see below) no links exist between universities and local businesses and industrial sectors in Patras.

The University of Patras offers an exciting and dynamic learning and research environment that provides its students with high level programs of studies. The University consists of four Schools; Natural Sciences, Engineering, Health Sciences and Humanities & Social Sciences with a School of Economics and Business Administration being established. Each School includes a number of departments with 22 operating in the university overall.

Each Department is linked to a University discipline area and is the basic academic unit whose study programme leads to a specific degree. Departments covering relative discipline areas constitute a School, which has mainly coordinating authority. The Departments are divided into Divisions corresponding to smaller and distinct parts of the major scientific discipline of the Department. Within each Division there are specific Laboratories and Clinics, which operate under specific internal rules and procedures.

The University of Patras provides its students with a vast variety of courses through the twenty-one (21) Undergraduate Programs of Studies that lead in a Bachelor degree with 4 years of studies (6 years for the Faculty of Medicine) or in a Diploma degree with 5 years of studies.

Furthermore the University of Patras offers thirty-three (33) Programmes of Postgraduate Studies. Ten (10) of these programs are interdepartmental and two (2) of them are inter-university operating in collaboration with other well-known universities. The postgraduate programmes of the University of Patras lead to M.Sc. and Ph.D. degrees.

Linking the University to Industry is the Liaison and Patent office which through university expertise offers specialist services to enterprises, public and private sector organisations. Through networks and initiatives the office transfers scientific knowledge skills and know-how. Additionally it provides support for patent licensing and intellectual property rights.

Operating alongside the University is Patras Science Park (PSP) an active organisation established 15 years ago. Today, a remarkable number of new and strong enterprises are operating under the auspices of PSP most of them are inventors, adaptors and users of new technologies. The strategic target of PSP is to establish an Innovative Business Area in the Region of West Greece, which will be a development and guidance tool for this Region towards the “rising innovative economic-productive frame” by facilitating – additively and alternatively- new economic, productive and business activities in the region. Thus, it aims at contributing essentially to the “innovative area” prominence.

The aims of PSP are:

- Encouraging Innovative ideas, products, services and procedures as well as the exploitation of research and development results.
- Promotion and financial completion of innovative investment & business plans for R&D results exploitation.
- Development, renewal and widening of the product and services spectrum, as well as of the methods for production, supply and distribution
- Introduction of new organizational and administrative methods for enterprises.
- Acquisition and diffusion of innovative methods and knowledge - Provision of services of scientific, technological, consulting and educational nature - Personnel training services for enterprises or any kind of legal entity.
- Attraction and installation of entrepreneurial schemes in the Park's premises

The 2nd University in Patras is the Hellenic Open University, the 19th Greek State University but the only one that provides distance education in both undergraduate and postgraduate levels via the development and utilisation of appropriate learning material and methods of teaching. Promoting scientific research as well as developing technology and methodology in distance learning is within the scope of the university's objectives. Like all other state universities in Greece, it is a Legal Entity of Public Law, completely independent and autonomous.

The Technological Educational Institute (T.E.I.) of Patras was established in 1972 as a Vocational Technical Education Centre (K.A.T.E.). In 1983, it became an independent and self-governed institute and belongs to the Greek Higher Education system along with the thirteen other institutes and the Universities of Greece. T.E.I. orientation is towards applied research and technology and its main concern, the assimilation and application of scientific knowledge whereas the universities give emphasis to theoretical background and basic research. The T.E.I. of Patras is a State Institute. It is a self-governed body, subject to public law and financed from public funds.

The main objectives of the institute are:

1. To educate students on technological matters adequately enough and to bring them up to the level of understanding, assimilating and promoting technology and technological know-how.
2. To undertake the task of advising scientifically and technologically, industries, enterprises and the social environment in general and to develop or innovate, through the links with production units, new material, procedures, equipment, tests, experiments etc.
3. To educate responsible and qualified people who will in their turn contribute to the economical, social and cultural developments of their country.
4. To participate in Research & Development projects either independently or together with Universities.

Operating alongside the 2 Universities and Technological Educational Institute are research institutes for; Academic Computer Technology, Chemical Engineering and High Temperature Chemical Processes and the Industrial Systems Institute.

The existence of these institutions creates opportunities and prospects for the growth of research and technology accessible to the productive process and responsive to social needs, particularly with reference to specialised sectors (e.g. energy, primary production etc). Nevertheless, the level of innovation in the social and economic sectors as confirmed by the data on expenditures for the transition to a knowledge economy, and by the number of registered patents, is deficient when compared to the European average[52]. The average expenditure for research and innovation corresponds to approximately 0.92% of GNP for the Region of Western Greece and specifically, the patents granted per million people are 6.1 for the Region of Western Greece against an EU average of 100.

3.7.4 Moving Forward

The industrial transformation of Patras linked to the knowledge Economy can only move forward through relationships with key regional Partners. The ULSG for Patras will include the following organisations.

- Municipality of Patras
- Patras Science Park
- University of Patras
- Technological Educational Institute
- Business Innovation Centre Western Greece
- Chamber of Commerce

The opportunities and challenges identified in the final section of the baseline, section 3.7.5, link well into the ERDF Competitiveness Programme. On 5 November 2007, the European Commission approved a regional operational programme[53] for the regions of Western Greece, Peloponnesus and Ionian Islands for the period 2007-2013, all falling under the "Convergence" objective. The total public budget of the programme is around € 1.14 billion and the Community assistance through the European Regional Development Fund (ERDF) amounts to € 914 million. The interventions relate mainly to transport infrastructure, environment, rural and urban development, culture, entrepreneurship and digital convergence, social infrastructure and services, health and social care.

In particular the challenges and opportunities for Patras articulated within the URBACT Local Action Plan can be delivered through actions related to Priority 4: Digital convergence & entrepreneurship in Western Greece where emphasis will be given to increasing investments in knowledge-intensive sectors and the reorientation of the productive dynamism of the economy into services and products of high added value. This will be pursued by the reinforcement of cooperation between universities, research institutes and enterprises, the set up of new companies including the modernisation of current ones, with emphasis on innovation and new technologies.

[52] European Territorial Cooperation Programme Greece – Italy, Programming Period 2007 – 2013, Athens, October 2007

[53] Operational Programme 'Western Greece - Peloponnesus - Ionian Islands', Regional Policy-Inforegio

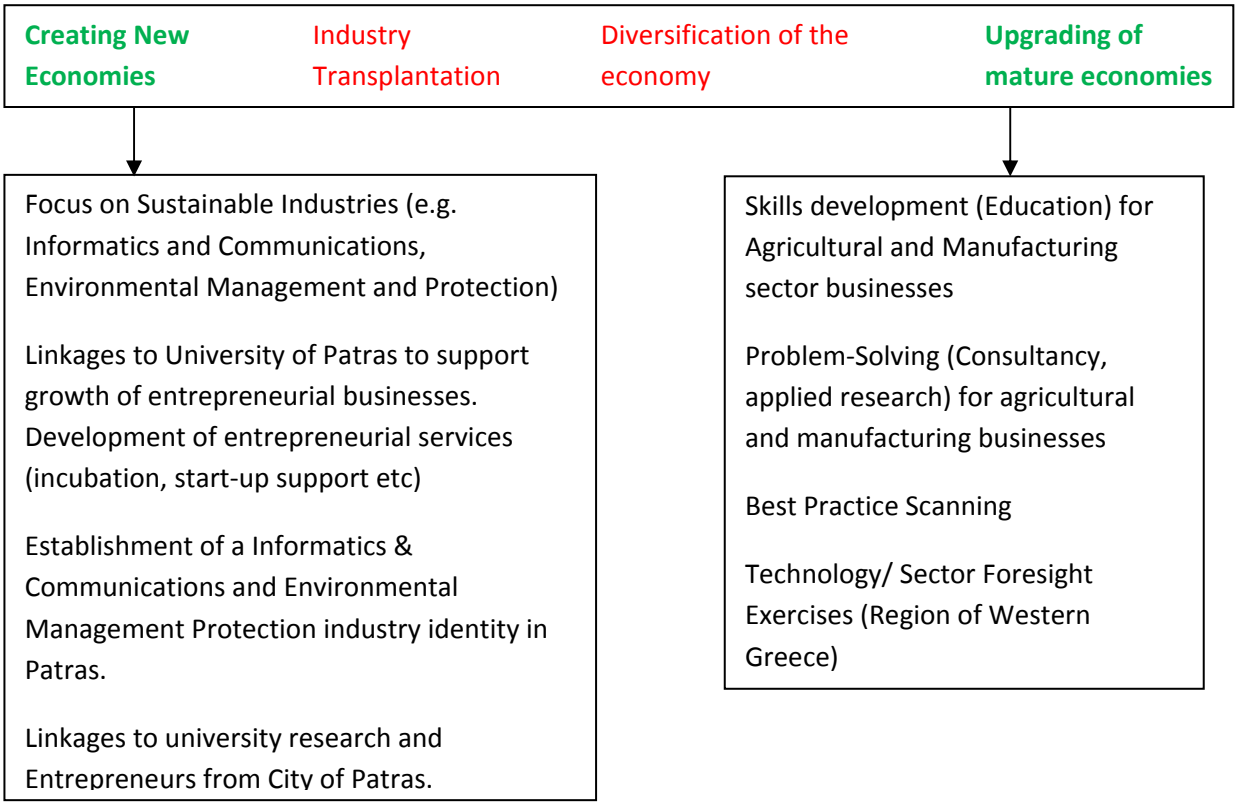
3.7.5 Key Challenges for Patras

The RUnUP thematic network seeks to maximise the economic, innovation and entrepreneurship potential of medium-sized urban poles. The challenges facing Patras within this context is that it has no focus on the transformation of its existing sectors of the economy (agriculture, food manufacturing) either through modernisation or diversification. A lack of data at the city level means that the identification of business need and the development and delivery of business support is being based on the needs of the prefecture and the region rather than local demand.

The municipality currently has no significant economic development role in terms of strategic development or economic development aligned with key partners e.g. university, business innovation centre and science park.

While there is no defined strategy for economic development there is a clear need to support existing sectors which are predominantly agricultural and manufacturing based. The regional innovation pole, co-ordinated by the Patras Science Park has focussed its activity on thematic areas in which the region has a competitive advantage in innovation and business activity. This includes safety and technologies of food, including the primary sector, food safety, production technology and piscicultures. This work should be considered an upgrading of a mature industry with activities delivered by partners led by the Science Park as outlined in figure 3.7.5a.

Figure 3.7.5a University / Knowledge Based Partners role in innovation-led growth for Patras

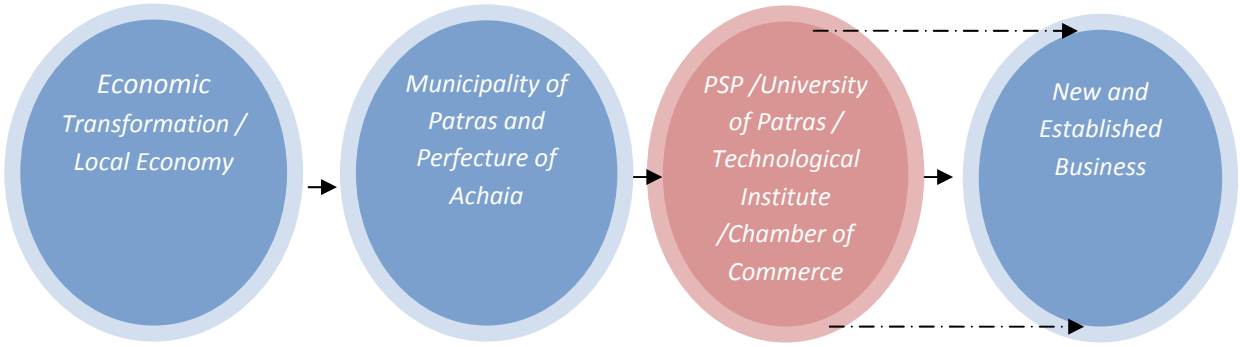


In addition given the high level of unemployment of 16.1% with business start-up rates below both the national average and convergence regions of the European Union and decline in economy activity within the primary and secondary sectors it is particularly important to consider the development of new industries within the economy.

The regional innovation pole of Western Greece has identified competitive advantage in innovation and business activity relating to technologies in informatics and communications and environmental management and protection and in delivering activities to strengthen these sectors of the economy. This aligns well with the University of Patras which has Departments of Computer Engineering and a School of Natural Sciences and Engineering.

The challenges facing Patras are clear and significant. The municipality has no strategy for supporting economic development of existing or future sectors, its economic development capacity needs to be enhanced so that the linkages between the knowledge based economy and its demand for skills, physical space and political support can be fully articulated and widely communicated. The University of Patras has no industrial liaison activity, its capacity and capability needs to be fully developed with reference to models of knowledge based enterprise support and entrepreneurial development within Universities across Europe. Moving forward the Patras Science Park and Business Innovation Centre must play a significant role in supporting the development of economic strategy and leading the implementation of significant activities with the Chamber of Commerce and the University and Technological Institute around industrial modernisation and industry creation.

Figure 3.7.5b Economic Transformation relationships in Patras



Within the RUnUP Thematic network the Municipality of Patras and its local partners need to address the following challenges to take full advantage of the knowledge economy:

- **Fully articulate the state of transformation in the Patras local economy**. There is a clear requirement to support the modernisation of the agricultural sector and manufacturing economy. This will require data on the sectors of the economy to understand the nature of these industries in Patras. In addition support for these industries around education, consulting, best practice exchange etc is extremely limited. The development of the new sectors of the economy has not been fully articulated. In particular the research capability of the universities in these fields has not being fully assessed and the development potential for spin-off and knowledge based businesses considered. The Municipality working with the Patras Science Park has a key role in articulating a knowledge-

Based Development Strategy for Patras linked to the transformation of its economy. This potential and appropriate action by the Municipality and its RUnUP partners are highlighted in figure 3.7.5a.

- **Enhance delivery capacity and capability within Knowledge Based Partners.** The Municipality of Patras currently has no direct remit in supporting local companies. To support new economic development and transformation the knowledge base (University of Patras, Patras Science Park, Business Innovation Centre and Technological Institute) need to act as the primary actors and facilitators in linking their resources with the economy around the activities identified in figure 3.7.5a. This requires them to design, develop and implement approaches (based on international best practice) that fit the need and demand of the Municipality of Patras and Region of Western Greece.

- **Develop the Business Development Knowledge of Knowledge Based Partners.** The state of the art identified the limitations of the traditional model of university engagement with industry through technology transfer and establishment of Spin-Off companies. As the key actors (see figure 3.7.5b) in taking forward the strategy for knowledge based industrial transformation strategy into implementation the universities and the technological park need to encourage and develop business development skills and capabilities within their university staff (e.g. Industrial Liaison Office) to support longer term strategy implementation.

3.8 POTSDAM, GERMANY

3.8.1 Introduction

Potsdam with a population of more than 150,000 people is the capital of the state of Brandenburg (see figure 3.8.1) within the convergence region of Brandenburg South-West. Potsdam considers itself as an integral part of a region whose economic development is closely connected to that of Berlin.

In recent years Potsdam has undergone significant economic growth with the number of new business registrations per year more than doubling between 2001 and 2007 from 720 companies to 1,847 while there has been only a slight increase in business de-registrations per year from 823 in 2001 up to 1.247 in 2007. As a result of this business growth Potsdam has created a profile for itself as a modern business centre with a rich tradition; one that is developing increasing autonomy, independent from Berlin, its immediate neighbour. The main activities within its economy is a widely diverse service sector encompassing the areas of media, information and communication, biotechnology, trade, banks, insurance and tourism.

Research has a long tradition in Potsdam and is characterised by activities in the fields of astrophysics, geodetic surveying and gravitation research. Potsdam has the densest population of research and scientific facilities of any city in Germany and there are more than 5.000 highly qualified people employed here to vouch for it. In 1948 the State Technical College was founded, which became a Pedagogic College in 1952 and was then included in the newly founded Potsdam University in 1991. In 1954 the German College for Film Arts was founded - this is now the Konrad Wolf Technical College for Film and Television. The University of Applied Sciences or the Potsdam Technical College was founded in 1991 as the third state university in Potsdam. The Hasso Plattner Institute for Software Systems Engineering and the UMC POTSDAM – University of Management and Communication are two private financed and organised institutes.

Figure 3.8.1: The State of Brandenburg

The RUnUP thematic network seeks to maximise the economic, innovation and entrepreneurship potential of medium-sized urban poles. The challenge facing Potsdam within this context is that while its existing economy is growing and developing in the areas of Media, Information and Communications and Biotechnology, the transfer of knowledge through students and graduates into the knowledge economy is limited given the primary focus of the university on Research and Education and the significant number of students commuting from Berlin to Potsdam on a daily basis.

Significantly within the URBACT II network RUnUP the University of Potsdam needs to articulate a strategy for enhancing its awareness of structures and processes for increasing its commercialisation activities and how these can align, integrate and mutually support the education and research activities of the university. Additionally in implementing a strategy for knowledge based

transformation the university needs to encourage and develop business development skills and capabilities within their university staff to support longer term strategy implementation. Overall while the City of Potsdam has a significant infrastructure of knowledge based organisations and business support organisations the environment for supporting companies is not well connected and extremely fragmented resulting in challenges for companies to engage with and be referred to appropriate organisations for support.

3.8.2 Potsdam Profile

3.8.2.1 Municipality of Potsdam

The development of Potsdam and provision of public services is the responsibility of the City of Potsdam, a partner in the local RUnUP Local Support Group. The state capital is developing into a main civic and administrative centre which is both modern and representative.

The municipality is responsible for the development of the medium-sized enterprise structure as a source of employment and growth. In this context the economy is driven by widely diversified service areas with the media businesses, information and communication enterprises, retailers, banking and insurance industries as well as independent professionals and tourism and in contrast by production industry.

The cultural heritage of the city provides a unique opportunity to engage with private investors in order to develop an attractive city which corresponds with all the requirements of a modern metropolis. Potsdam utilises the strong supra-regional transportation connections of the Berlin economic area and continues to develop in a targeted approach the infrastructure networks with Berlin. Based on this Potsdam is striving for continual further development of the transportation links of the city in the region as well as aiming for greater inner-city accessibility.

Figure 3.8.2.1 Images of Potsdam

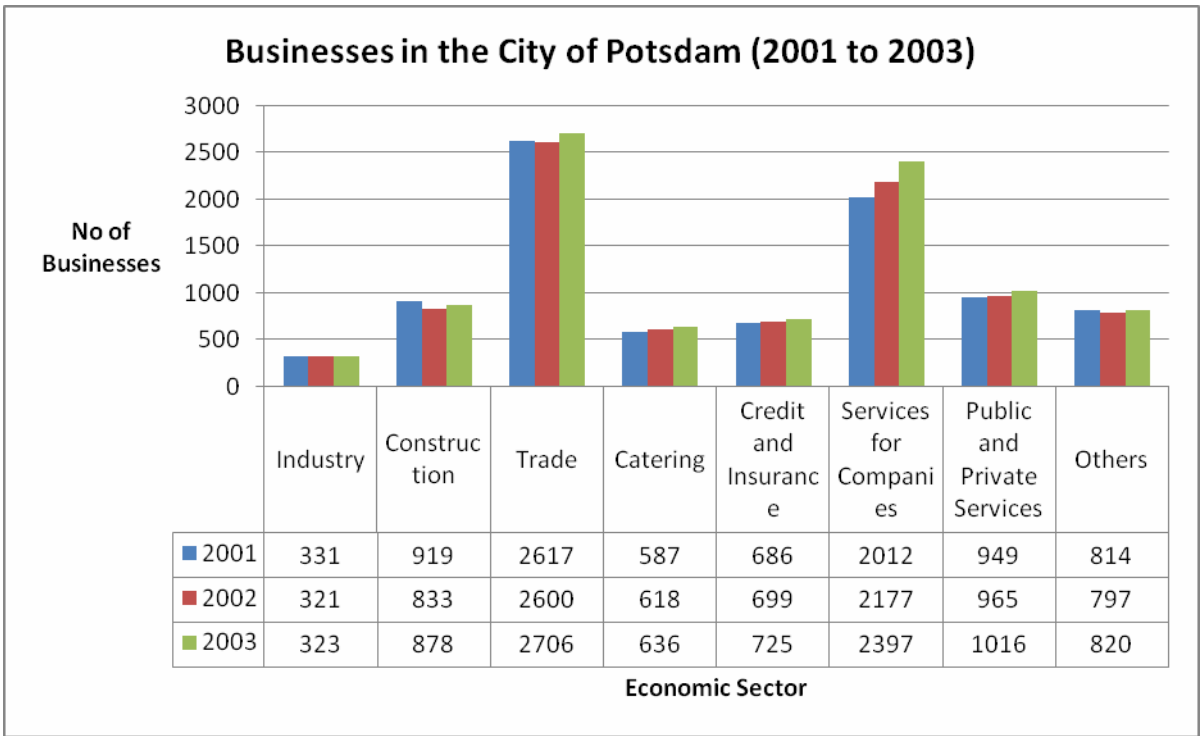
In order to improve the development opportunities for businesses operating in the region Potsdam is following a policy of innovation, economics and infrastructure which is regionally networked and also supported by regional sponsors. Specifically related to the work of the URBACT II network RUnUP, the innovation strategy is being implemented to achieve the goal of significant linkages between scientific facilities and commercial businesses in particular to strengthen job creation and development of the local economy. Alongside this in order to support enterprises in the processes of relocating, expanding or starting up new business areas and residential zones are being created.

3.8.2.2 Potsdam Economic Structure

In recent years Potsdam has undergone significant economic growth with the number of new business registrations per year more than doubling between 2001 and 2007 from 720 companies to 1,847 while there has been only a slight increase in business de-registrations per year from 823 in 2001 up to 1,247 in 2007. This has resulted in a significant increase in the stock of businesses from 6,314 in 2001 to 12,227 in 2007. However despite this unemployment remains at around 9 % in 2008 against a state average of 13 %.

As a result of this business growth Potsdam has created a profile for itself as a modern business centre with a rich tradition; one that is developing increasing autonomy, independent from Berlin, its immediate neighbour. The main activities within its economy is a widely diverse service sector (see figure 3.8.2.2) encompassing the areas of media, information and communication, biotechnology, trade, banks, insurance and tourism. The percentage of employees working in innovative industries is increasing constantly.

Figure 3.8.2.2



	Industry	Construction	Trade	Catering	Credit and Insurance	Services for Companies	Public and Private Services	Others
2001	331	919	2617	587	686	2012	949	814
2002	321	833	2600	618	699	2177	965	797
2003	323	878	2706	636	725	2397	1016	820

In the media sector excellent conditions for development have been created as the result of extensive investment particularly around the Babelsberg Media City. Television production and multimedia applications have grown in importance alongside traditional film production and there are currently more than 3,000 people working in the fields of audio-visual media.

Within Media City there are a large number of small and large companies operating in diverse fields; namely; cinema and television productions, multimedia, animation, stunts and special effects, equipment and post production. As a result Media City has become a significant environment for

networking and collaboration with more than 130 companies located in the city. A total of sixteen optimally equipped studios are available on the 46-hectare location of media city. Alongside these facilities and companies the Konrad Wolf Academy for Film and Television offers excellent training opportunities in Media City.

Information, telecommunication and software development are synonymous with the dynamic development of Potsdam as a home for the world of high-technology. The sector currently employs 1,500 people within the Potsdam economy with a forecast growth of 3000 to 4000 new jobs by 2013. The development of a high-technology campus at the Jungfernsee lake on a site with an area of thirty-six hectares in the north of Potsdam is an important step along the way to realising the vision of 'Silicon Sanssouci'. Models for the high-tech city on the Jungfernsee's shore are for example world-renowned locations like the SAP labs in Palo Alto, California. The planned investment amounts to approximately 250 million euro. The state is participating with a twenty-million euro contribution that will be used to finance the development of the site. The plans are long-term in scale and design and are aimed primarily at attracting successful companies from all over the world to establish themselves here and profit in turn from the excellent setting, made unique by Potsdam's rich cultural environment, the proximity to Berlin and the dense population of scientific institutions in Potsdam, such as the Hasso Plattner Institute for Software Systems Engineering (HPI) and the subsequently established HP-Ventures business incubator.

In addition to its focus on Media and Information and Communications Potsdam is one of the most important centres for biotechnology in the entire Berlin-Brandenburg region. This is driven by the location of the Hermannswerder Biotech Campus and the Golm Science Park, which includes the GO:IN innovation centre. Potsdam's biotech companies particularly value their proximity to the city's prestigious university and the extra-university research institutes located in Potsdam and in the region. Potsdam and the surrounding area are home to more than 40 well-known scientific facilities. With this concentration of research facilities and specialized workers, Potsdam ranks among the leading cities in Germany in this respect, with a total of 160 companies employing directly 3,200 people, alongside 5,000 people working in science-related jobs and 4,000 in the pharmaceuticals and services field. Overall, biotechnology is responsible for employing around 12,000 people in the region. More than half of the companies are direct spin-offs from the research institutes of Potsdam.

Supporting economic development the Potsdam Chamber of Commerce and Industry has over 65,000 member companies from the 6 counties of West Brandenburg. In line with the activities of the German Chambers of Commerce the Potsdam Chamber delivers assistance and advice for start-ups, regional development policy, and consultancy on foreign trade, risk management, innovation coaching, investor support, advanced training and legal advice. Alongside these activities the chamber has historically been involved in transnational projects from Interreg III, A, B and C. Its activities in support of knowledge management and transfer are significant and they support approximately 400 companies per year of which between 30 and 50 companies would be referred to the University for support.

3.8.3 The role of Universities and Knowledge Transfer Partners in Potsdam.

Research has a long tradition in Potsdam and is characterised by activities in the fields of

astrophysics, geodetic surveying and gravitation research. When the first special astrophysical observatory in the world was founded in 1874 it was the birth of the research site on Telegrafenberg hill. In 1924 the solar observatory in the Einstein tower on Telegrafenberg hill was completed which was to provide evidence for the predicted effects resulting from Einstein's general theory of relativity.

In relation to its long involvement in research the history of Potsdam as a location for universities and colleges is more recent. In 1948 the State Technical College was founded, which became a Pedagogic College in 1952 and was then included in the newly founded Potsdam University in 1991. In 1954 the German College for Film Arts was founded - this is now the Konrad Wolf Technical College for Film and Television. The Potsdam Technical College was founded in 1991 as the third technical college in Potsdam.

The University of Potsdam was founded in 1991. With approximately 18,000 students the University is the largest institution of higher education in the state of Brandenburg and is the most beautifully situated of all academic institutions in Germany. It has developed into an address for modern research and instruction as well as for a well developed network for the flow and exchange of information between the academic, scientific and business sectors. Five faculties form the pillars of the university: the Philosophical Faculty, the Faculty of Life Sciences, the Faculty of Mathematics and Natural Sciences, the Faculty of Economics and Social Sciences, and the Law Faculty.

The major goal of the University of Potsdam is to become a top medium-sized university over the course of the following years and to achieve the status of a university of excellence. This ambitious objective, defined in the recently passed university development plan, demands internationalisation, a distinct research profile as well as high quality course offerings. By supporting promising young researchers and promoting international research cooperation, technology transfer and close cooperation with respected research institutes, the University of Potsdam intends to raise its national and international visibility. The University turns its attention to building networks between its own faculties and institutes and the diverse research and science institutes facilities in Potsdam.

Linked to the University of Potsdam its commercialisation company UP Transfer Gmbh was established in 1998 with partners from Potsdam including the Chamber of Commerce, Industrial Associations and both national and international companies. In delivering knowledge and technology transfer UP Transfer delivers a highly professional service working on approximately 40 to 50 projects per year of which 10 to 15 would be related to organisations in Potsdam. While a company of the University, UP transfer is not the single point of contact for commercialisation activities and external organisations are open to contact university professors directly for assistance, resulting in a disjointed approach to external relationship with both public and private enterprises.

Linked to the Media Sector and the location of Media City in Babelsberg, the Academy of Film and Television Arts "Konrad Wolf" is a public financed university of Brandenburg county. Founded in 1954, it is the oldest German media university. There are 11 programmes of study, namely; Animation, AV Media Sciences, Film and Television Dramaturgy/Film Script, Camera, Media Specific

Acting, Film and Television Production, Film and Television Direction, Film Music, Editing, Set Design and Sound Design.

Linked to the Information and Communications sector the Hasso Plattner Institute (HPI) for Software Systems Engineering Potsdam was established in 1999. At HPI the study of software systems engineering is closely linked to application and practice. All the degrees are awarded by the Potsdam University with which the Hasso Plattner Institute works together closely on the basis of a co-operative agreement.

3.8.4 Moving Forward

The industrial transformation of Potsdam linked to the knowledge Economy can only move forward through relationships with key regional Partners. The core ULSG for Potsdam will include the following organisations.

- University of Potsdam, Institute of Geography
- City of Potsdam, Department of Economics and Communications
- University of Applied Sciences
- Association “ProWissen e.V.”
- Potsdam Chamber of Commerce and Industry, Department of Innovation and Environment
- Complan Kommunalberatung

This partnership will be enhanced by a number of specialist organisations like UP Transfer, state economic organisation etc. who will add value to the delivery of the local action plan and who will support the ULSG work. The Ministry of Infrastructure and Spatial Planning (MIR), responsible for the ERDF-funded state programme of Sustainable Urban Development, or other ERDF-partners on state level will take part in ULSG meetings.

The opportunities and challenges identified in the final section of the baseline study, section 3.8.5, link well into the ERDF Competitiveness Programme which is aligned to the strategic goals of Lisbon and which for the state of Brandenburg has an established aim to strengthen the innovation capabilities of businesses and to further expand the technology and education infrastructure.

In particular the challenges and opportunities for Potsdam articulated into a Local Action Plan can be delivered through the "European Regional Development Fund (ERDF) (Convergence Objective) operational programme for Brandenburg for the period 2007 to 2013". This programme constitutes Community support for Brandenburg under the "convergence" objective. The overall budget of the programme comprises some EUR 2 billion, with EU assistance from the ERDF amounting to approximately EUR 1.498 billion (around 5 % all the EU funding from the Structural Fund to be invested in Germany in the period 2007-2013).

In particular the actions identified within the Local Action Plan can be delivered through Priority 2 with its particular focus on developing infrastructure geared to innovation, technology and education. The priority concentrates on Brandenburg's development strategy in the field of science and education, targeting infrastructural support for growth, innovation and employment. Closely connected to this is the promotion of knowledge transfer to the economy and technological infrastructure to improve exploitation of the R&D potential for business development.

3.8.5 Key Challenges for Potsdam

The RUnUP thematic network seeks to maximise the economic, innovation and entrepreneurship potential of medium-sized urban poles. The challenge facing Potsdam within this context is that the University of Potsdam which is the partner in the RUnUP thematic network is relatively isolated from the development of the city both geographically given its location and also in relation to the economic development and employment within the city. The regional economic effects of the university for city economic development is increasable.

The City of Potsdam and its Universities have approximately 22,000 students. Of these 18,000 students are registered at the University of Potsdam yet many of these commute daily from Berlin as a result of excellent transport links, cheaper student accommodation and student environment. The University and other sciences institutes focus mainly on Education and – international orientated – Research. Local and regional business needs attract interest but currently do not have the highest priority. The commercialisation and economic development activities are managed by UP transfer, they are delivering approximately 45 projects per year of which 15 would be with Potsdam based companies. The rate of spin-out companies among academic staff and students are at 3 to 4 per year for staff and 30 to 40 for students.

Within the context of the RUnUP network it is recommended that consideration should be given by the University of Potsdam to information exchange with the City of Solna and in particular the Karolinska Institute to more understand the mechanisms by which the Institute has engaged pro-actively in commercialisation through patenting, licensing and spin-offs through its development company KI Innovations and the Science Park strengthening its education and research profile while impacting the local economy.

Figure 3.8.5a University / Knowledge Based Partners role in innovation-led growth for Potsdam

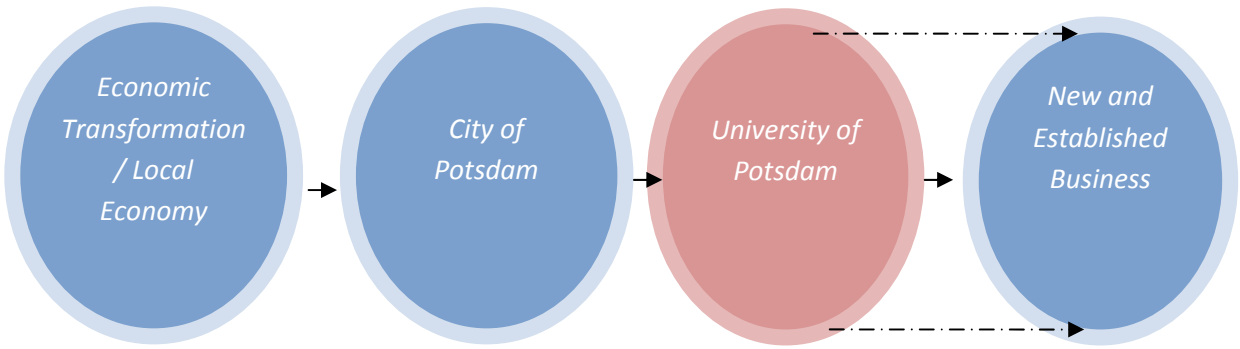
Creating New Economies	Industry Transplantation	Diversification of the economy	Upgrading of the economy

Focus on Biotechnology, Media, Information and Communications, GeoSciences Engagement and development of University of Potsdam in relation to Patenting, Licensing and Spin-Out Companies. Upgrading of existing commercialisation and entrepreneurial approaches within Institutes of Education and Research located in Potsdam	Problem-Solving (Consultancy, applied research) for Biotechnology, Media, Information and Communications. Student engagement programme for work with industry (Placement and Knowledge Transfer) with academic supervision.

Within the RUnUP Thematic network the University of Potsdam and its local partners need to address the following challenges to take full advantage of the knowledge economy:

Fully articulate the state of engagement between the University of Potsdam and the city economy. The focus of the University of Potsdam is on the delivery of Education and Research. Its focus on commercialisation activities in the form of patenting, licensing and spin-outs and other economic fields is increasable. As part of the RUnUP work programme the university tries to prove possibilities to enhance its awareness of structures and processes for increasing its commercialisation activities and how these can align, integrate and mutually support the education and research activities of the university. This potential and appropriate action by the University and its RUnUP partners is highlighted in figure 3.8.5a.

Figure 3.8.5b Economic Transformation relationships in Potsdam



Develop the Business Development Knowledge of Knowledge Based Partners. The state of the art identified the traditional model of university engagement with the economy through technology transfer and establishment of Spin-Off companies. As the key actor (see figure 3.8.5b) in taking forward the strategy for knowledge based transformation the university needs to encourage and develop business development skills and capabilities within their university staff to support longer term strategy implementation. The cooperation in the ULSG will help to establish close links with Triple Helix Partners and to develop ideas to implement methods and instruments to increase regional economic effects of university work.

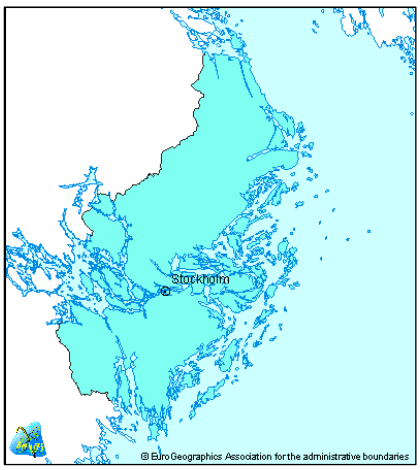
3.9 SOLNA, SWEDEN

3.9.1 Introduction

Solna with a population of 65 000 people is located in the east central Sweden, part of the capital Stockholm metropolitan area.

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 is 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.

Figure 3.9.1: The Stockholm Region



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.

For Solna, the problem as part of the RUnUP network can be precisely defined. With the world-class KI in Solna, and existing activity already in place to support the establishment of Bio-Tech and Life Science companies through KI Science Park and KI Innovations, focus is upon life science company start-ups and to strengthen the life science brand of Solna. The engagement in the RUnUP network will explore options to support an additional-tier of spin-out companies through incubation and

improvements. In addition, the establishment of stronger relationships between the City of Solna and KI is important in this process.

3.9.2 Solna Profile

3.9.2.1 City of Solna

Solna is situated in a strategic location in the Stockholm region ideally located for communications and transport. There are two international airports less than one hour's drive from Solna city centre and two motorways, the E4 and E18, pass through the city. Solna has two under-ground lines, six stations and two commuter train stations.

Solna is governed by its City Council, which has 61 elected members with responsibility for Finance, Planning and City Administration. The Council is supported by an Executive Board, Committees and City Commissioners**.** The Executive Board, together with various committees, is also responsible for implementing Council resolutions. The City Executive Board heads and co-ordinates the administration of the municipality's affairs and supervises the activities of the committees. It also has a duty to supervise the activities of Solna's municipal companies. The nature of the City Committees is determined by the City Council and are 11 in total. Supporting this activity are 4 full-time and 2 part-time city commissioners who are elected members of the City Council. Day-to-day activity is delivered through the work of the City Administration whose structure is aligned to that of the council committees.

The City of Solna has an Office that assists long term unemployed and immigrants to enhance their employability and ease the way back or into the Stockholm Region labour market. This office is within the same department as economic development, an intentional design to stimulate and make the best out of contacts between citizens, the city administration and the business sector. This successful work is one of the reasons for becoming the most business friendly municipality in 2008.

Economic Development in the City administration is decentralised and carried out in various offices. Only two people work part time within the Economic Development Office.

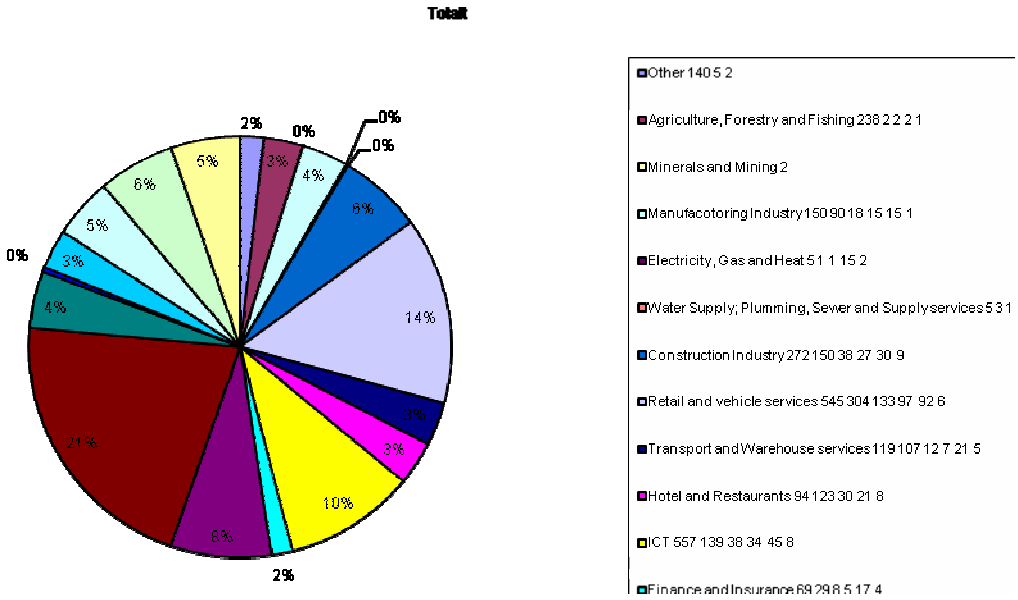
According to the survey among companies that rendered Solna the position as most business friendly municipality 2008, quick handling of permissions for construction and food permits, and the establishment of contact arenas between the city politicians and clerks on the one side and business representatives on the other, are the key features of the city's good track record in economic development. Aid and assistance for start-ups are delegated to the foundation Jobs and Society. Some guidance is available through the State welfare system, but the city itself has no such activity. Nor does the city own or assist in finding facilities for firms. The success has its basis in the service-minded organisation, a positive attitude towards alternative solutions and a high percentage of contracted private sub-contractors, along with a profile to become and maintain the position as a business friendly city. This has made Solna an attractive city for people and companies, while the city lost population only 15 years ago.

3.9.2.2 Solna Economic Structure

Solna has a political objective of being the most business friendly city in Sweden. Since 2000 Solna has on 3 occasions been recognised as Sweden's most business friendly municipality, in 2004, 2005 and 2008, by the Confederation of Swedish Enterprise, Sweden's leading and largest employer organisation. In Solna there are more jobs than inhabitants and several international companies have located their Swedish head offices in Solna.

There are 8 500 companies in Solna from international scientific companies, IT, telecommunications and healthcare and large construction companies to small restaurants and printing works. The university, the university hospital, the city administration, the EU agency ECDC (European Center for Disease prevention and Control) add up the public sector jobs in the municipality.

Figure 3.9.2.2 Economic Activity in Solna



The annual growth and the size of combined salaries has been about twice of Sweden's since 2000. The population is growing, is young and has a significant higher level of higher education than the national average. About 77 per cent of the population in Solna are working, which is about the regional and national average. Unemployment is among the lowest in Sweden, averaging 2,2 per cent during 2008. 685 companies were started in Solna during 2007, which is about twice as high as the national average. Estimated output for 2008 is about 600 start-ups. About 800 companies move to Solna every year, most of them from other parts of the Stockholm region. The number of Life Science companies is 60 – 80, dependent upon definition.

3.9.3 The role of Universities and Knowledge Transfer Partners in Solna.

KI is 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. It's mission is to improve people's health through research, education and global collaboration. Another goal is to

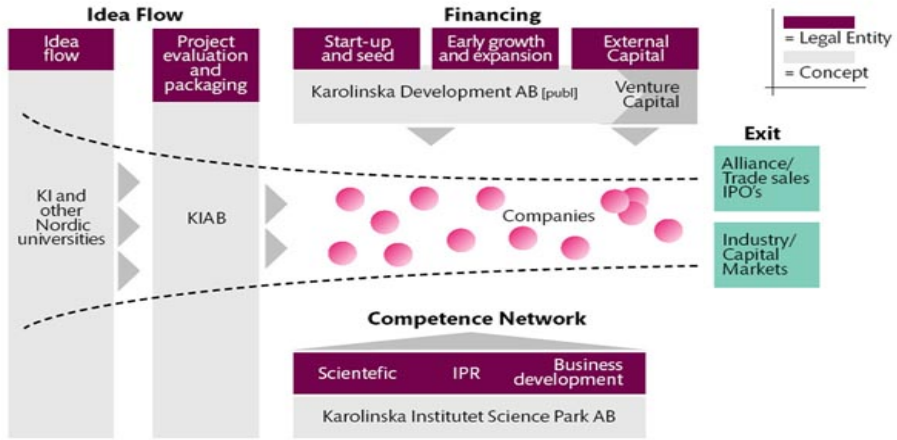
become Scandinavia's foremost innovation centre in Life Sciences, and leading in Europe in exploiting new scientific data.

KI places great value on close cooperation between the commercial and the academic sector. The Institute operates a Corporate Alliance unit that supports and stimulates cooperation with companies focusing on strategic alliances. The unit also works with strategies for infrastructure and regional interactions. The Corporate Alliances is a non-commercial counterpart to the innovation system (see below).

Research collaborations are important to KI and stands for about 8 per cent of KI's total revenue. The collaborations show a wide spectrum of different activities such as pure research collaborations, contract research and common infrastructure investments. Important collaborators are for example AstraZeneca, Biovitrum, Pfizer, Sumitomo and IBM.

By using the company Karolinska Institutet Education AB, the university provides the private sector with high quality specialized skills development within life science and medical technology. The work of KI in economic development is driven through the Karolinska Institutet Holding Company, which was formed at the end of 1995. The holding company has the following subsidiary companies; Karolinska Development (KD), Karolinska Institutet Science Park (KISP) and KI Innovations AB (KIAB).

KIAB promotes the results of biomedical research to develop new products and applications for the improvement of global health and wellbeing. The company provides the means for researchers at KI and other Nordic universities to develop their research results commercially. KIAB manages and finances the first steps of the development process by offering project management, funding for patent protection, legal advice and business development. It allows researchers access to an extensive network of contacts within the international pharmaceutical industry. KI has created an innovation system for commercialisation of innovative Life Science projects. The skills required for the implementation of each stage of the commercialisation process have been developed and improved in this system.



Projects are evaluated on the basis of commercial potential, quality of research and strength of the intellectual property rights. On average KI assesses 100 projects each year. 10 per cent are accepted

for development, with an average 50 per cent of successful projects transferred into license agreements and 50 per cent into spin-out companies. The commercialisation process is about "picking winners" rather than "making winners".

When a project satisfies the acceptance criteria a commercial agreement is signed and a project group is assigned to manage the development process in the establishment of a new biotech company or a licensing agreement with an international pharmaceutical or biotech company. KIAB offers academic researchers initial free and confidential consulting regarding academic innovations within fields of Life Science. If a project is accepted KIAB contributes with:

- Evaluation of commercial potential
- Patenting of academic inventions
- Licensing
- Negotiations
- Biotech start-up formation
- Pre-Seed financing

The project team creates a business plan with the goal to devise a strategy for the shortest possible route to successful commercialization for the specific invention. The strategies of the spin-out companies are seldom to create new pharmaceutical companies; instead priority is put on strategies that enable early exit opportunities through partnerships with existing international pharmaceutical companies that are able to provide extensive expertise in the later stages of drug development in combination with existing international sales forces. This reinforces the impact of the long gestation period of Research and Development, which can be between 10 and 15 years in length within the life science sector.

In parallel with the creation of a business plan the project teams are involved in planning and execution of continuous development of the scientific results towards a product, for instance through preparations for later stages of the clinical trials. The development work is also synchronised with the development of the patent portfolio and the project team assures that any new findings are protected.

Karolinska Institutet Science Park (KISP) was initiated by KI to create an opportunity for mature companies and start-ups to establish a presence in close physical proximity to academic research and training. At present, KISP has two buildings in Solna and one south of Stockholm in Flemingsberg. The park in Solna includes office premises and laboratory facilities. The company Karolinska Institutet Science Park AB, which, in turn, is owned by KI through its wholly owned company Karolinska Institutet Holding AB (KIHAB), operates KISP.

KISP is managed by an organisation of specialised professionals, whose main aim is to increase the wealth of its community and KI by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge based institutions. In addition to contributing to the commercialisation of research carried out at KI, the object is to promote KI's competitiveness and to generate further knowledge exchange for KI researchers.

KISP stimulates the flow of knowledge and technology between KI, R&D institutions, companies and markets. KISP provides laboratory and office space for mature companies collaborating with KI or with other companies at the Science Park. It facilitates the creation and growth of innovation-based companies through incubation and spin-off processes and provides other value-added services together with high quality space and facilities. KISP is currently developing 3 new buildings in park-like settings, two of which will be of six floors and one of seven floors.

The Unit for Bioentrepreneurship (UBE) is an academic unit at KI with the mission to inspire, educate and facilitate contacts and interactions for undergraduates and PhD candidates, researchers and clinicians within the fields of innovation and entrepreneurship. UBE develops and provides courses, seminar series and master thesis projects among other activities. In 2008, UBE started the Master in Bioentrepreneurship Programme. This Master Programme aims to provide persons with a background in Science knowledge and skills in entrepreneurship, economy, management, product development, patent etc. This gives them a greater opportunity to start companies and add value to existing companies in the Life Science sector. In coming years, this Programme will make a new resource for companies in Solna.

Stockholm-Uppsala Life Science is a cluster organisation that promotes the development of the life science sector in the Stockholm-Uppsala region, which covers an area greater than the Stockholm Region. The organisation promotes the region itself and is active on the international arena to attract new resources and investment.

The Stockholm Chamber of Commerce is located in the heart of Stockholm, with a regional office in Uppsala. The chamber is a private law Chamber, based on voluntary membership of 2,400 member companies, ranging from global giants to small entrepreneurs. 120 companies are members from Solna. Many members of the Chamber of Commerce are from key sectors in Stockholm's business community including ICT and health care along with banking and financial sectors.

The Stockholm Chamber of Commerce is a business organisation that aims to improve the environment for business in the region of Stockholm and Uppsala. The Stockholm Chamber of Commerce has a key focus in infrastructure and policy making. The Chamber is independent from political institutions and is a trusted third party in business agreements. Other tasks include establishing networks for business contacts and providing services for member companies.

3.9.4 Moving Forward

The industrial transformation of Solna linked to the knowledge Economy can only move forward through relationships with key regional Partners. The core ULSG for Solna[54] will include the following organisations.

- Solna City Council
- Karolinska Institutet
  - Unit for Bio-Entrepreneurship
  - Corporate Alliances
- Karolinska Institutet Innovations
- Karolinska Institutet Science Park
- Stockholm-Uppsala Life Science
- Stockholm Chamber of Commerce

This partnership will be enhanced by a number of specialist organisations who will add value to delivery of the Local Action Plan.

The opportunities and challenges identified in section 3.9.5 links well into the Stockholm Region ERDF Competitiveness Programme, a programme that focuses heavily on entrepreneurship in high tech and knowledge dense sectors. On 16 August 2007, the European Commission approved a Regional Operational Programme for the region of Stockholm in Sweden for the 2007-13 period. The operational Programme falls within the Regional Competitiveness and Employment Objective framework and has a total budget of around €94 million. Community assistance through the European Regional Development Fund (ERDF) amounts to some €38 million, which represents approximately 2.0% of the total EU investment for Sweden under the Cohesion Policy for 2007-13.

In particular the challenges and opportunities for Solna articulated into a Local Action Plan can be delivered through actions related to Priority 1; The Development of innovative environments in the urban area, in which clusters and innovation systems will be promoted and meeting places created for supporting innovation and development through advice and counselling and provision of risk capital. In addition there are also opportunities under Priority 2: Business development which specifically targets the strengthening of co-operation between academy and industry.

3.9.5 Key Challenges for Solna

The RUnUP thematic network seeks to maximise the economic, innovation and entrepreneurship potential of medium-sized urban poles. While Solna has KI within its municipality there is a need to develop communications between KI and the City of Solna.

To date, interaction between the municipality and the KI innovation system is limited. This represents a key challenge in driving forward the Local Action Plan for the RUnUP network. The municipality have identified the importance of life sciences to the development of its economy and

[54] Information: THE ULSG for Solna met in shadow form during the RUnUP network development phase on 18th August 2008 with the lead expert.

its role as a facilitator of activity rather than a deliverer of schemes to support economic change. In this context KI is the only actor with a fully exclusive focus on the development and delivery of a Biotech and Life Science based economy in Solna (see figure 3.9.5a and 3.9.5 b).

Within the RUnUP Thematic network the City of Solna and KI need to address the following challenges to maximise its potential in the knowledge economy:

- **Implement appropriate actions to support an additional-tier of spin-out companies through incubation**. KIAB as a spinout mechanism of KI assesses on average 100 ideas per annum. Of these, 10 per cent are accepted with roughly half of these being transferred into licensing opportunities and the remaining half into spinouts. While this is not the only route for facilitating a spinout within this environment and a potential entrepreneur could approach the Science Park directly this highlights the focus of KIAB "picking" rather than "making winners".

Figure 3.9.5a University / Knowledge Based Partners role in innovation-led growth for Solna

Creating New economies	Industry Transplantation	Diversification of the economy	Upgrading of the economy

Focus on Bio / Life Sciences within the economy of Solna

Linkages to KI to support growth of entrepreneurial businesses

Development of entrepreneurial services (incubation, start-up support etc)

Enhancement of a Life Science identity in Solna linked to the Stockholm-Uppsala Biotech cluster

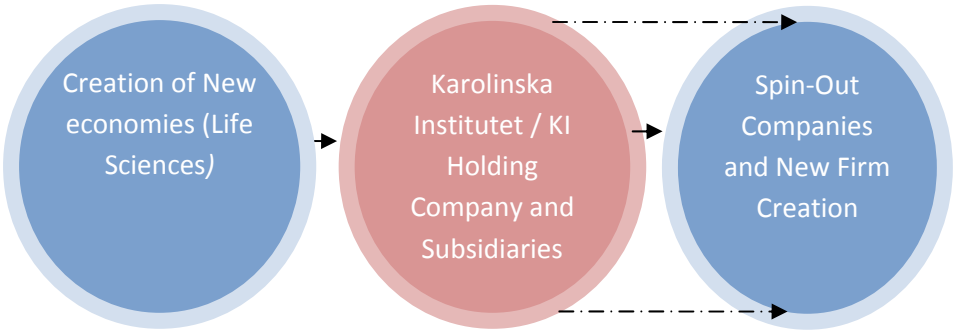
Linkages to university research and Solna/Stockholm Region Entrepreneurs

- To generate business growth in Solna, consideration should be given to incubation approaches that can support the establishment of an additional tier of companies to enhance the development of the life science cluster in Solna and the Stockholm Region. This drive for new firm creation may be restricted by the Swedish entrepreneurial mentality where individuals have a distinctly positive preference for being an employee of a company rather than an entrepreneur, although entrepreneurs are not seen negatively[55].

[55] Eurobarometer: Entrepreneurship Survey of the EU25, Secondary Analysis, Sweden.

- **Evaluate the adoption of a referral process for potential spin-out and licensing opportunities.** As with the potential of developing actions around incubation consideration should be given to the development of a mechanism to transfer ideas from inventors to the commercial world. The creation of a marketplace for technology needs and technology offers would enable the 90 per cent of ideas that are not taken forward by KI Innovations to be promoted within a wider marketplace.

Figure 3.9.5b Industry Transformation relationships in Solna



- **Actively promote the City of Solna as the place to do business and in particular link this to the promotion of biotechnology and life science.** Solna is marketed as the place to do business and is successful in this direction. However, there is a limited linkage in the marketing of the city and the creation of an industry identity in life science. The presence of a great number of life science researchers and companies, KI, the coming of NKS, the existence and expansion of KISP, the Stockholm Chamber of Commerce and existing cluster organisations makes an excellent opportunity for the branding of Solna as the place to do business for life science.

4.0 RUNUP: COMPARISON AND DATA ANALYSIS OF PARTNER CITIES

4.1 Introduction

In the 2nd chapter of the baseline study, the state of the art review has identified the importance of the knowledge economy within Europe and in European Commission policy. For medium sized cities with populations between 50,000 and 200,000 inhabitants the challenge is a critical one as they often lack the foundation of a university, commonly found in large cities that are strong in research and integration with the local economy. As a result of their size they also lack economic development strategies that have been fully articulated and debated and are unable to fully identify their economic strengths and distinctive offer. The Partner profiles as an integral part of the baseline study identify the specific context for each of the partner municipalities and the specific challenges that are facing in integrating the work of universities within their urban pole. This section compares and contrasts the situation between each of the partner cities.

Table 4.1: The Competitiveness and Convergence Regions of the RUnUP network

REGION	CODE	CLASSIFICATION	URBACT CITY
Northumberland, Tyne and Wear	UKC2	Competitiveness	Gateshead
Pais Vasco	ES21	Competitiveness	Barakaldo
Molise	ITF2	Competitiveness	Campobasso
Stockholm	SE01	Competitiveness	Solna
Nord - Pas-de-Calais	FR30	Competitiveness	Dunkirk
Dytiki Ellada	GR23	Convergence	Patras
Wielkopolskie	PL41	Convergence	Leszno
Centro, Portugal	PT16	Convergence	Águeda
Brandenburg - Südwest	DE42	Convergence	Potsdam

In line with the principles of URBACT II, 5 of the partner cities in RUnUP are from Competitiveness regions and 4 from Convergence regions (see table 4.1).

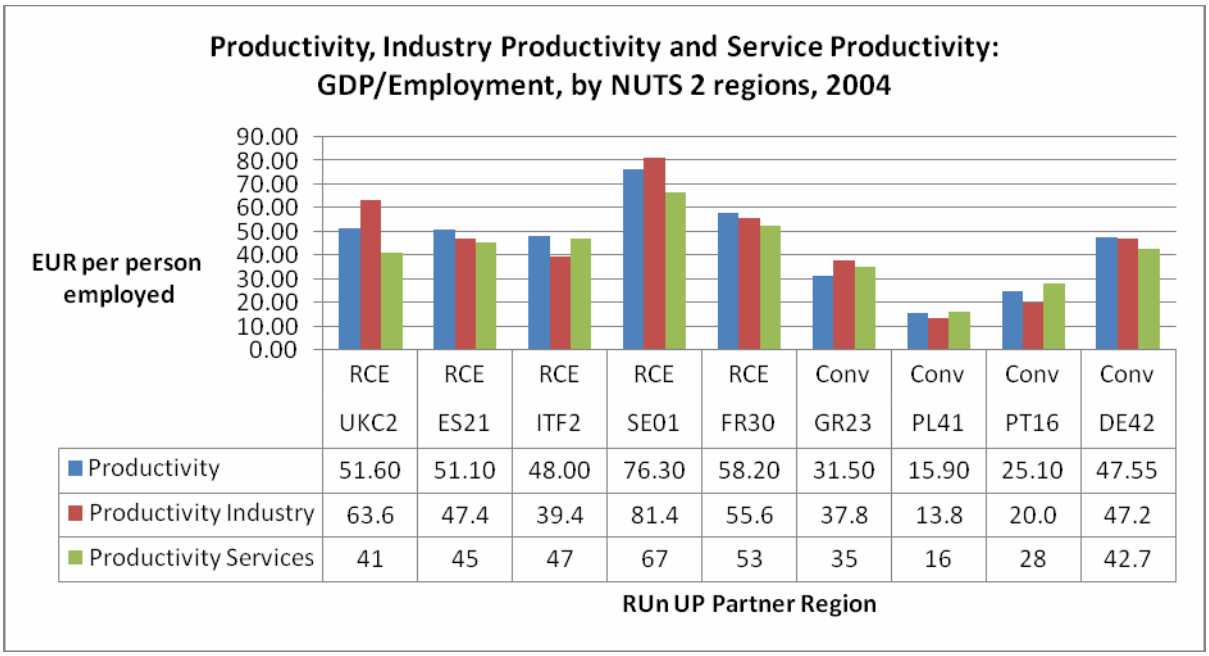
4.2 Economic Geography

Geographically the cities of the network can be considered as either from within a "city-region" namely; Newcastle-Gateshead; Bilbao-Barakaldo; Stockholm-Solna and Berlin-Potsdam or from within a wider regional context as a principal or smaller town or city, namely; Leszno, Dunkirk, Campobasso, Patras and Águeda. Those partner cities and towns operating within a city-region as will be evidenced from regional data within the synthesis are economically stronger performers supporting the arguments in the State of the Art Report[56] that "larger cities in particular are well placed as they are locations where knowledge is created, developed and commercialised, have higher levels of educated staff, have well developed infrastructure and are well networked in the

[56] Source: URBACT I Thematic Network STRIKE, Discussion Paper, Cities in the Knowledge Economy: New Governance Challenges, Willem Van Winden & Leo van den Berg, September 2004

Global Economy". Within this context the RUnUP network is able to and can explore the thesis that the physical proximity of a medium sized city to a larger city is a key determinant in its capability to access resources to support its development in the knowledge economy.

Figure 4.2.1[57]



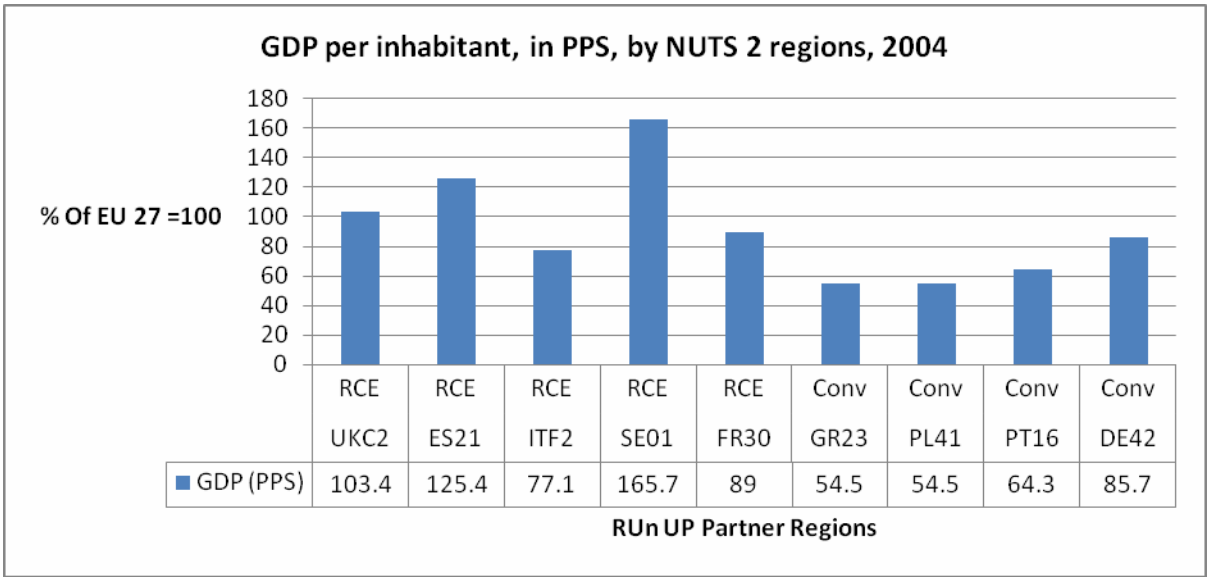
	RCE UKC2	RCE ES21	RCE ITF2	RCE SE01	RCE FR30	Conv GR23	Conv PL41	Conv PT16	Conv DE42
Productivity	51.60	51.10	48.00	76.30	58.20	31.50	15.90	25.10	47.55
Productivity Industry	63.6	47.4	39.4	81.4	55.6	37.8	13.8	20.0	47.2
Productivity Services	41	45	47	67	53	35	16	28	42.7

Economically while there are generally quantifiable differences between the positions of the partner regions regarding competitiveness and convergence there are 2 specific anomalies. The Molise region of Italy, in which Campobasso is located, although officially a competitiveness region can be considered to also exhibit certain convergence characteristics due to its lower educational attainment, lifelong learning participation and employment/unemployment profile. Conversely the Brandenburg region of Germany, in which Potsdam is located, while a convergence region exhibits certain competitiveness characteristics, in particular highlighted through its productivity in both industry and services. This is also highlighted in the European Innovation Scoreboard for 2006 in which Molise is ranked at 165 and Brandenburg at 84 from 203 European Regions.

An examination of the economic and innovation measures reveals that for all cities, there is a unique opportunity to improve the competitiveness of their local economy (see figures 4.2.1, 4.2.2 and 4.2.3) through the development of their university capabilities to support the local economy to improve performance related to productivity, GDP and employment. This is supported by the European Innovation Scoreboard for 2006[58] which identifies that 4 of the partner regions are in the top 100 of leading regions; namely, Stockholm (1), Pais Vasco (55), North East England (78) and Brandenburg (84); with the remainder, Nord-Pas de Calais (140), Centro, Portugal (153), Molise (165) and Dytiki Ellada (182) are lower ranked.

[57] Source: Regions: Statistical Yearbook 2005, European Commission
[58] Source: European Innovation Scoreboard, 2006

Figure 4.2.2[59]



The economic performance of the partner regions is driven by the dominating sectors within their economies; although it must be equally recognised that localisation of the economy can radically alter the perspective from region to an individual town. In this context both Wielkopolska and Dytiki Ellada, home to Leszno and Patras respectively are classified as being dominated by the agriculture and primary sectors, although Leszno is distinctly an industrial town. Similarly, while the region of Molise is classified as having no dominant sector, Campobasso is dominated by Agriculture and Trade. Such regions are characterised by significantly lower levels of GDP per capita, while employment levels although not high are not significantly behind those of the more industrial and service sector driven regions in the RUnUP network.

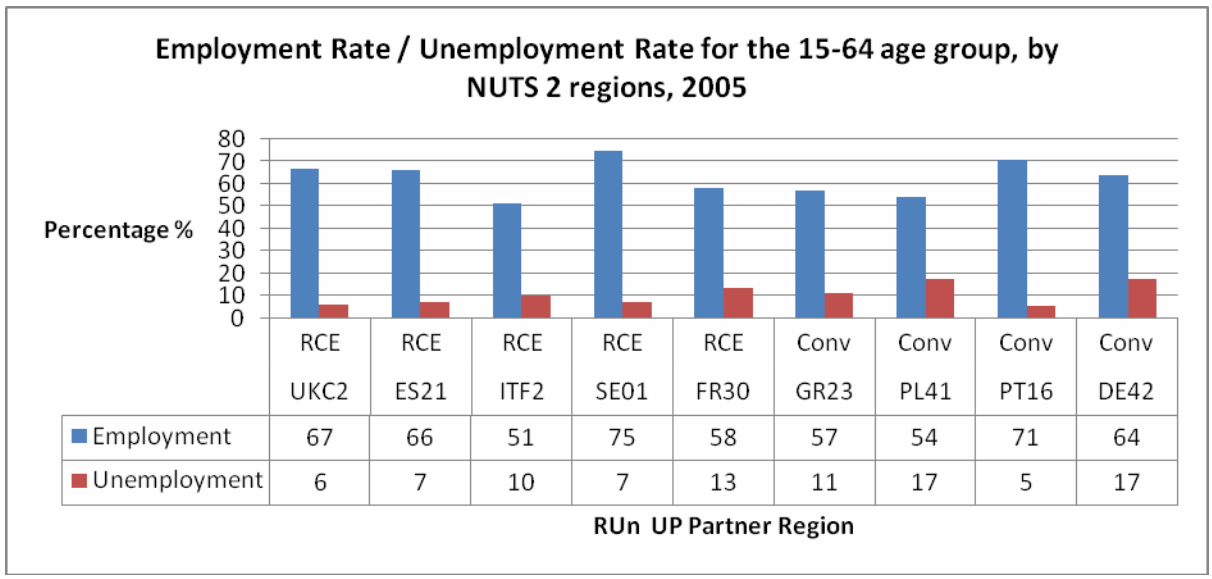
In the context of the URBACT II network RUnUP the challenges facing the economies of Campobasso, Leszno and Patras are clear and significant. The respective municipalities have no strategy for supporting economic development of existing or future sectors, their economic development capacity needs to be established so that the linkages between the knowledge based economy and its demand for skills, physical space and political support can be fully articulated and widely communicated. This will enable the creation of a platform for the transfer of their economies from lower value to higher value adding activities.

The RUnUP regions of Northumberland, Tyne and Wear; Pais Vasco; and Nord Pas de Calais, home to Gateshead, Barakaldo and Dunkirk respectively are predominantly industrially based, although only Pais Vasco is classified as such. In this context such cities and towns generally need to develop strategies that support the modernisation (upgrading of existing economies) and diversification (old industry into related new economic sectors) of their existing economic base. Within this context the RUnUP network is able to and can explore the thesis that the dominance of industrial and service sectors in local economies is critical to productivity, levels of GDP and employment, enabling

[59] Source: Regions: Statistical Yearbook 2005, European Commission

medium sized cities and towns to develop within the knowledge economy and maximise the location of knowledge institutions at a local and regional level.

Figure 4.2.3[60]



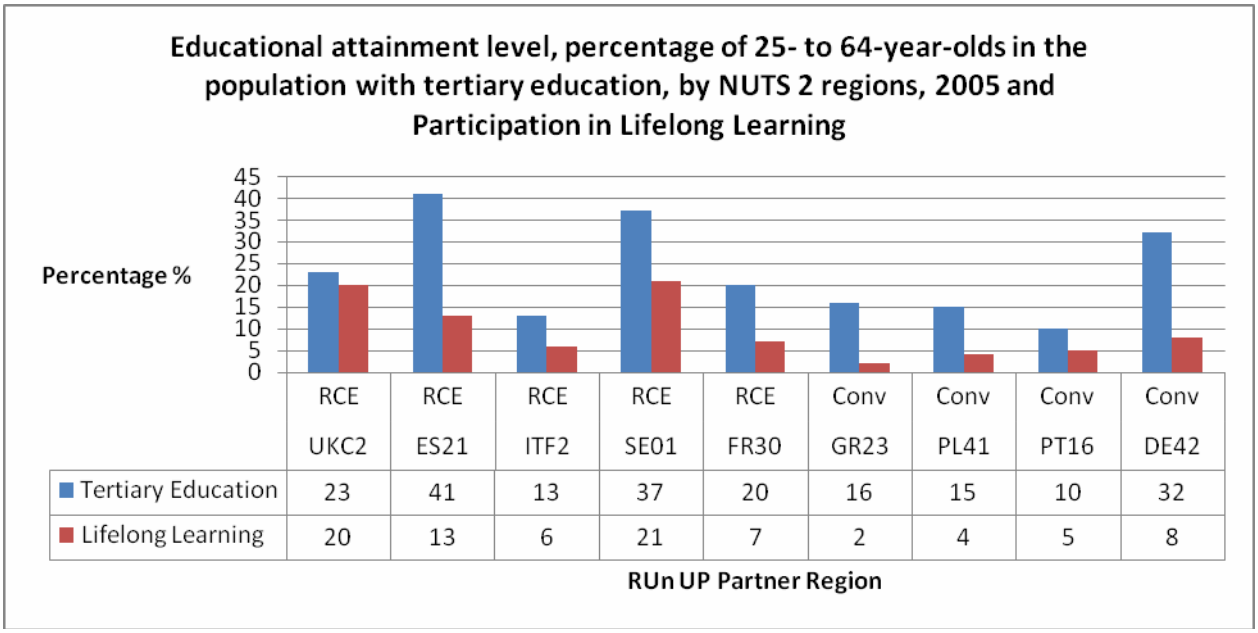
	RCE UKC2	RCE ES21	RCE ITF2	RCE SE01	RCE FR30	Conv GR23	Conv PL41	Conv PT16	Conv DE42
Employment	67	66	51	75	58	57	54	71	64
Unemployment	6	7	10	7	13	11	17	5	17

4.3 Education and Skills

As highlighted in the OSLO Manual[61] "much innovation knowledge is embodied in people and their skills, and appropriate skills are needed to make intelligent use of external sources or codified knowledge. The role of human capital in innovation is important at both the firm and the aggregate level. Some issues of interest here are the quality of the education system and how well it matches the needs of innovative firms and other organisations; what efforts firms make to invest in the human capital of their employees; whether innovation activity is hampered by shortages of qualified personnel; whether there are sufficient opportunities for worker training; and how adaptive the workforce is in terms of the structure of the labour market and mobility across regions and sectors".
In this context 3 indicators are of particular relevance; Educational Attainment Level, Participation in Lifelong Learning and Human Resources working within the Science and Technology Sector. As outlined on the European Commission website for Growth and Jobs[62], technical development and innovation is central to the knowledge economy and in this environment individual citizens need to continually learn new skills or participate in Lifelong Learning. Put simply "investing in technology is useless unless Europe also invests in people who can make that technology work for growth and jobs".

[60] Source: Regions: Statistical Yearbook 2005, European Commission
[61] Source: Oslo Manual, Guidelines for Collecting and Interpreting Innovation Data, 3rd Edition, OECD and Eurostat.
[62] Source: European Commission website for Growth and Jobs

Figure 4.2.4[63]



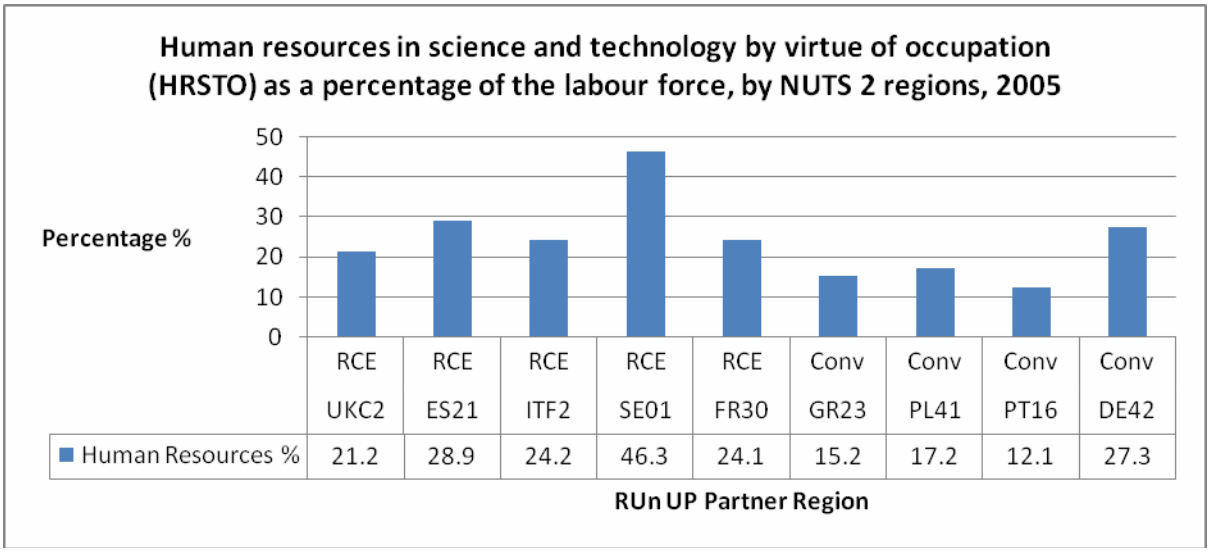
Educational attainment levels and participation in Lifelong Learning (see Figure 4.2.4) which is the traditional measure of available resources to support economic modernisation, a key attractor for industry transplantation and a key ingredient in the creation of new economic sectors through knowledge based spin-offs is particularly strong in the Basque country; Stockholm; Northumberland, Tyne and Wear and Brandenburg. This will enable the transformation of these economies in-line with business standards through the deployment of educated personnel.

Conversely the performance of Molise, Wielkopolska, Centro, and Dytiki Ellada is poor reflecting to some extent the high concentration of micro-enterprises within the local economy and the local perspective on the importance of universities for these RUnUP partner towns and cities. The impact of higher levels of educational attainment and participation levels is directly linked to employment in Science and Technology fields (see figure 4.2.5). While performing relatively poorly in educational attainment the Italian region of Molise performs on a par with other competitiveness regions in Science and Technology, indicating that a proportion of this workforce are educated to less than tertiary level and highlighting a particular requirement for increasing access to Lifelong Learning which is a key feature of all the convergence partner regions.

The Commission recognised in its communication 'Investing in research: an action plan for Europe'[64], that an increase in the levels of research investment between Europe and its main trading partners was required to support long-term innovation, growth and employment potential. The objective set by the March 2003 Barcelona Council was to increase the average level of research investment from 1.9% of GDP to 3% of GDP by 2010, of which 2/3 should be funded by the private sector.

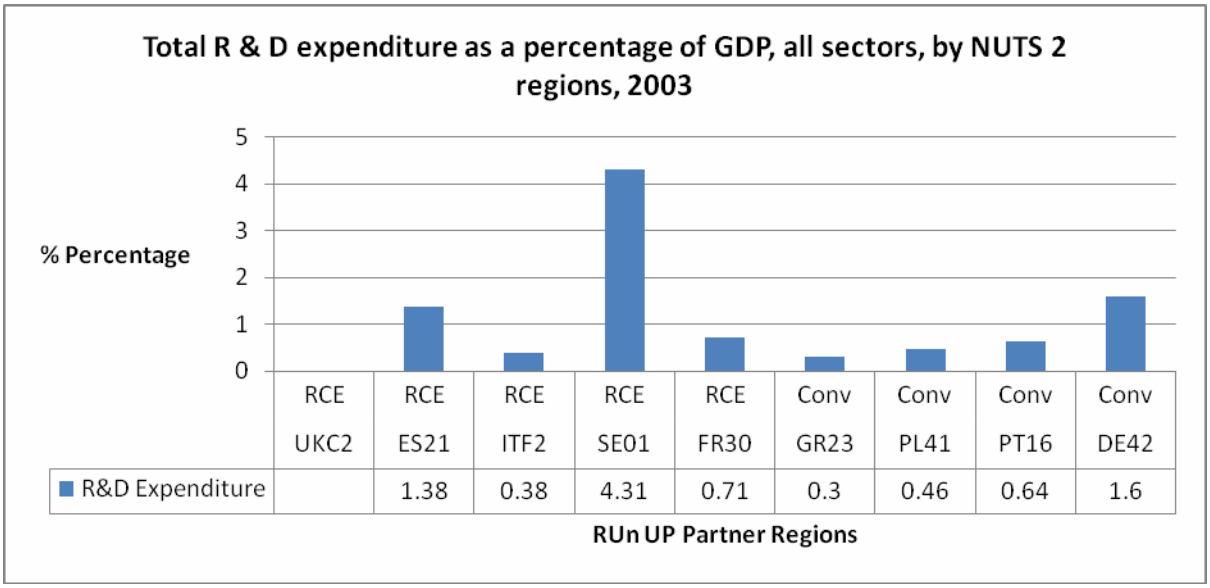
[63] Source: Regions: Statistical Yearbook 2005, European Commission
[64] Source: Investing in research: an action plan for Europe', European Commission, April 2003,

Figure 4.2.5[65]



The communication recognised the value of the development of regional innovation strategies across Europe in increasing awareness of the importance of research and innovation. However the 3% objective needed and required updated and strengthened regional strategies. Bridging the gap between the academic research system and industry was seen as an essential requirement in the creation of the European Research Area and for the continuing development of Europe's economy.

Figure 4.2.6[66]



The position of the partner regions in RUnUP in 2003 (see figure 4.2.6) reflects the improvement required by European Regions more generally with only the Research and Development intensive Region of Stockholm exceeding the 2010 target with an expenditure of 4.31% of GDP (Note: Data for

[65] Source: Regions: Statistical Yearbook 2005, European Commission
[66] Source: Regions: Statistical Yearbook 2005, European Commission

North East England UKC2 was unavailable). As defined within the European Innovation Scoreboard[67], "R&D expenditure represents one of the major drivers of economic growth in a knowledge-based economy. As such, trends in the R&D expenditure indicator provide key indications of the future competitiveness and wealth of the EU. Research and development spending is essential for making the transition to a knowledge-based economy as well as for improving production technologies and stimulating growth."

[67] Source: European Innovation Scoreboard, 2006

5.0 RUNUP: SYNTHESIS

5.1 Introduction

The RUnUP network addresses 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. To support the network and its partners the synthesis brings together the needs and challenges of the partner cities in a coherent way and within the broader context of the role of universities in Medium Sized cities.

5.2 RUN-UP: Adding Value at the City and European Level

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. As has been outlined in the State of the Art 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 identifies the entrepreneurial role of universities as a source of spin-offs and start-up companies and their role in knowledge and technology transfer. In this context 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

In support of this, 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, with a particular focus on:

- Contributing to faster and better commercialisation of research results;
- Improving innovation performance and accelerate 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;
- Helping companies grow and become more competitive.

Such support mechanisms designed to raise R&D 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.

To support the development of their local economy the partners in the RUnUP network need to examine how knowledge is transferred into the economy. The RUnUP partners operate in urban

areas with generally a large number 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 particular they need to develop with partners from their URBACT Local Support Groups 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.

The network has taken an integrated approach to economic transformation examining the role of universities and economic development partners at a local level in particular utilising a general framework from Massachusetts Institute of Technology (MIT) which has allowed us to understand the specific challenges faced by cities much more clearly while at the same time providing a structure for comparison and the drawing of general policy conclusions. Traditionally medium-sized urban areas seeking to work with and to integrate universities into their economic activities often take a "classic perspective" of universities focussed solely on technology transfer and spin-out activity linked to research. The adoption of this integrated approach provides a mechanism through which local authorities can become actively engaged in defining and delivering their local approach to engage business in the knowledge economy and influencing the role of local and regional universities in line with the principle of the triple helix of university-industry-government relations.

5.3 RUNUP: Promoting the Knowledge Economy within the Partner Cities

The RUnUP network focuses on the practical role that local authorities can play in Small and Medium-Sized Cities as the vital interface between the needs of economic actors and the knowledge base.

5.3.1 Gateshead

The challenge for Gateshead in promoting the knowledge economy is that while it has no university located within its metropolitan borough, there is a clear need to work closely with the excellent range of nearby university institutions, and to ensure that their focus is increasingly aligned to the needs of the Gateshead economy. While it operates collaborative activity with its partner universities the council needs to fully understand how its knowledge based partners deliver activity in support of economic transformation so that as a result in can deliver new knowledge-based collaboration activity in line with economic transformation requirements. In particular it needs to articulate the state of transformation within its local economy, specifically its role within the creative industries and its support for modernisation and diversification of its manufacturing economy.

The ULSG for Gateshead for Gateshead has met 2 times during the development phase, including 1 meeting with the lead expert. Its composition is strongly linked to the structure of the triple helix and promotion of the knowledge economy involving stakeholders form Universities (Newcastle and Northumbria), Government (Gateshead Council, Newcastle Council, One North East (Managing Authority) and Business representation (Chamber of Commerce, Engineering Employers Federation).

5.3.2 Águeda

The Municipality of Águeda is characterised by an industrial tradition with an endogenous entrepreneurial capability, which are the major factors that have contributed to the economic success of the city during the twentieth century. However, changes in the demand patterns of international markets, as well the economic crisis that took place due to these changes, affected Águeda's economic environment forcing it to rethink its approach to economic development and innovation.

Águeda as a result has established projects to stimulate innovation and competitiveness. In this context, it is natural that the municipality of Águeda is a partner in 2 URBACT networks, "Greening SME´s", related to the development of policies that stimulate the creation of sustainable businesses and the RUnUP network, in which the main theme is the role of universities in economic development of urban centres. It is also natural that that these projects are part of the same strategic approach as company sustainability will have to be achieved through innovation and knowledge transfer centres, including universities.

5.3.3 Barakaldo

While Barakaldo has undergone significant economic transformation and economic regeneration to date this has not included the development of knowledge based economy activities. In particular Barakaldo has only a small campus location of the University of the Basque Country with no direct engagement with the technology transfer and spin-out activities of the university.

The Municipality of Barakaldo through its economic development agency Inguralde as the principle actor in economic development needs to develop a strategy that supports the creation of new economic sectors linked to the research activities of its university and technology centres and support existing sectors of the economy namely business services and construction. In this context, for example, Inguralde has got some business infrastructures which could be used to deliver new activities linking research into the generation of spin-out companies and entrepreneurial activity and linkages with local economy.

The RUnUP network will enable new opportunities for collaborative working to be explored to address specific problems (e.g. creation of new models of integrated education, knowledge transfer and entrepreneurship models) or the creation of a new identity linked to the marketing of Barakaldo and the offer of its university partners. In this context the ULSG for Barakaldo involves the following key Stakeholders; Municipality of Barakaldo, Inguralde, two faculties and one multidisciplinary group of the University of the Basque Country, the Chamber of Commerce and Industry and two private companies located in Barakaldo. During the development phase the ULSG has met 3 times.

5.3.4 Campobasso

The integration of services for enterprises and entrepreneurs linked to knowledge and technology transfer in particular connections with universities and research centres is seen as the key problematic for Campobasso. The Municipality of Campobasso is home to 2 universities, the public University of Molise and the private Catholic University of the Sacred Heart operating alongside other knowledge-base partners including the Chamber of Commerce and Innovation Point located at the Cittadella dell' Economia in Campobasso.

The challenge facing Campobasso is that its existing economic structure is dominated by the agriculture sector. The Scientific & Technological Park of Molise (Molise Innovazione) is supporting businesses operating in this sector but is limited in its current level of engagement and support for businesses. Its operations and approach to working with business need to be further developed and enhanced.

To strengthen its economic development activities the Municipality of Campobasso needs to articulate a strategy for the development of new economic sectors around sustainable industries and bio-medical/biotech. As Campobasso has 2 universities and a technological park located in the city it is the role of these organisations supported through RUnUP and the development of their local action plan to enhance their knowledge of business development in a university context and to enhance their capacity and capability around entrepreneurship and incubation development. To support this local development the ULSG involves the following stakeholders; Municipality of Campobasso, Province of Campobasso, University of Molise, Science and Technology Park of Molise (Molise Innovazione), Catholic University of the Sacred Heart, Chamber of Commerce. During the RUnUP development phase the ULSG has met 2 times including 1 facilitated meeting with the lead expert.

5.3.5 Dunkerque

Economic Diversification is seen as the key problematic in relation to Dunkerque where the university contribution to the economy is seen as insufficient and the linkage of the local economy to the energy sector 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.

The development of an entrepreneurial and innovation culture is of particular importance. In this context the council see 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 and environment for SMEs
- The development of Innovation and Research & Development projects with large enterprise

In particular there is a requirement to enhance the level of innovation by developing partnership working between businesses to maintain and develop industrial employment. The potential impact of concentration on Large Enterprises for employment is well recognised and there is a requirement to maximise the position of the council area as a transport and logistics hub.

Specifically the Greater Council see the development of a cluster of sustainable technology supported by the involvement of the university in technology transfer and logistics as key development.

5.3.6 Leszno

The challenge facing Leszno is that its economy is based on traditional industries with low levels of productivity. In delivering innovation led growth for Leszno through the modernisation of its existing industrial base and the creation of new companies a new relationship between the municipality and business support organisations in Leszno needs to be established. Similarly the role of the higher schools in Leszno needs to be maximised to look simply beyond the role of skills development through education into examining their potential for supporting businesses through consultancy, best practice scanning, technology/foresight exercises and in creating new areas of the economy by supporting the development of entrepreneurial services e.g. incubation to students, graduates and the wider community.

In support of this development the ULSG for Leszno includes the following stakeholders; Muncipality of Leszno, Higher Vocational State School (Państwowa Wyższa Szkoła Zawodowa), Centre for Innovation and Technology Transfer, Regional Chamber of Industry and Commerce, Higher Education School of Marketing and Management (Wyższa Szkoła Marketingu i Zarządzania) and Leszczyńska Fabryka Pomp.

5.3.7 Patras

The challenges facing Patras is that it has no focus on the transformation of its existing sectors of the economy (agriculture, food manufacturing) either through modernisation or diversification with no economic strategy or economic development activity at the municipality level. A lack of data at the city level means that the identification of business need and the development and delivery of business support is being based on the needs of the prefecture and the region rather than local demand. In addition given the high level of unemployment of 16.1% with business start-up rates below both the national average and convergence regions of the European Union and decline in economy activity within the primary and secondary sectors it is particularly important to consider the development of new economic activities potentially around Informatics and Communications and Environmental Management and Protection.

Its economic development capacity needs to be established so that the linkages between the knowledge based economy and its demand for skills, physical space and political support can be fully articulated and widely communicated. The University of Patras has an extremely limited industrial liaison activity, its capacity and capability needs to be established with reference to models of knowledge based enterprise support and entrepreneurial development within Universities across Europe. Moving forward the Patras Science Park and Business Innovation Centre must play a significant role in supporting the development of economic strategy and leading the implementation of significant activities with the Chamber of Commerce and the University and Technological Institute around industrial modernisation and new sector creation. To support this local development the ULSG for Patras includes the following stakeholders; Municipality of Patras, Patras Science Park, University of Patras, Technological Educational Institute, Business Innovation Centre Western Greece, and the Chamber of Commerce.

5.3.8 Potsdam

The challenge facing Potsdam is that while its existing economy is growing and developing in the areas of Media, Information and Communications and Biotechnology, the transfer of knowledge through students and graduates into the knowledge economy is limited given predominance of the university on Research and Education and the significant number of students commuting from Berlin to Potsdam on a daily basis.

Significantly within the URBACT II network RUnUP the University of Potsdam needs to articulate a strategy for enhancing its awareness of structures and processes for increasing its commercialisation activities and how these can align, integrate and mutually support the education and research activities of the university. Additionally in implementing a strategy for knowledge based transformation the university needs to encourage and develop business development skills and capabilities within their university staff to support longer term strategy implementation. Overall while the City of Potsdam has a significant infrastructure of knowledge based organisations and business support organisations the environment for supporting companies is not well connected and fragmented resulting in challenges for companies to engage with and be referred to appropriate organisations for support.

5.3.9 Solna

For Solna with the world-class Karolinska Instiutet (KI) located in their municipality and existing activity already in place to support the establishment of Bio-Tech and Life Science companies through KI Science Park and KI Innovations the focus of their engagement in the RUnUP network is specifically around exploring options for supporting an additional-tier of spin-out companies through incubation and improvements to the referral process for potential spin-out and licensing opportunities alongside the establishment of stronger relationships between the City of Solna and the Karolinska Institutet.

In support of this the ULSG for Solna includes the following key stakeholders; Solna City Council, Karolinska Institutet - Unit for Bio-Entrepreneurship and Corporate Alliances; Karolinska Institutet Innovations; Karolinska Institutet Science Park, Stockholm-Uppsala Life Science and Stockholm Chamber of Commerce. During the development phase the ULSG for Solna met 2 times including 1 facilitated meeting with the lead expert.

5.4 RUNUP: Partner Issues and Challenges

The RUnUP State of the Art identified that medium-sized urban areas often seek to work and integrate universities into their economic activities in line with the principles of the Knowledge Economy but often take a “classical perspective” of universities focussed solely on technology transfer and spin-out activity linked to research. The introduction of a model (see figure 2.5 in the State of the Art) 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-business-government relations[68].

Utilising this model as a framework for exploring the future activities of the RUnUP network comparisons can be made (see figure 5.4) between the detailed problematic of each of the partners that will explored.

i) Creating New Economies

The creation of new economies based on Knowledge is a key focus and problematic in all of the partner cities with the exception of Dunkirk and to a lesser extent Leszno. This is not unrealistic as the partners are pro-active in seeking to develop their economies around higher value adding sectors in line with the principles of the Knowledge Economy.

For Águeda the municipality has already identified the importance of establishing a business incubator linked to environmental technologies. Such an activity linked to commercialisation approach of the University of Aveiro and the School of Technology and Management in Águeda is essential to encourage entrepreneurial development among students, graduates, staff and the local community.

In Campobasso and Patras there is a particular requirement to define these new sector opportunities in partnership with their local universities however it is considered that opportunities exist in the fields of; sustainable industries and bio-medical/biotech for Campobasso and Informatics and Communications and Environmental Management and Protection in Patras. Similarly, Barakaldo needs to define its sector focus but is clear in its aim in developing a joint local initiative that links research into the generation of spin-out companies and entrepreneurial activity, enhancing linkages with local business.

In comparison, Gateshead Council is already examining the potential for the creation of new economic activity around the cultural and creative sector, possibly focusing on a design led economy linked to the Design Centre for the North, although the viability and impact of such a focus must be examined.

In Potsdam the University needs to articulate a strategy for enhancing its awareness of structures and processes for increasing its commercialisation activities and how these can align, integrate and mutually support the education and research activities of the university. Additionally in implementing a strategy for knowledge based transformation the university needs to encourage and develop business development skills and capabilities within their university staff to support longer term strategy implementation.

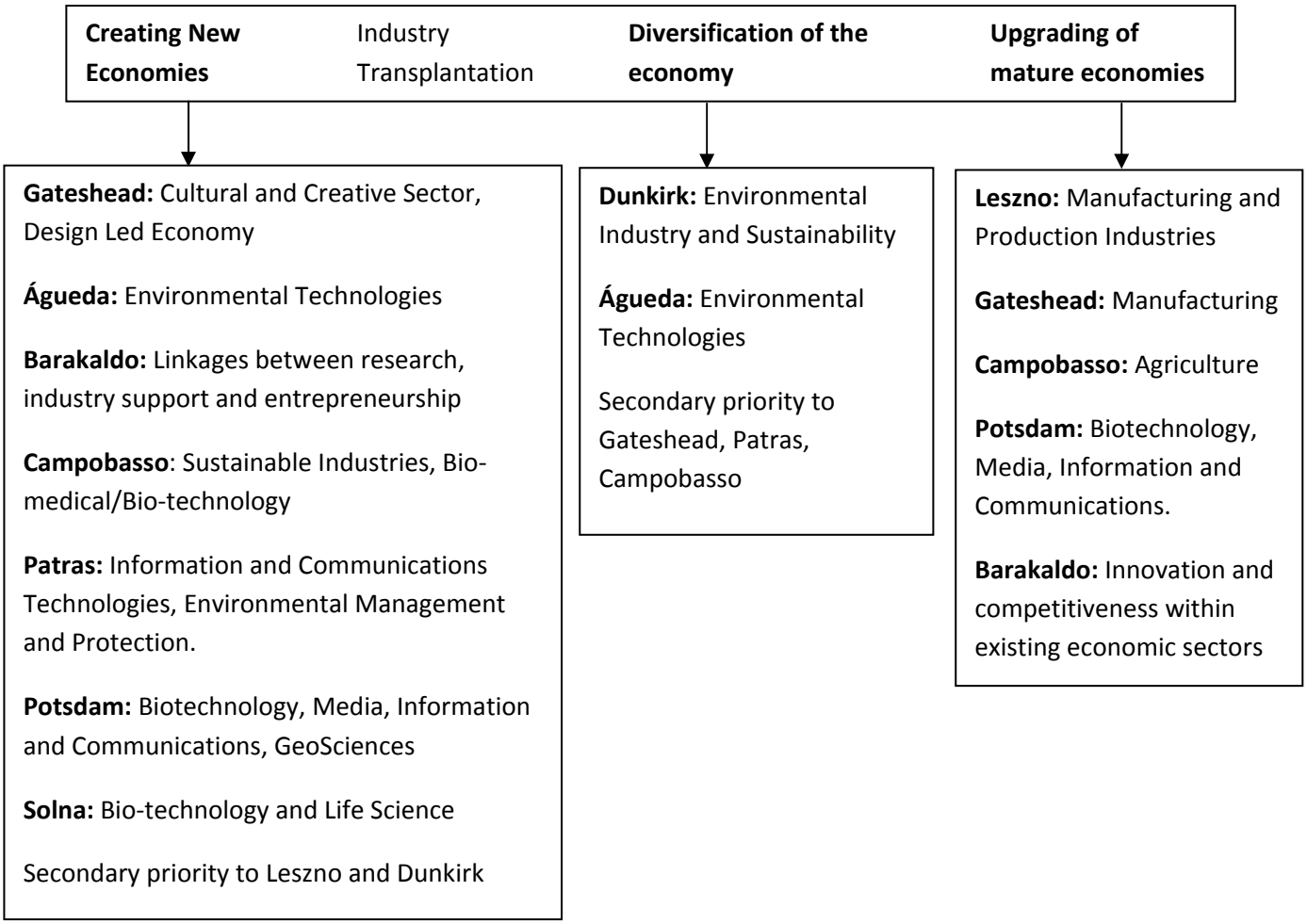
[68] The transformation of University-Industry-Government Relations; Loet Leydesdorff & Henry Etzkowitz; Electronic Journal of Sociology, 2001.

For Solna the situation can be more precisely defined. With the world-class Karolinska Institute located in their municipality and existing activity already in place to support the establishment of Bio-Tech and Life Science companies through KI Science Park and KI Innovations the focus of their engagement in the RUnUP network is specifically around supporting an additional-tier of spin-out companies through incubation and improvements to the referral process for potential spin-out and licensing opportunities alongside the establishment of stronger relationships between the Municipality of Solna and the Karolinska Institute.

ii) New Industry Transplantation

While new industry transplantation can be seen traditionally and more extensively in the lower wage economies of the European Union this element of University interaction with the economy has not been identified as a problematic by the RUnUP Partners. While Leszno with a focus on the development of Special Economic Zones has a potential interest in this area its main focus is seen as the modernisation of its existing industry in the design and manufacture of products and secondly in the development of incubation activity in support of the development of new economic sectors.

Figure 5.4 Comparison of challenges for Run-Up partners in supporting economic transformation linked to the role of their local universities



iv) Diversification of the Economy

Economic Diversification is seen as the key problematic in relation to Dunkirk where the university contribution to the economy is seen as insufficient and the linkage of the local economy to the energy sector 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.

In addition diversification within the manufacturing sector of Águeda is a priority as with nearly 50% of employment within manufacturing and the increasing pressures of globalisation in their traditional product markets they are seeking to move into environmental technology related economic activity areas.

Diversification is also a related activity to modernisation. In this context this is a secondary priority for Gateshead, Patras and Campobasso.

v) Upgrading of Mature Economies

Modernisation of industry is a primary goal of Leszno, whose economy is based on traditional industries with low levels of productivity. In delivering innovation led growth for Leszno through the modernisation of its existing economic base and the creation of new companies a new relationship between the municipality and business support organisations in Leszno needs to be established.

Similarly manufacturing remains a significant part of the Gateshead economy and there is a particular requirement to develop a strategy that supports the modernisation of its existing manufacturing and an upgrading of its skills base.

The challenge facing Campobasso within this context is that its existing economic structure is dominated by the agriculture sector. The Scientific & Technological Park of Molise (Molise Innovazione) is supporting businesses operating in this sector but is limited in its current level of engagement and support for businesses. Its operations and approach to working with business need to be further developed and enhanced.

Importantly, it is recommended that several of the RUnUP partners namely Patras, Campobasso, Barakaldo, Gateshead and Leszno as has been highlighted within individual baseline reports need to further explore and define the sector development approach that will be pursued within their economies. Such strategies need to be articulated before a proactive approach to university engagement in the local economy can be successfully implemented. Such a requirement is not unrealistic or uncommon for medium sized cities as this particular issue has been highlighted in policy documents that have been reviewed within the State of the Art report.

5.5 Concluding Remarks

The URBACT II RUnUP network provides a unique opportunity to examine the role of universities in urban poles from the perspective of Local Government, given the constitution of the partners rather than a traditional model taking Universities as the point of reference. In the development phase this unique perspective has provided valuable insights; namely:

1. Universities are positioned as mechanisms for research and development and subsequently licensing, patenting and spin-outs (and this is reinforced in European and National policies); although this may not be where their potential for supporting local economic development truly exists.

2. Local Government organisations see Universities primarily as vehicles for Education and Research & Development (see point 1) and expect them to support the development 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.

3. 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.

Moving forward at a local level it is recommended that 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. In parallel with this the partners as a prerequisite to the design of new schemes and approaches for university–business interaction need to consider defining their sector priorities and the state of economic transformation.

The RUnUP partners have a limited perspective (normally of their own universities) of the capability of Universities to support economic development. It is recommended that the partners with the inclusion of URBACT Local Support Group Members need to be taken to see models of best practice highlighting the new approaches of certain European Universities to university-business interaction e.g. University of Twente, in the medium-sized city of Enschede with regard to Spin-Outs. This should be further supported by the delivery of Run-UP workshops and seminars that can highlight wider European best practice resulting in the development of a series of themed case books supporting capitalisation at the network and programme level. Similarly in support of the capitalisation process it is recommended that the knowledge obtained through the work of the network should be developed into a Continuing Professional Development course for both Local Government and University staff to highlight the significant potential of modern universities in supporting innovation

in their local economy and the mechanisms by which a transformation in medium sized cities to the knowledge economy can be delivered.

As a result of this the distinctive characteristics of the RUnUP approach can be summarised as:

- The understanding of the concrete needs of each partner city in relation to its existing economic base and the 'absorptive capacity' of its firms, allowing us to map out strategies for the partner cities each with different economic starting positions.
- The alignment of university activity to economic transformation. Recognising that the traditional linear model of seeing universities as producers of knowledge from research and conversion into technology transfer and developing spin-outs is extremely limited. Universities can undertake much wider roles in local economies many of which are more aligned to the focus of small and medium-sized cities. The activities of RUnUP will extend and highlight the range of alternatives regarding the role of Universities in such environments.
- A focus on the practical role that local authorities can play in Small and Medium-Sized Cities as the vital interface between the needs of economic actors and the knowledge base.
- By studying good practice both within and outside the RUnUP partners the approach will allow the network to provide practical guidelines for city managers while at the same time producing general policy recommendations to strengthen a vital component of the Lisbon Strategy.

Annex A

Partner	Contact Name	Telephone Number	E-mail
Gateshead Council – Lead Partner	Chris Wilson	+ 44 (0) 191 433 2060	chriswilson@gateshead.gov.uk
Barakaldo	Teresa Gaminde	+ 34 (0) 9 44 78 94 06	teresa@inguralde.com
Solna	Mathias Forsberg	+ (0) 46 8 734 20 00	mathias.forsberg@solna.se
Municipality of Campobasso	Antonio Iacobucci	+39.(0)874.405251	segreteria.difabio@comune.campobasso.it
Municipality of Patras	Ioannis Kostopoulos	0302610966287	Kostopul@patras.gr
Municipality of Leszno	Alicja Szczepińska	+48 65 529 81 23	szczepinska@leszno.pl
Communauté Urbaine de Dunkerque	Yannick Vissouze	+333 28 24 54 29	yannick .vissouze@cud.fr
University of Potsdam	Prof. Manfred Rolfes	+49.331.9772305	mrolfes@uni-potsdam.de
Municipality of Agueda	Marlene Marques	+351 234610070	marlene.marques@cm-agueda.pt