

# International Roundtable Innovative and Competitive Regions

25 June 2012, University of Eastern Piedmont Amedeo Avogadro, Novara, Italy

## People make the difference

**Places and connectivity matter for innovation and SME growth**

**“Smart specialisation” strategies for regions require prioritisation**

**A good regional strategy involves policy learning supported by outcome indicators in a multi-level governance context**

**New firms and innovative SMEs are key actors for a job-rich recovery and long-run growth, but regional policies are crucial to address barriers and unlock their full potential**

**The university third mission of economic development supports SMEs and regional innovation**

## Introduction

Regions matter for innovation, and innovation matters for regions. Innovation is called upon as a source of growth, particularly post-crisis, and also as a tool for addressing global challenges like climate change and social issues such as inequality. Regions are seeking to promote their economic development increasingly through support to innovation. They define and implement strategies and policy instruments to build on their strengths and to shift course. However, a shared regional vision needs to be grounded in an analysis of regional strengths and weaknesses, part of the process of developing a “smart specialization” strategy.

The core challenge for regional innovation policies is to ensure a favourable environment for entrepreneurship and business growth. This is all the more evident in the current difficult economic context, as strengthening SMEs and reviving entrepreneurial dynamics are crucial for a job-rich recovery. In fact, across regions the process of entry and exit of firms (i.e. creative destruction) provides an important contribution to increased efficiency and aggregate employment. The growth and job creation effects mainly happen through innovation, as new firm creation and SME growth increase productivity, especially in knowledge-based sectors, and bring new or under-utilised resources into use. New and young firms can translate knowledge and ideas into jobs and wealth, often exploiting opportunities that have been neglected by more established companies.

### Box 1. The Region of Piedmont, Italy

The Piedmont region and its capital Turin are home to 4.5 million people in the north-western part of Italy. Piedmont hosts the headquarters of the FIAT automotive company as well as a number of other globally competitive businesses in sectors such as pharmaceuticals and chemistry, engineering, textile, agro-food, new material and aerospace. The region has a policy of innovation poles to support those sectors.

Piedmont is in the Industrial Production Zone group of OECD regions (see Figure 1). It is an advanced region within the Italian socio-economic context, being the top Italian region for business R&D intensity and second for total R&D intensity (as a share of % GDP). The regional employment in high and medium-high technology manufacturing and knowledge-intensive services is also high with respect to the Italian average.

Over the last 15 years, building on international events such as the 2006 Winter Olympic Games, Piedmont has been following a path of economic and cultural reconversion. The region and city of Turin have increasingly become a tourist destination popular for cultural activities and agro-food experiences.

Source: OECD (2009) *OECD Reviews of Regional Innovation: Piedmont, Italy*.



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## The Roundtable and its co-sponsors

### The Roundtable

The **International Roundtable on Innovative and Competitive Regions** was held with the aim to promote dialogue and exchange of good practices with respect to innovation and entrepreneurship support in regions. The Roundtable brought together regional and national policy makers, international organisations, the academic and research community, business representatives, and other stakeholders for innovation-driven growth. The event was held at the University of Eastern Piedmont Amedeo Avogadro (Novara) on 25 June 2012 and was co-sponsored by the Piedmont Region and the OECD.

### Piedmont Region and Finpiemonte

In 2005, the **Regional Government of Piedmont** created a dedicated Regional Ministry (Assessorato) to oversee all its activity concerning research and innovation. The present Regional Ministry, entitled the Regional Ministry for Economic Development, University, and Research, is responsible for defining, developing and overseeing strategies and policies of the Regional Government in these fields. In line with the Regional Government priorities, regional civil servants are organized into Divisions (Direzioni), one of which is entirely dedicated to research, innovation, university and energy sustainable development.

Launched in 1977, **Finpiemonte** is a public company, whose majority shareholder is the Piedmont Region, with a share of over 96%. Finpiemonte is the regional “in house” finance company that works to sustain development and competitiveness of the Piedmont productive system.

### OECD

The **Regional Development Policy Division (OECD)**, under the Directorate for Public Governance and Territorial Development, focuses on how regional development and other “place-based” policies can contribute to aggregate performance. Such performance is measured not only in terms of economic growth, but also in a broader development agenda integrating equity and environmental objectives. The main areas covered in the field of regional development at the OECD are innovation, rural and urban territorial development, cities and green growth, multi-level governance, and the production of statistics and indicators at sub-national level.

The **Centre for Entrepreneurship, SMEs and Local Development (OECD)** supports national and local governments to design and implement effective policies for local employment and economic development, SMEs and entrepreneurship, and tourism. Drawing on an extensive network of international experts and in regular consultations with civil society, the CFE conducts analysis and promotes policy dialogue to identify good practices and develop recommendations to foster entrepreneurship, help SMEs to innovate and meet the challenge of globalisation, facilitate local sustainable growth, competitiveness, skilled jobs creation and employment.



## List of speakers

**Sergio Arzeni**, Director, Centre for Entrepreneurship, SMEs and Local Development, OECD, Paris, France

**Andrea Ballarè**, Mayor, Novara Municipality, Piedmont Region, Italy

**Andrea Bonaccorsi**, Professor, Pisa University and National Agency for the Evaluation of Universities and Research Institutes, Italy

**Vincenzo Capizzi**, Professor, University of Eastern Piedmont Amedeo Avogadro and IBAN (the Italian Business Angels Network), Italy

**Stephen Cohen**, Professor, University of California at Berkeley and Co-Director, Berkeley Roundtable on the International Economy, US

**Roberto Cota**, President, Piedmont Region, Italy

**Lucia Cusmano**, Centre for Entrepreneurship, SMEs and Local Development, OECD, Paris, France

**Mike Emmerich**, Chief Executive, New Economy, Manchester, United Kingdom

**Massimo Feira**, President, Finpiemonte, Piedmont Region, Italy

**Paolo Garbarino**, Rector, University of Eastern Piedmont Amedeo Avogadro, Italy

**Carlo Gianelle**, Researcher, European Commission Joint Research Center, Institute for Prospective Technological Studies, Seville, Spain

**Massimo Giordano**, Regional Minister for Economic Development, Research and Innovation, Piedmont Region, Italy

**Lorenzo Lener**, Director, University of Eastern Piedmont Amedeo Avogadro Enterprise Incubator, Italy

**Yves Leterme**, Deputy Secretary-General, OECD, Paris, France

**Karen Maguire**, Regional Development Policy Division, OECD, Paris, France

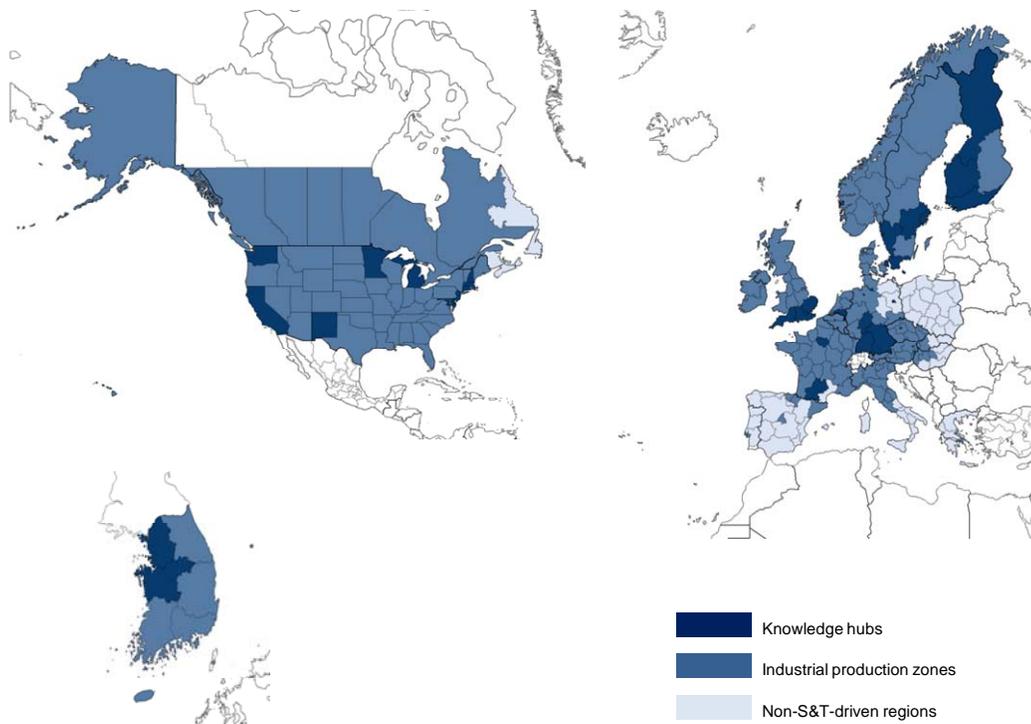
**Francesco Profumo**, Minister of Education, University and Research, Italy

**Joan Romero**, Executive Secretary, ACC1Ó Competitiveness for Catalonia, Spain

**Diego Sozzani**, President, Novara Province, Piedmont Region, Italy

**Lars Vildbrad**, Deputy Director, Regional Development, Central Denmark Region, Denmark

**Figure 1. Categorisation of OECD regions using innovation-related variables**



Note: This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map. The map is cropped for ease of display. Eight different types of regional profiles, based on an analysis of 12 indicators in OECD regions with available data, were grouped into these three categories.

Source: OECD (2011) *Regions and Innovation Policy*, OECD Publishing.

**People make the difference. Skill development as well as talent attraction are essential for competitive regions**

For OECD regions, skilled people are at the heart of economic growth and long-term competitiveness. Without skills, the technological progress and potential innovations hardly translate into economic growth. Ensuring skills for all in a region is also essential for social inclusion. Data shows that low-skilled workers are a bottleneck to growth in all types of regions. The most successful regions are those that are able to educate, retain and attract high-skilled workers. The tertiary education attainment of the labour force is unequal across OECD regions. Those rates in 2008 for regions in this Roundtable reached 31.6% in Catalonia, 29.9% in the North West of England (where Manchester is located), 29.7% in Central Denmark and 15.6% in Piedmont.

The OECD Skills Strategy sets out a roadmap for investing in skills throughout the lifecycle, from early childhood to working life. It is not just about developing skills, but developing *relevant* skills. Knowledge economies are characterised by the rapid obsolescence of skills. Therefore skills must be constantly renewed and adapted through life-long learning.

In some regions, high unemployment rates co-exist with unfilled jobs due to a skills mismatch. It is necessary to fill this gap between labour demand and supply with an integrated approach at regional and local levels to respond to different contexts. Therefore, to support national policy, regional and local governments can assist in the identification of relevant skills for local labour market needs. Such concerted efforts should involve a range of relevant actors: firm associations, universities and higher education institutions, and vocational and secondary education institutions, among others. Such efforts also mean mobilising the skills and talents of all those who could



contribute, including youth, seniors, women and immigrants. Addressing youth unemployment through high-quality and relevant training is an urgent priority in Europe, where youth have typically faced unemployment rates double that of adults for more than a decade.

There are specific skills needed for promoting innovation. STEM skills, those focusing on science, technology, engineering and mathematics, are experiencing a shortfall in many OECD countries as evidenced in results of the OECD's Programme for International Student Assessment. And as most jobs are actually in the tertiary sector, a much wider range of skills than STEM are required for innovation, including creativity.

Entrepreneurship skills should also be promoted, including for those populations under-represented as entrepreneurs (Box 2). Entrepreneurial skills can be taught in schools, universities and vocational training institutions as well as special public programmes. For migrants and newcomers, it is important to receive training on the local entrepreneurial environment and frameworks (such as the local labour law, income tax and social security legislation) in addition to more traditional entrepreneurship courses.

### **Box 2. Manchester metropolitan area: economic renewal and the importance of skills**

The Manchester metropolitan area, birthplace of the Industrial Revolution, has undergone a profound transformation over the last 20 years. According to the findings of the Manchester Independent Economic Review (MIER), an independent study that brought together economists, researchers and business sector actors, the Manchester metropolitan area is one of the UK's biggest potential growth poles outside of London. Investing in the city therefore is not only a regional but also a national priority. The city needs to focus on building on its assets as well as general conditions such as skills, finance and urban planning. The Review helped to leverage significant financial resources and to change fundamentally the vision of the local stakeholders about directions for development. The focus on market-led growth, for instance, led to a revised cluster-oriented policy, from cluster *creation* to cluster *support*, considering the drive of business to be crucial for cluster policies to produce long-lasting impacts.

One of the main priorities of the city is investing in the development of relevant skills, especially for children and young people that can be the true engine of renewal and transformation. The city has also implemented a programme (FranchisingWorks) to reduce unemployment by creating new businesses and jobs through franchising, which includes structured training to equip unemployed with the key business skills to run a franchise.

Source: [www.manchester-review.org.uk/](http://www.manchester-review.org.uk/).

### **Places and connectivity matter for innovation and SME growth**

Regional innovation systems vary, implying different areas of potential and policy focus depending on the region. Such systems are composed of different types of firms (small or large, domestic or multi-national), universities, public research facilities, technology centres, and cluster associations, among others. The concept of regional innovation systems highlights the variety of regional settings within countries, the different dynamics of innovation and the interactions across institutions in a given context. The system view also helps explain the variety of innovation patterns across regions and the sources of competitive advantage by leading regions. The top 20 patenting-intensive OECD regions account for 53% of total patent activity. Policies or brokering institutions can reinforce those systemic relations to drive innovation further.



Regional innovation systems go beyond regional boundaries into global networks. From 1977 to 2007, the number of patent applications with at least one inventor located in another region doubled from 10 to 20%. Regions need to position themselves and compete by establishing relevant connections with partners abroad, according to their strategies, industrial specialisation and areas of knowledge. Such efforts can build critical mass, increasingly required for success in the global marketplace. For example Catalan firms have established co-operation on water treatment technology with Israeli firms. Piedmont is collaborating with regions in the Danube area to set up nanotechnology hot spots, supporting common usage of nanotechnology centres in the area, without unnecessary duplication of public investment.

As highlighted in the OECD Innovation Strategy, innovation should be recognised in a broad sense, including technological innovations (process or product innovation), as well as non-technological innovations. The latter involves implementing new organisational methods such as changes in business practices, workplace organisation or in the firm's external relations (organisational innovation) or new marketing methods such as changes in product design and packaging, in product promotion and placement, and in methods for pricing goods and services (marketing innovation). Consequently, many firms are innovating without R&D—in some countries just as often as those firms investing in R&D. Investments in intangible assets such as software, people and organisational structures exceed investments in machinery and equipment in countries like the US and Sweden. These trends highlight the importance of developing skills and competencies to manage intellectual assets, including by accessing intellectual property tools, especially for SMEs and new firms that rely strongly on intellectual capital in their business models.

This broader approach to innovation is particularly relevant for the Italian context. In key sectors of specialisation, like tourism, fashion and business services, non-technological innovation can flourish and drive international competitiveness. This applies in the Piedmont region, which has experienced a notable increase in recent years in the share of its services that are knowledge intensive. Thanks to this renewal and transformation, Turin, its capital city, is moving from a traditional "grey" industrial landscape to a "colourful" one, based on integration between manufacturing functions and knowledge-based services and on the expansion of creative industries. The same is true for Catalonia, with its design hub in Barcelona, or for Central Denmark, located in a country with strong policy support to design and user-driven innovation.

Innovation policy is increasingly called upon to achieve greater economic impacts and environmental sustainability as well as improve social well-being. The Italian Ministry of Education, University and Research has recently included the social dimension of innovation in the national initiatives it supports: health, energy, environment, culture, tourism and education are among the prioritised areas. The social benefits of innovation can have a strong regional and local dimension. Many regions, for example, are combining their need to provide less costly and higher quality health care with demand-driven public procurement to spur innovation in local firms.

Regions often prioritise policy support (to specific sectors, clusters or technologies). However, this policy targeting sometimes neglects to consider the actual role of regions in global scientific and trade flows. The "fractal syndrome" means that regions will often just imitate the priorities of national and supranational governments. There have been fashions among regions to support particular sectors over time, from ICT to biotech to nanotech to green tech. In the first set of regional innovation strategies in England (UK), for example, most of the nine regions prioritised several of the same sectors. In Denmark, all five regions have prioritised some form of welfare technology and sustainable energy in their strategies. However, not all regions can be equally successful in the same sectors.

**“Smart specialisation”  
strategies for regions  
require prioritisation**



Region-specific industrial and scientific assets can prove internationally competitive. But the success of these targeted policies is strictly linked with the capacity to identify real strengths with market potential in fields where a critical mass can be achieved by mobilizing private resources. For example, one of the prioritized areas for support by the region of Central Denmark is wind energy. The region is ranked 3rd worldwide for renewable energy patents. Catalonia (Spain) has prioritized life sciences, particularly in its support to scientific research. The region has grown over the past 30 years from the fourth quintile to the top quintile in terms of the number of international co-patenting partner regions in the biotech sector.

In the past, regional innovation strategies have often suffered from a number of common weaknesses. They include: the lack of an international and trans-regional perspective; a disconnection with the industrial and economic fabric of the region; and an excessive public involvement that makes innovation strategies insufficiently business driven. Frequently regional strategies do not involve a sound analysis of regional assets but rather replicate the strategies of a well-performing region without adapting them to the local context. The European Commission has provided some guidelines for “smart specialization” strategies to overcome these common pitfalls (Box 3).

### Box 3. Smart specialization strategies: the EU definition

The European Commission has provided guidance on the “how to” of developing a smart specialisation strategy. Such a strategy should be founded on the 4 “C”s. They include:

- **(Tough) Choices and Critical mass:** limited number of priorities on the basis of own strengths and international specialisation – avoid duplication and fragmentation in the European Research Area – concentrate funding sources ensuring more effective budgetary management
- **Competitive Advantage:** mobilise talent by matching RTD + I capacities and business needs through an entrepreneurial discovery process
- **Connectivity and Clusters:** develop world class clusters and provide arenas for related variety/cross-sector links internally in the region and externally, which drive specialized technological diversification – match what you have with what the rest of the world has
- **Collaborative Leadership:** efficient innovation systems as a collective endeavour based on public-private partnership (quadruple helix) – experimental platform to give voice to unusual suspects

Smart specialization strategies can be translated into practice by implementing the following steps:

- Step 1 - Analysis of the regional context and potential for innovation;
- Step 2 - Governance: ensuring participation and ownership;
- Step 3 - Elaboration of an overall vision for the future of the region;
- Step 4 - Identification of priorities;
- Step 5 - Definition of coherent policy mix, roadmaps and action plan; and
- Step 6 - Integration of monitoring and evaluation mechanisms.

Source: European Commission (2012), *Guide to research and Innovation Strategies for smart specialisations (RIS 3)*, May 2012.

### A good regional strategy also involves policy learning supported by outcome indicators in a multi-level governance context

Regions need to develop policies with the end in mind, but they also need to learn along the way. That is why policy learning processes, both at the policy-making level and among the firms and institutions receiving public funds, are needed. The monitoring and evaluation phase should thus be a core component of a regional innovation strategy, so as to learn from past experiences and better design strategies and policy instruments.



Policy learning requires a well-designed scheme of incentives that make regional actors responsible for outcomes. Outcome indicators support learning, as they can serve to effectively monitor and evaluate the policies in place, against previously agreed targets. Such outcomes need to be defined with reliable and robust indicators that hold the recipient accountable for success. For example, in the Region of Tuscany (Italy), the financial support to incubators is conditional, based upon the number of firms attracted. The financial support to innovation poles is conditional on the recruitment of firms involved in joint research projects. With the right mechanism of incentives, regional policy makers can select the best local actors. Such institutions receiving public support in turn will feel the pressure of policy learning so as to “only do what they are good at doing”.

Policy learning and integrated approaches are also necessary across multiple levels of government. With the increasing role of regions in innovation policy, efficient spending of resources is particularly crucial in this tight fiscal environment. And for regional innovation policy, the role of the private sector is also vital. Coordination tools to share information between the public and private sector are needed, such as the new Regional Growth Forum in each Danish region (see Box 4).

In this context, different mechanisms are used to address this need for co-ordination of investment across levels of government. They include: dialogue, consultation, contracts, and project co-financing, among others. Dialogue can build relationships as well as promote information sharing. It can shed light on the most relevant regional actors in the private and academic sectors, as well as in the public sector, that can be mobilised for improving not only regional, but national performance.

#### **Box 4. The new Danish regions and the Regional Growth Forum**

Denmark implemented a sub-national governance reform in 2007 that consolidated the existing 14 counties into 5 regions. The new regions are responsible for service delivery (mainly health care) but also for regional development. Thus regions are now officially responsible for designing regional business development strategies to guide innovation-related projects. In addition, each region established a Regional Growth Forum where representatives of regional actors belonging to the private, public and higher education sectors meet and discuss regional challenges and development strategies on a regular and permanent basis.

*Source: OECD (2012), OECD Reviews of Regional Innovation: Central and Southern Denmark, OECD Publishing.*

#### **New firms and SMEs are key actors for a job-rich recovery and long-run growth**

Fostering entrepreneurship and small business development is a key ingredient to job-rich recovery strategies. SMEs account for 99% of firms in the OECD area, and 50-75% of value added across these countries. Their contribution to social inclusion as well as growth is undeniable. The recent crisis and its effects on the SME sector and potential entrepreneurs have further highlighted the crucial role of small businesses and start-ups in the creation or preservation of employment, as well as in the generation and diffusion of innovation.

New firm creation through entrepreneurship is a key driver of job and wealth generation, especially when the entry dynamics stems from innovation-related opportunities. According to the Kauffman Foundation, between 1977 and 2005, nearly all the net job creation (jobs created minus jobs destroyed) in the US occurred in firms less than five years old. In 2008, innovative firms, backed by venture capital, accounted for 11% of US private sector employment and 21% of GDP: that means they created jobs with a much higher productivity than the US average.



The increasing role of new and small businesses in innovation dynamics is related to profound and multi-dimensional transformations in market economies. These trends have led to a reduced importance of economies of scale in production, management, finance and R&D. A major driver of such change has been greater product differentiation. As incomes have risen and the taste for variety increased, multiple market niches have appeared, which new and small firms are quick to fill. These include traditional product markets, but also, and increasingly so, social goods and services, such as services for the individual and environmental protection. Furthermore, increased competition and new technologies have reduced product life cycles, demanding rapidity in anticipating or responding to new market needs. Industries at the local level are, therefore, increasingly required to build on their traditional competencies and integrate them with skills and competence profiles to target higher value-added market niches.

The ever more important role of small players for innovation is also related to the emerging open or network-based modes of innovation. New technologies and their applications are changing the way firms are created, grow and innovate. The Internet has enabled start-ups that require smaller amounts of initial capital, allowing greater capital efficiency and more rapid testing and adjustment of products and/or business models. New and small ventures participate increasingly in knowledge networks, not only as knowledge exploiters, but also as knowledge sources and, increasingly, as “bridges of innovation”, which interact with other players as knowledge purchasers, providers and partners. This is the case, for instance, of Knowledge-Intensive Business Services (KIBS) firms involved in activities such as consultancy, market research, design, engineering and technical services. They provide specialised knowledge inputs for other service and manufacturing firms, generate opportunities for interactive learning, favour the creation of local linkages and contribute to the connectivity of regional or national systems with international knowledge networks.

**But regional policies need to recognise the wide variety in the SME sector and adapt instruments to different needs**

However, there is an uneven distribution of small firm innovation. There are a few highly innovative and high-growth-potential firms. But the vast majority of SMEs, often family-owned firms in low and medium-technology sectors, innovate very little compared to their larger counterparts and struggle to adapt to the knowledge economy. In this respect, within-sector differences can be more relevant than those between sectors. Innovation policies at the local level need to distinguish clearly between these groups of firms and define suitable instruments, reflecting the different ways in which they innovate.

**A number of barriers limit SMEs and entrepreneurs from playing their full potential role for innovation and growth**

There are, traditionally, barriers to innovation and growth in SMEs. Limited access to finance, administrative burdens and cumbersome regulation, the lack of suitably qualified personnel (both scientific and managerial) as well as risk aversion constitute the principal barriers to SME growth. While government policies have long grappled with the finance issue, and some effective approaches are emerging, the need to upgrade skills in SMEs and to furnish potential entrepreneurs with skills for successfully setting up ventures is only now becoming clear. Start-up entrepreneurs often lack skills across a number of the relevant areas, including decision-making, risk-taking, information processing, opportunity recognition, resource organisation, market awareness and product management. In addition, the role of business angels as a source of finance for new entrepreneurs and SMEs should be better understood by regional authorities.



Entrepreneurial opportunities are a formidable channel for economic and social participation and upgrading, and for tapping into talent and innovativeness that flourish in different parts of societies. Entrepreneurship can play an important role by allowing under-represented groups, including young people, women and migrants, to create their own opportunities to participate in the economy. Programmes for youth and women's entrepreneurship are part of the policy response to the crisis and the strategy for economic renewal in many regions and countries.

**The regional environment and “soft infrastructure” are critical to entrepreneurial dynamics and SME innovation**

The quality of the local environment for knowledge generation and transfer, such as the strength of local technology partners and science-industry linkages, is crucial to sustain entrepreneurial dynamics and SME innovation. Although many of the framework conditions in which firms operate are determined at the national or even global level, regional governments can play a crucial role in shaping the “soft infrastructure” that orient and support SME innovative efforts and attract external talents and resources. In particular, SME skill acquisition occurs in the context of local skill ecosystems. These ecosystems involve regional and industry-specific networks that bring together public and private training providers (colleges, universities, etc.), employers, industry representatives, unions, labour market and training intermediaries (temporary work agencies and group training companies), local and regional government agencies, and community representatives, in order to develop skill strategies and deliver training.

**The university third mission of economic development supports SMEs and regional innovation**

Universities and higher education institutions (HEIs) can engage in regional economic development in several ways. Beyond the traditional missions of education and research, universities are increasingly called upon to engage in regional economic development. This “third mission” of universities includes a wide range of actions, such as collaborative research and consultancy with SMEs, intellectual property management and knowledge transfer through technology-bridging institutions, entrepreneurial education, lifelong learning, skills development, university-industry staff exchange programmes that strengthen the absorptive capacity of SMEs, spin-offs that nurture the local entrepreneurial environment, and social and cultural initiatives that increase the public awareness of science and technology.

Universities can also play a relevant brokering role in the regional innovation system, favouring the dialogue among different cultures and disciplines as well as among different actors and stakeholders. In areas of the world that have been particularly successful in establishing an innovation milieu, such as Silicon Valley or Israel, interactions among universities and private actors is pervasive. This interaction also favours the development of a shared language and vision, helping SMEs in articulating their demand for innovation.

Incubators are infrastructures, generally within or closely linked to universities, designed to accelerate the successful development of innovative companies through an array of business support resources and services. Services are provided by incubator management and offered both in the incubator and through its network of contacts. Incubators vary in the way they deliver their services, in their organisational structure, and in the types of clients they serve. The experience of the Piedmont Region illustrates that different models can develop within the same regional context, acknowledging intra-regional variety in local context and needs (Box 5).



### **Box 5. University enterprise incubators in the Piedmont region**

The Piedmont region has experience in the development of Enterprise Incubators, with dedicated structures at three of its universities. For instance, the Polytechnic of Turin, whose Innovative Enterprise Incubator (I3P) has launched many start-ups since 1999, is a leading example of how world-class research can support knowledge-based competitiveness in regions. This is a “traditional” technology incubator, whose main objective is to transfer technology and assist start-ups in product development. The University of Turin, on the other hand, has launched an incubator (2I3T) that supports science-based start-ups in developing applied research and partnering with medium-sized or large industry groups. A rather different model of incubator (Enne3) has been developed by the University of Eastern Piedmont Amedeo Avogadro in Novara, which was founded in 1998 to serve a large region outside the capital city area. This third incubator model is consistent with the mission of the University to support regional development. It is therefore based on strong ties with local institutions and local SMEs and intends to promote new entrepreneurship, highly embedded in the local context, which can support modernization of the local industrial base and strengthen its linkages with knowledge networks.

*Source: <http://www.i3p.it>; <http://www.2i3t.it>; <http://www.enne3.it>.*

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