Regional innovation strategies: the Apulian experience and the role of ARTI, the Regional Agency for Technology and Innovation

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An overview

1. Introduction
   - Apulia Region, its R&I system, its strategy for R&I
   - ARTI

2. Implementation of the Apulian Regional Innovation Strategy (RIS)
   - The knowledge network
   - Tools and mechanisms

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   - A successful story: the ILO Puglia Project
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1. Introduction
Apulia Region

Area: 19,366 km²
GDP: € 68.9 billion (in 2008; +1.8% on 2007)
EC convergence objective
(Cohesion Policy Funding)

An intermediate development region
- prevalence of SMEs
  - scarce propensity to innovate
  - inadequate level of internationalisation
- weak infrastructure system
- low level of R&D expenditure (0.6% of GDP)
- highly qualified labour force available
- relevant environmental resources
Apulian R&I System

Some figures
- 5 universities, with a total of 109,678 students
- 5,965 researchers
- M€ 426 R&D expenditures in 2005 (2.5% of national figure)
- n. 45 university patents
- n. 30 spin-off companies
- Public Research Bodies (CNR, ENEA)
- Research Centers, Scientific and Technological Parks, public-private consortia

Relevant characteristics
- Universities are the main source of regional R&D expenses
- excellence of scientific research offer in some strategic sectors (biotech, chemistry, nanotech, avionics, mechatronics)
- brain drain
- gap between research and industry, cultural differences between business and science communities
Apulian strategy for R&I (2001)

Specific objectives
- Promotion, organization and support to the innovation demand
- Qualification of the supply of R&D, technological transfer and services for innovation
- Strengthening of the network of services for innovation and of the connections between the scientific and the productive systems
- Human resources qualification and development
- Permanent observatory of innovation

ARTI
- ARTI is the Apulian Agency for Technology and Innovation, established in 2004 by Apulia Region as a main tool to realize the specific objectives set in this strategy
- Its function is to strengthen the regional innovation players and the relationships among them, in order to help and develop the stream of innovation between research and enterprises
Apulian strategy for R&I (2009)

General objective

in the Lisbon Strategy perspective, making Apulia a competitive region in the global knowledge economy, through a strategy based on innovation and on the intensive use of knowledge in the socio-economic context

Specific objectives

- growing of innovation demand
- growing of productivity
- growing of the technological content of products and services
- internationalization of industrial sectors
2. Implementation of the Apulian Regional Innovation Strategy
The knowledge network

Education → Higher education → Scientific research → Innovation

Structural actions for university and for students welfare
Laws to support research
Incentives for enterprises and finance

Liaison offices
Incubators
Regional Competence Centers
Public laboratories networks
Technological districts
Productive districts

Development
Quality
Competitiveness
Employment
Implementation of the Apulian Innovation strategy - 1

Tools and mechanisms are those set by ARTI, while pursuing its lines of activities.

1. Spreading innovation culture

- Defining the regional innovation system map (the actors, their competences, their activities)
- Creating networks of innovation actors
- Organizing big events and competitions

2. Strengthening the Regional Innovation System

- Creating the regional network of Industrial Liaison Offices for tech-trans (ILO Puglia Project)
- Supporting the birth of innovative start ups and the registration of patents
- Promoting international technological exchanges (Bridgeeconomies)
- Joining European research programmes (7 FP, CIP, MED)
Implementation of the Apulian Innovation strategy - 2

3. Developing technological clusters
- Mechatronics
- Aerospace and space technologies
- Renewable energies and energy efficiency
- Multimedia
- Agro-food
- Biotechnologies
- Chemistry and new materials
- ICT
- Technologies for cultural heritage
- New technology for consumer goods
- Logistics
- Tourism
- Environment

4. Supporting local R&I policy-making
- Cooperating to the definition of policy documents
- Monitoring and evaluating regional R&D programmes, activities and measures
3. Challenges and opportunities
Challenges and opportunities

Challenges

- The Apulian R&I system is relatively small (5,965 researchers, the 3.4% on the Italian total figure)
- ... with a prevailing role of Universities (62% of researchers work there)...
- ... with excellences in some scientific areas (Physics, Food Technologies, Nanosciences, Biology)...
- ... and able to compete on an European scale

Opportunities

- Leading the regional R&I system (university + research + clusters) to an European matching (ERA)
- In the perspective of the Commission's communication n.474 of 16/8/2007, promoting (as Apulia Region and ARTI do) an integrated use of funds, in particular:
  - 7FP
  - CIP
  - Structural Funds
4. Recommendations
A successful story: ILO Puglia Project

ILO Puglia Project was a pilot action for knowledge transfer by Universities, conceived and led by ARTI in 2007-2008 period

Objectives

- building a network of the university Industrial Liaison Offices
- improving the management of knowledge and IP
- increasing the number of international patents
- supporting the generation of academic spin-offs
- organising a local business plan competition and an Innovation Festival

Results

- five ILOs in the five Universities are now working together
- 40 seminars for 1000 researchers to improve the management of knowledge and IP
- 28 new international patents are now available for licensing
- 7 voucher granted to young spin-offs
- 11 new spin-offs created (+ 50%)
- the Start Cup Puglia competition was launched, with 50 challengers, 10 finalists and 3 winners
- the Innovation Festival was launched in 2008, with the following figures: more than 5,000 visitors, 100 exhibitors, 40 prototypes on show, 140 workshops and events, competitions on science topics for student, an investment forum
The Apulian model of interaction between research and market, as elaborated also thanks to the evidences of the pilot action, should

- be **sustainable in the long term**, through permanent structures placed in the universities and in the public research bodies involved
- be respectful of the **preeminence of public research**, of the independence of each researcher, of the need to maximize the impact of R&D investments on the regional economic development
- provide adequate **performance indicators** of the same structures, even in the perspective of a constant evaluation of public investments
- be **coherent with the regional R&I strategy**

On these bases, Apulia Region and ARTI are launching the Regional Network for the Knowledge Transfer project for the period 2009-2013.
Lessons learned and recommendations

- Learning from the pilot action and develop new lines of intervention
  - improving patent licensing activities, innovation vouchers, business plan competitions, offering high-value assistance to developing spin-offs
  - supporting the bilateral co-operation between research and industry, to increase and expand knowledge transfer, by creating specific competences (investing on human capital qualification on the themes of innovation management and knowledge transfer)
  - supporting the international dimension of clusters

- Recognizing KT as a key issue when defining innovation policies
  - adopting a multilevel and integrated approach (regional, national European) in the definition of R&I politics
  - adopting an “open innovation” approach, to attract talents and reduce the brain drain
  - co-operating with national and international KT networks
Thank you for your kind attention!

APULIA REGION - ARTI
Regional Agency for Technology and Innovation
www.arti.puglia.it