Smart strategies to create innovation based jobs in Regions of Europe

Action & Implementation plan
Western Greece

September 2014
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GLOSSARY

ADRION – Adriatic Ionian Programme
BAN - Business Angel Network
BIC - Business Innovation Centre
BSO - Business Support Organisation
CTI - Computer Technology Institute and Press “DIOPHANTUS”
EBN – European Business Innovation Centre Network
EIB – European Investment Bank
ΕΠΑνΕΚ - Operational Programme for Competitiveness, Entrepreneurship & Innovation
ERDF - European Regional Development Fund
ESF – European Social Fund
ESPA – National Strategic Reference Framework
EU – European Union
FSIWG - Fund for the Smart Innovation in Western Greece
GDP – Gross Domestic Product
GNTBF - Greek New Technology Firms
GSRT – General Secretariat for Research and Technology
ICE/HT - Institute of Chemical Engineering & High Temperature Chemical Processes
ICT – Information and Communications Technologies
ISI - Industrial Systems Institute
ITTO - Innovation & Technology Office
KET – Key Enabling Technologies
NIKOS - Netherlands Institute for Knowledge-Intensive Entrepreneurship
OAED – Organisation for Employment of Labor Force
PSP - Patras Science Park S.A.
R.C. ATHENA – Research Centre ATHENA
R&D – Research & Development
R&I – Research & Innovation
RIGS - Research & Innovation Governance System
RIS – Regional Innovation System
ROP (PEP) – Regional Operational Programme
RTDI – Research, Technological Development & Innovation
RWG – Region of Western Greece
S3 – Smart Specialisation Strategy
SEE – South-East Europe
SME – Small and Medium Enterprise
SF - Structural Funds
SWOT – Strengths, Weaknesses, Opportunities, Threats
TEI - Technical Educational Institute
TTF – Twente Technology Fund
UP - University of Patras
VC – Venture Capital
WP – Work Package
1 INTRODUCTION

The objective of this Report is to provide a comprehensive guidance to the Region of Western Greece about the actions needed to improve the overall innovation structure and performance of the Region. Key actions are described in more detail to be implemented by Patras Science Park, the Regional Government in cooperation with other regional stakeholders.

The first section contains general information about the project, the Region and the main funding sources available.

The second section focuses on the Peer Review outcomes and the necessary actions identified and recommended by the Peer Review Experts during their site visits and discussions with the regional stakeholders. This section constitutes the Action Plan, and includes information about time schedule, involved stakeholders and other requirements for implementation.

The third section focuses on key selected actions that Patras Science Park and the Region of Western Greece could implement in the short term.
1.1 Project description

1.1.1 Synopsis of the SMART EUROPE Project (http://smart-europe.eu)

SMART EUROPE is based on the concept that smart and focused regional policies and interventions can be designed to boost the employment in innovation-based sectors.

With this aim, a consortium of 13 partners, representing 11 EU regions, exchanged policies and instruments to identify and support the main regional economic actors that generate job opportunities in the innovation based sectors of their economy.

![Figure 1: The SMART EUROPE Partnership](image)

SMART EUROPE supports decision makers to improve their strategies with the aim of incorporating the creation of employment as an additional key feature of their policy activities. To achieve this overall purpose, project activities addressed the following sub-objectives:

- Collection and exchange of good practices and possible policy improvements in the field using the Peer Review methodology
- Set up of the SMART EUROPE Toolkit, a customized package of policy instruments and measures to facilitate the creation of innovation-based jobs
- Development of concrete implementation plans for each partner region to achieve the main objective
- Dissemination of the tested measures towards other interested EU Regions
1.1.2 The INTERREG IVC Programme (http://www.interreg4c.eu/)

The SMART EUROPE project was supported and financed by the INTERREG IVC Programme and national resources.

INTERREG IVC provides funding for interregional cooperation across Europe. It is implemented under the European Community’s territorial co-operation objective and financed through the European Regional Development Fund (ERDF).

The overall objective of the INTERREG IVC Programme is to improve the effectiveness of regional policies and instruments. A project builds on the exchange of experiences among partners who are ideally responsible for the development of their local and regional policies.

The areas of support are innovation and the knowledge economy, environment and risk prevention. Thus, the programme aims to contribute to the economic modernisation and competitiveness of Europe. INTERREG IVC is linked to the objectives of Lisbon and Gothenburg agendas.

Typical tools for exchange of experience are networking activities such as thematic workshops, seminars, conferences, surveys, and study visits. Project partners cooperate to identify and transfer good practices. Possible project outcomes include for example case study collections, policy recommendations, strategic guidelines or action plans. INTERREG IVC also allows light implementation or piloting, but only if these complement the exchange of experience activities.
1.2 Regional context

1.2.1 General overview, economic profile of the Region of Western Greece

Geography & Demography – The administrative region of Western Greece is a coastal area in the Western part of the Greek Mainland with access to the Ionian Sea. Geographically, it extends to an area of 11,350 km$^2$ and hosts a population of around 742,000 inhabitants in 2012. Its biggest municipality is the capital city of Patras with approximately 200,000 inhabitants in 2009.

General Economic Figures – Western Greece is the second less developed region in Greece. Regional income per capita averaged 15,100 EUR against a national of 19,095 EUR. The primary sector (agriculture and fishery) plays a significant role with Western Greece producing around 54 % of its regional GDP. 91,4% of employees in the region work for SMEs, 8,5 % are employed by the public sector and only a marginal percent work for big companies. The regional unemployment rate from 2007 to 2011 was between 8,7 and 19,6 %. Since 2009 this rate is below the national level.

Technology & Innovation – Western Greece is strong in technology & innovation, enjoying the presence of several public and private institutions. It comprises three universities, 3 research centres, 1 science park and incubator and 1 cluster (microelectronics). Most important, the Innovation & Technology Office (ITTO) of the University of Patras (UP) aims to the transfer of technology from the public to the private sector. Other institutions contribute to an attractive infrastructure designed to support innovation, notably the Computer Technology Institute and Press (CTI), the Industrial Systems Institute (R.C. ATHENA / ISI), the Institute of Chemical Engineering & High Temperature Chemical Processes (ICE/HT), the Patras Science Park (PSP) and Patras Innohub (part of the Corallia cluster initiative), the Achaia Chamber of Commerce and the Federation of Greek Industries (Peloponnese branch).

Tourism – Tourism is one of Western Greece’s specialisation. Among Patras’ main tourist attractions are both historical monuments as well as infrastructural sites. The most famous are the Saint Andrew’s Church, the Patras Castle, the Archaeological museum, the Rio - Antirrion Bridge, the Ancient Auditorium, the Apollon Municipal Theater, and the Achaia Clauss Wine Factory.

Problems – As a weakness, Western Greece suffers from a lack of investment capital, which has hindered job creation in the past. Slow bureaucratic procedures and institutional capacity gaps impede on its regional innovation system, which is considered as rather weak. SMEs in particular have been victims of the crisis. It has been difficult to build up sustainable businesses in the region that could channel international cooperation.
**Measures** – Western Greece is establishing a regional innovation system, based on smart investments, the dissemination of new technologies and promotion of entrepreneurship. Structural funds have been used in a centralised way, at national level, but yet insufficient resources to boost regional innovation policy have been provided. Moreover, the state aid character of investment has been a point of discussion. A 13.4% of Greek RTDI funding is dedicated to Western Greece.

1.2.2  **SWOT analysis of the Region of Western Greece**

A SWOT analysis took place during the project Peer Review of Western Greece, the preliminary conclusions of which are presented below:

![SWOT Analysis Diagram](image)

**Figure 3: The SWOT analysis matrix**

1.2.2.1  **Strengths**

- Well formulated S3 strategy, concentrated on the strengths of the Region
- High standard, high number of publications and specific fields of expertise at the University of Patras and the research institutes
- Valuable initiatives supporting innovation and entrepreneurship:
  - Cross sectoral network platform at the University
  - Internship possibilities
  - ITTO a driver for recruitment & research, support office for entrepreneurship
Career office
✓ University initiative to promote its research and find new funding

- Presence of the Science Park, CTI, InnoHub, Regional University Hospital, ISI, Corallia etc.
- Presence of a significant number of spin offs
- Existing role models in business creation
- Many highly educated people with language skills
- Foreign investments
- International contacts and partnerships at the university, in business and within the innovation sector stakeholders
- Some room for maneuver in changing the University curricula
- Continuation of successful EU projects upon ending

1.2.2.2 Weaknesses

- Capabilities of implementation of programmes and strategies
- Need to increase the critical mass of innovative companies
- Many initiatives but not very mature
- Lack of venture capital & business angels
- Bureaucracy: the existence of many levels of decision and cross – checking slowing decision making
- Communication between all the stakeholders of the ecosystem in a cross – sectoral approach
- Little contamination between sectors and branches
- Narrow definition of innovation that focuses on universities and research institutes (innovation happens everywhere)
- Monitoring of strategies that needs to be specified
- Research on agriculture not very connected to the agricultural sector
- Low acceptance of failure (dangerous when the technological sector has a success rate of 1 in 10 initiatives)

1.2.2.3 Opportunities

- New administrative distribution: region in charge of its own strategy
- EU financial support available
- Implementation of ICT in different sectors:
  ✓ Margin for manoeuvre for improvement in agriculture or tourism an opportunity given the high skills and technologies available
- Needs from the central government for ICT-based solutions produced in Patras (CTI)
- Potential for branding as a high tech leader «in Olympia» for instance a non-used name)
- Potential for using role models to promote the entrepreneurial spirit
- Rental prices low
1.2.2.4 Threats

- Infrastructure
- Cuts at national level for the University
- Way of implementing tax system
- Potential changes of big pharmaceutical sector
- High reliance on EU funding for R&D projects, a threat for fragmentation (loss of focus)
- General climate unfavourable for investment in startups (banks don’t lend money, high cost of failure)
1.2.3  Strategy for Research and Innovation in the Region of Western Greece (2007-2013)

1.2.3.1  The regional innovation system

![Image](image4)

**Figure 4:** The Regional Innovation System

The regional innovation system as described by the Region, is shown schematically in the figure above.

1.2.3.2  Weaknesses of the regional innovation system

The weaknesses exhibited by the regional innovation system have been identified as follows:

- Low R&D investments by the private as well as by the public sector.
- Very low investments by the private sector in R&D and innovation application. Among other reasons, this weakness is also due to the structure of the Greek economy (lack of large enterprises in innovation-producing, high-tech sectors). Business R&D expenditures are particularly low (16% of the EU average).
- Extremely low performance record in: manufacturing (the lowest in the EU); employment in medium and high-tech sectors; innovative manufacturing enterprises; new-to-market product sales, added value; high-tech industries.
− Weak production base, consisting of small-sized enterprises in traditional sectors that are used to transfer mature technology from abroad rather than developing technology in-house or cooperating with research organisations.
− Low performance in exports of high-tech products and in the development of new products.
− Low performance in venture capital, in terms of both supply (32% of the EU average) and demand.
− Segmentation of public R&D efforts across many areas, organisations and groups whose size is below the critical mass required to bring results.
− Public research organisations do not respond to the needs of the local economy and of society. Nevertheless, the public sector is the main driving force for innovation in Greece.
− Weak intermediary technology transfer mechanisms, combined with qualitative and quantitative deficiency of liaison. Among other reasons, this is also due to the lack of the necessary specialised personnel in these areas.
− Incompatibilities between employment supply and demand in research – technology – innovation. Although social demand for university-level education is high, new graduate scientists cannot be absorbed by the country’s productive fabric. Lack of specialised scientists and engineers in rapidly developing technological areas; inability of new doctoral graduates to secure employment in enterprises; low level of life-long learning and training activities; lack of suitably qualified trainers.
− Lack of entrepreneurship in the Greek research community, and domination of “risk avoidance” attitudes, even in young people.
− Low level of recognition by the general public and by the enterprises of the importance of technology and of the possibilities it provides for restructuring economy and society. Society is wary of technological change, as a result of insufficient or distorted information. Inability to showcase social models from the research and innovation area.
− Great regional disparities. Concentration of R&D activities in the Attica Region (the only Greek Region whose innovation performance is above the EU average).
− Low performance in the registration of patents in all categories.
− Low performance in broadband penetration.
− Bureaucratic and time-consuming management system, focused on ex-ante evaluation rather than on monitoring and on detailed supervision of projects. Absence of a mechanism for systematic assessment/study of the impacts of policies/actions/funding.
1.2.3.3 Performance of the innovation system (in Greece)

Figure 5: Innovation performance of Greece (innovation union scoreboard 2012) Indicator values relative to the EU27 (EU27=100)
1.2.3.4 Strategic sectors in Western Greece

The strategic sectors for the Region of Western Greece are shown in the following table compared with the corresponding strategic sectors at national level.

**Table 1:** Strategic sectors in Greece and the RWG

<table>
<thead>
<tr>
<th>TECHNOLOGICAL SECTORS</th>
<th>GREECE</th>
<th>RWG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Via</td>
<td>Information &amp; Communication technologies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environmental technologies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Energy</td>
<td></td>
</tr>
<tr>
<td>SOcioECONOMIC SECTORS</td>
<td>Agriculture</td>
<td>Agricultural production, fish farming, animal farming</td>
</tr>
<tr>
<td></td>
<td>Marine</td>
<td>Food and Drinks</td>
</tr>
<tr>
<td></td>
<td>Tourism</td>
<td>Culture</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td>Tourism</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advanced material and Microelectronics</td>
</tr>
</tbody>
</table>

[Source 2: Smart Specialisation Strategy for the Region of Western Greece, February 2014]
1.3 Planning of activities in the Region of Western Greece

1.3.1 Directions and planned interventions

Table 2: Directions and categories of interventions in the Region of Western Greece

<table>
<thead>
<tr>
<th>Development of infrastructures and networks services and creation of axes of development</th>
<th>Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boosting the production capacity of the Region and promotion of dynamic sectors with focus on Innovation and New Technology</td>
<td></td>
</tr>
<tr>
<td>Information Society</td>
<td></td>
</tr>
<tr>
<td>✓ Development of ICT for promotion and marketing of services and applications towards the improvement of the quality of civil life</td>
<td></td>
</tr>
<tr>
<td>✓ Promotion and support of cooperation of Higher and Highest Education Institutes, Research Institutes and Companies and support of research and technological development</td>
<td></td>
</tr>
<tr>
<td>✓ Support of infrastructures for research, technological development and innovation</td>
<td></td>
</tr>
<tr>
<td>✓ Support of cooperation between research bodies and production companies</td>
<td></td>
</tr>
<tr>
<td>✓ Establishment of new and modernisation of existing companies with respect to innovation and new technology</td>
<td></td>
</tr>
<tr>
<td>✓ Actions to support SMEs in production, tourism, trade and services</td>
<td></td>
</tr>
<tr>
<td>✓ Support to companies to undertake projects towards environmental protection</td>
<td></td>
</tr>
<tr>
<td>✓ Development of infrastructure for the initial establishment of companies that absorb the outcomes of research and technological development</td>
<td></td>
</tr>
<tr>
<td>✓ Diffusion and promotion of innovative projects</td>
<td></td>
</tr>
<tr>
<td>Research and Technologic Development, innovation and entrepreneurship</td>
<td></td>
</tr>
</tbody>
</table>

Integrated development of rural area and development of Local Production Systems, Integrated Urban Sustainable Development

<table>
<thead>
<tr>
<th>Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment in social infrastructures</td>
</tr>
<tr>
<td>Tourism</td>
</tr>
<tr>
<td>Urban and Rural Renaissance</td>
</tr>
<tr>
<td>Environmental protection and prevention of hazards</td>
</tr>
</tbody>
</table>

1.3.2 Research and technological development framework

In Greece, Research and Technology Development is coordinated by the General Secretary of Research and Technology. In the framework of the previous programming period, the general objective of GSRT was to promote actions in two directions:

I. Support of RTD programmes targeted mainly at enterprises and associations of enterprises and knowledge-producing organisations.

II. Actions and Programmes to promote innovation and the creation of highly knowledge-intensive enterprises.

In the currently closing programme period (Strategic Plan for the Development of Research, Technology and Innovation during the 2007-13) the general objective of GSRT is to support innovation towards knowledge society, with the following priority areas:

I. Increase and improvement of investments in knowledge and excellence towards sustainable development

“The key objective of the development strategy is to promote innovation in all sectors as a key driver for restructuring the Greek economy and for the transition to the knowledge economy, which is a prerequisite for substantial improvement of competitiveness, development, employment and the welfare of citizens. Priority is given to promotion of innovative actions that contribute to the attainment of this objective and are environment-friendly (eco-innovation).”

II. Promotion of innovation, of the dissemination of new technologies and of entrepreneurship towards generating economic and social “value” benefits

The priority areas should focus on improving the competitiveness and internationalisation of Greek enterprises, and on restructuring them through a shift to the production of high value-added products and services.
1.3.3 *Measures and planned activities*

In the Table below the measures and planned activities, at national level, are summarized and grouped according to specific objectives:

**Table 3: Measures and planned activities at national level**

<table>
<thead>
<tr>
<th>No</th>
<th>MEASURE DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Support of research groups in Higher Education and in Research Bodies in RWG</td>
</tr>
<tr>
<td>1.2</td>
<td>Support of the workforce in RWG</td>
</tr>
<tr>
<td>1.3</td>
<td>Creation of spaces for the establishment and support of innovative companies</td>
</tr>
<tr>
<td>1.4</td>
<td>Development of applied research and technology in companies of RWG</td>
</tr>
<tr>
<td>1.5</td>
<td>Promotion and protection of copyright</td>
</tr>
<tr>
<td>1.6</td>
<td>Promotion of the “licensing-in” and “licensing-out” models</td>
</tr>
<tr>
<td>1.7</td>
<td>Training of researchers in basic principles of research and technology management</td>
</tr>
<tr>
<td>1.8</td>
<td>Technology demonstration projects</td>
</tr>
<tr>
<td>1.9</td>
<td>Development of Research Centers with the collaboration of users – Support of laboratories cooperating with Companies and research users</td>
</tr>
<tr>
<td>1.10</td>
<td>Promotion of a Central Structure for innovation and technology transfer</td>
</tr>
<tr>
<td>2.1</td>
<td>Early Investment Networks</td>
</tr>
<tr>
<td>2.2</td>
<td>Seed Financing</td>
</tr>
<tr>
<td>2.3</td>
<td>Business Angels</td>
</tr>
<tr>
<td>3.1</td>
<td>Support of young entrepreneurship</td>
</tr>
<tr>
<td>3.2</td>
<td>Support for innovation and creativity</td>
</tr>
<tr>
<td>3.3</td>
<td>Support for start-ups in knowledge intensive sectors</td>
</tr>
<tr>
<td>3.4</td>
<td>Training of business executives in principles of innovation management, research and technology</td>
</tr>
<tr>
<td>3.5</td>
<td>Implementation and support of business clinics</td>
</tr>
<tr>
<td>4.1</td>
<td>Establishment of international R&amp;D centers/companies in the RWG</td>
</tr>
<tr>
<td>4.2</td>
<td>Attractiveness of investments in the RWG in high-tech activities from abroad</td>
</tr>
<tr>
<td>4.3</td>
<td>Support internships of graduates in the RWG in international RTD centers</td>
</tr>
<tr>
<td>5.1</td>
<td>Workshop for Innovation</td>
</tr>
<tr>
<td>5.2</td>
<td>Pupils Innovation Awards</td>
</tr>
<tr>
<td>5.3</td>
<td>Support of competition for students business plans</td>
</tr>
</tbody>
</table>

1.4 Peer review presentation

1.4.1 Peer Review methodology summary

The SMART EUROPE Peer Review Methodology enables an objective and high-quality assessment of regional policies targeting the employment growth in the sectors of their “innovation anchors”.

Innovation anchor: driving actor of regional employment in innovation based jobs. Depending on the region it can be a multinational company, a cluster, a university or a specific economic sector, or a combination of those.

The SMART EUROPE Peer Review Methodology is an adaptation of the peer review methodology of the Assembly of European Regions (AER), developed directly to use it during the SMART EUROPE project, when assessing different regions' innovation anchors.

The methodology standardizes the relevant aspects that need to be measured, in order to enable experts with different background, to assess the regional situation in an objective way. By this, they will be able to give appropriate recommendations on the field of innovation-based job creation in the host region.

So, in the context of the project implementation, 11 Peer Reviews took place, one in each SMART partner region, allowing building on the knowledge of peers, experts and practitioners dealing with employment strategies in different European countries, selected by the partners.

Background information was provided to the review team prior to the Peer Review. The host region sets the agenda with interviews, study visits and workshops allowing the experts to identify strengths and weaknesses in its innovation and employment policies.
A checklist is the common tool used by the peers to assess the host region’s policy regarding its innovation anchor. After the visit, the review team prepared a report with a series of recommendations on how to improve the region’s policy design and delivery.

Based on the feedback of the experts, the host region prepares its Action Plan setting out the concrete steps to follow up to the recommendations. An Implementation Plan defines a longer-term strategy and explains how the recommendations will be included in future regional policies.

1.4.2 **Peer Review in Western Greece**

The Recommendations resulted from the Peer Review at the Region of Western Greece are briefly presented in the next section, accompanied by the description of the relevant foreseen actions. The following **basic categories** were examined during the Peer Review meetings, and the recommendations were structured accordingly:

- Regional strategy
- Education and human resources
- Innovative environment
- Partnerships
- Sustainability of the jobs created by the innovative sectors
1.5 Peer review focus in the Region of Western Greece

1.5.1 Focus areas in Western Greece

The overall objective of the Peer Review in Western Greece was to examine policies and actions to support the creation and growth of New Innovative and Technology based Firms (NTBF’s).

Greece received an economic blow by the financial crisis. The overall economic conditions are currently not favourable for investments and require concentrated actions. Therefore, the region suffers from lack of capital, as donors prove hesitant to provide it. In this context, enhancing the support for access to and use of capital is crucial.

Patras Science Park, host of the regional peer review, delivered the following specific questions to the Peer Review experts to better examine and understand the local innovation system and receive recommended actions on how to improve its performance:

- How to better organise the regional innovation system
- How to improve regional policy to boost employment and innovation
- How to improve the business models of key innovation stakeholders
- How to develop financial instruments to support the creation and development of new firms
- How to boost the cooperation between business and research actors
- Narrow the gap between public and private sector in respect to project deliveries and undertaking common initiatives
1.5.2 **Short summary of key findings in Western Greece**

The peer review in Western Greece focused on the role of the Region and key stakeholders in supporting research, development and innovation as well as bridging the gap between the private and the public sector. Peers found that Region’s research and innovation institutions with their international networks, young talents and inspiring role models were strong assets that could help Region take advantage of **opportunities** like:

- The recent political decentralisation
- The opportunities arising from the crisis
- The new EU-funding period

They **recommended** therefore:

- To focus on the operational level
- To increase cooperation between the different stakeholders
- To foster entrepreneurial spirit in the region
2 ACTION PLAN

2.1 Description of the actions

In this section we present the Actions recommended by the Peer Review Team during their visit in Patras in October 2013. A Summary is given to the table below:

**Table 4: Summary of Recommendations and relevant Actions**

<table>
<thead>
<tr>
<th>a/a</th>
<th>RECOMMENDATIONS</th>
<th>ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional strategy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td><strong>R1.1 - The infrastructure of Western Greece needs investment. The improvement of the road from Patras to Athens should be given high priority.</strong></td>
<td>The harbor of Patras, businesses and tourism in the region need to be connected to the main road infrastructure of Greece. At this moment, the infrastructure is very poor, which is frustrating for businesses and entrepreneurs wanting to invest in the region. A better infrastructure would boost the economy. Better railway connection to Athens and a more developed regional airport would be an asset for the economy.</td>
</tr>
<tr>
<td>2</td>
<td><strong>R1.2 - The regional smart specialisation strategy is a good approach for the Region of Western Greece.</strong></td>
<td>With the smart specialisation strategy, the Region of Western Greece can give priority to the projects that are most needed by local people and businesses. There is a lot of frustration about the projects that were supported at national level in the past decades. The need for increased subsidiary is obvious and the new territorial organisation should allow for higher adequacy between policies and regional needs as well as higher efficiency of regional policies. Interregional cooperation can moreover help the region strengthen their position in relationship to the central government and at international level.</td>
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<td>3</td>
<td><strong>R1.3 - Make a concrete and widely accepted plan for the regional</strong></td>
<td>Once the expected new European funds are available for the region, it is crucial</td>
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<td><strong>R1.4 - Take advantage of the European funds but do not be too dependent on them.</strong></td>
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<td>4</td>
<td><strong>Development of Western Greece.</strong> To specify objectives and define concrete operational tools and a plan to implement the strategy. It is equally important to ensure that there is enough capacity with different stakeholders for the implementation of the plan. Execution matters, logistics should therefore be valued. Results should be monitored and the plan should be improved and adjusted regularly. Use and involve young people for inspiration and ideas in defining objectives and tools to improve the region.</td>
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<td></td>
<td><strong>R1.5 - Strengthen the SMEs in the region by cluster development.</strong> The Region of Western Greece has few large companies and few multinationals. SMEs are the backbone of the regional economy. SMEs can be supported by organising a number of promising clusters of SMEs and connect them with researchers from the local institutes and the University of Patras who can offer very useful help and support for innovation.</td>
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<td></td>
<td><strong>R1.6 - Bridge the gap between agriculture and research.</strong> Agricultural production can integrate innovation at different levels (crops, irrigation, logistics and distribution,</td>
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There is currently a gap between the agricultural research conducted in the region and the way agriculture is actually carried out by regional farmers. This gap should be bridged in order to bring more innovation in the sector.

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<th>7</th>
<th>R1.7 - Widen the scope of action for emergence and diffusion of innovation: involve secondary schools and polytechnics.</th>
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<td></td>
<td>Only a few young people can get a regular job at the moment, all others must try to make their own job by creating a business. That is a trend in many European countries. Education of young people is well organised in the Western Greece Region. Many young people feel the need to work abroad, because jobs perspectives in the region itself are limited. When students of polytechnics and secondary schools are more involved in innovation and science, they may be able to make their own businesses with the results of inventions.</td>
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<th>8</th>
<th>R1.8 - Develop a unique Patras model on the role of incubators and science parks.</th>
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<td></td>
<td>Smart Specialisation Strategy of the region can be improved if the University of Patras, Patras Science Park and the local research institutes work together and facilitate research to get closer to the market. Maybe an innovation agency could be installed to give guidance to this development. In this innovation agency exchange of knowledge about recent research and market possibilities could take place. Maybe create a special prize for both the most innovative and best commercial initiative could be developed</td>
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<th>9</th>
<th>R1.9 - Ensure that there is a coordinated strategy to utilise optimally the developed broadband infrastructure.</th>
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<td>Co-operation of all parties is instrumental in achieving optimal functioning of the broadband infrastructure and get a return on investment</td>
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<td>RECOMMENDATIONS</td>
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<td>10</td>
<td><strong>R2.1 - Adopt proven models of bottom up entrepreneurial activities.</strong></td>
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<td>11</td>
<td><strong>R2.2 - Promote competition for students.</strong></td>
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<tr>
<td>12</td>
<td><strong>R2.3 - Expand the problem solving programme that exists in University and explore co-creation support tools.</strong></td>
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product and service demo concepts together with companies and create new solutions to real-life problems.

13  **R2.4 - Integrate students from polytechnics.**

The competitive strength of a country is focused on the ability to attract human capital and innovative companies and the capacity to generate new ideas, new knowledge and new technologies. The number and strength of the innovation hubs in a country will decree its luck or decline. The countries with a high percentage of workers with a higher education will become the new centres for the production of ideas, knowledge and value and will be the winning ones. Therefore, it is important for the companies to invest in research and innovation as a new element of competitiveness of the economic system, contributing to the educational process of training young talents for the industry and nation. The university itself must facilitate the awareness of the opportunities that the University offers to local companies (territory) to the companies and the institutions acting on the territory, as means of dissemination of scientific knowledge (technology) and qualified human resources (talents).

For the companies benefiting of the possibility to integrate university students within their own organisation for a period of the year offers the opportunity to integrate and develop innovative projects.

Thanks to the possibility to receive support in the definition of an industrial research project and the possibility to avail themselves of the university research laboratories, the company will be able to develop specific research and exploit the know-how to build a lasting competitive advantage, based on the innovation of product, process and organisation (e.g. Tentura Castro).
<table>
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<th></th>
<th>R2.5 - Get out of the University, support cross-sector contamination with events and common projects for students.</th>
<th>Valuable initiatives supporting innovation and entrepreneurship: university initiatives encourage students to finish their studies within an enterprise (&quot;practical entrepreneurship&quot;), set up a career office and alumni network, to promote their research and find new funding. To support companies in the development of innovative projects, it could be useful to implement initiatives aimed at creating opportunities for direct matchmaking between research and business. In particular, this offers the opportunity for individual entrepreneurs and company managers to approach specific groups of researchers with whom to build collaborative projects. For example, the methodology successfully implemented by the Province of Bologna, Aster and CNA for this type of initiative is a new dissemination method, effective and direct, overtaking the formalisms that can hinder the dialogue among the leaders of the two sides, research and business. Taking advantage of the points of view of both sides, the exchange of experiences feeds on continuous stimuli and thus enriches itself. The opinions generate a virtuous circle bringing into question the points of view and guiding towards the research of problems solutions.</th>
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<tr>
<td>14</td>
<td>R2.6 - Foster the entrepreneurial spirit via acceptance of failure, summer schools, projects in curricula.</td>
<td>Foster entrepreneurial projects according to an “idea” for instance and not to the “final results”, trying to think to failure/crisis as an opportunity, not as “dead meat”. Increasing educational tools to integrate the curricula (example of the problem solving experience in a company that was included in the</td>
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curriculum at the IT department) could help in boosting the entrepreneurial spirit.

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<tr>
<td>16</td>
<td><strong>R2.7 - Incentives for researchers to become entrepreneurs (chemical engineering centre).</strong></td>
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<td></td>
<td>The strong orientation towards technical disciplines prepares students to be ready for the business environment, but the lack of education “in teaching” entrepreneurial culture and of risk taking, does not allow students to be self-sufficient for their own business. Furthermore, the attention to the ICT and high-tech sectors has many positive effects due to the cross-sector strength: high-paid jobs and many jobs opportunities in different sectors.</td>
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<tr>
<td>17</td>
<td><strong>R2.8 - Further use of ICT-based solutions for education.</strong></td>
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<td></td>
<td>The Region of Western Greece should claim optical fibre to be ruled by the region, in order to further promote digital services, digital structures and networking. E-learning solutions, for example, especially aimed at the rural areas of the region, could help education become more and more approachable. Distance learning and projects like “digital school platforms” and “virtual language learning” (CTI) could also help in tackling the digital divide. It is also necessary to realise special educational programmes for teachers allowing them to be updated on new technologies in order to integrate them into the study pathways.</td>
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<td>RECOMMENDATIONS</td>
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<tr>
<td><strong>Innovative environment</strong></td>
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<td>18</td>
<td><strong>R3.1 - Enhance public – private co-operation.</strong></td>
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| 19 | **R3.2 - Support and develop knowledge providers.** | It is recommended that the Regional authorities offer financial support to both the university and the companies (with input from interested students) to develop, realise and maintain additional, specialised training programmes. This will also help to establish connections at different levels between the UP and companies. **CTI**  
It is recommended that CTI interacts with its counterpart at UP and focuses on developing the e-support system. It is close to its (original) core expertise. It should also try to obtain a position in the power play / inertia concerning broadband connections for the region. |
| 20 | **R3.3 - Intermediary parties.** | In general: investigate how a better fit between public and private levels can be arranged.  
To start with, organise and formalise a good working structure between the key-players (in terms of influence on the money streams) RA and IMA (Chamber of Commerce, PSP...).  
At the meeting of stakeholders on August 29 2102, the foundations for the new realities were laid, it says in the RIS 3 report. Hopefully this meeting has since been followed up by regular and organised institutional contacts between the stakeholders. Cooperation requires first and foremost knowing of each other, getting to know each other and building trust. This is a necessary but not sufficient condition to set in motion a culture change towards sectoral and cross-sectoral cooperation rather than competition. This needs to be organised and fostered for a long time, over and over again. Be aware that having a good ICT infrastructure |
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<td>will help to be visible and exchange information, but in itself will not bring about interaction and cooperation.</td>
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<td>21</td>
<td><strong>R3.4 - Data Management.</strong></td>
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<td></td>
<td>It could be a recommendation to start a joint project (knowledge providers, intermediaries, businesses) for further analysing the data available, to fit the needs of target groups at regional and municipal levels and broadly share these analyses (and not so much continuing to ‘produce’ more data).</td>
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<td>22</td>
<td><strong>R3.5 - Innovation Culture.</strong></td>
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<td></td>
<td>Rather than risking the loss of an entire generation of highly educated youth – the window of opportunity for building a career is not open forever – risk investing in their riskier endeavours: starting up new business. There are tax incentives for appointing youth and for starting innovative companies. Partly use this to work on the image and ‘branding’ of entrepreneurship as a career option. One of the companies demonstrated a multiplier effect of going bankrupt, in that it resulted in 7 new start-ups by staff members that had lost their jobs, who had grown substantially since. This offers a new perspective on ‘failure’. (Or, as Greek mythology has it, the Phoenix is reborn from its own ashes again and again). Spread this story and work on the image of ‘failed’ entrepreneurs’ to become heroes. Rather than running the risk of “a quick loss” of FDI investments in times of economic distress, actively make use of brain gain from the Greek Diaspora. Track potential and/or successful entrepreneurs and businessmen abroad, who have a link to the region, and offer incentives for their return. If they bring or found companies to the region, at least they will feel some pressure to stay on when times get rough.</td>
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<tr>
<td>23</td>
<td>R3.6 - Cluster development.</td>
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<tr>
<td>24</td>
<td>R3.7 - Develop youth and female Entrepreneurship &amp; Innovation.</td>
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<td>a/a</td>
<td>RECOMMENDATIONS</td>
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<tr>
<td>Partnerships</td>
<td>R4.1 - Recognise technology enterprises as important players for innovation.</td>
</tr>
<tr>
<td>26</td>
<td>R4.2 - Enhance visibility, exploiting the full potential of the web, including speed of dissemination and access.</td>
</tr>
<tr>
<td>27</td>
<td>R4.3 - Ask successful entrepreneurs with charisma to tell their story and act as advisors for students.</td>
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to be further utilised. During the peer review interviewees mentioned, that young persons preferred to work in big companies instead of starting their own business, due to the fear of failure. Successful stories told by charismatic and successful businessman may influence the young generation to organise their own business. The owner of CBL (Chemical and Biopharmaceutical Laboratories in Patras) company or the owner of the Tentoura Company could for instance be examples of good mentors for students.

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<tr>
<th>28</th>
<th>R4.4 - Rebranding of the region.</th>
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<tr>
<td>To bring closer different economy driven forces of the region (R&amp;D organisations, Universities, SMEs, private entrepreneurs, enterprises, etc.) rebranding is needed. At the moment the Western Greece region is recognised as agricultural region. To underline that in region exists technological sector some innovative approach to the local cultural and historical traditions is needed. “InnOlympia” for instance a non-used name.</td>
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<tr>
<th>29</th>
<th>R4.5 - Organise matchmaking events.</th>
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<tbody>
<tr>
<td>1. Between students and SMEs During the peer review, some companies mentioned that it is hard for them to find a worker, due to the fact that students after University need at least half a year education inside of the company to be able to work in their environment. Representative of another international company mentioned that University was not contacting them regarding internship of students. Of course it is hard for the University to follow the development of the innovative environment, so it would be beneficial for Universities and for the companies to have “information days” aimed at informing students about their</td>
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</table>
job opportunities or about the opportunities presented for training in high technology companies.

2. Between researchers and SMEs, public

It is important to encourage and support a dialogue between researchers and the public, so that the development of research activities and policies can reflect more effectively the changing needs of a more informed society.

3. Between students and Alumni

Student Alumni association could be created to enhance the student experience by providing opportunities that strengthen their lifelong loyalty to Western Greece region, educate students and prepare them for their future career. Network of alumni volunteers could be involved in organisation of different events for the students. Alumni may act as mentors on campus, provide entrepreneurial advice, share hobbies and interests, and become employers for internships and externships across the country.

4. Cross-sectoral meetings

Experts from different sectors could find some common interest. For example nanotechnology could be applied in agricultural sector or in medicine. Representatives of SME could pose some questions, problems and researchers could help them to solve the problems by applying an innovative approach to the problems. Organise an open innovation platform for students and company (see good practice description)
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<tr>
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<th>RECOMMENDATIONS</th>
<th>ACTIONS</th>
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<td><strong>Sustainability of the jobs created by the innovative sectors</strong></td>
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<tr>
<td>30</td>
<td><em>R5.1 - Foster the entrepreneurial spirit.</em></td>
<td>With the wealth of talents present in the region and the huge potential of the innovation ecosystem, fostering the entrepreneurial spirit in the region will improve the anchoring of innovation in the territory. This should be done from an early stage and in an inclusive way. Attitudes and skills leading to self-employment need to be fostered within the education system and throughout lifelong learning. These include creativity, responsibility, risk-taking, problem-solving, team-working. Moreover education curricula should integrate project education and entrepreneurship programmes in order to help students grasp which are the required skills and competences to become an entrepreneur. Technical and vocational education should be valued, especially given the technology-based innovation anchor of the region. Teachers should be trained both during their initial training and during their professional development in order to be able to provide adequate entrepreneurship education.</td>
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</table>
| 31  | *R5.2 - Develop support structures and regular funding for start-ups and companies throughout their development.* | In order to create a general climate, which supports entrepreneurs and encourages risk taking, the region should offer its entrepreneurs comprehensive support. For the moment support this is generally organised on an ad-hoc basis. Efforts should therefore be taken to this end:  
  - **In the conceptual phase**, define their innovative idea and turn it into a business idea, and provide opportunities for consulting.  
  - **In the development phase**, |
entrepreneurs need to have access to scholarships, funding, consultancy, coaching, support to internationalisation and export. This is where venture capital and Business Angels are needed. The region should therefore provide incentives for investors to support start-ups.

- **In the commercialisation and growth stage** a wide range of stakeholders should be able to support start-ups and banks need to be involved in these partnerships. In the current climate where it is extremely hard to get loans from banks the region should also explore the possibilities offered by revolving funds.

In the context of Patras, personal networking with private capital holders seems to be the main approach to improve funding opportunities. In this situation, the national, and even more importantly the international sources of capital are crucial. The University of Patras has educated a lot of talented and successful business people who are currently in good national or global position, mainly in European countries and in the US. The utilisation and strengthening of these linkages and networks will provide huge opportunities to increase funding possibilities.

Private and public stakeholders need to cooperate in the different stages. A framework should exist to coordinate support actions without creating extra bureaucracy.

32 **R5.3 - Diversify funding innovation.**

The peer review team found that several entities from the innovation ecosystem conducted a high proportion of their research and development in the framework of projects, either at local, national or European level, leading to high dependence and a risk of low level of innovation produced
because of the timeframe of projects located in different organisations. Indeed, although these projects are fruitful and generate a wealth of innovative ideas, processes and products, it is very risky to rely too highly on EU funds for research as the main asset of the region lies in the technological sector, where products are deemed to evolve very quickly. From the accessibility, user experience and quality of service perspectives this is probably not an optimal situation and can lead to a fragmented and ad hoc service offering at the regional level. Project-based operations are also rather limited in scale and time and thus they often have challenges in creating the critical mass required for a cultural change. This also presents a risk for the jobs created in this context, which may not be sustainable.

Crowd funding is not only valuable as a potential new means of finance for scientists and (small) businesses. Its importance is also that it forces scientists to be able to think about their work in terms of potential customer benefits and potential threats to its public acceptance and to present their work to the public “at large”.

33  

**R5.4 - Improve the attractiveness of the region.**

As has been mentioned above, the region enjoys a particularly friendly atmosphere, great natural and cultural surrounding and is home to remarkable talents. In order to improve the attractiveness of the region transport (rail, road, air), digital and social (care services, leisure activities) infrastructure is vital. The region should further build on the results and successes achieved in the context of European projects, to address the digital divide in rural areas and increase territorial cohesion and contamination.
of innovation. The region should also further take advantage of the potential of its young population and include them more actively in the definition and implementation of the smart specialisation strategy.

34 **R5.5 - Use networking and modernisation to make agriculture sustainable.**

The agricultural sector was boosted by the economic crisis as job prospects deteriorated in most sectors. In order to take advantage of this pool of skilled and often young workers, who arrived in this sector due to external factors, the region should provide a framework, organise places and events where farmers, farmers’ organisations, traders can meet and bring about new possibilities for innovation and modernisation in the sector. A regular contact with research institutions is also essential to bridging the gap between research and economic activity in the sector.

35 **R5.6 - Propose a debate on the definition of sustainability.**

The perception of sustainability and the expectations of stakeholders with regards to the role of the region in this respect may vary. Therefore it would be good to organise a public debate with the different stakeholders in order to ensure the criteria for measuring and monitoring sustainability are based on a regional consensus. This would also improve the participation of citizens in the regional development strategy and the economy as a whole.
2.2 Ambitions, goals and policy

The main ambitions / objectives, policies and priorities are presented in various documents prepared by and for the Regional Authorities in Western Greece. Their summary below is taken from the following official documents:

- 3-year Operational Programme of the Region of Western Greece, October 2011
- Smart Specialisation Strategy for the Region of Western Greece, February 2014

2.2.1 Vision

The general vision for the Region can be summarized in the following phrase:

“Self-sustained, extroverted and sustainable restructuring of the Region of Western Greece, focused in its unique universal identity, in human values, and in the environment”.

The citizen is placed at the center, and the objective is not only to satisfy the citizen’s needs but also to ensure his participation at the determination of policies and the decisions to be taken for the environment, natural resources, health, culture, training and education.

The “Innovation” vision for the Region is:

“To constitute a regional pole of Research and Innovation for young scientists, researchers and enterprises, taking advantage of its privileged geographic location and the plethora of its innovative assets, and particularly the educational and research facilities that result in a continuous flow of young scientists and researchers”.

To do this, the human capital should be maintained and upgraded, critical mass should be created, wherever weak, and linkages between research and the production fabric in the Region should be improved. Support for the knowledge economy will be sought via the continuous improvement of knowledge production at all the links of the production chain, with emphasis at participation of the private sector and alignment with excellence and the Knowledge Society.
2.2.2 Objectives

The objectives / directives for successfully implementing the target set above through the general vision are summarized in the table below:

**Table 5: Objectives for implementing the vision**

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<tr>
<th>A/A</th>
<th>OBJECTIVE TITLE</th>
<th>DESCRIPTION</th>
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| O1  | Taking advantage of RWG strengths and elimination of current weaknesses | Taking advantage of RWG competitive advantages for:  
- Increase of the per capita product  
- Better regional cohesion  
- Reduction of unemployment and elimination of other social problems |
| O2  | Smoothening of intra-regional inequalities | Better convergence of various indicators between:  
- The three Prefectures (Etoloacarnania, Achaia, Ilia)  
- Urban and rural areas  
- Mountainous and lowland areas |
| O3  | Protection of the environment | Protection of the environment, as one of the three pillars of sustainable development, mainly refers to:  
- Protection and rational use of water resources  
- Municipal waste management  
- Prevention of environmental impact due to planned major interventions in Western Greece |
| O4  | Development of the Region and all its legal bodies, improvement of relation with citizens, and other public organisations, transparency everywhere |  
- Development of new RTD infrastructures for research organisations  
- Actions for improvement of access of SMEs to RTD results  
- Support to public research organisations for development of spin-off companies |
| O5  | Support of SMEs and entrepreneurship |  
- Redirection of industrial sectors towards high-tech sectors of higher added value products and services  
- Development of high-level synergies between primary, secondary and tertiary production levels  
- Promotion of entrepreneurship, mainly directed towards exports |
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<th>O6</th>
<th>Promotion of local, and traditional products at the Greek and foreign markets</th>
<th>Development of integrated programmes for urban and agricultural regeneration</th>
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</table>
| O7       | Enhancement of social services, and of measures for health, education, culture and sports | • Introduction of new ICT applications for health, education and governance  
• Improvement of infrastructures and road network  
• Protection of natural and cultural heritage  
• Promotion of cultural monuments and artifacts  
• Incorporation of new technologies (ICT) in tourism |
| O8       | Creation of new jobs | • Measures for the extension of employment life  
• Support to entrepreneurship and self-employment  
• Measures for reduction of gender inequalities  
• Measures for inclusion of disadvantaged people |

[Source: 3-year Operational Programme of the Region of Western Greece, October 2011]
2.2.3 **Challenges for research and innovation at RWG in relation to S3**

A summary of the challenges considered under the Smart Specialisation Strategy of the Region is given below:

**Challenge 1. Restructuring, modernisation and economic diversification of the regional economy**

Taking advantage of contemporary production methods and shifting to new, higher-added-value sectors. Research will be supported on sectors, where RWG has certain competitive advantages or on high-added-value sectors, where competitive advantages will be built through networking and clustering (e.g. Agriculture, animal farming, fish farming, food and drinks, tourism-culture, advanced material, microelectronics).

**Challenge 2. Increase and improvement of investments on knowledge and excellence**

Planning of actions for the support of research and innovation in RWG for the development of centers of excellence on Key Enabling Technologies (KET), via investments on equipment and infrastructures.

**Challenge 3. Support of research and innovation in the private sector**

Involvement of the private sector at the strategic design process, and implementation of actions in order to enhance private sector investments in research and technological development, against the current economic recession and scarcity of risk and innovation financing.

**Challenge 4. Prevention of the RWG brain drain**

Containment of high unemployment, especially in specialised and highly educated young people.

**Challenge 5. Smoothening of intra-regional variations in matters of research, technology and innovation**

Design of priorities and actions with the aim of balancing inequalities between Achaia and the other two prefectures.

**Challenge 6. Improvement of linkages between research and production**

Reinforcement of the cooperation of the local enterprises with RTD and education organisations, for adoption of innovative methodologies, products and applications, increase of competitiveness and employment.

**Challenge 7. Transformation of RWG to a model of smart and digital region**

Implementation of actions for enhancement of e-governance and administrative reform of regional structures, and for taking advantage of new ICT applications on certain dynamic sectors, such as culture, tourism, environment and agriculture.
2.3 Regional strategy

R1.1-Recommendation #1

The infrastructure of Western Greece needs investment. The improvement of the road from Patras to Athens should be given high priority.

The harbor of Patras, businesses and tourism in the region need to be connected to the main road infrastructure of Greece. At this moment, the infrastructure is very poor, which is frustrating for businesses and entrepreneurs wanting to invest in the region. A better infrastructure would boost the economy. Better railway connection to Athens and a more developed regional airport would be an asset for the economy.

Description of the action- Relevance

Improvement of the road, rail and aerial networks is a long-term aim of the Regional authorities in Western Greece, and several initiatives have been planned in cooperation with the Ministries responsible for major Public Works. Specifically:

The new Korinthos - Patras motorway section is currently under reconstruction, funded by a combination of private funds (bank loans 29% and equity 9%), European funds (33%), the contribution of users (tolls 23%) and the Greek State (6%) with a Public – Private Partnership (PPP) scheme, involving major Greek and international construction companies.

The Antirion – Ioannina motorway section (Ionian road) is currently under reconstruction funded by a combination of private funds (bank loans 54% and equity 16%) and Greek state and EU funds (30%) with a Public – Private Partnership (PPP) scheme, involving major Greek and international construction companies.

The Patras – Pyrgos – Tsakona motorway section reconstruction is expected to be funded during the next programming period 2014-2020.

Peripheral roads around the cities of Patras, Nafpaktos and Agrinio are already in operation, but connecting roads are pending construction.

The Korinthos – Patras railway section is currently under construction, funded by Greek State and EU funds. The Patras – Pyrgos and Pyrgos – Kalamata railway sections are in the phase of studies.

Western Greece is served by 2 small airports (Araxos and Aktio) with a third military airport (Andravida).

A1.1.1. Completion of the new Korinthos - Patras motorway section, which is currently under reconstruction, involving major Greek and international construction companies
A1.1.2. Completion of the Antirion – Ioannina motorway section (Ionian road), which is currently under reconstruction, involving major Greek and international construction companies
A1.1.3. Reconstruction of the Patras – Pyrgos – Tsakona motorway section
A1.1.4. Construction of connecting roads at the peripheral roads around the cities of Patras, Nafpaktos and Agrinio
A1.1.5. Completion of the Korinthos – Patras railway section and construction of the Patras – Pyrgos and Pyrgos – Kalamata railway sections

**Participatory process (who is involved, leader / owner, where)**
The above actions are the result of long-term consultations with all the relevant regional stakeholders, highlighted by implementation of targeted workshops and conferences.

While ownership of the road network lies exclusively with the state, operation of the main motorway sections (Korinthos – Patras and Antirion – Ioannina) is granted to the private sector for long term periods. Ownership of the railway network remains public.

Airfields in the area are mainly military although two of them also serving civilian traffic.

However, investments in RWG ports are welcome, and negotiations have taken place repeatedly about several of the local ports (Astakos, Patras).

**Expected results**
- An efficient road network that will facilitate transportation of goods and passengers from south Peloponnese to the port of Patras, from the port of Patras to the Egnatia road, leading to northern Greece, Balkans and Turkey, and from Patras to Athens and eastern Greece
- A rail connection between Patras and Athens and the rest of the rail network that will enable inter-modal transportation (sea, road, rail)
- Further development of the two regional airports that will facilitate tourist flows towards Western Greece and the rest of Peloponnese

**Preconditions**
- Availability of EU funding
- Improvement of economic conditions in Greece, so that public works’ co-financing continuous to flow, and investment increases

**Possible barriers**
- Lack of private sector financial capacity for investments due to banking or other relevant obstacles
- Delays in expropriations caused both by lack of state financial capacity and litigations by local population
• Archaeological findings during road construction
• Natural habitat protection in certain parts of the road and railway network of the Region

**Related good practice examples**

None

**Planning**

The construction of the new motorway Korinthos – Patras is completed at a percentage of 48% (April 2014) and is expected to end at the end of 2015. The extension of this motorway towards Pyrgos – Tsakona is expected to be funded in the framework of NSRF 2014-2020. The Ionian road is also expected to be completed at the end of 2015 with the exception of the Klokova tunnel that is expected to be delivered on August 2016. The Korinthos – Kiato railway section is already completed; the Kiato – Rio railway section is expected to be completed in 2017, while the Rio – Patra section is expected to be delivered by 2020. The sections Patras – Olympia, Pyrgos – Katakolo and Pyrgos – Kalamata are currently in the phase of studies.
**R1.2-Recommendation #2**

The regional smart specialisation strategy is a good approach for the Region of Western Greece.

With the smart specialisation strategy, the Region of Western Greece can give priority to the projects that are most needed by local people and businesses. There is a lot of frustration about the projects that were supported at national level in the past decades. The need for increased subsidy is obvious and the new territorial organisation should allow for higher adequacy between policies and regional needs as well as higher efficiency of regional policies. Interregional cooperation can moreover help the region strengthen their position in relationship to the central government and at international level.

**Description of the action- Relevance**

The regional innovation system in Western Greece is weak despite the strong past public funding, as it did not manage to leverage regional business innovation performance and enhance the adoption of technology by the productive sector towards radical product / service innovation. The regional specialisation strategy provides a new approach that could help enhancing the internal capabilities of private sector firms. Moving away from the largely centralised Structural Fund support of the past period, the regional smart specialisation strategy could reinforce the framework for effective bottom-up strategic planning with the direct involvement of regional stakeholders. Good practices at an international level could be utilised through interregional initiatives.

Specific actions that could be undertaken towards these directions, especially by PSP, include:

- A1.2.1. Promote networking activities among different stakeholders in the Region of Western Greece from the public-academic-business sectors aiming at thematic industry working groups that could identify sectorial innovation needs
- A1.2.2. Focus on innovation management schemes, addressing primarily SMEs located at PSP and at a later stage the wider audience of SMEs in the Region, which could help increase the SME internal capacities in knowledge intensive service sectors
- A1.2.3. Develop an integrated approach towards financial support of innovation twinned with mentoring / coaching / advisory services. This approach would identify the critical needs of regional SMEs and the proposed tools to address them, including seed-funding, micro-credit, business angels.
- A1.2.4. Promote clustering of regional SMEs

**Participatory process (who is involved, leader / owner, where)**

PSP serves as a business support organisation and incubator in the area and could be the natural leader / owner of the above actions. It could undertake the role of
managing innovation in the area of the Region of Western Greece through the participation of all available stakeholders from academia/research, business and public sector.

Action 1.2.3 would require a wider enlisting of all regional actors under the leadership of the Region in order to make it possible to provide the local firms with the right mix of financing tools to address their needs/financing gaps in the innovation development process.

**Expected results**
- SMEs with increased innovation potential
- SMEs with greater capability to absorb innovation and utilise it towards the production of innovative products or the provision of innovative services
- Bottom up design of regional projects leading to more efficient results for the regional economy and development

**Preconditions**
- Availability of state and EU funding
- Development of trust between the different stakeholders at regional level

**Possible barriers**
- Strong top-down approach utilised in the past may still influence the distribution of funds in the future

**Related good practice examples**
None

**Planning**
New Calls and opportunities in the HORIZON 2020 programme are launched frequently already. New Calls in Interreg VC and MED are expected for the 1st semester in 2015 and for the ADRION and Baltic Med programmes in September 2015.

Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
R1.3-Recommendation #3

Make a concrete and widely accepted plan for the regional development of Western Greece.

Once the expected new European funds are available for the region, it is crucial to specify objectives and define concrete operational tools and a plan to implement the strategy. It is equally important to ensure that there is enough capacity with different stakeholders for the implementation of the plan. Execution matters, logistics should therefore be valued. Results should be monitored and the plan should be improved and adjusted regularly. Use and involve young people for inspiration and ideas in defining objectives and tools to improve the region.

Description of the action- Relevance

The need to effectively implement the new programming period strategy for the development of the Region of Western Greece is critical for the Region in order for it to move upwards in the list of less developed European regions. One of the primary objectives of the implementation should be to help promote the innovation potential of the Region and the uptake of innovative results by the SMEs in the Region. Strengthening the productive fabric of the Region in a sustainable way should be a major outcome of the implementation of the next period strategy.

A good model for such an implementation could be the central monitoring of the implementation by the Region and Regional bodies, while allocating the actual execution of specific thematic axes of the strategy to stakeholders of the Region with proven experience in acting as intermediary organisations. Such stakeholders could include PSP as it has strong previous experience in executing and managing large scale projects like the Regional Innovation Pole of Western Greece.

Specific actions that could be undertaken towards this direction include:

A1.3.1. Breakdown of the implementation of the strategy into thematic axes and allocate thematic axes implementation leaders. This allocation would be a task of the Region, with the active participation of all relevant stakeholders, including PSP.

A1.3.2. Acting as an intermediary organisation for the thematic axis of Innovation Management, dealing especially with the uptake of innovation by SMEs and the innovation transformation process support so that SMEs in the region produce innovative products and provide innovative services

A1.3.3. Involvement of all stakeholders in the Region following a bottom up approach in the Thematic Axes of the next period strategy implementation during all of its phases, starting from the implementation plan elaboration through the implementation plan execution and the monitoring of its outcomes
Participatory process (who is involved, leader / owner, where)
The Region of Western Greece is the natural leader for A1.3.1. PSP, with its strong previous experience in dealing with large initiatives such as the Regional Innovation Pole, and serving its business support organisation role, could undertake the role of the leader in A1.3.2 and heavily contribute to A1.3.3. Further stakeholders in the Region that could contribute include business support organisations, the Regional Development Fund and Regional Development Agencies. All stakeholders should participate in the bottom up approach for the efficient execution of the new strategy including policy makers, academia and research, and the business sector.

Expected results
- Bottom up participatory implementation of the strategy for the next period leading to more efficient projects and results applicable to the regional economy and promoting regional development
- Distributed and more efficient thematic implementation of the strategy under central monitoring leading to better uptake of the results by the thematic stakeholders
- SMEs with increased innovation potential and increased capability to absorb innovation participating in the implementation of the Innovation Management Thematic Axis through fresh ideas and innovative projects

Preconditions
- Availability of state and EU funding
- Set up of the needed intermediary organisation structures at the involved stakeholders
- Consensus at regional level relevant to the distributed implementation of the new period strategy

Possible barriers
- Centralised implementation of the past period strategies may still inhibit a distributed implementation for the next period
- Top down approach generally followed in the past in the Region may still influence the implementation in the next period

Related good practice examples
PSP was the leader of the implementation of the Regional Innovation Pole of the Region of Western Greece in the past, having proved the necessary efficiency for managing and effectively running large scale projects. In the framework of this initiative, PSP managed to develop the necessary consensus at Regional level bringing around the same table all stakeholders relevant to innovation in W. Greece.

Planning
The implementation of the next period is expected to start during 2015. Thematic axes related programmes could be launched by the end of 2015.
**R1.4-Recommendation #4**

**Take advantage of the European funds but don’t be too dependent on them.**

*Never waste a good crisis!* The financial and economic crisis has severely hit most countries of the European Union, and is therefore not only a Greek challenge. Local businesses and business initiatives must be able to benefit from the European Funds, which will be made available for the Smart Specialisation Strategy to improve their production and to support the development of new products. In order to avoid a subsidy-driven market it may be better to use subsidies only for a limited number of high-risk (but promising) business projects. For other projects, revolving funds (sharings and loans) are advised.

**Description of the action- Relevance**

Greece has been severely hit by economic crisis during the past years leading to large percentage of unemployment and job losses. It is a challenge for Greece to reverse the bad situation in the real economy reinitialising economic development. Since SMEs represent the heart of the Greek economy, measures leading towards strengthening the competitiveness of existing SMEs through the uptake of innovation and the production of innovative products and the provision of innovative services and measures leading to the establishment of new innovative SMEs, seem to be the way to go.

European funds may play an important role towards this direction, taking into account the scarcity of relevant national funds. Support towards SMEs could take the form of subsidies, as in the past periods, utilising available European funding funneled towards the implementation of the Smart Specialisation Strategy of the Region. Yet, in order not to stick to unsuccessful models of the past, this form of funding should be ideally used for competitive projects focusing on radical innovations. Novel tools to be used, should focus on the establishment of revolving funds that would allow for the innovation development and transformation of existing SMEs in the region as well as for the establishment of new SMEs.

Specific actions that could be undertaken towards this direction, especially by PSP, include:

- **A1.4.1.** Design and implementation of radical innovation subsidy programmes for SMEs of the Region of Western Greece to be run by the Region of Western Greece and PSP
- **A1.4.2.** Design and implementation of a revolving fund programme by the Region of Western Greece to be utilised by academia and business support organisations
- **A1.4.3.** Establishment of a revolving fund project for innovation development by SMEs of the Region of Western Greece, focusing primarily on SMEs located at the PSP or new SMEs to be located to PSP
Participatory process (who is involved, leader / owner, where)
The Region of Western Greece is the natural leader for A1.4.1. and 1.4.2.

PSP, being a business intermediary organisation and an incubator in Western Greece, could offer a Revolving Fund project for SMEs resident at its premises as well as new innovative SMEs initiated by individuals not having easy access to financing and locating their new SMEs at PSP. In this context, it could lead A1.4.3.

All three actions should involve all: the public sector, academia and research and primarily the business sector.

Expected results
- SMEs with radical innovations having access to subsidy funding
- SMEs with improved innovation potential having access to revolving funds
- New SMEs with innovation potential created in the Region having access to revolving funds
- Decrease of the unemployment rate in the Region and increase of SME competitiveness and regional development

Preconditions
- Availability of state and EU funding
- Spotting radical innovation in thematic sectors of interest in the Region
- Enhancement of the entrepreneurial spirit in the Region of Western Greece

Possible barriers
- Brain drain from the Region of Western Greece, not being capable of keeping the brightest people educated at its academic institutions
- Overall bad entrepreneurial climate of the past (including heavy taxation and legal and regulatory issues) may inhibit the sustenance of existing and creation of new innovative SMEs

Related good practice examples
None

Planning
The implementation of the next period is expected to start during 2015. Programmes relevant to subsidy funding and revolving funding could start by the end of 2015. In general, launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
Strengthen the SMEs in the region by cluster development.

The Region of Western Greece has few large companies and few multinationals. SMEs are the backbone of the regional economy. SMEs can be supported by organising a number of promising clusters of SMEs and connect them with researchers from the local institutes and the University of Patras who can offer very useful help and support for innovation.

Description of the action - Relevance

SMEs in the Region of Western Greece play the role of the backbone of the regional economy. Based on the general EU experience, SMEs can play a significant role in developing innovations and launching to the market innovative products and services. Yet, in the Region of Western Greece, it seems that most of the core sectors of economic activity and their relevant SMEs are, with the exception of few cases, not connected to the regional innovation system.

The majority of regional policies / projects of the past have followed a horizontal and multi-sectoral approach, while on the other hand sector specific support actions and policies have only partially being deployed and tested in the region. This has led to the fact that the core sectors of the regional economy appear without collaboration schemes or active facilitators / associations. Yet, the Region can show one mature cluster in micro-nano-electronics and ICT (mi-cluster) and two emerging clusters in Hydrogen Fuel Cells and PV Smart Installing.

The creation of clusters in core economic sectors of the Region of Western Greece (including Farming and Animal Husbandry, Agricultural Products, Tobacco, Maritime, Construction, Tourism, Processed Food, and Transportation and Logistics) could create a competitive advantage for the Region increasing the innovation absorption by SMEs in the above sectors and creating competitive advantages for them.

Specific actions that could be undertaken towards this direction, especially by PSP and Innohub, include:

A1.5.1. Design and development of a solid methodological approach for effective cluster development replication facilitating the rapid spread of good practices and ideas
A1.5.2. Creation of a Cluster Secretariat that would promote the utilisation of this methodological approach for the creation of clusters in core sectors of the Region of Western Greece
A1.5.3. Creation of a One-Stop-Shop for Entrepreneurial and Innovation Support Services provision towards SMEs of the Region of Western Greece, providing advisory services towards cluster formation to the business sector
Participatory process (who is involved, leader / owner, where)

PSP is the coordinator of an emerging cluster in the Region of Western Greece, the cluster of Hydrogen Fuel Cells. It is also an incubator that provides already entrepreneurial and innovations support services to businesses of the region. It could thus undertake a leader role in all three actions proposed above.

Other relevant actors in the area with the identity of cluster facilitator include Patras Innohub and the University of Patras. Further relevant stakeholders include the business sector, especially in sectors that appear to have the necessary size and specialisation in the Region of Western Greece, business representative organisations, the academic / research sector that has to support clustering from the innovation point of view and the public sector.

Expected results

- Cluster creation in core sectors in the Region of Western Greece
- Economies of scale and increase of competitiveness for the SMEs in the Region of Western Greece, deriving from their participation in clusters
- SMEs with increased absorption of innovation
- Innovative and highly competitive sectoral ecosystem in the Region
- Qualitative upgrade of traditional core business sectors in the Region (e.g. agricultural products or tourism)
- Inter-sectoral cooperation through the collaboration between clusters and spill-over effects

Preconditions

- Availability of state and EU funding
- Building of trust between the SMEs of core sectors in the Region of Western Greece
- Bringing otherwise competitive SMEs around the same table and find room for collaboration and clustering

Possible barriers

- Traditional isolation of SMEs in the Region of Western Greece
- Large number and small size of SMEs in the core sectors of the Region of Western Greece

Related good practice examples

Mi-cluster: The Nano/Microelectronics based Systems and Applications Cluster is the first innovation cluster in Greece with a pole of concentration in the Region of Western Greece. Since its establishment in 2006, it demonstrates continuous growth. Today, the mi-Cluster consists of more than 130 members including innovative start-ups, small, medium and large companies, academic labs and research institutes, science parks, networks, associations, suppliers of services, financial institutions, media of different kinds, national ministries and regional
agencies involved in industry, regional, science and technology development and policy.

**Planning**

The implementation of the next period is expected to start during 2015. Programmes relevant to cluster formation could start by the end of 2015. Further funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.
R1.6-Recommendation #6

**Bridge the gap between agriculture and research.**

Agricultural production can integrate innovation at different levels (crops, irrigation, logistics and distribution, storage, transformation...). There is currently a gap between the agricultural research conducted in the region and the way agriculture is actually carried out by regional farmers. This gap should be bridged in order to bring more innovation in the sector.

**Description of the action- Relevance**

The agricultural sector in the Region of Western Greece is quite important being a core economic sector of activity with significant extrovert character and high percentage of employment. The agricultural sector in the Region is driven at a large extent by traditional agricultural practices exercised by family owned farms. Many agricultural products lack the necessary standardization and are sold in bulk.

On the other hand, the academic and research world of the region conducts research relevant to sectors that could be utilised by the agricultural production and that could incorporate significant innovations. Crops monitoring, irrigation systems and techniques, greenhouse farming, agricultural product logistics and distribution, agricultural products marketing and standardization, are some of the levels that could integrate innovation in the Region of Western Greece.

There is a need to gap the two worlds, offering guidance to the farmers of the region and providing services to the agricultural sector of the area so that it will be possible to increase its competitiveness in a sustainable way.

Specific actions that could be undertaken towards this direction include:

- **A1.6.1.** Transformation of the Regional Agro-Food Collaboration, already created under the guidance of the Region of Western Greece to a Agro-Food Cluster in the Region bringing the academic / research and business sector together and helping integrate innovation in the agricultural sector
- **A1.6.2.** Creation of a Portal of Best Agricultural Practices focusing on specific agricultural and agro-food products of the Region of Western Greece
- **A1.6.3.** Provision of training to individual farmers and agricultural SMEs in the Region of Western Greece

**Participatory process (who is involved, leader / owner, where)**

PSP is the coordinator of an emerging cluster in the Region of Western Greece, the cluster of Hydrogen Fuel Cells. It could thus undertake A1.6.1 as a leader and could
heavily contribute also assuming the leading role in A1.6.2. Action A1.6.3 could be better undertaken by an academic / research institution of the Region.

Other important actors in the Region relevant to the above activities include the Region of Western Greece and policy making bodies, having sound interest towards empowering the agricultural sector of the Region. Academic and research institutions, farmers and farming businesses, agricultural cooperatives and associations are also important stakeholders that should be brought together. Finally, existing and emerging technology clusters that could be of relevance to the needs of the agricultural sector and that could provide solutions to its problems are also stakeholders in an inter-cluster collaboration approach.

### Expected results
- Agro-Food cluster in the Region of Western Greece
- Farmers and farming SMEs with increased knowledge and tools to increase their overall competitiveness through the integrating of innovation at different levels of agricultural practices

### Preconditions
- Availability of state and EU funding

### Possible barriers
- Traditional isolation of farmers and farming SMEs in the Region of Western Greece
- Agricultural sector in the Region of Western Greece following traditional practices to a large extent

### Related good practice examples
None.

### Planning
The implementation of the next period is expected to start during 2015. Programmes relevant to cluster formation could start by the end of 2015. Further funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.

Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
**R1.7-Recommendation #7**

**Widen the scope of action for emergence and diffusion of innovation: involve secondary schools and polytechnics.**

Only a few young people can get a regular job at the moment, all others must try to make their own job by creating a business. That is a trend in many European countries. Education of young people is well organised in the Western Region. Many young people feel the need to work abroad, because jobs perspectives in the region itself are limited. When students of polytechnics and secondary schools are more involved in innovation and science, they may be able to make their own businesses with the results of inventions.

**Description of the action- Relevance**

Innovation is critical for the creation of new jobs in Europe in general and the Region of Western Greece in particular. Enhancing innovation in an area is not an easy task but represents a multi-parametrical challenge involving different stakeholders coming from different target groups with different perceptions of what innovation is. The different parameters influencing innovativeness, especially between young people, need to be identified and understood for a successful innovation enhancement in the area of the Region of Western Greece.

In this context, two different axes may be discerned: the policies axis and the individuals’ axis. Policies enhancing innovation represent an important element, while the perception of policies by individuals represent a second important element for increasing innovation performance in a society. The perception of innovation by young people as an opportunity rather than a challenge or even worse a threat is quite significant.

Specific actions that could be undertaken towards this direction, especially by PSP, include:

- **A1.7.1.** Elaboration of an Innovation Model detailing the different parameters that influence innovativeness focusing on the general public and especially the youth
- **A1.7.2.** Detailed Innovation Support Framework with the correct mix of existing tools, policies, approaches and methodologies relevant to innovation enhancement
- **A1.7.3.** Performance of innovation capacity building and awareness campaigns in the Region of Western Greece incorporating innovation motivation tools for young people

**Participatory process (who is involved, leader / owner, where)**

PSP as a business support organisation and an incubator in the area of the Region of Western Greece represents a partner dealing with the different aspects of innovation of SMEs as well as of individuals founding new innovative SMEs. In this...
context it could undertake the leading role in A1.7.1 and A1.7.2 and contribute heavily to A1.7.3.

The Region of Western Greece and the public policy making stakeholders should also participate, especially in A1.7.2.

Academia and research institutions could undertake the leadership of A1.7.3.

The business sector and business representation organisation are also stakeholders that should participate.

Schools, the wider public and civil society are also stakeholders of interest.

### Expected results

- Enhanced understanding by all stakeholders of the Region of Western Greece or what innovation is and of the parameters influencing the enhancement of innovativeness
- Enhanced knowledge of the suite of tools and approaches available in the Region of Western Greece in order to pursue and achieve innovation
- Young people with increased awareness and capacities relevant to the achievement of innovation

### Preconditions

- Availability of state and EU funding
- Entrepreneurship culture in the Region of Western Greece

### Possible barriers

- Perception of innovation as a challenge or a threat rather than an opportunity in the Region of Western Greece
- Pure innovation culture in the Region of Western Greece

### Related good practice examples

None.

### Planning

The implementation of the next period is expected to start during 2015. Programmes relevant to cluster formation could start by the end of 2015. Further funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.

Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
R1.8-Recommendation #8

**Develop a unique Patras model on the role of incubators and science parks.**

*Smart Specialisation Strategy of the region can be improved if the University of Patras, Patras Science Park and the local research institutes work together and facilitate research to get closer to the market. Maybe an innovation agency could be installed to give guidance to this development. In this innovation agency exchange of knowledge about recent research and market possibilities could take place. Maybe create a special prize for both the most innovative and best commercial initiative could be developed.*

**Description of the action- Relevance**

The Region of Western Greece is in line with the “European paradox” identified as the difficulty of Europe to transform research results to innovation to the extent other economies do. Being a modest innovator (the lowest ranking in four categories of innovation performance) the Region of Western Greece is characterised by low scores in “technological innovation”.

On the other hand, the academic and research institutions of the area, appear to be quite productive. The scientific output of the University of Patras especially is particularly high (ranked 3rd among Greek Universities).

According to an analysis of the European Clusters Observatory, the scientific specialisation is in line with the industrial specialisation of the Region of Western Greece.

All the aforementioned, create the need for innovation facilitation in the Region of Western Greece and a different approach for innovation support than followed in the past. Business support organisations and business intermediaries in the area, should develop a unique model for their role, so that the scientific output of the University of Patras primarily and of the rest academic and research institutions secondarily is transformed to innovative products and services, paying back to society and increasing the overall quality of life.

Such a model should address the different needs associated with innovation management, including change of entrepreneurial and innovation culture, methodological approach and knowledge on what innovation is and how it can be effectively pursued, support framework with specific innovation enhancement tools and services, financing mechanisms for the support of the innovation development process. The role of institutions like PSP is critical to this end.

Specific actions that could be undertaken towards this direction include:

A1.8.1. Elaboration of a new Patras Science Park model as a business plan for Innovation Management in the Region of Western Greece. This model
should address the necessary transformation of existing services and approaches of the PSP, so that the needs of the Region of Western Greece with reference to innovation are efficiently met.

A1.8.2. Implementation of the new Patras Science Park model for Innovation Management, founding an Innovation Agency at the PSP. The Innovation Agency would include functions like for instance Intermediary organisation for funding of targeted thematic programmes for innovation support, Cluster Secretariat, One-Stop-Shop for innovation enhancement in SMEs, Innovation Support Framework comprising the necessary approaches and tools (e.g. Innovation Prizes).

**Participatory process (who is involved, leader / owner, where)**

PSP as the Science Park in the Region of Western Greece and the main incubator of the area assumes the leader role of both A1.8.1 and A1.8.2 and could elaborate and implement the new model for Innovation Management, becoming the Innovation Agency of the Region of Western Greece.

Part of the envisaged role of PSP, would be in this sense the coordination of all stakeholders involved in the Innovation Management and Support in the Region of Western Greece: i.e. academy and research, the business sector and other business support organisations.

**Expected results**

- Enhanced innovation absorption by the SMEs in RWG
- Increase in the number of innovative SMEs spinning out of the academic and research institutions of the Region of Western Greece

**Preconditions**

- Availability of state and EU funding
- Consensus between the different involved stakeholders at the Region of Western Greece

**Possible barriers**

- Distance between the business and academic world in RWG
- Lack of consensus among the different innovation management stakeholders at the Region of Western Greece

**Related good practice examples**

None.

**Planning**

The implementation of the next period is expected to start during 2015. Funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.
R1.9-Recommendation #9

Ensure that there is a coordinated strategy to utilise optimally the developed broadband infrastructure.

Co-operation of all parties is instrumental in achieving optimal functioning of the broadband infrastructure and get a return on investment.

Description of the action- Relevance
Being a national priority, the Operational Programme Information Society has funded the development of metropolitan fiber optic network broadband infrastructure in eight municipalities of the Region of Western Greece, forming a total network of about 176,996 Km and interconnecting a total of 446 access points. The Greek School Network connects 422 access points to educational institutes, while the number of points covered by the MANs is 148 with the potential to extend to 238 educational points. Local academia and research institutions are served by GRNET (the Greek Research and Technology Network) via dedicated fiber lines.

This developed broadband infrastructure needs to be optimally utilised so that there is a return on investment. For this reason, there is a tender to integrate MANs with National Networks, to extend the coverage of broadband infrastructure with other infrastructures (Syzefxis, School-net), to promote the use of fiber optic and wireless networks for internet access to all the area of the Region of Western Greece.

Finally, providing e-services to the citizens, the public sector (e-governance) and specific business sectors (primary, transportation, health, manufacturing, food and beverages, education, e-learning) that are more influenced by the penetration of ICT is expected to accelerate the broadband infrastructure return on investment.

Specific actions that could be undertaken towards this direction, especially by PSP, include:

A1.9.1. Provision of e-governance and e-learning services to SMEs located at PSP and to SMEs located at the Region of Western Greece in general
A1.9.2. Enhancement of the provision of Broadband infrastructure to the SMEs located at PSP

Participatory process (who is involved, leader / owner, where)
PSP is the Leader of both actions A1.9.1 and A1.9.2.

Other stakeholders that need to be involved include the public sector, including the Region of Western Greece, academia and research institutions, the business sector.

Expected results
- Better utilisation of broadband infrastructures
- E-learning and e-governance services to SMEs
• E-services provided by SMEs to the citizens / clientele

**Preconditions**
• Availability of state and EU funding

**Possible barriers**
• Maintenance of the Broadband Infrastructure

**Related good practice examples**
None.

**Planning**
The implementation of the next period is expected to start during 2015. Funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.
2.4 Education and human resources

R2.1-Recommendation #1

**Adopt proven models of bottom up entrepreneurial activities.**

The direction is to work on human resources within the companies in order to share company’s mission and be proactive, encouraging a model of shared leadership.

**Description of the action- Relevance**

Human resources are critical for enterprises. The human resource strategic decisions taken by an enterprise have the power to shape the enterprise direction and influence to a great extent its future success. Key challenges that Human Resource management has to face, ranging from strategic implementation and training practices to fostering competencies and developing leadership skills, need preparation, inspiration and forward thinking. Building the Human Resource strategy of a company is supportive to the achievement of the business strategy of the company. This support is both proactive and reactive. Proactive in the sense that it deals with the maximization of the company’s human resources added value to the company. Reactive in the sense that, decisions can be taken on the directions to follow towards achieving the business strategy of a company, based on the assessment of Human Resource implications of such a strategy.

Human Resource management is thus a critical factor for encouraging a model of shared leadership inside a company, which is especially important for innovative SMEs. Such a model could address the liaison between business strategy and human resource management strategy and detail the tools available towards this end, such as HR development, training, rewards and employee relations.

Working on human resources within companies and offering professional consultancy on establishing effective human resource strategies is a needed service for the Region of Western Greece. The small size of SMEs in the Region makes it difficult for them to have professional HR management within them. In this context, external professional consultancy seems mandatory.

Specific actions that could be undertaken towards this direction, especially by PSP, include:

- **A2.1.1.** Develop an integrated model for bottom up entrepreneurial activities providing a human resource management framework for innovative SMEs, detailing the most applicable approaches, methodologies and tools
- **A2.1.2.** Establish human resource management professional capacity building service provision, primarily towards innovative SMEs located at PSP and secondarily located in the overall area of the Region of Western Greece
Participatory process (who is involved, leader / owner, where)

PSP, being a business support organisation and an incubator of innovative SMEs in the Region of Western Greece, can be the leader in both A2.1.1 and A2.1.2.

A2.1.1 could also involve as partners academic / research institutions making it possible to develop the envisaged model and HR management framework. The contribution of the business sector with potential good practices is also essential.

A2.1.2 could involve institutions offering capacity building and training, as well as academia. The business sector and SMEs would be the recipient of the offered services.

The public sector and the Region of Western Greece could be also indirectly involved in both actions as enhancing the human resource of the region towards a more entrepreneurial friendly model can be of interest for the development of the Region.

Expected results

- SMEs with enhanced human resources
- Shared leadership model enforced in innovative SMEs in the Region of Western Greece
- Human resource management framework for innovative SMEs enforced in the Region of Western Greece

Preconditions

- Availability of state and EU funding
- Collaboration with academic / research institutions and human resource professionals in order to define the model of bottom up entrepreneurial activities and resulting human resource management framework

Possible barriers

- Existing human resource management practices followed by owner centric traditional sector SMEs in RWG, inhibiting adoption of new concepts / ideas

Related good practice examples

None.

Planning

The implementation of the next period is expected to start during 2015. Funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively. Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
R2.2-Recommendation #2

Promote competition for students.

Young students need to be proactive and add their spirit to what they receive from the University, trying to go closer to the industry, instead of choosing an academic career. Improve the pro-active attitude by promoting competition between students and by looking at failures as an opportunity to emphasize the idea, not the results.

Description of the action- Relevance

Young students represent an asset for the Region of Western Greece. Having two Universities and one Technical Educational Institute, the Region of Western Greece attracts a large number of students from all over Greece (30.000 out of them at the University of Patras).

Increasing innovativeness and entrepreneurial spirit of the young student population of the Region of Western Greece is a quest for the individual development and the development of the Region. Being largely a University with a technological focus, the University of Patras could become a hub for spin offs and spin outs and a field for innovation and entrepreneurship.

Bringing the industry close to the University and the students is essential for the above evolution. The industry can provide the academic / research audience with its problems that need to be solved, while on the other hand it can benefit from the solutions provided by the University to these problems. Furthermore, the industry represents (or should represent) the natural employer of the majority of students; thus, bringing the two worlds together even at the study stage, can be beneficial for both of them.

A change in mentality relevant to the role of Greek Universities especially in times of crisis is necessary. Further to being hubs of excellence, more industry driven research and applied research should be desirable. Liaison between industry and university should be strengthened viewing them as parts of the same ecosystem rather than competing worlds. This climate could reflect on the student audience of the Universities and create spillover effects for increased innovativeness and enhancement of their entrepreneurial spirit.

Changing student mentality towards entrepreneurship should be topped by a broader change of the overall society towards innovation. Viewing a business failure as a step in the process of learning rather than a catastrophe is essential for promoting innovation and entrepreneurship in the Region.

Specific actions that could be undertaken towards this direction, especially by PSP, include:
A2.2.1. Provide Innovation and Entrepreneurship Capacity Building services towards University students
A2.2.2. Establish annual Student Innovation Competition for three best student ideas
A2.2.3. Establish Innovation and Entrepreneurship programme for the funding and implementation of best student ideas

Participatory process (who is involved, leader / owner, where)

PSP, being a major innovation support institution in the Region of Western Greece could act as a leader in A2.2.1, and A2.2.2. It could contribute to A2.2.3 either as a leader of as an involved partner, in which case A2.2.3 could be assumed by the Region of Western Greece.

A2.2.1 and A2.2.2 should involve also academia / research institutions of the area, which students are the focus of the action.

A2.2.3 should involve the public and business sector being the funding bodies or sponsors respectively of the action and its envisaged programme.

Overall, the different actions should involve the public and policy makers, academia and research, students, business sector and SMEs, and the wider public.

Expected results

- Students with enhanced innovativeness and entrepreneurial skills
- Students with changed mentality with reference to innovation and entrepreneurship
- Increase in the number of SMEs spinning out or spinning off academia
- Overall enhancement of innovation and entrepreneurship in the Region of Western Greece

Preconditions

- Availability of state and EU funding
- Availability of private funding by industry and SMEs
- Wide consensus over bringing industry and academia closer

Possible barriers

- Existing mentalities in academia that are hostile towards industry and the private sector, as well as applied and industry driven research
- Existing mentalities in society in general that could be identified as enterprise and / or industry hostile

Related good practice examples

None.

Planning
The implementation of the next period is expected to start during 2015. Funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.

Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
R2.3-Recommendation #3

Expand the problem solving programme that exists in University and explore co-creation support tools.

The importance of combining technical expertise with practical spirit, focusing on the ability to design alternatives, would ensure a more proactive approach to face possible errors/problems. In this sense a co-creative environment could inspire brainstorming and good practices sharing.

This recommendation could be put into practice by taking inspiration from the good practice “Demola of New Factory” (Tampere Region), where multidisciplinary teams of university students, in collaboration with companies, produce demonstrations of new products, services and social practices, and gain the ownership of IPR that makes entrepreneurship possible. The objective of Demola is to boost a multidisciplinary, agile innovation culture and encourage entrepreneurship in the Tampere Region. University students from three regional universities can develop product and service demo concepts together with companies and create new solutions to real-life problems.

**Description of the action - Relevance**

Collaboration is essential in the field of innovation. Having an ecosystem of academia and industry in an area, creates the need for collaboration between them in order to be possible to come up with innovative products and innovative service provision.

Taking a further step, co-creation or co-working represents a scheme for multidisciplinary work on a common problem that can lead to innovative solutions. Co-creation or co-working spaces can offer the necessary exchange of ideas between multidisciplinary teams, making it possible for them to address real life problems more efficiently and with a fresh look.

Co-creation or co-working spaces in the Region of Western Greece are limited to the premises of business support organisations such as PSP, or Patras InnoHub and rely mostly on the daily acquaintance between SMEs residing in their incubators. There are no such facilities at the academic / research institutions of the area or even more open facilities to SMEs and the general public / entrepreneurs / professionals.

Replicating the idea of “Demola of New Factory” would require the establishment of such a space, focusing on University students, SMEs and professionals. The idea is that though the proximity of these stakeholders achieved at a common space, implementation and demonstration projects relevant to real life problems could be possible, combining the different types of expertise that they carry and leading to individual projects that could at a later stage be the seed behind the establishment of new SMEs.
Specific actions that could be undertaken towards this direction, especially by PSP, include:

A2.3.1. Establish a co-creation space in the Region of Western Greece open to students, professional and SMEs
A2.3.2. Establish innovation animation services in the framework of the co-creation space, making it possible to better combine existing multidisciplinary expertise of participants towards common projects
A2.3.3. Establish funding programme for co-creation projects and spin off support

Participatory process (who is involved, leader / owner, where)
PSP can act as a leader in A2.3.2 and could contribute to A2.3.1 and A2.3.3. In A2.3.1 it could offer its existing expertise with reference to the co-creation and collaboration among the SMEs located at its premises. In A2.3.3 it could offer its expertise in co-creation project management and creation of spin offs.

A2.3.1 should be established at a University space or even better at a space in the city of Patras, so that it is easier accessible by SMEs, professionals and of-course students. In the first case, the leader of the actions should be academia, while in the latter it should be either the Region of Western Greece or some other public body (e.g. Municipality).

A2.3.3 should be led by the Region of Western Greece or some other public body.

Overall, the different actions should involve the public and policy makers, academia and research, students, business sector and SMEs, professionals, and the wider public.

Expected results
- Co-creation space open to students, SMEs, professionals and the wider public in the area of the Region of Western Greece
- Co-creation projects providing solutions to real life problems
- SMEs spinning out of the co-creation space
- Enhanced collaboration, innovativeness and entrepreneurial spirit in the RWG

Preconditions
- Availability of state and EU funding
- Availability of private funding by industry and SMEs
- Consensus for bringing industry and academia closer

Possible barriers
- Existing mentalities in academia that are hostile towards industry and the private sector, as well as applied and industry driven research
• Existing mentalities in society in general that could be identified as enterprise and/or industry hostile
• Traditional isolation of SMEs in the Region of Western Greece

**Related good practice examples**
None.

**Planning**
The implementation of the next period is expected to start during 2015. Funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.

Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
Integrate students from polytechnics.

The competitive strength of a country is focused on the ability to attract human capital and innovative companies and the capacity to generate new ideas, new knowledge and new technologies. The number and strength of the innovation hubs in a country will decree its luck or decline. The countries with a high percentage of workers with a higher education will become the new centres for the production of ideas, knowledge and value and will be the winning ones. Therefore, it is important for the companies to invest in research and innovation as a new element of competitiveness of the economic system, contributing to the educational process of training young talents for the industry and nation. The university itself must facilitate the awareness of the opportunities that the University offers to local companies (territory) to the companies and the institutions acting on the territory, as means of dissemination of scientific knowledge (technology) and qualified human resources (talents).

For the companies benefiting of the possibility to integrate university students within their own organisation for a period of the year offers the opportunity to integrate and develop innovative projects.

Thanks to the possibility to receive support in the definition of an industrial research project and the possibility to avail themselves of the university research laboratories, the company will be able to develop specific research and exploit the know-how to build a lasting competitive advantage, based on the innovation of product, process and organisation (e.g. Tentura Castro).

Description of the action- Relevance

Innovation is an essential element creating a competitive advantage for SMEs. Innovation, especially in high added value sectors of activity, is associated with highly educated work force that is capable of generating new ideas, identifying potential for improvement in business processes and being knowledgeable about potential solutions to real life problems faced by SMEs. Yet, even in more traditional sectors innovation plays the role of providing SMEs with the necessary springboard needed to maintain and enhance their market status.

In this context bringing industry and academia closer is essential and creates advantages for both. Industry can seek solutions to problems that it faces and have access to highly educated employees, while academia can come face to face with real life problems and perform applied research.

Industry driven and applied research can be materialised through smaller or larger projects partly funded by the industry and involving students in the industrial workforce already during the time of their studies. Examples of small industry driven projects could be relevant to the elaboration of theses at the academic institutions.
of the Region, providing the real problem to solve to the academic world and integrating the students to the SME environment for the period of time of their theses. Large industry driven projects could be relevant to the funding of postgraduate studies and memorandums of understanding between industry and academic institutions.

Specific actions that could be undertaken towards this direction include:

A2.4.1. Establish industry driven theses research programmes in the Region of Western Greece
A2.4.2. Establish industry driven post-doctoral research programmes in the Region of Western Greece

Participatory process (who is involved, leader / owner, where)
Both activities are led by academic institutions. PSP could contribute to both activities, providing supportive actions for identifying potentially interested SMEs and bringing them in contact with academia, focusing primarily to the SMEs located at its premises and secondarily to SMEs at the Region of Western Greece in general. Overall, the different actions should involve the public and policy makers, academia and research, students, business sector and SMEs.

Expected results
• Industry driven theses implemented at academic institutions of the Region of Western Greece
• Integration of students to SME workforce during their theses implementation
• Solutions of problems of SMEs of the area with innovative solutions and approaches
• Industry driven long term research implemented at academic institutions of the Region of Western Greece

Preconditions
• Availability of state and EU funding
• Availability of private funding by industry and SMEs
• Consensus relevant to industry driven research

Possible barriers
• Existing mentalities in academia that are hostile towards industry and the private sector, as well as applied and industry driven research
• Existing mentalities in society in general that could be identified as enterprise and / or industry hostile
• Traditional isolation of SMEs in the Region of Western Greece

Related good practice examples
None.
Planning

The implementation of the next period is expected to start during 2015. Funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.

Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
R2.5-Recommendation #5

Get out of the University, support cross-sector contamination with events and common projects for students.

Valuable initiatives supporting innovation and entrepreneurship: university initiatives encourage students to finish their studies within an enterprise ("practical entrepreneurship"), set up a career office and alumni network, to promote their research and find new funding.

To support companies in the development of innovative projects, it could be useful to implement initiatives aimed at creating opportunities for direct matchmaking between research and business. In particular, this offers the opportunity for individual entrepreneurs and company managers to approach specific groups of researchers with whom to build collaborative projects.

For example, the methodology successfully implemented by the Province of Bologna, Aster and CNA for this type of initiative is a new dissemination method, effective and direct, overtaking the formalisms that can hinder the dialogue among the leaders of the two sides, research and business.

Taking advantage of the points of view of both sides, the exchange of experiences feeds on continuous stimuli and thus enriches itself. The opinions generate a virtuous circle bringing into question the points of view and guiding towards the research of problems solutions.

Description of the action- Relevance

Common projects between industry and academia are quite important for the development of the local economy at the Region of Western Greece. The two worlds: business and industry on one side and academia and research on the other side have complementary needs. Industry poses the problems and academia finds solutions to the problems. Industry is in need of new ideas and academia generated such ideas. Industry is in need of highly educated and innovative people and academia should produce such people. These and further complementarities should present a fertile ground for collaboration at different levels.

Yet, the different languages many times spoken by industry and academia, and furthermore the different mentalities of the two worlds, do not make this collaboration easy and straightforward. Thus, facilitation services are needed that would make it possible to have a cross-sector contamination between industry and academia and which would set the scene for common projects integrating the two worlds. Specific actions that could be undertaken towards this direction include:

A2.5.1. Establish brokerage services for the collaboration of SMEs, primarily located at the PSP and secondarily at the Region of Western Greece in general, and academia
A2.5.2. Launch a mechanism for thematic brokerage events, initiating and re-instating cooperation between industry and academia

Participatory process (who is involved, leader / owner, where)
Both activities can be led by the PSP, as a business support organisation. A2.5.1 could focus primarily on SMEs residing at PSP and extend at a later stage to the overall population of SMEs of the Region of Western Greece. It should offer brokerage services connecting the two worlds: needs of industry and available solutions by academia / research. This would build on top of a networking database compiled by PSP.

A2.5.2 would set up a mechanism for regular brokerage events that could offer wider brokerage possibilities to the Regional audience of stakeholders.

Overall, the different actions should involve the public and policy makers, academia and research, students, business sector and SMEs.

Expected results
- Bilateral agreements between industry and academia / research
- Common projects between industry and academia / research
- Mobility of students between academia / research and industry

Preconditions
- Availability of state and EU funding
- Availability of private funding by industry and SMEs
- Consensus relevant to industry driven research

Possible barriers
- Existing mentalities in academia that are hostile towards industry and the private sector, as well as applied and industry driven research
- Existing mentalities in society in general that could be identified as enterprise and / or industry hostile
- Traditional isolation of SMEs in the Region of Western Greece

Related good practice examples
None.

Planning
The implementation of the next period is expected to start during 2015. Funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.

Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
R2.6-Recommendation #6

**Foster the entrepreneurial spirit via acceptance of failure, summer schools, projects in curricula.**

Foster entrepreneurial projects according to an “idea” for instance and not to the “final results”, trying to think to failure/crisis as an opportunity, not as “dead meat”. Increasing educational tools to integrate the curricula (example of the problem solving experience in a company that was included in the curriculum at the IT department) could help in boosting the entrepreneurial spirit.

**Description of the action- Relevance**

Entrepreneurial spirit is relevant to challenge and initiative. Taking the initiative to enter the enterprise arena involves a risk of failure. This is especially true for innovative firms that have to go through the so called “valley of death”, a period when they have to develop their innovative products and services out of promising ideas or prototypes, and a period when they generally have to invest money and cannot get financed through mainstream financing elements. The magnitude of risk of failure for innovative start-ups is indicated by the fact that 90% of new ventures that do not attract investors fail within the first three years.

Enhancing the entrepreneurial spirit in a society involves changing societal attitude towards failure. Failure should be viewed as rather an unhappy event in the process of learning, rather than as a catastrophe, negating efforts placed and undermining future possibilities of success. Acceptance of failure as a natural consequence of taking the risk of a new venture is a critical step in altering the entrepreneurial / innovation culture of an area.

The Region of Western Greece has a high level of education, especially in the technological sectors. This is critical for setting the necessary background for achieving a high level of innovation and entrepreneurship. Building a friendlier climate for innovation and entrepreneurship is a second pillar towards this end, along with the availability of financing, can promote the development of the area.

Altering the innovation / entrepreneurial climate in general in the society requires the contribution of all stakeholders of the Region. Focusing on the specific group of younger population and students requires the active involvement of academia in the Region as well as business support organisations.

Specific actions that could be undertaken towards this direction include:

- A2.6.1. Establish innovation and entrepreneurship capacity building services focusing on students of the Region of Western Greece
- A2.6.2. Establish a summer school for entrepreneurship and innovation in the Region of Western Greece
Participatory process (who is involved, leader / owner, where)

PSP could assume the role of leader in action A2.6.1 and contribute to A2.6.2.

A2.6.1 will provide entrepreneurship and innovation capacity building services towards students of the Region of Western Greece. PSP can assume the role of leader in this action, as it already offers such services to the audience of innovative SMEs located at its premises. Building on top of this experience and curtailing it to the needs of the student audience can lead to altering the innovation climate of the Region.

A2.6.2 would be better led by academia, offering already education and having the necessary structures for a summer school. Yet, PSP could contribute to this effort, undertaking part of the implementation, contributing its expertise in innovation and entrepreneurship, as well as setting up in the context of the summer school specific projects in collaboration with innovative ventures located at its premises.

Overall, the different actions should involve the public and policy makers, academia and research, students, business sector and SMEs.

Expected results
- Students with increased capacities relevant to entrepreneurship and innovation
- Entrepreneurship and innovation spirit enhanced in RWG
- Summer school addressing entrepreneurship & innovation operating at RWG

Preconditions
- Availability of state and EU funding
- Consensus relevant to entrepreneurship and innovation in RWG

Possible barriers
- Existing mentalities in academia that are hostile towards industry and the private sector, as well as applied and industry driven research
- Existing mentalities in society in general that could be identified as enterprise and / or industry hostile

Related good practice examples
None.

Planning
The implementation of the next period is expected to start during 2015. Funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.

Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
**R2.7-Recommendation #7**

**Incentives for researchers to become entrepreneurs (chemical engineering centre).**

The strong orientation towards technical disciplines prepares students to be ready for the business environment, but the lack of education “in teaching” entrepreneurial culture and of risk taking, does not allow students to be self-sufficient for their own business. Furthermore, the attention to the ICT and high-tech sectors has many positive effects due to the cross-sector strength: high-paid jobs and many jobs opportunities in different sectors.

**Description of the action- Relevance**

The Region of Western Greece has a strong orientation towards technical disciplines, which enables students to be ready for the business environment. The high level of education provided in the Region creates the necessary background for fostering innovation and entrepreneurship. Yet, motivation towards this end is still weak.

Intrinsic motivation of students / researchers to become entrepreneurs is quite important, entailing personal factors such as self-satisfaction and achievement of personal goals, and is deemed necessary to create an entrepreneurial intention. For this purpose education on entrepreneurial culture and risk taking is essential.

Getting acquainted with company creation in education can help students develop the intrinsic motivation towards entrepreneurship. Teaching, coaching and role-playing (developing and presenting company creation projects) can lead towards this direction. This can be a starter for researchers / would be entrepreneurs. Changing mindsets and encouraging students to enter the business environment can be the final goal.

Extrinsic motivation of students / researchers wants to acknowledge and reward students for their achievements. It should be relevant to monetary and prestige awards, increasing the perception of fairness and motivating students. Building a framework for student transfer projects between academia and SMEs as well as for supporting their involvement in spin-offs can be beneficial both for them and the overall development of the Region of Western Greece.

Specific actions that could be undertaken towards this direction, especially by PSP, include:

- A2.7.1. Establish an Entrepreneurship Seminar
- A2.7.2. Establish a Framework for Student transfer projects and Student involvement in Spin-offs

**Participatory process (who is involved, leader / owner, where)**

PSP could assume the role of leader in action A2.7.1 and contribute to A2.7.2.
A2.7.1 will be relevant to the organisation of an Entrepreneurial Seminar for selected students / researchers on company creation. The students would be provided with a situation of company creation and growth that they have to manage, and be given the opportunity to express their ideas and provide feedback to the overall process. This role-playing activity could enact motivation of students and provide them with a starter for creating their own ventures.

A2.7.2 would be better led by academia, building a framework for student transfer between academia and SMEs of the region, as well as for their involvement in spin offs. PSP could contribute to this action participating in this transfer programme, helping develop memorandums of academia and SMEs in the area and providing space for the development of spin offs.

Overall, the different actions should involve the public and policy makers, academia and research, students, business sector and SMEs.

**Expected results**

- Students with increased capacities relevant to entrepreneurship and innovation
- Entrepreneurship and innovation spirit enhanced in RWG
- Students participating in the transfer programme between academia and SMEs of the Region
- Students involved in spin offs

**Preconditions**

- Availability of state and EU funding
- Consensus relevant to entrepreneurship and innovation in RWG

**Possible barriers**

- Existing mentalities in academia that are hostile towards industry and the private sector, as well as applied and industry driven research
- Existing mentalities in society in general that could be identified as enterprise and / or industry hostile

**Related good practice examples**

None.

**Planning**

The implementation of the next period is expected to start during 2015. Funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.

Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
Further use of ICT-based solutions for education.

The Region of Western Greece should claim optical fiber to be ruled by the region, in order to further promote digital services, digital structures and networking. E-learning solutions, for example, especially aimed at the rural areas of the region, could help education become more and more approachable. Distance learning and projects like “digital school platforms” and “virtual language learning” (CTI) could also help in tackling the digital divide. It is also necessary to realise special educational programmes for teachers allowing them to be updated on new technologies in order to integrate them into the study pathways.

Description of the action- Relevance

The Region of Western Greece is characterised by digital divide to a great extent. Further to the existence of more developed urban areas, led by the city of Patras, the Region is by far a rural / agricultural / mountainous territory that is characterised by lack of opportunities for its inhabitants.

In order to alleviate this situation, broadband infrastructure in the Region as well as e-learning solutions and platforms existing or being developed at academic / research institutions of the region could play a significant role.

Offering e-learning opportunities to people residing on mountainous and rural areas, can enhance their abilities and close the digital gap existing in the Region of Western Greece. Capacity building could also be enhanced, leading to remote offering of services by different stakeholders of the Region. Such services could include entrepreneurial and innovation capacity building, coaching and mentoring services, company management services, and could be personalised for the audience they are relevant to.

Specific actions that could be undertaken towards this direction include:

A2.8.1. Establish a digital platform for capacity building services in the Region of Western Greece
A2.8.2. Establish digital material for remote capacity building on entrepreneurship and innovation

Participatory process (who is involved, leader / owner, where)

PSP could assume the role of leader in action A2.8.2 and contribute to A2.8.1.

A2.8.1 would be better led by academia / research / technology provider, offering a digital platform for the provision of e-learning / capacity building in a generic way, enabling the different stakeholders of the area to utilise it for different capacity building needs developing their own material for this purpose. PSP could contribute to this action in the user requirement phase, being an end user of this platform.
A2.8.2 is about the production of digital material relevant to remote capacity building / e-learning on entrepreneurship and innovation and can be led by PSP. PSP can design and produce this material aiming at different groups of the region and offering the necessary context for the enhancement of entrepreneurship in the overall landscape of the Region of Western Greece.

Overall, the different actions should involve the public and policy makers, academia and research, students, business sector and SMEs.

**Expected results**
- Enhancement of entrepreneurship and innovation in the Region of Western Greece
- Increased capacities in the Region of Western Greece
- Decrease of the digital gap between urban and rural areas in the Region of Western Greece

**Preconditions**
- Availability of state and EU funding
- Increasing the efficiency of the networking infrastructure in rural areas of the Region
- Collaboration of the different stakeholders of the Region

**Possible barriers**
- Existing isolation of the different stakeholder of the Region of Western Greece inhibiting collaboration
- Digital illiteracy of part of the population of the Region
- Isolation of parts of the rural population of the Region

**Related good practice examples**
None.

**Planning**
The implementation of the next period is expected to start during 2015. Funding could come from EU Horizon 2020 and INTERREG projects with calls already started and expected in 2015 respectively.

Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
2.5 Innovative environment

R3.1-Recommendation #1

Enhance public – private co-operation.

Universities have been recognised as motors for (radical) Innovation, and as such for the creation of start-ups and jobs (refs). Scientific research provides a basis for innovation through spin-offs. However, in Greece, like in many countries starting your own company was -and in some still is- not the traditional follow-up to a university study. Having a sound career at a multinational or in a government position has been the most wanted route after finishing a university education, apart from pursuing a career as a scientist at university. University students themselves need to be aware of the option of becoming an entrepreneur. Of equal importance is that the environment needs to be sensitized also in favour of entrepreneurial careers.

The Regional Authority and IMA are advised to explicitly acknowledge the special role of the University of Patras and the Technology Institutes as drivers in the regional development process. They are included in the RIS3 Regional Assessment on Western Greece as stakeholders, equal to the public, private and intermediary organisations. It is promising that in the report (3.3) is explicitly stated that they ask to be involved and ask for an explicit partnership to reinforce their role. It is positive that stakeholders acknowledge “a need for development scenarios based on innovation and skills [...] and the creation of strong technological advantages.” This materialises also via entrepreneurs setting up spin-offs that rapidly need university trained staff to increase capacity for technology absorption through well-trained staff.

Description of the action- Relevance

Enhancing public – private cooperation is a long-standing objective of regional and state authorities, supported institutionally and financially. It is not an easy task and several previous attempts for bridging the gap were mostly successful but did not lead to permanent networking and sustainable results. The most successful current examples relate to the implementation of major infrastructure (technical) works, such as the Rion – Antirion Bridge, and the new Patras - Corinth interstate.

Concerning smaller scale projects, public – private partnerships have and still keep being formed for proposing joint RTD (mainly) projects, between the University of Patras and the three Research Institutes and local SMEs and other public organisations. This process will continue and it can't be considered as a new action. However, the very good although not lasting example of such cooperation, during the Regional Innovation Pole programme, could be improved, and seek in a very coordinated manner to create more effective and sustainable networks of public and private organisations, in a new attempt to continue during the present programming period.
Furthermore, this is an objective that could be sought even with regional funds only, when and if they become available by RWG.

Actions that could be undertaken for this purpose, with strong participation by PSP, can be summarized in:

A3.1.1. Design of an improved and more effective local network of public – private organisations that should be a key deliverable of the next Innovation Pole Programme, where all the key stakeholders will participate

A3.1.2. Design of a very effective and sustainable local network of public – private organisations with RWG lead and funding, where all the key stakeholders will participate

**Participatory process (who is involved, leader / owner, where)**

For the first action, PSP seems to be the natural choice for leader, in close cooperation at least with the University of Patras, the RTD Institutes, the Region of Western Greece, and the two local Chambers.

For the second action, RWG, which will be the action leader, should indicate one of the public organisations that will undertake the task of developing the network (probably PSP again).

**Expected results**

- Better opportunities for acquiring funding for various projects
- Development of a permanent cooperation network of all local actors

**Preconditions**

- Launching of a new Innovation Pole initiative (it is currently under discussion)
- Availability of other regional funding

**Possible barriers**

- Delays, for various reasons, in launching of a new Innovation Pole initiative
- Adverse economic climate that may prevent private companies’ participation

**Related good practice examples**

None

**Planning**

Launching of a new Innovation Pole programme should be expected sometime in 2015, and implementation should start in 2016 or 2017.

If implemented through regional funds, implementation should be expected during the current programming period (2014-2020), probably starting at 2016.
**R3.2-Recommendation #2**

**Support and develop knowledge providers.**

It is recommended that the Regional authorities offer financial support to both the university and the companies (with input from interested students) to develop, realise and maintain additional, specialised training programmes. This will also help to establish connections at different levels between the UP and companies.

**CTI**

It is recommended that CTI interacts with its counterpart at UP and focuses on developing the e-support system. It is close to its (original) core expertise. It should also try to obtain a position in the power play / inertia concerning broadband connections for the region.

**Description of the action- Relevance**

Supporting knowledge providers in the region is a reason for pride for the Regional Authorities and a long-term objective of regional and state authorities, and namely the Ministry of Education, the General Secretariat for Research and Technology (GSRT), the Region of Western Greece, and the Decentralised Administration.

Focusing exclusively on RWG, support has been provided in the past in various ways:

- Providing funds for building new infrastructures and repairing / renovating existing ones
- Launching new initiatives for knowledge providers and private industries in the form of Innovation Poles, Innovative Actions and Social Actions
- Launching and managing new RTD or innovation programmes for the development of small scale and partnership RTD projects (PEP)

Naturally, a key role in all the above is given to the local University and the three RTD Institutes (CTI, ISI, ICE/HT). The recent restructuring of the research organisations in Greece, brought all RTD Institutes under the auspices of the Ministry of Education, where CTI has long served successfully, and so, coordinated efforts are performed much easier, in terms of organisational structure.

Actions in line with the above cannot be considered as new actions that should be mentioned separately, except for the new regional Innovation Pole programme that has been mentioned repeatedly.

**Participatory process (who is involved, leader / owner, where)**

The Region of Western Greece is the leader of such activities that will naturally involve mainly PSP, as a catalyst among public knowledge providers and the productive sector private firms, the University of Patras, as the major knowledge provider in the region, and the three RTD Institutes, as significant and internationally recognised knowledge providers.
**Expected results**
- Stronger knowledge providers and more know how diffused in the area production and services sector
- Development of high quality RTD personnel

**Preconditions**
- Availability of regional funding for launching of new initiatives and supporting infrastructures

**Possible barriers**
- Adverse economic climate that may prevent launching of new initiatives and programmes
- Reduction of public funds due to central government additional budget cuts, in case the financial crisis becomes worst

**Related good practice examples**
The ASTER High Technology Network, Bologna (IT).

**Planning**
Launching of a new Innovation Pole programme should be expected sometime in 2015, and implementation should start in 2016 or 2017.

Launching of new initiatives and programmes by the Region should be expected during the current programming period (2014-2020), probably starting at 2016.
R3.3-Recommendation #3

**Intermediary parties.**

In general: investigate how a better fit between public and private levels can be arranged.

To start with, organise and formalise a good working structure between the key-players (in terms of influence on the money streams) RA and IMA (Chamber of Commerce, PSP...).

At the meeting of stakeholders on August 29 2102, the foundations for the new realities were laid; hopefully this meeting has since been followed up by regular and organised institutional contacts between the stakeholders. Cooperation requires first and foremost knowing of each other, getting to know each other and building trust. This is a necessary but not sufficient condition to set in motion a culture change towards sectoral and cross-sectoral cooperation rather than competition. This needs to be organised and fostered for a long time, over and over again. Be aware that having a good ICT infrastructure will help to be visible and exchange information, but in itself will not bring about interaction and cooperation.

**Description of the action- Relevance**

Currently, the only important intermediaries (chambers of commerce are not included), in the sense of business support organisations (BSOs) are Patras Science Park and the Managing Authority for European Programmes, established in Patras, which represents the Chambers of Commerce of four regions, and which manages the Structural Funds aimed towards SMEs of the production and services sectors. Previous attempts to develop similar intermediate organisations with slightly different or even more narrow scope lasted a few years but the finally did not achieve the required sustainability.

Therefore, although the number of Development Companies (Municipal, Prefectural, Regional) in the area is decreasing, due to mergings arising from the KALLIKRATES major restructuring programme for the Local Authorities, several of them are still active and seem healthy, although the financial crisis and the lack of public funding has left a significant mark on them, raising questions about their sustainability.

In particular, the decline of the local Business Innovation Centre, and member of the Brussels based EBN (BIC Western Greece), the limited scope of the Managing Authority for European Programmes, and the lack of public funding for PSP, prevent existing intermediate organisations from growing and from widening their scope of operation and the number of offered services to SMEs and citizens.

There are signs that this trend can be reversed, and the following actions could effectively contribute to it:
A3.3.1. Public funding to PSP by the state will help enhance the competences of its personnel, with new recruits and new infrastructures.

A3.3.2. Extension of the scope of activities of the Managing Authority for European Programmes beyond plain evaluation and funding of Feasibility Studies for specific SMEs’ investments will make it a more effective intermediate organisation in the wider geographic area.

A3.3.3. Development of a new BIC in the area or evolution of one relevant organisation to a BIC (Corallia cluster).

**Participatory process (who is involved, leader / owner, where)**

For the first action, PSP is the beneficiary, and the current administration of its supervisory body in the Ministry of Development has declared its eagerness to proceed in this direction.

For the second action, the local Chambers will have to consult with the other local stakeholders (Regional authorities, RTD organisations and University of Patras) about the kind of scope and services extension they would consider more beneficial for the local SMEs, before they plan any changes for future programming periods.

For the third action, since the local Chambers have not expressed any eagerness for development of a new BIC or for reopening of the old one, it should be assumed that only the evolution of another organisation to a BIC is possible in the short term. Recent contacts between EBN and the Corallia cluster organisation, which has a Western Greece branch, led to a very promising result, having EBN accepting Corallia as an associate member, raising hope that it could lead to full membership in a few years.

**Expected results**

- Better and more effective support to SMEs
- Stronger and more sustainable intermediate organisations
- Development of local expertise in SME consulting
- Local economic development and new and high-quality jobs

**Preconditions**

- Availability of state or regional funding
- “Political” will for Chambers of Commerce to extend the scope of their Managing Authority for European Programmes, and deeper involvement in SME consulting
- Further development of Corallia as a unit of the ATHENA Research Centre

**Possible barriers**

- Adverse economic climate that may prevent state or regional funding
- Reluctance for deeper involvement of Chambers of Commerce in SME consulting activities
• Lowering of Corallia Cluster ambitions due to economic or other reasons

**Related good practice examples**
None

**Planning**
Public funding for PSP should be expected very soon, and definitely during early 2015, since it constitutes a commitment of the supervising body of the Ministry of Education (General Secretariat for Research and Technology).

Planning of the second activity should be done during the current programming period (2014-2020), and implementation, if any, should be expected for the next programming period.

The third activity could be implemented only after three years from now, i.e. from 2018 and beyond, since Corallia will have to be evaluated for at least a three year period as an associate member, before it applies to EBN for full membership.
R3.4-Recommendation #4

**Data Management.**

It could be a recommendation to start a joint project (knowledge providers, intermediaries, businesses) for further analyzing the data available, to fit the needs of target groups at regional and municipal levels and broadly share these analyses (and not so much continuing to ‘produce’ more data).

**Description of the action- Relevance**

Although it is true that a lot of data are produced in the Region it does not mean that these sets of data are always complete and can provide an integrated view of the Region situation. A lot of data are still being missed and serious and structured coordination between public authorities is still required in order for this view to be improved. This is evident when, during the implementation of projects, a need for evaluating or processing sets of indicators arises. Several key indicator values do not exist or simply are not available (e.g. environmental indicators).

This problem can be faced with better networking between local stakeholders, and it could be taken care of through an RWG initiative.

Furthermore, this integrated form for presenting regional data will allow for the exploitation of new ICT and other technologies, and the development of new management tools for local stakeholders and policy makers. In particular, webGIS systems for feeding data to data bases, creating digital maps with information classified at various layers, and having these processed or raw data available through internet, is a very powerful tool that is lately widely recognised by public officials.

RWG, in cooperation with the Computer Technology and Press Institute (CTI), in the context of the SEE/CHERPLAN project, have developed such a webGIS system for cultural heritage and environmental parameters monitoring for the neighboring area of Nafpaktos, right across the sea from Patras. Other incremental systems have been developed in the region, as a result of RTD or development work of various organisations, in the context of territorial cooperation programmes, and an excellent example is the webGIS system for processing and presenting measurements of environmental parameters from various ports in the south east Europe area, which was developed by CTI on behalf of PSP, in the context of the SEE/ECOPORT8 project. Actions that could be implemented in these directions are the following:

- **A3.4.1.** Development of a network that will include all major public organisations, in order to ensure that all data at their disposal will be available by the others and will be provided upon request
- **A3.4.2.** Extension of current webGIS systems to a wide-range and applicability system that will constitute the master version of this holistic approach to the regional data issue
Participatory process (who is involved, leader / owner, where)
For the first action, naturally, RWG will be the leader that will take the initiative and will motivate the other organisations to participate. The data will be accessible by all relevant actors and even the general public but with a hierarchy of user rights, so that confidentiality of sensitive data will be sustained.

For the second action, again, RWG should lead, in cooperation with some technical experts in the subject of ICT, such as CTI, ISI and the University of Patras.

Expected results
- Completion of produced regional data
- Graphical presentation of data for better viewing and identification of important data deviations / changes
- Easier correlation of data sets between different indicators / parameters
- Powerful tools for managers, investment planners and policy makers

Preconditions
- Availability of regional funding
- Successful identification of opportunities for development and funding through EU programmes (HORIZON 2020 or Territorial Cooperation)
- Cooperation mentality of all involved public organisations

Possible barriers
- Adverse economic climate that may prevent regional funding
- Not successful applications for relevant development projects
- Lack of cooperation attitude between public organisations

Related good practice examples
None

Planning
Discussion on both actions could start during 2015 but implementation, especially for the second action (webGIS), could take a couple of more years. A good estimate for the webGIS could be 2017-2018.
Innovation Culture.

Rather than risking the loss of an entire generation of highly educated youth – the window of opportunity for building a career is not open forever – risk investing in their riskier endeavors: starting up new business.

There are tax incentives for appointing youth and for starting innovative companies. Partly use this to work on the image and ‘branding’ of entrepreneurship as a career option. One of the companies demonstrated a multiplier effect of going bankrupt, in that it resulted in 7 new start-ups by staff members that had lost their jobs, who had grown substantially since. This offers a new perspective on ‘failure’. (Or, as Greek mythology has it, the Phoenix is reborn from its own ashes again and again). Spread this story and work on the image of ‘failed’ entrepreneurs’ to become heroes.

Rather than running the risk of “a quick loss” of FDI investments in times of economic distress, actively make use of brain gain from the Greek Diaspora. Track potential and/or successful entrepreneurs and businessmen abroad, who have a link to the region, and offer incentives for their return. If they bring or found companies to the region, at least they will feel some pressure to stay on when times get rough.

Tax-regimes, requirements for calls for proposals, etc. for start-ups and innovative companies are not a ‘small version’ of the corporate predecessors. They have a logic of their own that should be understood by the issuing organisations.

Description of the action- Relevance

Improvement of the innovation spirit requires the cooperation of the overall educational system, starting at least from the secondary school and extending deeply into the tertiary (University) education, with the Chambers of Commerce and Industries, associations of young entrepreneurs, as well as all kinds of Business Support Organisations (BSOs), such as the local Science Park.

Several attempts for the creation of such a local Network have been implemented in the past, always with the active participation and sometimes leadership of PSP but not for the aim of promoting the innovation mentality exclusively. The latest relevant attempt with development of a regional Business Angel Network - BAN (Innovation Pole programme), initially successful, led to a failure, due to the closing of the local cooperative Bank that led its implementation phase.

However, PSP being at a new launching position, with new administration and ambitions to grow rapidly, and with assurances from the state for financial support, is exploring several innovative tools that could help promoting significantly the innovation and entrepreneurial spirit, mainly among the young. The Recommendations below are directly relevant to Recommendations R5.1.
Actions that could and should be undertaken for this purpose, especially by PSP, which is currently considering some of them, can be summarized in:

A3.5.1. Introduction of a soft landing scheme for youngsters and/or new entrepreneurs, considering relocation or initiation of activities in the PSP incubator
A3.5.2. Introduction of new concepts in PSP’s or other local organisations’ mainstream operations and offered services, funded in the context of European Union Programmes, where international cooperation will provide additional knowledge and added value (local initiatives, HORIZON 2020 or various Territorial Cooperation Programmes)

**Participatory process (who is involved, leader/owner, where)**

For the first action, PSP is already considering the prospects with own funding and in cooperation with RWG and the RWG Development Company (Olympiaki S.A.).

For the second action, anyone of the key stakeholders can take the initiative, through a HORIZON proposal, but the Region and PSP can take the initiative through an Interreg type of proposal, where all the other relevant stakeholders will participate through a local partnership that will operate as a local Steering Committee for such an interregional or international project.

**Expected results**

- University students, and youngsters in general, will be able to test their abilities in the entrepreneurial world in a trial period, exploring their managing capacity and innovation effectiveness
- Determination of funding for testing and possibly applying innovative concepts that will enrich the PSP (mainly) portfolio
- Development and sustaining of a permanent cooperation network of local actors

**Preconditions**

- Positive outcome of relevant EU proposals
- Availability of other regional funding

**Possible barriers**

- Financial crisis and adverse overall economic environment that could prevent youth from starting new endeavors, due to lack of capital and suitable workforce, due to emigration
- Difficulty in having a positive outcome in a HORIZON 2020 proposal, due to fierce competition and odds

**Related good practice examples**

None
Planning
Launching of a new soft landing scheme by PSP, in cooperation with the two regional partners, can be implemented during 2015, starting in June at the latest.

Local initiatives that could provide support, such as a new Innovation Pole programme, should be expected in 2016 or 2017.

New Calls and opportunities in the HORIZON 2020 programme are launched frequently already, proposals have already been submitted and new proposals will continue to be submitted.

New Calls in Interreg VC (Interreg Europe) and MED are expected for the 1st semester in 2015, and for the ADRION and Baltic Med programmes in September 2015.
R3.6-Recommendation #6

**Cluster development.**

Allocate sub-budgets to the parties cooperating in the three clusters. Presuming that the parties in the cluster have (or seek) the expert knowledge of the technologies at stake, innovation processes and financing of innovation, and have influence.

**Description of the action- Relevance**

Cluster development in Western Greece is a difficult task for several reasons:

- Reluctance in cooperation mentality that is typical among SMEs in Greece, and particularly outside the main urban centers, among traditional industrial sectors’ firms, among firms in Western Greece etc.
- Lack of critical mass due to shrinking of the production sectors and expansion of the services sector (de-industrialisation)
- Financial crisis (lack of capital, rapid reduction in consumption, over financing) that leads to firms’ closing, relocation or simply scaling-down of operations

Furthermore, cluster development in itself is difficult because its mechanisms are not clear, although studied for many years), and its results are not reproducible from one territory (e.g. Italy) to another (e.g. Greece). The first attempts for developing clusters in Greece started in 1987, with the initiative of the Ministry of Development, and since then, after a lot of funding programmes (SME Initiative, Operational Program for Competitiveness), several clusters were developed with good, fair or limited chances for success. The most successful such case from the first round of support was the development in 1998 of the Solar Systems manufacturers cluster (SOLARNET).

The latest and very successful example is the establishment of the CORALLIA unit in the ATHENA Research Centre, which managed the latest round of support and relevant programme, and helped establish three new clusters in three high-tech industrial sectors of activity. Corallia is providing funding to the cluster legal entity and not to the individual entities, so that the use of these funds only for the cluster purposes is ensured.

In order for the Recommendation to be adopted, the specifications for the structure and partnerships of clusters must be changed, with the initiative of the relevant state authorities, in order to include credit organisations, consulting companies, in the form of specialised institutes, and research organisations, following good practices from Italy and the USA (e.g. California wine cluster). This way, funding of individual companies will be made possible, and significant portion of know-how will be provided to all members by the RTD and consulting organisations.

Actions that could be undertaken for this purpose could be the following:
A3.6.1. A new round of cluster development support programmes, launched by the relevant Ministry of Development

A3.6.2. Modification of the cluster programme regulation (and manual) in order to account for changes to facilitate direct funding of individual companies

**Participatory process (who is involved, leader / owner, where)**

For the first action, a new call for proposals for clusters development by the relevant Ministry will bring new opportunities for cluster development. All local stakeholders will have a change to intervene during the initial consultation period, if any.

For the second action, it is up to the relevant Ministry to proceed in modifications in the Operational Manual for the cluster programme in the new Programming Period, upon interventions by PSP and other local organisations that will take advantage of their privileged relationship to the Corallia unit.

**Expected results**

- Development of new clusters in other industrial sectors
- Development of more effective clusters, following the Italian (e.g. Emilia Romagna ceramic and clothing Industrial Districts) or USA model (e.g. Silicon Valley and wine cluster in California)
- Rapid economic development
- Development of a cooperative culture that could be extended to other activities

**Preconditions**

- Smooth implementation of the new programming period programme
- Successful intervention at the development phase of the new programme

**Possible barriers**

- Financial crisis that could prevent implementation of the new programming period programme and the launching of the new cluster programme (reduction of Public Funding Appropriations, which are very common)
- Rigidity of the Operational Programme Guidelines that could prevent implementation of the proposed changes

**Related good practice examples**

The ASTER High Technology Network, Bologna (IT).

**Planning**

Launching of the new cluster programme should be expected sometime between 2015 and 2016 and in any case during the new programming period (2014-2020). Any interventions, if possible, should be done during the consultation period, sometime between 2015 and 2016.
Develop youth and female Entrepreneurship & Innovation.

Collect data on the presence of female talent and consider special attention for female entrepreneurship. There must be plenty of capacity slack in buildings (near the city centre of Patras, in the old harbor are a number of old empty buildings) and laid-off people. Use overcapacity in buildings, add a few facilities (central coffee machine!) to stimulate the creation of ‘hotspots’ for people to get together and experiment. These places offer a great opportunity to create a place for young jobless people. If the buildings are somewhat improved and desks with internet (Wi-Fi) are installed, young people can be given an opportunity to organise their own businesses and learn from each other and inspire one another - a creative breeding place for new businesses.

Description of the action- Relevance

Youth and female entrepreneurship and Innovation have been addressed at several occasions in the past but only in the form of individual companies. Development of incubators for young people (hatcheries) or for female entrepreneurs exclusively is a bright idea that could exhibit impressive results. Unfortunately, its implementation at the full extent of the Recommendation does not seem easy, due to the financial situation, and the overall restructuring of the public sector that it currently takes place.

The Municipality of Patras is currently developing such an incubator that the RWG Development Company will manage, in the context of an Interreg Greece-Italy programme. However, the problems arising from the reduction of the Local Authorities personnel make its sustainable operation questionable.

Several other examples could be brought up or could be conceived as potential implementation in the short-term. However, operation after the project period or after the project funding remains to be verified, at least with current conditions in the Greek market. This goes for the local Chambers of Commerce, the University and the Research Institutes. Not one of these organisations will be willing to allocate personnel and other resources after a project period.

No specific actions that could and should be undertaken for this purpose, especially by PSP, can be proposed, in view of the above problems, and for the period that the economic crisis lasts.

Participatory process (who is involved, leader / owner, where)

PSP could be a key actor for developing or simply managing incubators, dedicated to youth or female entrepreneurs alone. Other relevant organisations could be the University of Patras, the Region of Western Greece, and the two local Chambers in Patras. The above stakeholders could be the beneficiaries of the development of...
new and focused incubators, in case their operation could somehow become sustainable.

**Expected results**

- Enhancement of youth and women entrepreneurship
- University students, who are involved in research activities, eager to test their abilities in the entrepreneurial world, in a “protected” or controlled environment
- Increase in youth employment

**Preconditions**

- Availability of funding from relevant projects
- Availability of other regional funding
- Willingness of one or some of the local stakeholders to participate actively

**Possible barriers**

- Adverse overall environment for youth and women entrepreneurs involvement
- Reluctance of local actors to commit the necessary material and human resources

**Related good practice examples**

None

**Planning**

No specific actions should be planned in this direction as long as the economic crisis impact is evident on the Greek and local markets. Any actions aligned with this Recommendation R5.7 should be planned in the medium or long term.
2.6 Partnerships

R4.1-Recommendation #1

Recognise technology enterprises as important players for innovation.

The peer reviewers had the impression that the regional authorities did not sufficiently value the technological sector in Western Greece. Technology can create income faster than other sectors. Recognition and valuation of technology enterprises as important players for innovation is crucial.

Description of the action- Relevance

This is a non-accurate impression, since the Regional Authorities value very much the technological sector and the relevant assets in Western Greece. Naturally, some traditional and more conventional in terms of technology sectors (e.g. food and drinks) are very dynamic and need to be supported further, as they constitute a competitive advantage for the Region. However, the technological sector is at the front end of any of the RWG major initiatives, and more specifically, although indicatively:

- Smart Specialisation in Western Greece addresses three topics, one of them being Advanced materials, nanotechnologies and microelectronics, and two Horizontal topics, i.e. ICT and Energy systems and smart applications
- During the Regional Innovation Pole Programme implementation, most of the participating private industries belonged to the technological sector
- At several occasions, RWG participates in programmes that generate sub-projects to be implemented by high-tech companies, through Calls for proposals in the relevant technological thematic axes (e.g. manufacturing technologies – MANUNET project)
- During the management of the Structural Funds at each of the last two programming periods, certain Calls for proposals were issued, addressed at RTD organisations arising from the public and private sectors, in order to implement significant RTD projects and deliver new products and services through the development of RTD partnerships (ROP programme)

No special actions are planned other than the kind of actions described above.

Participatory process (who is involved, leader / owner, where)

PSP is a typical member of RTD and other partnerships, such as the ones described above, and a permanent participant, and sometimes leader, at all major initiatives at regional scale, always in cooperation with the three Research Institutes, the University of Patras, and occasionally the Chambers of Commerce and Industries.

Expected results

- Development of a permanent cooperation network of all local actors
- Faster local economic development
Preconditions
- The technological sector is assumed to remain strong and to survive the current economic crisis and the scarcity of capital problems

Possible barriers
- Lack of regional funding that will reduce RWG initiatives, programmes and available budgets

Related good practice examples
No need for any

Planning
Current planning of the new Programming Period (2014-2020) should be sufficient.
R4.2-Recommendation #2

Enhance visibility, exploiting the full potential of the web, including speed of dissemination and access.

The Regional Government could develop a web portal for providing information to the stakeholders (citizens) about access to the full range of innovation processes, network of intermediary organisations providing facilities, business creation and incubation services, as well as research results from different fields in the region. Fast access to research results, can drive innovation, and support the development of a strong knowledge-based economy. Small and medium sized businesses and entrepreneurs can also benefit from improved access to the latest research developments to speed up commercialisation and innovation.

Description of the action- Relevance

The web and the Information and Communication Technologies in general are fields, where RWG has given particularly high priority, in an attempt to take advantage of various National and Thematic Operational Programmes, such as the “Digital Convergence” and the “Administrative Reform”, in order to upgrade its infrastructure and to align it with the requirements and realities of the major restructuring “KALLIKRATES” programme for Local Authorities.

The aim of the Region is to exploit these technologies, through new investments for the development of tools and services for:

- Upgrading services offered to its citizens, facilitating transactions with public authorities
- Promoting e Government concepts for larger participation of the citizens to local administration
- Promotion of the Region itself and various local products

Actions that will be undertaken for this purpose, according to the 3-year Strategic Planning for RWG, are the following:

A4.2.1. Development of a Regional Digital Services Center for support of services that will utilise cloud computing infrastructures, virtual computing environments, and open source software
A4.2.2. Upgrade of the RWG website, in order to include the “electronic consumer basket”, with information about all the local products
A4.2.3. Development of a digital center for handling permits for local professionals and companies
A4.2.4. Development of an integrated system of enhanced reality for promotion of cultural heritage and tourism in the region
### Participatory process (who is involved, leader / owner, where)

The above subjects relate to RWG and its Development Company (Olympiaki S.A.) alone. The Chambers of Commerce and Industries will have a role in the development of the specifications for the e-basket only.

### Expected results

- Promotion of RWG services for the citizens and companies
- More effective promotion of local products
- Strengthening e-Government issues among the citizens

### Preconditions

- Availability of regional funds

### Possible barriers

- Negative citizen attitude towards e-Government issues
- Lack of regional funding that will prevent implementation of such RWG actions

### Related good practice examples

None

### Planning

Implementation of the first action is foreseen for the current programming period 2014-2020.

Current planning about the e-basket for local products is for mid-2015, with funding from the Digital Convergence for Western Greece 2007-2013 programme.

Implementation of the last two actions will start in 2015 and will be completed during 2016.
R4.3-Recommendation #3

**Ask successful entrepreneurs with charisma to tell their story and act as advisors for students.**

The regional success stories are very inspiring and they demonstrate in a realistic way how global high-tech businesses are often created in the contemporary global environment. The young generation needs examples of success in private business. In the future, especially the charismatic entrepreneurs and leaders of these businesses can act as strong role models for other, especially young, entrepreneurs and talent. For the region, these persons with global linkages and networks are strong assets to be further utilised.

During the peer review interviewees mentioned that young persons preferred to work in big companies instead of starting their own business, due to the fear of failure. Successful stories told by charismatic and successful businessman may influence the young generation to organise their own business. The owner of CBL (Chemical and Biopharmaceutical Laboratories in Patras) company or the owner of the Tentoura Company could for instance be examples of good mentors for students.

**Description of the action- Relevance**

Improvement of the entrepreneurial spirit requires the cooperation of the overall educational system, starting at least from the secondary school and extending deeply into the tertiary (University) education, with the Chambers of Commerce and Industries, associations of young entrepreneurs, as well as all kinds of Business Support Organisations (BSOs), such as the local Science Park. It actually requires cooperation of the University of Patras (UP), the Technical Educational Institute (TEI), the Business Associations, Patras Science Park, and the Regional Authorities that manage the relevant ERDF and ESF funds.

This issue is directly relevant to Recommendation 5.1 about improving the entrepreneurial spirit among the young people (especially scientists) in the area, and it should be implemented in the context or in the margin of Actions 5.1.1 and 5.1.2.

Actions that could and should be undertaken for this purpose, especially by PSP, can be summarized in:

A4.3.1. Introduction of local good practices and examples of successful entrepreneurs, presented by the entrepreneurs themselves, in various events, organised in PSP and the local Chambers of Commerce and Industries, that will be implemented in the context of A5.1.1 that should be included in the next Innovation Pole Programme, with participation of all the key stakeholders in the area

A4.3.2. Introduction of local good practices and examples of successful entrepreneurs, presented by the entrepreneurs themselves, in various
events, organised in PSP and the local Chambers of Commerce and Industries, that will be implemented in the context of A5.1.2 that should be included in the scope of a European Union Programme, and where one or some of the key stakeholders could participate.

**Participatory process (who is involved, leader / owner, where)**
For the first action, PSP seems to be the natural choice for leader, in close cooperation at least with the local Chambers and RWG. The research institutes in the area could play a key role, always in cooperation with the University of Patras, presenting new and high-tech companies established by local researchers.

For the second action, anyone of the key stakeholders identified above can take the initiative, through a HORIZON proposal, but the Region and PSP can take the initiative through an Interreg type of proposal, where all the other relevant stakeholders will participate through a local partnership that will operate as a local Steering Committee for such an interregional or international project.

**Expected results**
- High-school students exposed to the entrepreneurial world and learning by examples
- University students, who are involved in research activities, motivated by examples from colleagues
- Wide promotional campaign, using available programme or project funds

**Preconditions**
- Launching of a new Innovation Pole initiative (it is currently under discussion)
- Positive outcome of relevant EU proposals

**Possible barriers**
- Fragile political climate that could result in unexpected elections for a new government, and consequently, delays in launching of a new Innovation Pole initiative
- Difficulty in having a positive outcome in a HORIZON 2020 proposal, due to fierce competition and odds

**Related good practice examples**
None

**Planning**
Launching of a new Innovation Pole programme should be expected sometime in 2015, and implementation should start in 2016 or 2017. New Calls and opportunities in the HORIZON 2020 programme are launched frequently already. New Calls in Interreg VC and MED are expected for the 1st semester in 2015, and for the ADRION and Baltic Med programmes in Sept. 2015.
R4.4-Recommendation #4

Rebranding of the region.

To bring closer different economy driven forces of the region (R&D organisations, Universities, SMEs, private entrepreneurs, enterprises, etc.) rebranding is needed. At the moment the Western Greece region is recognised as agricultural region. To underline that in region exists technological sector some innovative approach to the local cultural and historical traditions is needed. “Inn Olympia” for instance a non-used name.

Description of the action- Relevance

Rebranding of the Region has been recognised as a difficult but necessary task that will provide a distinct identity for RGW among other Regions in Greece, and that will extend this identity abroad, possibly taking advantage of the significant cultural heritage monuments and history of the area. The Region of Western Greece has selected to develop an identity based on the innovation ICT potential, taking advantage of the unusually high concentration of RTD organisations in the area, and its clearly stated vision for developing to be the most advanced among the Greek Regions in terms of digital convergence.

A first attempt for providing a local brand name was implemented through the “Regional Innovation Pole for Western Greece Programme”, by developing a relevant business plan on the development of a distinct identity, based on the innovation performance and RTD capacity. The results were not sustainable, basically due to the fragmentation of the actions that were performed by a large number of local organisations and companies, but not in a very integrated manner.

Current and planned attempts by the Region to take advantage of various National and Thematic Operational Programmes, such as the “Digital Convergence” and the “Administrative Reform”, will bring it closer to the vision about digital convergence. This action is related to Recommendation 4.2 about promotion of RWG through the use of Internet, and the corresponding Actions 4.2.1 to 4.2.4.

Actions that will be undertaken for this purpose are the following:

A4.4.1. Determination and promotion of a regional brand name in the context of the new Regional Innovation Pole Programme
A4.4.2. Development of Regional Digital Services so that RWG becomes the top digital region in Greece

Participatory process (who is involved, leader / owner, where)

For the first action, PSP seems to be the natural choice for leader, in close cooperation at least with the University of Patras, the Region of Western Greece,
and the two local Chambers. The research institutes in the area could play a key role, always in cooperation with the University of Patras.

The second subject relates to RWG and its Development Company (Olympiaki S.A.) alone, although collaboration of various other local partners will be required depending on the arising needs.

**Expected results**

- Promotion of RWG as a better environment for its citizens and companies
- More effective promotion of “branded” local products
- Establishment of a permanent cooperation network between all the key local actors

**Preconditions**

- Successful outcome of a proposal for a new Innovation Pole initiative in Western Greece
- Availability of regional funds

**Possible barriers**

- Possible delays in launching or cancelling of a new Innovation Pole initiative
- Lack of regional funding that will prevent implementation of such RWG actions

**Related good practice examples**

None

**Planning**


Implementation of the second action will start in 2015 and will be completed during 2016.
R4.5-Recommendation #5

Organise matchmaking events.

1. between students and SMEs
During the peer review, some companies mentioned that it is hard for them to find a worker, due to the fact that students after University need at least half a year education inside of the company to be able to work in their environment. Representative of another international company mentioned that University was not contacting them regarding internship of students. Of course it is hard for the University to follow the development of the innovative environment, so it would be beneficial for Universities and for the companies to have “information days” aimed at informing students about their job opportunities or about the opportunities presented for training in high technology companies.

2. between researchers and SMEs, public
It is important to encourage and support a dialogue between researchers and the public, so that the development of research activities and policies can reflect more effectively the changing needs of a more informed society.

3. between students and Alumni
Student Alumni association could be created to enhance the student experience by providing opportunities that strengthen their lifelong loyalty to Western Greece region, educate students and prepare them for their future career. Network of alumni volunteers could be involved in organisation of different events for the students. Alumni may act as mentors on campus, provide entrepreneurial advice, share hobbies and interests, and become employers for internships and externships across the country.

4. Cross-sectoral meetings
Experts from different sectors could find some common interest. For example nanotechnology could be applied in agricultural sector or in medicine. Representatives of SME could pose some questions, problems and researchers could help them to solve the problems by applying an innovative approach to the problems.

Organise an open innovation platform for students and companies (see good practice description)

Description of the action- Relevance
Most of the above suggestions by the peer review experts have already been recognised by the local stakeholders, and several events are organised annually, either periodically or spontaneously by some of them. For example:

- Open days are organised every year at the local University of Patras for the public, mainly high school students, where various research results are exhibited
- Researcher days are organised at least once a year in Athens, where all Research institutes are asked to exhibit their RTD results, products and services
- Other events are also organised spontaneously, depending on availability of funding and always in relation to other events

However, some of the suggestions are out of the Greek mentality, and so, motivation and networking of alumni, for example, is not easily feasible.

For the last suggestion, i.e. to organise an open innovation platform, a recent attempt by PSP to implement it, as part of an impressive international consortium, in the context of the HORIZON 2020 programme (STARTINNOCOOP proposal), was not successful, due to extremely harsh competition. The partnership decided to stay in touch and to try to implement all these actions that do not require significant funds, and to proceed slowly but with persistence.

Furthermore, several attempts that had been undertaken in the past, in the context of regional initiatives, are now long forgotten, without any follow-up by the relevant partners (mainly the University of Patras).

However, this is a well-recognised need at PSP, and it is expected to be investigated and possibly developed further.

Actions that will be undertaken for this purpose are the following:

- A4.5.1. Design of an integrated and holistic approach to the matchmaking meetings issue that should be included in the next Innovation Pole Programme, where all the key stakeholders will participate
- A4.5.2. Implementation of matchmaking meetings during various events that could be included in local, national or EU projects, where some of the key stakeholders could participate
- A4.5.3. Development of an open innovation platform for students and firms, following the concept of the DEMOLA platform

**Participatory process (who is involved, leader / owner, where)**

For the first action, PSP seems to be the natural choice for leader, in close cooperation at least with the University of Patras, the Region of Western Greece, and the four local Chambers. The research institutes in the area could also play a key role.

For the second action, anyone of the local stakeholders could take the initiative and later involve the most relevant partners, through a local Steering Group formation.

For the third action, PSP is the most suitable choice for leader, in close cooperation at least with one of the two Informatics Research institutes (CTI, ISI) and with the University of Patras.
Expected results

- Transfer of know how into conventional industrial sectors
- Developing an entrepreneurial culture among youth
- Bridging the gap between research and production actors
- Establishment of a permanent cooperation network between all the key local actors

Preconditions

- Successful outcome of a proposal for a new Innovation Pole initiative in Western Greece
- Successful outcome of a proposal where such activities can be introduced with project funding
- Availability of regional funds

Possible barriers

- Possible delays in launching or cancelling of a new Innovation Pole initiative
- Not successful outcome in submission of relevant proposals by local stakeholders
- Lack of regional funding that will prevent implementation of such actions

Related good practice examples

Demola, Open Innovation Concept platform (FI).
Venture Lab business development programme, Twente (NL).

Planning


Implementation of the second action is also foreseen for the current programming period 2014-2020, and more possibly for 2016-2017.

Implementation of the third action is foreseen for 2016.
2.7 Sustainability of the jobs created by the innovative sectors

R5.1-Recommendation #1

Foster the entrepreneurial spirit.
With the wealth of talents present in the region and the huge potential of the innovation ecosystem, fostering the entrepreneurial spirit in the region will improve the anchoring of innovation in the territory. This should be done from an early stage and in an inclusive way. Attitudes and skills leading to self-employment need to be fostered within the education system and throughout lifelong learning. These include creativity, responsibility, risk-taking, problem-solving, team-working. Moreover education curricula should integrate project education and entrepreneurship programmes in order to help students grasp which are the required skills and competences to become an entrepreneur. Technical and vocational education should be valued, especially given the technology-based innovation anchor of the region. Teachers should be trained both during their initial training and during their professional development in order to be able to provide adequate entrepreneurship education.

Description of the action- Relevance
Improvement of the entrepreneurial spirit requires the cooperation of the overall educational system, starting at least from the secondary school and extending deeply into the tertiary (University) education, with the Chambers of Commerce and Industries, associations of young entrepreneurs, as well as all kinds of Business Support Organisations (BSOs), such as the local Science Park. It actually requires cooperation of the University Of Patras (UP), the Technical Educational Institute (TEI), the Business Associations, Patras Science Park, and the Regional Authorities that manage the relevant ERDF and ESF funds.

Several attempts for the creation of such a local Network have been implemented in the past, always with the active participation and sometimes leadership of PSP but not for the aim of promoting the entrepreneurial spirit exclusively. The latest relevant attempt with development of a regional Business Angel Network (Innovation Pole programme), initially successful, led to a failure, due to the closing of the local cooperative Bank that led its implementation phase.

Actions that could and should be undertaken for this purpose, especially by PSP, can be summarized in:

A5.1.1. Design of an integrated and holistic approach to this aim that should be included in the next Innovation Pole Programme, where all the key stakeholders will participate
A5.1.2. Search of such an integrated and holistic approach to this aim in the context of a European Union Programme, where international
cooperation will provide additional knowledge and added value (HORIZON 2020 is the best candidate but also the various Interreg and Interreg – type of Programmes could do), and where one or some of the key stakeholders could participate

**Participatory process (who is involved, leader / owner, where)**

For the first action, PSP seems to be the natural choice for leader, in close cooperation at least with the University of Patras, the Region of Western Greece, and the two local Chambers. The research institutes in the area could play a key role, always in cooperation with the University of Patras.

For the second action, anyone of the key stakeholders identified above can take the initiative, through a HORIZON proposal, but the Region and PSP can take the initiative through an Interreg type of proposal, where all the other relevant stakeholders will participate through a local partnership that will operate as a local Steering Committee for such an interregional or international project.

**Expected results**

- High-school students exposed to the entrepreneurial world
- University students, who are involved in research activities, eager to test their abilities in the entrepreneurial world
- Development of a permanent cooperation network of all local actors

**Preconditions**

- Launching of a new Innovation Pole initiative (it is currently under discussion)
- Positive outcome of relevant EU proposals
- Availability of other regional funding

**Possible barriers**

- Fragile political climate that could result in unexpected elections for a new government, and consequently, delays in launching of a new Innovation Pole initiative
- Difficulty in having a positive outcome in a HORIZON 2020 proposal, due to fierce competition and odds

**Related good practice examples**

None

**Planning**

Launching of a new Innovation Pole programme should be expected sometime in 2015, and implementation should start in 2016 or 2017. New Calls and opportunities in the HORIZON 2020 programme are launched frequently already. New Calls in Interreg VC and MED are expected for the 1st semester in 2015, and for the ADRION and Baltic Med programmes in Sept. 2015.
R5.2-Recommendation #2

**Develop support structures and regular funding for start-ups and companies throughout their development.**

In order to create a general climate, which supports entrepreneurs and encourages risk taking, the region should offer its entrepreneurs and potential entrepreneur’s comprehensive support. For the moment support is generally organised on an ad-hoc basis. Efforts should therefore be taken to help entrepreneurs and potential entrepreneurs:

- **in the conceptual phase**, define their innovative idea and turn it into a business idea, and provide opportunities for consulting.
- **In the development phase**, entrepreneurs need to have access to scholarships, funding, consultancy, coaching, support to internationalisation and export. This is where venture capital and Business Angels are needed. The region should therefore provide incentives for investors to support startups.
- **In the commercialisation and growth stage** a wide range of stakeholders should be able to support start-ups and banks need to be involved in these partnerships. In the current climate where it is extremely hard to get loans from banks the region should also explore the possibilities offered by revolving funds.

In the context of Patras, personal networking with private capital holders seems to be the main approach to improve funding opportunities. In this situation, the national, and even more importantly the international sources of capital are crucial. The University of Patras has educated a lot of talented and successful business people who are currently in good national or global position, mainly in European countries and in the US. The utilisation and strengthening of these linkages and networks will provide huge opportunities to increase funding possibilities.

Private and public stakeholders need to cooperate in the different stages. A framework should exist to coordinate support actions without creating extra bureaucracy.

**Description of the action- Relevance**

Support and funding for startups and companies requires a type of structures that does not exist in Greece or is away from the mentality of the Greek people. More specifically:

- Intermediate organisations, such as Science and Technology Parks, Business Innovation Centers (BICs) and other similar BSOs lack serious funding in Greece, if any at all, in deep contrast with French, Spanish, Italian and other good practices. A Science Park or a BIC in Greece are completely autonomous and self-sustained organisations, just like any private sector company.
Links with graduates of the local University, former employees etc. are weak, and creation of a network of this type of sponsors, is not in the mentality of the Greek people.

A late relevant attempt with development of a regional Business Angel Network (BAN), initially successful, led to a failure, due to the closing of the local cooperative Bank that led its follow-up phase.

In view of the above, and since another attempt for a new BAN does not seem possible, due to certain local economy characteristics (large fragmentation of productive sector to very small firms) and the lack of a really “local” bank or other credit organisation, very few options remain to be tested in the future, in the form of the proposed actions below:

A5.2.1. Development of a new structure that is been discussed for several years and provide the necessary funding resources, namely the Innovation Zone of Western Greece, and incorporation of other relevant organisations to it, either by geographic integration or by institutional merging.

A5.2.2. Development of a network that will include all major local stakeholders along with credit organisations (banks, VCs), in order to ensure that assessment, support and funding of innovations, startups and existing firms will be done in a structured, well-coordinated manner, where the credit organisations will provide the funds and the other partners will provide the technical and other expertise.

A5.2.3. Extension of the scope of the existing Intermediate Body for the Management of the EU Programme funds, so that instead of funding certain Business Plans only, to extend to support actions of any kind or to be integrated in the network of the proposed Action A5.2.2 above.

**Participatory process (who is involved, leader / owner, where)**

For the first action, PSP is the driving force and it is expected to undertake the management of the Innovation Zone. The Region will supply the funds for it, and the cooperation of the local actors will be sought. The research institutes and the University of Patras in the neighboring area will have a key role in this Endeavour.

For the second action, participation of all the regional key stakeholders will be sought, under the leadership of the Park or the Regional Authorities.

The third action requires the cooperation of the Chambers of Commerce and Industries that currently manage the Intermediate Body.

**Expected results**

- Coordinated and structured support for startups
- Development of new support structures
- Development of a permanent cooperation network including all local actors
Preconditions

- State approval for establishment of the Western Greece Innovation Zone
- Availability of regional funding

Possible barriers

- Deterioration of the economic crisis and further decrease of funds for innovation, and RTD
- Changes in the status of PSP as a result of the restructuring process that is sweeping the country

Related good practice examples

Innovation vouchers – Such a programme exists already in Greece

Planning

Launching of the new Innovation Zone should be expected sometime in 2016, and implementation should start in 2017, if all goes according to current planning.

The local network could be built on the existing Innovation Network that operates under the auspices of the Region of Western Greece, starting on 2016.
R5.3-Recommendation #3

**Diversify funding innovation.**

- The peer review team found that several entities from the innovation ecosystem conducted a high proportion of their research and development in the framework of projects, either at local, national or European level, leading to high dependence and a risk of low level of innovation produced because of the timeframe of projects located in different organisations. Indeed, although these projects are fruitful and generate a wealth of innovative ideas, processes and products, it is very risky to rely too highly on EU funds for research as the main asset of the region lies in the technological sector, where products are deemed to evolve very quickly. From the accessibility, user experience and quality of service perspectives this is probably not an optimal situation and can lead to a fragmented and ad hoc service offering at the regional level. Project-based operations are also rather limited in scale and time and thus they often have challenges in creating the critical mass required for a cultural change. This also presents a risk for the jobs created in this context, which may not be sustainable.

- Crowd funding is not only valuable as a potential new means of finance for scientists and (small) businesses. Its importance is also that it forces scientists to be able to think about their work in terms of potential customer benefits and potential threats to its public acceptance and to present their work to the public “at large”.

**Description of the action- Relevance**

The need for diversification of the sources for innovation funding is a clearly recognised current weakness, but the still severe economic crisis, the lack of capital in the Greek market and the reluctance of the banking system to get involved in new, and even current, endeavors, do not allow any optimism for a change in the near future.

Crowd funding is a great instrument that could provide one solution but is still not developed at all in Greece.

Another solution could to develop a type of revolving fund for innovation financing, always with the reservation that were stated above, relating to the banking system.

The following actions can be proposed:

A5.3.1. Initiation of a discussion about crowd funding advantages and opportunities available elsewhere, and of an effective informative campaign could be implemented
A5.3.2. Exploitation of foreign experiences and development of a regional revolving fund

**Participatory process (who is involved, leader / owner, where)**

For the first action, PSP will be the driving force in the initiation of the discussion, and hosting of the relevant workshop(s), with cooperation of the Regional Authorities, the University of Patras and the three neighboring research institutes.

For the second action, the leading role for its implementation should be taken by the Region of Western Greece, and particularly by the Regional Development Fund (RDF), and PSP, in cooperation with RDF, should have a key role in the benchmarking study, and the overall design of the technology transfer process.

**Expected results**

- Development of a new support structure
- Study and exploitation of international good practices
- Transfer of relevant know how
- Diversification of sources for innovation funding and independence from EU and national programmes

**Preconditions**

- Resolving of several legal problems for the development of the revolving fund, which will naturally arise, due to the very strict and inflexible current legal framework
- Availability of regional funding

**Possible barriers**

- Legal issues that may prevent RDF to develop and operate the revolving fund
- Deterioration of the economic crisis and further decrease of national and regional funding for innovation, and RTD

**Related good practice examples**

Several good practice examples in relation to either crowd funding:

- Gofundme
- KICKSTARTER
- Indiegogo
- Teespring
- Causes
- YouCaring
- Giveforward
- Crowdise
- Patreon
- FirstGiving
- etc.

Or revolving funds:
• Clean Water State Revolving Fund
• Green Revolving Fund
• Drug Revolving Fund
• Southwestern Union Revolving Fund
• etc.

**Planning**

Launching of the discussion on crowd funding could be implemented in the 2015-2016 time frame.

The discussion about the revolving fund will start during 2015. No estimate can be provided for its implementation yet.
R5.4-Recommendation #4

**Improve the attractiveness of the region.**

As has been mentioned above, the region enjoys a particularly friendly atmosphere, great natural and cultural surrounding and is home to remarkable talents. In order to improve the attractiveness of the region transport (rail, road, air), digital and social (care services, leisure activities) infrastructure is vital. The region should further build on the results and successes achieved in the context of European projects, to address the digital divide in rural areas and increase territorial cohesion and contamination of innovation.

The region should also further take advantage of the potential of its young population and include them more actively in the definition and implementation of the smart specialisation strategy.

**Description of the action- Relevance**

 Projects relevant to improvement of infrastructure have been identified and described in R1.1.

Concerning implementation of the Smart Specialisation Strategy (S3), Western Greece has elaborated in 2014 a study, where the vision and overall strategy for approaching the Smart Specialisation issues are stated clearly.

The following action is proposed:

A5.4.1. Implementation of the Smart Specialisation Strategy as it is described in the relevant RWG document

**Participatory process (who is involved, leader / owner, where)**

RWG has the main role in the implementation of this action, which should start at 2015, with the cooperation of several key local actors, such as PSP, the University of Patras, the three research institutes and the Chambers of Commerce and Industries.

**Expected results**

- “Smart development” of the knowledge and innovation based economy
- Sustainable development, and in particular, promotion of a more efficient and competitive green economy
- Development for all, with new capacities, creativity and new jobs, for social and territorial cohesion

**Preconditions**

- Political stability
- Availability of regional funding
## Possible barriers
- Deterioration of the economic crisis and further decrease of national and regional funding for innovation, and RTD

## Related good practice examples
None

## Planning
The S3 study has already been elaborated, hence the initiative is considered as launched already. Its implementation will last from 2015 to 2020, following the programming period.
R5.5-Recommendation #5

**Use networking and modernisation to make agriculture sustainable.**

The agricultural sector was boosted by the economic crisis as job prospects deteriorated in most sectors. In order to take advantage of this pool of skilled and often young workers, who arrived in this sector due to external factors, the region should provide a framework, organise places and events where farmers, farmers’ organisations, traders can meet and bring about new possibilities for innovation and modernisation in the sector. Regular contacts with research institutions are also essential to bridging the gap between research and economic activity in the sector.

**Description of the action- Relevance**

This activity involves almost exclusively the Regional Authorities, the University of Patras and the agricultural sector key actors. Such informative activities are in process by RWG and will continue for all the current programming period.

The following action is proposed:

A5.5.1. Restarting of the RWG Edaphic (soil testing) Laboratory and determination of contaminated soil areas in Western Greece agricultural assets

**Participatory process (who is involved, leader / owner, where)**

RWG has the main role in the implementation of this action, which is scheduled to start before the end of 2014, with the cooperation of the Development Company of RWG (Olympiaki S.A.), the Patras Technical Educational Institute, and agricultural stakeholders.

**Expected results**

- Wide dissemination about the benefits from soil testing and reparation
- Diagnosis and mapping of the soil quality in Western Greece
- Shifting of farming activities from traditional plants to higher-quality and value products

**Preconditions**

- Maturity and cooperation of farmers
- Availability of relevant regional funding

**Possible barriers**

- Improvement of the financial situation and creation of new jobs that will direct young people again towards other than agricultural activities
- Farmers’ mentality to maintain traditional products that will not be subsidized further after 2015
Related good practice examples
None

Planning
The existing Edaphic Lab is restarting during November 2014, and its main aim is to obtain sustainable and independent from RWG operation in 2018.
**R5.6-Recommendation #6**

**Propose a debate on the definition of sustainability.**

The perception of sustainability and the expectations of stakeholders with regards to the role of the region in this respect may vary. Therefore it would be good to organise a public debate with the different stakeholders in order to ensure the criteria for measuring and monitoring sustainability are based on a regional consensus. This would also improve the participation of citizens in the regional development strategy and the economy as a whole.

**Description of the action - Relevance**

On this activity, with the opportunity of a SEE project about the development of a new methodology for protection and management of cultural heritage areas (CHERPLAN), with the initiative of RWG (and the Regional Development Fund) and the neighboring Computer Technology Institute (CTI), a set of environmental indicators was identified for the sustainable development of the small city of Nafpaktos.

Various issues were examined about sustainability in a general but also specific manner (cultural heritage area), a large number of indicators were considered, and methodological issues were extensively explored. This was done in a cooperative manner, since all relevant actors were involved right from the project start, with development of a local Steering Group.

The project contract period ended in June 2014 but its results remain to be further exploited for other areas too.

The following action is proposed:

A5.6.1. Continuation / capitalisation of the CHERPLAN project results, with extension to other areas and even the whole Western Greece territory, either through a sequel to the last project in one of the Interreg or Interreg-type of programmes, or through RDF regional funds available for the current period 2014-2020

**Participatory process (who is involved, leader / owner, where)**

RWG has the main role in the implementation of this action, in close cooperation with CTI on matters of GIS and webGIS applications, and with each one of the targeted local municipalities.

**Expected results**

- Capitalisation on existing project results
- Diffusion of important know how towards municipality personnel
- Clarification of sustainability issues and use of indicators for monitoring and assessment
• Better protection of the environment

**Preconditions**
- Successful design of a new proposal and Application Form in any of the new period Interreg and Interreg-type of programmes
- Availability of relevant regional funding

**Possible barriers**
- Not successful application for a follow-up project in other Western Greece areas
- Lack of available regional funding

**Related good practice examples**
- Nafpaktos and six (6) more pilot areas (Aquileia-Italy, Idrija-Slovenia, Halsttatt-Austria, Cetjne-Montenegro, Monastir-FYROM, Berat-Albania) in the context of the CHERPLAN project

**Planning**
Considering a new project proposal in the Fall of 2015, implementation will start on the Fall of 2016.

Considering regional funding, no planning can be foreseen specifically, but it should be sometime during the current programming period (therefore between 2016-2020).
2.8 Realisation of projects

The specific time table, methodology and means for the realisation of each one of the suggested / proposed actions / projects is sufficiently described in the presentation of each individual action for responding in each one of the peer reviewers’ recommendations.

For some of them, planning is under way and, if unexpected conditions do not arise, implementation is sufficiently sketched. For some of the proposed actions, this can be done quite vaguely.

2.9 Financing

Financing resources (amounts), sources (projects, regional funds, own funds, other) and Funds (ERDF, ESF etc.) are hard to be determined at this stage, except for some, already under planning, actions, since they depend a lot on chance, availability of funding, political situation, economic recession etc.

The financing sources are mainly:

- European projects (HORIZON 2020)
- European projects (Territorial Cooperation)
- National funds (ESPA – new programming period 2014-2020)
- Regional funds
- Local stakeholders own and in-kind funds
- Other (sponsoring, foreign investments)
3 IMPLEMENTATION PLAN

This part of the document presents key initiatives actions considered as very important for the implementation of a smart innovation-based development policy. They aim to create those basic mechanisms and tools that will enable regional stakeholders and entrepreneurs realise their projects and strategies.

3.1 Regional Strategy

3.1.1 Research & Innovation Governance System

According to the Action Plan

<table>
<thead>
<tr>
<th>Relevance of the action:</th>
<th>A necessary condition for the successful implementation of the Research and Innovation Action Plan for the Western Greece Region is the development and operational function of the appropriate Governance System.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholders:</td>
<td>Research &amp; Innovation Governance System (RIGS) needs to make sure that all members of the four-helix are actively participating. This requirement implies the adequate representation of the regional government, the business sector, research / academia and civil society institutions in decision making, emphasizing the use of people with successful careers and utilisation of organisations with experience on R&amp;I support and networked in more than one component of the four-helix.</td>
</tr>
<tr>
<td>Expected results:</td>
<td>The Research and Innovation Governance System (RIGS) needs to:</td>
</tr>
<tr>
<td></td>
<td>▪ Develop and maintain the objectives of R&amp;I Strategy.</td>
</tr>
<tr>
<td></td>
<td>▪ Create and support the network of stakeholders.</td>
</tr>
<tr>
<td></td>
<td>▪ Lead, direct, coordinate, manage and control the final implementers of the activities in the R&amp;I action Plan.</td>
</tr>
<tr>
<td></td>
<td>▪ Monitor and Measure the impact of the R&amp;I action plan and its executed activities.</td>
</tr>
<tr>
<td>Preconditions:</td>
<td>Shared view from all regional stakeholders and will to co-operate with other partners, even if that means declining of existing privileges.</td>
</tr>
<tr>
<td>Possible barriers:</td>
<td>Will for cooperation between innovation actors</td>
</tr>
<tr>
<td>Good practice examples:</td>
<td>Association of Combined Manchester Authorities</td>
</tr>
<tr>
<td></td>
<td>Twente Technology Ecosystem</td>
</tr>
</tbody>
</table>

A Research & Innovation Governance System should meet the following criteria:

i) Broad acceptance and visibility

RIGS needs to identify all stakeholders and define the role of each one along with their tasks and responsibilities. This means that the key priorities and performance
targets set in the action plan will be assigned to the respective stakeholders, along with the authority and the means to attain them.

RIGS should not only request the broad participation, but also develop the mechanism to assure it. Continuous interaction with all stakeholders and application of the principles of collective leadership by consensus could enhance stakeholder participation and involvement.

RIGS needs to make sure that members of the four-helix are actively participating. This requirement implies the adequate representation of the regional government, the business sector, research / academia and civil society institutions in decision making, emphasizing the use of people with successful careers and utilisation of organisations with experience on R&I support and networked in more than one component of the four-helix.

RIGS needs to be transparent in its decision making process and cultivate the dialogue with stakeholders. All decisions should be transparent regarding the criteria used for their selection and have to account for the opinions of all those affected by them.

RIGS needs to establish digital governance processes. Digital technology (e.g. portals, social networks, on-line forums & surveys, prediction markets, etc.) should be exploited fully for communication processes for both informing the regional stakeholders and for feedback on the decisions or the use of collective knowledge.

ii) Three-tier Research & Innovation Governance System
The Governance System needs to have provision for distinct authorities separating strategy, management and implementation of Research and Innovation. A three-tier governance model is typical for the case.
The three tiers are formed as follows:

A) Steering Committee in which all actors of the quad helix are represented. The main functions of the Committee include:
   - the adoption of a management system for the action plan,
   - setting goals and objectives for the underlying structures and monitoring their achievement on a periodic basis,
   - monitoring of the implementation of the goals and objectives of the plan,
   - ensure policy and institutional support to the lower levels of the governance system and
   - Staffing of the executive tier (see B) and monitoring of its performance.

It is clear that very high competence, experience and influence requirements should be set for the selection of the Steering Committee members and especially for the person who will preside over it.
B) A flexible and lean Executive Mechanism that is responsible for managing the implementation of the action plan under the guidance of the Steering Committee. The key responsibilities include:

- The transformation of the strategic objectives set by the Steering Committee operational objectives to be communicated to the third tier of the governance structure.
- Data Collection through a suitable monitoring system, the disclosure thereof and preparation of periodical progress reports based on a scorecard system in order to support the decision making process and to inform transparently all stakeholders.
- Communication and cooperation with the respective R&I managerial bodies in other regions, along with networking with other regions on issues of common interest.
- Monitoring and coordination of activities in the third tier of the RIGS.
- Coordination of the communication with the stakeholders of the region and the rest of the world.
- Active search for funding of the R&I action plan from European, national and private sources.
- The dissemination of the results of the action plan at regional, national and European level.

The executives who will staff the Executive Mechanism need to hold a wide range of complementary skills and experience (project management, management by objectives, operations and quality management, knowledge of the national and European regulatory framework, knowledge of the technology fields covered by the R&I action plan, innovation management, etc.). The coordinator of Executive Mechanism should cover satisfactorily most of the above skills and have managerial experience, communication and persuasion skills.

C) The third level is where action plan is implemented and includes a number of the final beneficiaries & users. These include but are not limited to:

- A series of Knowledge and Innovation Communities that correspond to the strategic priorities of the action plan. The Knowledge and Innovation Communities are self-organised and self-Administered associations and individuals from all sectors of the quad helix (businesses or clusters, research labs or organisational units of academic institutions / research centers, institutions of regional or local government / public entities, representatives of civil society). Following a bottom up approach these communities have the role of contributing to the development of the R&I strategy in the area of their expertise and they are essential components of the system of governance with a multiplying effect on the diffusion of the objectives and impact of the action plan.
- Ad hoc Working Groups that are more coherent structures formed around specific projects. Working Groups can be established, operate and dissolve depending on the implementation needs of the action plan.
- Agencies - Final beneficiaries. The Final Beneficiaries have a clear role in the implementation of the R&I action Plan. They implement a particular activity of the plan clearly defined in terms of specifications, inputs and outputs part.

**Figure 7: Research & Innovation Governance System**

### iii) Management tools
The organisational structure of the Governance System needs to be supported by the suitable tools that provide the quantitative and qualitative information and that is required for decision making.

A set of indices consolidating performance measures for each activity needs to be defined. The indices are structured hierarchically following the structure of the plan, so that data that are collected at the level of every individual activity can be accumulated seamlessly at higher levels.

Monitoring of the indices and controlling of plan execution requires the support by a Management Information System that comprises of data collection applications, index calculation and monitoring applications, and reporting tools.

### iv) Establishment of the R&I Governance
For the formation of the proper Governance System it is required that there is an initial consultation with the Regional Authorities in order to agree on the schema of the executive mechanism. In parallel extensive consultation and “advertisement” with the beneficiaries is required so that the schema is accepted and the communication lines between the different beneficiaries are established. In the
sequence RIS documents can be finalised and detailed plans for the execution of all innovation activities can be produced under the responsibility of the Research an Innovation Governance System, so that they have wide acceptance within the region’s stakeholders, consensus for their implementation and identified financial sources.

The executive mechanism can take the form of a secretariat that initially can be staffed with two persons. PSP could host the executive mechanism and provide the needed infrastructure in terms of office space, personal computing facilities, meeting facilities etc. The anticipated operational cost for the secretariat is estimated in the range of 120.000 Euros per year and covers all personnel cost, provided facilities, use of equipment, overheads, operational costs etc. An additional investment of about 100.000 Euros for the development of the Management Tools should be also considered.
3.1.2 **Incubator in Patras Science Park**

According to the Action Plan

<table>
<thead>
<tr>
<th>Relevance of the action:</th>
<th>This action derives from the need to encourage and support the start of innovative, knowledge intensive companies, offering a concrete package of tools and a friendly business environment.</th>
</tr>
</thead>
</table>
| Stakeholders:            | - Patras Science Park (PSP)  
- University of Patras and Research Institutes  
- Innovative Companies, knowledge intensive SMEs  
- Private sector with financial capacity to contribute to the fund, (e.g. banking sector, private partners, VCs, business angels)  
- Government (provision of the funding programme) |
| Expected results:        | - Support of young entrepreneurs  
- Exploitation of scientific and research results  
- Innovative, technology companies are a source of creative innovation, vital for future growth of labour productivity and employment  
- Development of new companies  
- Attraction of direct investments  
- Cooperation between academia and companies  
- Development of technology ecosystem  
- Commercialisation of Research results |
| Preconditions:           | Funding programme needs to be designed and become available on time  
New facilities at PSP need to be constructed |
| Possible barriers:       | None |
| Good practice examples:  | Israel model of incubators  
Twente (Holland) model of business support for start-ups and commercialisation |

The objective of this action is the establishment of an incubator for new technology-based companies in the Region of Western Greece. The incubator will look after the development and management of modern and appropriate infrastructure (office spaces, workshops, meetings, and logistics) and will provide the suitable administrative, financial and operational support to the hosted companies.

The incubator will offer funding alternative sources to the companies and will monitor their performance during the initial stage (2-3 years) until they prepare their business plans, complete product development and do the first steps in the market (first customers).

The characteristics of the proposed model are the following:
- Have a special incubator programme funding the new company for 2-3 years. This section is financially supported from public funds. The amount can reach 75-80% of the total requested.
- The incubator (or the shareholders of the incubator) participates in the new company with 15-20%. Additional investors may also participate with equity share.
- The total amount invested is at least €600K for a period of two years.
- The Incubator monitors the company and facilitates its functions, preparing the way for the second phase of funding from investors (Coaching, Mentoring, Marketing, Operations).
- At the end of the period, the company has achieved its growth objectives, finds investors or capital and exits the incubator.
- The incubator and the other investors decide to either capitalise their gain or remain as shareholders.

The model is aimed at companies with great potential and the entry criteria are strict. The aim is to create good and sustainable "World Class", high value producing companies.

Apart from the above ‘Scheme’ there are alternative lighter ones, but with the aim to develop sustainable, competitive businesses with strong market orientation.

**Transfer & Implementation Process**

Patras Science Park has an extensive knowledge and experience in incubation processes for over 15 years. However, new models and international developments are constantly monitored and evaluated, so that services provided follow recent trends and results.

PSP now examines new approaches in incubation process and is in contact with relative organisations and science parks to acquire experience and knowledge. Twente Kennispark, Israel incubator model and Manchester Science Partnerships are considered pioneers in this subject and their model is been analysed to be used for this case also.

**Finance**

ERDF and national funds should be used for premises construction. A new investment incubation programme for the businesses should be designed and published. Private funding is necessary to cover investment in the companies. European COSME, Horizon 2020 could be exploited as well.

After the initial cycles of the programme, Invested funds can return back in a revolving mode and be used for further investment cycles.

In order for the programme to obtain the critical mass of supported projects so that their impact is visible in the region and a continuum of success stories is created an amount of 4,2 million Euros is estimated to be needed.
Responsible Organisations
Patras Science Park will be the responsible organisation to operate and manage the incubator.

Timescale of the Process
Preparation Phase: Three months – Choice of advisor organisation and model introduced
Feasibility Study: 3 months
Business Plan: 2 months
Investment Fund – Financial Resources: Four months
Supporting Tools: Four months
Building Construction or renovation: 6 months
Programme Launch: Total 12-18 months

The above actions are closely related to other actions mentioned below in this report.

Evaluation Scheme
The programme execution will include several parameters and factors to be monitored and evaluated. For instance the number of companies funded, jobs created, executives and managers trained, commercialised research results, common projects realised with academia and private sector, capital employed by the companies, company growth rate are some of them.
3.1.3 **Investment Fund with Private Participation**

According to the Action Plan

<table>
<thead>
<tr>
<th>Relevance of the action:</th>
<th>A fund, targeting innovative, knowledge intensive companies. It is strongly related to the activities of PSP incubation programme as well as to the companies hosted in the PSP or situated in the vicinity of the innovation zone.</th>
</tr>
</thead>
</table>
| Stakeholders:           | Patras Science Park (PSP)  
University of Patras and Research Institutes  
Innovative Companies, knowledge intensive SMEs  
Private sector with financial capacity to contribute to the fund, (e.g. banking sector, private partners, VCs, business angels, EIB)  
Government (provision of part of the funding programme) |
| Expected results:       | Capital leverage of the fund.  
Development of local companies.  
Boost of local economy |
| Preconditions:          | Private sector needs to contribute with capital and fund management  
Public sector needs to contribute part of the capital  
Universities and research centres are the main sources for new products and business cases  
SMEs can materialise their business plan and bring innovative products to the market. |
| Possible barriers:      | Limited business cases to get financed initially in order to certify the mechanism. However, this is a process that takes much time – years - to evolve. Many regions started a long time ago and therefore, patience and long term strategy is necessary. |
| Good practice examples: | Twente Technology Fund |

A specialised fund to support innovative and knowledge intensive companies as well as finance technology co-operative projects. It is strongly related to the activities of PSP incubation programme as well as to the companies hosted in the PSP or situated in the innovation zone of the University of Patras. Such a Fund for the Smart Innovation in Western Greece (FSIWG) can play a catalytic role in the development of the area.

The FSIWG will focus on all stages of a company development (e.g. seed capital, growth capital, accelerator injection, business angel matching fund) to the addition of financing viable technology projects (e.g. proof of concept or cooperative projects
between academia and private sector for the development of new products and services).

The invested amount can vary from €20K to €50K (Accelerator programme) to €200K and €400K (seed capital) per company in order to provide the necessary financial backing at initial steps. At a later stage, investment can increase (different investment rounds) based on the company progress and product development needs.

All invested capital will be on a subsidy, loan or equity basis. Usually several different funds are constructed to support different needs. By (co-) investing in structured rounds, FSIWG will keep a grip on the conditions and prevent dilution in these portfolio enterprises.

The benefits of this early funding are obvious by means of injecting emerging breakthroughs in research and technology businesses with sufficient venture capital. This is necessary to optimize their chances of success and ultimately provide revenue to FSIWG investors and the research groups involved. Once these companies are established with seed funding, FSIWG will seek to work with other traditional venture capital companies to partner in the effort to advance these technologies.

FSIWG needs to establish special relationships with the academic and research institutes of the region since they are the major source of investment opportunities in different areas of technology that relate to smart specialisation of Western Greece.

FSIWG has as main goal to generate return for its investors. The effects of its operations, however, will be much broader, catalysing innovative business activities and economic development of the Western Greece region as a whole. An efficient combination of the resources of the research institutes and the FSIWG shall facilitate the transfer of technology to the private sector. The creation and high-growth of these new spin-out companies will benefit local economic development and will create many new jobs in the region.

**FSIWG Management**

FSIWG management needs to understand the investment process followed and the existing best practices from across the business and academic communities, particularly as they related to the funding of seed and pre-seed stage companies and technology validation activities.

The management of FSIWG needs to be well experienced in guiding and supporting the management teams of its portfolio companies. The management of the fund will be holding active board positions to further support the portfolio companies post investment.
PSP accumulates a number of advantages that make it suitable for the management of the fund. PSP has gained a lot of experience on guiding, facilitating and supporting new and innovative companies, for over twenty years. It has established good relationships with the academic and research institutes and is experienced in managing innovation as one of the first organisations in the area that was involved in projects related to exploitation of innovation generated in the labs. PSP has extensive knowledge of the region’s market condition and the entrepreneurship capital of the region and is considered as an important node of the innovation pole of the region, connecting academia with enterprises. In the following picture, a typical organisational chart of the investment fund is presented.

**Figure 8:** Organisational chart of the Investment Fund

**FINANCING**

The sources of finance for FSIWG should be both public and private in order to create additional leverage to the public contribution.

**Private Sector**

Banks can be the major source of the private sector. Banks can take advantage of different incentives, national and European, to gather the amount required, but do not need to be the sole contributor. Individual entrepreneurs in the region, companies that are interested on particular technologies or investment opportunities can also participate.

**Public Sector**

The contribution of the public sector can be materialised in many ways. Main vehicle for the public sector contribution are the Regional Operational Plan of Western Greece along with the Regional Innovation Strategy for Smart Specialisation and the Operational Programme for Competitiveness, Entrepreneurship, and Innovation
(ΕΠΑΝΕΚ) that applies to the whole country. These plans include both the support of innovation and the use of financial tools. In addition the plans include amounts for the technical assistance that could be used for the financing of the management of FSIWG. Their final format and budget will be ready at the end of 2014.

Regional Operational Plan
The Regional Operational Plan has been designed to address a number of challenges for the Region of Western Greece as they have been specified in the smart specialisation strategy for the region. Challenges related to the Innovation are:

Challenge 4: Restrain the immigration trend that exists especially of the young scientific capital (“Brain Drain”).
Challenge 6: Increase connectivity between Research Institutions and the production network of the local economy.
Challenge 7: Transform the Western Greece to a model smart and digital Region.

In parallel Regional Innovation Strategy (RIS) sets a number of strategic priorities related to innovation. In particular:

Strategic Priority 1: aims at strengthening research, technological development and innovation in technological, priority areas of the smart specialisation of Western Greece region, along with the strengthening of research infrastructure and innovation in enterprises and clusters.
Strategic Priority 3: aims at enhancing the competitiveness of enterprises through restructuring, modernisation and economic diversification of the orientation of the regional economy towards technological, sectoral and cross-sectoral priority areas of Western Greece smart specialisation. This includes motivation of foreign businesses to settle in Technology Parks and create Business Development Centers, employ scientific staff and invest in projects in cooperation with local and national economy. Support SME cluster in order to create common research and development departments of innovative products and solutions.

FSIWG can contribute to effectively face the above challenges recognised by ROP and contribute to the accomplishment of the strategic priorities set. Within the same frame the Regional Operational Programme has as first Strategic Objective “the strengthening of the competiveness and the capacity for extroversion of the enterprises, along with the shift to quality entrepreneurship with innovation at the cutting edge and increase in the domestic value added.”

This Strategic Objective relates with the following Thematic Objectives:
• TO 1: “01 – Strengthening research, technological development and innovation”.

1The number of each Challenge is according to the Regional Operational Plan of Western Greece.
TO 2: “Enhancing access to, and use and quality of, information and communication Technologies”.
TO 3: “Enhancing the competitiveness of small and medium sized enterprises”.

The strategy for these Thematic Objectives has a high degree of synergy with the (national) Operational Programme for Competitiveness, Entrepreneurship, and Innovation (ΕΠΑΝΕΚ).

Although the Regional Operational Programme will be finalised at the end of 2014, it foresees for the Thematic Objective 1 “Strengthening research, technological development and innovation” the allocation of 2.4% of the total ROP budget. This rather small percentage means that about 9.5 million Euros will be allocated. A part of this amount can be dedicated for the creation of the “Fund for the Smart Innovation Western Greece”.

A portion of this amount could contribute towards the build-up of the Fund for Smart Innovation Western Greece.

In addition one can use as potential source of financing of the management and the expenses of the fund an amount from the Technical Assistance of the ROP, facilitating this way the functional operation of it.

**Operational Programme “Competitiveness, Entrepreneurship, Innovation” (ΕΠΑΝΕΚ - 2014-2020)**

The Operational Programme "Competitiveness, Entrepreneurship, Innovation" (ΕΠΑνΕΚ) is one of the five sectoral operational programmes of the Partnership Agreement (new ΕΣΠΑ) for 2014-2020. ΕΠΑνΕΚgeographically covers the whole country and has a budget of 4.56 billion euro of public expenditure (EU assistance 3.65 billion), compared to the total budget of the programme amounting to 24.79 billion public expenditure (19.89 billion EU Assistance).

Central strategic goal of ΕΠΑνΕΚ is to enhance the competitiveness and internationalisation of enterprises, the transition to entrepreneurship quality with cutting edge innovation and increasing domestic added value. The Operational Programme for Competitiveness, Entrepreneurship and Innovation is central to the country's efforts to create and support a new production model that will lead to the development and enhance the competitiveness of Greek economy, by leveraging private resources. The new model highlights the central role in productive, competitive and outward-oriented sectors such as tourism, energy, food and agriculture, environment, supply chain, information technology and communications, health and pharmaceutical industry, creative and cultural industries, materials - construction.
Through ΕΠΑνΕΚ and in synergy with the Regional Operational Programmes the strategy of smart specialisation will be implemented for linking research and innovation, entrepreneurship and strengthening / development of existing and / or new competitive advantages of the country and its regions.

The ΕΠΑνΕΚ is structured around the following axes:

- **Axis 1**: "Developing entrepreneurship Sectoral priorities" (2.243,8 million euro budget)
- **Axis 2**: "Adaptation of workers, businesses and the business environment in new development requirements" (828,8 million euro budget)
- **Axis 3**: "Develop mechanisms to support entrepreneurship" (1.401,4 million euro budget)
- **Axis 4**: "ERDF Technical Assistance" (total budget of 68,3 million euro)
- **Axis 5**: "Technical Assistance ECB" (total budget of 15,5 million euro)

Currently ΕΠΑνΕΚ foresees an amount of about 289 million Euros for the development of entrepreneurship within the sectorial priorities for the less developed regions of Greece among which the Region of Western Greece is included. ΕΠΑνΕΚ can be the main source for the public part of finance of the Fund for the Smart Innovation in Western Greece.

**IMPLEMENTATION TIME PLAN**

The establishment of Fund for the Smart Innovation in Western Greece requires the careful planning in order to ensure that all components of the financing are available, its management and administration will operate smoothly. Most important, the SMEs should be able to take advantage of the fund when they really need it without many constraints.

At first phase a study is needed in order to:

- Create the map of potential investors from the private sector.
- Identify the exact configuration of the sources for the public contribution.
- Describe the management mechanism of the fund.
- Describe the candidate SMEs that could use the fund.
- Establish measures for the FSIWG impact assessment in local and national economy.
- Create the economic framework of operations and estimate the total amount needed and the support for each type.
- Establish the rules and conditions for funding.
The duration of the first phase in order to carry all above tasks adequately needs to be at least 4 months.

At second phase the management mechanism is established. PSP can provide all required infrastructure and personnel for the management of the fund. Also the knowhow transfer is concluded during the second phase and the exact financing schema is established. The operational rule of the fund is finalised and the fund transfer details are arranged. The second is expected to last about 3 months.

At third and final phase FSIWG becomes operational and the funding of innovative SMEs is launched.

### Further steps of implementation in case of Good Practice Transfer

| Short description of selected Good Practice: | The Twente Technology Fund (TTF), established on the 1st of July 2010, is an independent venture capital fund aiming to capitalise on technological developments. TTF invests in high tech entrepreneurial activity in Twente region in general and at the University of Twente in particular. |
| Relevance of selected Good Practice: | Twente and Western Greece Region have in common elements like size, a University dominating Research, that could facilitate the transfer of experience |
| Transfer methodology: short description of the transfer process – steps made so far, as well as the upcoming ones: | This Good practice needs to be adjusted to the WG environment, especially regarding fund administration, funding from the regional, national operational programmes and other sources (COSME etc), and funding regulations. |
| Financial tools and sources of implementation (international, national or local level): | Financial tools to be used are coming from: |
| | - The regional operational programme |
| | - The (national) Operational Programme for Competitiveness, Entrepreneurship, Innovation, |
| | - Funds from European programmes like COSME |
| | - Private financing from the banking sector and entrepreneurs-business angels |
| Institutional background, responsible organisations: | Patras Science Park and a chosen Banking Institute |
| Time scale of the process: | The implementation of the FSIWG needs to follow the time scale of the national development plans, so the detailed study for it can start only after ESPA has been finalised and |
approved. The major steps seen are:
Study of for the Fund, together with Twente Kennispark foundation (4 months)
Regulatory framework for the administrative mechanism (2 months)
FSIWG establishment approximately 6 months after finalisation of Greek ESPA

<table>
<thead>
<tr>
<th>Evaluation scheme (based on indicators):</th>
<th>Indicators to be used for measuring the impact of FSIWG will be finalised after the relative study. In any case the indicators will include:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of companies funded</td>
</tr>
<tr>
<td></td>
<td>Number of work positions created</td>
</tr>
<tr>
<td></td>
<td>Turnover of companies funded</td>
</tr>
</tbody>
</table>
3.2 Innovative Environment

3.2.1 Open Innovation Platform

According to the Action Plan

<table>
<thead>
<tr>
<th>Relevance of the action:</th>
<th>This proposed action derives from the observation that little interaction exists between regional innovation stakeholders, while partnerships are very rare. Furthermore, entrepreneurship is risk averse especially among the young graduates and diffusion of an innovation culture inside the business sector is limited.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholders:</td>
<td>Patras Science Park, University of Patras, SMEs, Large Companies, University students and graduates</td>
</tr>
</tbody>
</table>
| Expected results:       | - Cross-disciplinary teams  
                          | - Real Challenges by companies  
                          | - Academia participation  
                          | - Development of company R&D and jobs  
                          | - Start-ups founded  
                          | - Base for continuous flow of research projects between academia and businesses  
                          | - Increase of regional competitiveness  
                          | - Increase European networking  
                          | - Novel combinations of knowledge, new innovation culture and entrepreneurial spirit  
                          | - Common IPR policy to enable win-win-win situation  
                          | - Neutral and open platform for connecting ecosystem players and linking talents with meaningful challenges  
                          | - Practical co-operation as a catalyst for systematic innovation capabilities and new innovation policies. |
| Preconditions:          | - Co-working space  
                          | - ERDF for the first 2-3 years of launch and pilot operation |
| Possible barriers:      | University Endorsement  
                          | Project Pipeline from regional businesses  
                          | Finance by the companies for their business case |
| Good practice examples: | Demola Network (Finland) |

Preface
During the peer review for Western Greece Region taken place in October 2013 under the framework of ‘Smart Europe’ European Project, several conclusions came out concerning regional entrepreneurship spirit and innovation culture. Smart
specialisation strategy does not take sufficient advantage of the potential of the young students and graduates in the region. In addition, it is based on a narrow definition of innovation, whereas innovation indeed happens everywhere.

Entrepreneurial culture is perceived as risk averse. Fear for failure hinders both start-up creation process and investors. Moreover, the interaction between the innovation stakeholders is not always organised in the best possible way, while partnership initiatives are rare.

An open innovation platform would assist in mitigating the above mentioned gaps and introduce the young generation earlier in the business cycle. Innovation anchors will have also the opportunity to work closer in meaningful real world cases.

**Demola Open innovation Platform**

Demola is an international organisation that facilitates co-creation projects between university students and companies, either locally or internationally. It is a network that consists of various partners including universities and their faculties, researchers and students, as well as companies, local agencies and a growing number of Demola Centres around the Globe.

Apart from a network, Demola is a co-creation concept that is geared to solve real life challenges. Every project has an outcome – be it a new concept, a demo, or a prototype. In the case that the partner company finds the outcome useful, it can license or purchase the outcome, and take it for further development. The process is formatted and facilitated. It ensures therefore, that the work is systematic and runs on schedule. Things are under control both in terms of time and deliverable. The applicable framework of Demola is straight forward, each partner has a clear role and the work is guided by simple procedures. Contracts, intellectual property rights, licensing models, and other legal requirements are in place to meet international business standards and practices.

**Added Value**

Demola is a vehicle to re-think innovation. It is based on random coalitions of knowledge and ideas. As a community-driven co-creation platform, acts as an ecosystem catalyst, complementing knowledge transfer activities and corporate R&D.

For Companies, the real value in networking is to know when to use resources that are outside of it. When short on brainpower for fresh ideas and new perspectives, open innovation platforms are the answer. Demola makes use of an international pool of young talents from fields of science, university partners with the latest research and an award winning innovation platform to guarantee real results. All is needed is company's challenges. For Universities, Demola offers a way to build sustainable company relationships and a vantage point to market needs. Also provides a smooth project flow of practical real-case courses. Business contacts are valuable to both the university and the students.
Students get a unique opportunity to add some real-life twist into the conventional path towards a career. At Demola, a student works with a multidisciplinary team solving real-life cases together with partner companies. In most of the cases it is part of the degree programme.

Transfer & Implementation Process
Demola implementation has three major steps. At step one, the regional innovation engine is planned and the ecosystem is defined. In step two, the engine is ramped-up and facilitators are trained. Step three contains scale-up and international collaboration.

Before Demola implementation, a preparation phase that includes ecosystem analysis and development strategy formulation takes place. A weekly workshop is organised at partner’s location. Deliverables include a print-ready analysis report and tailored Demola implementation model with a presentation. A Go/no-go decision is made. In case of a go decision, cooperation agreement is signed between the responsible organisation and the Demola network.

Implementation Phase includes five work packages (WPs):
**WP1: Ecosystem development, Process implementation, Partnership screening and case design** (Demola co-creation model, IPR framework, university collaboration model, partnership development with project partners, pilot project preparation, marketing material and brand assets).
**WP2: Facilitator training, facilitation capabilities and service experience, Demola event facilitation** (Case analysis, Demola project roadmap, student recruitment and matchmaking, project deliverables, workshops with university representatives, first season tools and preparations).
**WP3: Demola value-creation workshop for student teams, project partners. Jam facilitation**
**WP4: Demola innovation curricula and scaling-up strategy, Additional Demola project and campaign models** (Project review and evaluation practices, Demola course elements and integration to innovation curricula, scaling-up Demola operations with additional campaign models and sustainability plan).
**WP5: Operative Demola management support** (Management level support with operative management of regional Demola initiative to enable quick launch and scale-up with high quality service experience for pilot customer and partners).

Finance
Launch phase usually lasts 2-3 years. In several regions, ERDF, national instruments, regional support (e.g. municipalities) have been used to finance operations. The cost per annum ranges between 200K and 300K€.

After launch phase, a more optimal and sustainable financial model is developed, inviting regional stakeholders to participate considering the learning, cultural and professional effects.
**Responsible Organisations**
Patras Science will be the responsible organisation to operate and manage Demola network in Western Greece Region.

**Timescale of the Process**
Preparation Phase: Three months  
WP1: Three months  
WP2-WP3: Four months  
WP4: Six months  
WP5: 9 months (starting from the beginning of the first WP)

**Evaluation Scheme**
The network has a self-evaluation scheme including the number of universities and faculty members involved, the companies and the business projects handled, the number of students.

The quality of results, public awareness, the international perspective and participation are additional parameters examined inside the network.
3.2.2 *Business Development Programme*

### According to the Action Plan

<table>
<thead>
<tr>
<th>Relevance of the action:</th>
<th>The success of a company requires more than a great idea. Factors such as a sound business model, access to markets and capital, the right contacts and personal and team skills determine over eighty percent of the final outcome. The one-year business development programme has the intention to equip business executives with the right set of tools to achieve their ambitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholders:</td>
<td>Patras Science Park, OAED, University of Patras, Research Institutes, SMEs, Large Companies, graduates and PhD students who wish to become entrepreneurs, serial entrepreneurs in high tech, SMEs new business developers, Soft Landing incoming entrepreneurs, Consulting companies</td>
</tr>
</tbody>
</table>
| Expected results: | - Participants receive intensive coaching and support from a personal coach, supplemented by expert coaching  
- Knowledge exchange, training and support in strategy, finance, marketing and sales, technology and organisation  
- Personal and team development  
- Access to networks and business relations, including potential partners, customers and financiers  
- Flexible working spaces, meeting rooms, access to research databases |
| Preconditions: | - Co-operation with Twente University, the University of Patras and the Research Institutes  
- ERDF and OAED funding to reduce the cost of training and mentoring  
- Co-operation with a recognised HR consulting company might be necessary |
| Possible barriers: | Creation of a new generation of mentors  
Finance by the companies, and the Manpower Employment Organisation (OAED)  
Critical Mass of Companies applied for on a regular basis and not only at the beginning |
| Good practice examples: | Venture Lab Twente (Holland) |
Preface

During the peer review for Western Greece Region taken place in October 2013 under the framework of ‘Smart Europe’ European Project, several conclusions came out concerning regional entrepreneurship spirit, innovation culture and start-up development. The peer review team observed that support to start-ups and companies is usually organised on an ad-hoc basis, which may nurture the fear of failure instead of promoting the entrepreneurial values. Despite their high technology skills and potential, start-ups usually fail to grow or underperform. The reasons can be attributed to several factors the main of which are mono-disciplinary teams, lack of managerial skills, small ambitions and market orientation, limited market and academic networks, little VC available and long time interval to market.

A business development programme guides and support participants with a comprehensive programme of training and coaching. It is a virtual business incubator that enriches high-tech companies using knowledge, skills and contacts to facilitate growth.

Venture Lab Programme

The Venture Lab programme is geared towards value creation, based on a scientific model developed at the University of Twente and NIKOS (Netherlands Institute for Knowledge-Intensive Entrepreneurship).

The model is based on the observation that companies with an overreliance on technology often fail to live up to their potential.

‘Entrepreneurship is about recognising or creating an opportunity for value creation, converting this opportunity into a feasible concept and making it operational within a growing organisation. From the earliest stages of development, this process must involve working to build four types of capital that combine to form the operating capital of business. This model is applicable to every company, regardless of the stage in which it finds itself’.

This view of value creation is the foundation of Venture Lab programme, and mainly centres on the cohesion and balance between the four types of capital. It is important to realise that hardly anyone is capable to acquire or maintaining all these types of capital. That is why the programme emphasizes at the importance of a diversified, enterprising team.

The four types of capital are the strategic, economic, cultural and social. Strategic capital is about setting goals, pursuing them and winning a place in the market. Knowledge, technological developments, and the organisation of effective behaviour are considered to be cultural capital. The ability to communicate with various target groups also belongs to this category. Economic capital is all about financial resources. This also covers efficiency and optimization of business processes to save money. Social capital refers to the interaction with others: Contacts and networks.
Venture Lab offers a one-year flexible programme. It comprises of forty hours personal coaching, weekly training, easy access to experts, labs, technologies, a variety of networks which in turn offer access to potential customers or finance.

**Added Value**
- Economic development and employment
- Sustainable, future oriented businesses
- Research on successful entrepreneurship and economic development

**Transfer & Implementation Process**
University of Twente has already sent a proposal of cooperation which is now under consideration.

**Finance**
ERDF and OAED financial programmes can facilitate the cost of each participant team that is approximately €30,000.

**Responsible Organisations**
Patras Science will be the responsible organisation to operate and manage Venture Lab in Western Greece Region.

**Timescale of the Process**
One and a half year.

**Evaluation Scheme**
The programme has a self-evaluation and monitoring process along the lines of the research model that provides data back to the University of Twente and NIKOS Institute. In this way the VL programme can continuously improve and increase knowledge on high-tech entrepreneurship process. Furthermore, NIKOS cooperates with other regions to develop and support SMEs and academic entrepreneurs.
4 CONCLUSIONS

Many of the factors that are decisive for innovative development are present in the Region of Western Greece, i.e. adequate University and Research Institutions that provide the necessary human capital, Region’s Administration being committed to innovation and having developed a Smart Specialisation Strategy, available funds through the regional and national Operational Programmes along with the European ones (Horizon2020, COSME etc.)

Innovation in the Region of Western Greece can be supported with the rainbow of activities initiatives described in chapter 2 that could have a catalytic role for the development of innovative SMEs.

Patras Science Park can be the organisational unit that provides the execution mechanism for these activities. PSP acquires the experience since it operates as an incubator for 20 years, can transfer know how and best practices from other successful European examples since it has developed a European contact network and operates as an active node within it. In addition PSP has the contacts with Patras University and the research community of Western Greece, while it maintains close ties with the entrepreneurs’ community of the region.

The materialisation of the above activities requires an integrated and modular plan. The plan needs to be integrated so that all activities are included. It also needs to be modular so that one can address a subset of the activities at a particular point in time and assure that delay of one activity does not withhold the whole plan.

The preparatory phase of the integrated plan includes the creation of a map of possible financing sources both public and private.

The first step to be implemented towards the materialisation of the above activities is the inclusion and alignment of these activities in the actions and projects of the operational programmes and the identification of potential financial resources. This step matures along with the respective operational plans and takes a final form as they are finalised. This requires that PSP seeks three courses of action:

1. Cooperation with the authorities of the Regional Administration of Western Greece. The output of this cooperation will be the definition of the innovation activities to be funded by the regional operational programme.
2. Cooperation with the Ministry of Development for the design of the activities that could be funded by the Operational programme for the development, and competitiveness.
3. Activation of PSP in order to take advantage of the funding opportunities that Horizon2020, COSME and the other European initiatives are providing.
In parallel with the above PSP could consider establishing a network of potential financial sponsors from the private sector getting in closer contact with local entrepreneurs, financial institutions like banks, venture capitals etc. Preparation of informative material and presentations is a prerequisite for the effective communication of the objectives of the plan.

At a second phase, detailed description and planning, budget, organisational support, and business plan are created for each activity. This takes under consideration the financing potential of each activity so that feasible scenarios are prepared.

At the final phase the execution of each activity takes place according to its planning. For PSP it is most important to establish the channels of communication with the Authorities of the Region of Western Greece and the Ministry of Development so that the proposed innovation activities are included in the respective plans and obtain the required financial support.
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