

RIS3 Regional Assessment: Peloponnese

A report to the European Commission, Directorate General
for Regional Policy, Unit I3 - Greece & Cyprus

December 2012 (final version)

Alasdair Reid, Nicos Komninou, Jorge-A. Sanchez-P., Panayiotis Tsanakas

Table of Contents

| | |
|-------------------------------------------------------------------------------|----|
| 1. Executive summary: Overall conclusions and recommendations | 1 |
| 2. Regional Innovation Performance and potential | 4 |
| 2.1 Regional profile and specialisation | 4 |
| 2.2 The strengths and weaknesses of the regional innovation system | 7 |
| 3. Stakeholder involvement and governance of research and innovation policies | 8 |
| 3.1 Stakeholder involvement in strategy design and implementation | 8 |
| 3.2 Multi-level governance and synergies between policies and funds | 10 |
| 3.3 Vision for the Region | 10 |
| 4. Towards a smart specialisation strategy | 11 |
| 4.1 The regional research and innovation policy | 11 |
| 4.2 Cluster policies | 12 |
| 4.3 Digital economy and ICT policies | 14 |
| 5. Monitoring and evaluation | 15 |
| Appendix A List of people attending regional workshop | 16 |
| Appendix B List of key documents and reference materials | 16 |
| Appendix C Key actors in the regional innovation system | 17 |
| Appendix D Regional RTDI funding under the OP Competitiveness and Innovation | 18 |
| Appendix E Total Gross value added at basic prices – Peloponnese | 19 |
| Appendix F Relative regional specialisation in 20 industries – Peloponnese | 20 |
| Appendix G Entrepreneurial attitudes in the Peloponnese | 21 |
| Appendix H NETFORCE pilot actions | 22 |

Figures

| | |
|--------------------------------------------------------------------------|----|
| Figure 1 Summary benchmark of regional innovation performance | 6 |
| Figure 2: SWOT of regional innovation potential and specialisation | 7 |
| Figure 3: RIPE action plan | 9 |
| Figure 4 Priorities and funding of OP Peloponnese 2007-2013..... | 11 |
| Figure 5 Regional priorities for R&I – 2007-14 | 11 |
| Figure 6: Mature and Emerging Clusters in Peloponnese | 12 |

1. Executive summary: Overall conclusions and recommendations

Smart specialisation and the regional innovation system

Over the last decade, the Peloponnese region has attracted significant foreign and domestic investment mainly because of its proximity to and motorway/railway links to Athens, its advanced infrastructure networks and its natural resources. However, the relative industrial specialisation of the Peloponnese region is in crop production, market gardening, horticulture; tobacco products, refined petroleum products; mixed farming; and mining and agglomeration of lignite as well as the processing and preserving of fruit and vegetables. The scientific focus of the regional higher education research institutes in natural sciences is coherent with the regional economic specialisation. However, R&D expenditure is very low strong and linkages with the business sector are weak. Given the regional specialisation profile, the expert team **recommends** to combine (1) targeted cluster programmes for agro-food, tourism and manufacturing sectors and (2) cross-sectoral support for technological upgrading by identifying key enabling technologies important to the regional business sectors. This will require further analysis and feasibility studies during the RIS3 design phase.

The regional innovation system is rather weak and regional enterprises are not well served in terms of more specialist market and technological advice. However, as a range of specialist companies and university and public research institutes are located in neighbouring Athens, and to a lesser extent Patras, the region needs to be careful not to duplicate investments in specialist laboratories or technology service providers. The expert team **recommends** that the Regional authorities consider merging (closing or terminating funding) the various intermediaries into a single regional enterprise and innovation agency that would client management a target group of growth and export orientated companies to support business plan implementation (e.g. see Highlands & Islands Enterprise model from Scotland).

Recommendations on governance

During the last decade, two innovation support programmes were implemented in the Peloponnese, both funded by the Innovative Actions Programme of DG REGIO. RIPE (Regional Innovation for Peloponnese, 2002-2005) focused on (1) the assessment of the regional innovation system and the elaboration of a regional innovation strategy, and (2) the implementation of pilot actions that were intended to strengthen innovation and entrepreneurship in three key economic sectors: food industry, ecotourism, and local products. The overall budget for the implementation of the RIPE strategy was estimated at €35m. NETFORCE (2006-2009) was a direct follow-up to and was managed by the same steering committee as RIPE, under the leadership of the Chamber of Commerce of Arcadia. NetForce aimed to reinforce regional innovation potential by implementing a series of cross-sectoral innovative actions. The programme was focused on networking businesses for the promotion of new products and encouraged the establishment of innovative enterprises with links to educational institutions and research centres (Innovation Technology Transfer Support Centre).

However, in the period 2007-2013 continuity with and implementation of these two initiatives was not assured as the regional innovation and digital convergence programmes were designed and managed centrally from Athens. For 2014-20, the Regional Authority proposes initiatives focusing on broadband networks, green energy, and waste management and expects all available funds should be designed and managed regionally, to avoid a repeat of the negative experience of the current period.

The expert team **recommends**, given the initial stage of RIS3 in the Peloponnese, to adopt the RIS3 management and decision making structure, as described in the Guide, and organise working groups to address the issues of entrepreneurial discovery and specialisation focus. An update of RIPE strategy and action plan taking into account

the current crisis conditions and productive restructuring should be the departure point of RIS3 working groups.

Recommendations on innovation policy

Initially the Peloponnese ROP 2007-2013 foresaw that the digital convergence and entrepreneurship priority (8% of total funds) would be focussed on R&D and innovation. However, the RTDI projects funded by the GSRT since 2007 have a total budget of less than €4m. Hence, it is clear, that despite past strategy efforts, research and innovation policy implementation has been given a low priority. Hence, the expert team **recommends** that for 2014-2020:

- The innovation policy orientations of the Regional Authority (broadband connectivity, Euro-Mediterranean institute of marine wind energy, green economy and waste management, creation of special economic zones) should be implemented through public-private partnerships, leverage private sector funding and be managed by the private sector.
- The regional innovation policy should address the modernisation / diversification of existing industries and services. Platform-type measures should be considered in this domain offering (1) market and technology intelligence, (2) incubation of new companies, (3) export advice and support. Product design and development measures at the company level should be also a priority.
- Actions implementing the RIS3 should be selected using the following criteria: (1) financial sustainability, (2) creation of local capabilities, (3) integrated solutions to technology-production-market-funding, and meet three performance criteria (1) level of private leverage, (2) large number of beneficiaries, and (3) contribution to development goals of wealth and employment creation.

Recommendations on clusters

The Peloponnese has the highest potential for specialisation agricultural products, farming and animal husbandry and maritime, oil and gas, processed food, construction. However, there is not a mature regional cluster, but a number of dynamic organic clusters (structured around the tourism and agro-food sectors) provide opportunities for development if appropriate cluster policies are applied. The Peloponnese Region has no previous experience of **cluster policies**, however, the regional strategy does refer to specialisation and actions it will take towards the development of key sectors. Hence, the expert team **recommends** replicating a competitive technology industrial cluster approach to facilitate the rapid spread of good practice (e.g. Corallia Clusters Initiative). Due to the fact that the Region has borders and interconnections with Attica and Western Greece it should consider, incentives for the development of trans-regional clusters. Cluster policy should be implemented by a (trans-) regional **cluster secretariat**.

Recommendations on ICT policy – broadband – eservices

The RIS3 should place a special emphasis on ICT technologies supporting crucial sectors of the regional economy i.e. agriculture, food & beverages, energy, tourism and health services. Broadband expansion (both wireline and wireless) is crucial for improving the competitiveness of the whole economy and improving the quality of life.

The Region should investigate policy tools to provide incentives for new IT-enhanced products and services from local enterprises, and also target funds towards the fast transformation of traditional businesses using ICT tools.

Special attention should be given to improving ICT skills levels and keeping talented ICT professionals and attracting new ICT businesses by creating new and sustainable demand for innovative ICT services. Effective public service coverage for citizens living in isolated areas can be assured by the deployment of reliable telemedicine and home-care services. A particular emphasis should be placed on setting proper rules for the substantial involvement of the private sector of ICT, by assuming part of the risk for the planned investments.

2. Regional Innovation Performance and potential

2.1 Regional profile and specialisation

The Peloponnese peninsula in southern Greece covers 15,490 km² (11.7% of the total Greek land area) with a mountainous interior and deeply indented coasts. The region has 590,000 inhabitants (5.2% of the Greek population and one of the lowest densities in Greece at 38 inh/km²) producing 4.2% of the national gross domestic product (GDP) in 2009¹. With a GDP per capita of €17,900 in 2009 (76% of the EU27 average), the region ranked 7th out of the 13 Greek regions. The education level is relatively low as 17.3% of the population aged 25-64 have tertiary education (25.4% in Greece, 26.8% in EU27), ranking third last in Greece. As is the case nationally, a low share of adults aged 25-64 participated to life-long learning in 2011 (0.9%, 2.4% Greece, 8.9% EU27)

The region has a strong manufacturing base, an important agricultural production, but the majority of activity is in services including tourism, which has a growth potential given recent public and private investments. However, like the rest of Greece, the region has been hit by the economic crisis and unemployment doubled from 2008 and 2011 from 7.1% to 14.2%. A large share of small firms, mainly in trade and services, have closed and there has been a sharp reduction of construction activities.

In 2009, the service sector dominated the economy (particularly retail and wholesale trade, tourism and transportation services), accounting for 65.9% of the regional GDP. Industry and construction contribute a further 27.6%, with growing importance of the manufacturing sector. The Peloponnese Region attracts significant foreign and domestic investment (32% of Greek FDI, Invest in Greece) mainly because of its proximity to and motorway/railway links to Athens, its advanced infrastructure networks and its natural resources. Hence, a number of larger firms in sectors such as coke and refined petroleum products and the fabricated metal products are based in the Corinth prefecture due to the proximity to Athens. In the rest of the region, the most important industries in terms of employment are food and beverages, wood and cork products and other non-metallic mineral products. Moreover, the city of Megalopolis is the second most important electric energy production centre in Greece.

The region's agricultural lands account for 11% of the Greek total, however, the share of the agricultural sector in regional GDP has declined constantly over the past decade to 6.3% in 2009 (see Appendix E). The main agricultural products are fruits (53% of national production), olive oil (65% of national production) and potatoes (11% of national production). The Peloponnese region is ranked 1st position in terms of the number of wine producers, wineries, varieties and vineyards in Greece.

In 2005, the gross expenditure on research and development (GERD) in the Peloponnese region stood at €29.1m or 0.29% of regional GDP (2.3% of the national total). This is well below the Greek average of 0.6% of GDP invested in R&D and the EU27 average of 1.83%. This gap is partly due to the limited demand from the industry, reflecting the low-to-medium technology structure and low export intensity. Additionally the proximity to both Attiki and Western Greece, where a large number of research institutions are located, leads many regional firms to seek collaborations with institutions outside the region (RIM 2012).

Regional businesses invested only €65k in R&D, i.e. 0.2% of the total GERD (compared to 31% nationally and 63% in the EU27). Given the crisis, this situation is unlikely to have improved. Hence, R&D activities in the Peloponnese are concentrated almost exclusively in the higher education sector (€26.2m in R&D investments, 90% of GERD versus 47.5% in Greece and 22.5% in the EU27). The government sector

¹ All data provided is sourced from Eurostat unless stated differently.

invested €2.2m, or 7.7% of regional GERD (20.3% Greece, 13.6% EU27). Interestingly the non-profit sector invested seven times more than the business sector (€492k or 1.7% of regional GERD). The lack of business R&D investments is reflected in the level of patenting activities, with 5.34 patents registered per million inhabitants to the European Patent Office in 2008 in Peloponnese (8.04 in Greece and 111.6 EU27).

The share of Human Resources in Science and Technology (HRST) in the Peloponnese is slowly increasing from 15% of the regional workforce² in 2000 to 21.9% in 2011, (or 3.6% of the Greek HRST). In 2005, there were 562 full-time equivalent (FTE) R&D staff or 0.21% of the regional active population versus 0.69% in Greece and 0.95% in the EU27. Only four FTE were in the business sector against 520 in the higher education sector and 28 in the government sector. Looking specifically at the share of researchers (0.12% of active population against 0.4% in Greece and 0.59% in EU27), 95% of the 312 regional FTE researchers were in the higher education sector; and only four researchers were working in a company.

The University of Peloponnese (UOP), created in 2002, has sites in all five prefectures to help reinvigorate the local economy³. Although the scientific activity of the University is increasing year on year in terms of both scientific production and impact⁴, its performance is still low in comparison to other longer-established Greek universities. In terms of scientific output, between 2006 and 2010, the UOP is ranked 16th out of 21 Greek universities with a total of 236 publications, or 0.6% of total Greek academic publications (55 publications in 2010), 28% of those involving international co-authorship. The Technical Educational Institute (TEI) of Kalamata had only 20 publications in 2010 and over the period 2006-2010, it ranked 11th out of the Greek TEI with a total of 85 publications (or 3.8% of all Greek TEI publications). Both the UoP and TEI have a weak citation impact⁵, with respectively a score of 0.65 (18th out of 20 universities) and 0.42 from 2006-10. As regards the main fields of science, the UOP is active in natural sciences (365 citations over 2006-2010, 145 publications, citation score of 0.71) and engineering and technology (113 citations, 76 publications, citation score of 0.52), whereas the TEI Kalamata is only active in natural sciences (102 citations, 44 publications, citation score of 0.42).

The scientific focus in natural sciences is coherent with the regional economic specialisation. The relative industrial specialisation of the Peloponnese region compared to other European regions⁶ (see Appendix E) is in the crop production, market gardening, horticulture; tobacco products, refined petroleum products; mixed farming; and mining and agglomeration of lignite as well as the processing and preserving of fruit and vegetables. Interestingly, the tourism sector does not appear in the top 20 sectors whereas agricultural activities are well placed, both in terms of employment and specialisation.

Looking at the overall innovation performance of the region, the European Regional Innovation Scoreboard⁷ ranks the Peloponnese (grouped in the mega-region Kentriki Ellada) as a modest-medium innovator (the lowest of four performance categories) along with all other Greek regions aside from Attiki. Similarly, the 2011 Regional

² This indicator gives the percentage of the total labour force in the age group 15-74, that is classified as HRST, i.e. having either successfully completed an education at the third level or is employed in an occupation where such an education is normally required.

³ However due to recent macroeconomic pressures and structural changes in the tertiary education sector its further development is currently under question.

⁴ <http://metrics.ekt.gr/en/report02/index>

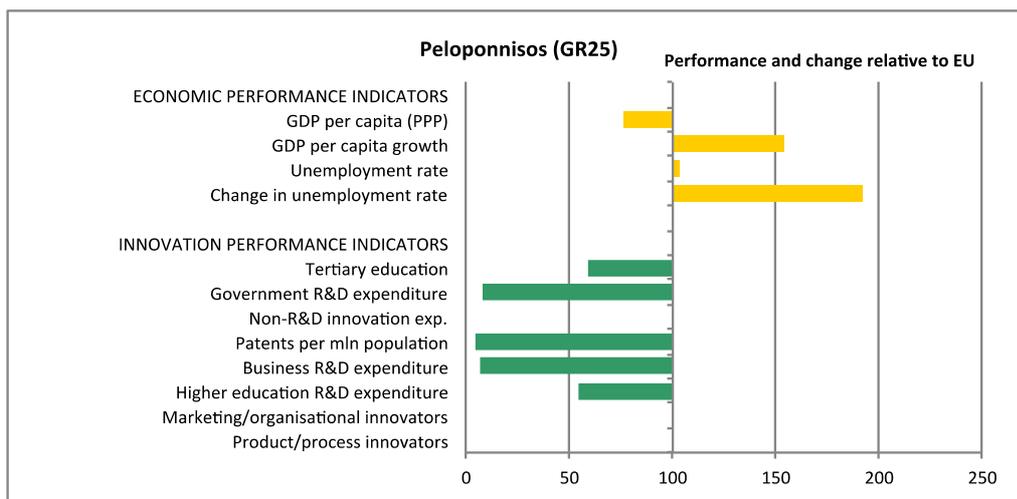
⁵ The relative number of citations to publications of a university compared to the world average

⁶ The minimum degree of specialisation is 1.5 (meaning that the region has 50% more employment in the industry than the size of the region), and the industry must have at least 500 employees in the region (in order to eliminate high specialisations in very narrow industries).

⁷ MERIT & Technopolis 2012, http://ec.europa.eu/enterprise/policies/innovation/files/ris-2012_en.pdf

Innovation Monitor (RIM) annual report classified the region amongst a group of knowledge absorbing innovating regions (again along with all other Greek regions except Attiki). From a positive perspective, this group of 19 EU27 regions has the highest average score (amongst the RIM regional grouping) on ‘innovative entrepreneurship’ (based on the share of SMEs that declare to have introduced innovations in the Community Innovation Survey) but the lowest score on ‘technological innovation’: business R&D and patenting is very low, while the non-R&D innovation expenditures (as a % of turnover) are higher than in any other group. This implies that innovation is mostly through integrating knowledge created elsewhere by purchasing ‘off-the-shelf’ technologies.

Figure 1 Summary benchmark of regional innovation performance



Source: Regional Innovation Monitor, data used is 2011 or latest available year. Trend data is over latest three year period for which data is available.

Ierapetritis et al⁸ (2007) studied why young people in the Peloponnese become entrepreneurially active and found that push factors, such as family needs, financial security and escaping unemployment were more important than pull factors such as exploiting an entrepreneurial opportunity (see Appendix G). While the young entrepreneurs were characterised by a willingness to take risk, the survey found that entrepreneurial initiative is almost impossible when the prospective entrepreneur or his close family do not have an important starting capital available. Moreover, the businesses founded and operated by young entrepreneurs are small and family-run, have a low investment level and are mainly active in tertiary sector activities. Another major characteristics of these companies, is that only a very small percentage export goods or services or had an e-mail or a website. Looking at barriers to young entrepreneurs, the survey points to red-tape when creating a firm, the lack of start-up capital and the fear of failure. The lack of entrepreneurial knowledge and entrepreneurial experience is another problem.

Among the six most important obstacles faced by young entrepreneurs during the first three years of operations are the business taxation system, intense bureaucracy, lack of financial resources for maintaining the enterprise, insufficient demand, inability to attract new clients and lack of entrepreneurial experience. Over half of the young entrepreneurs stated that the most important obstacle to growing their enterprises was the inability to repay loans and a limited ability to manage their enterprises.

⁸ The methodological framework of the research is based on a series of personal interviews by means of a structured questionnaire with closed and open questions in which participated 70 young businessmen (19-40 years old) from various sectors of the regional economy who have their seat in one of the five Prefectures in Peloponnese.

Figure 2: SWOT of regional innovation potential and specialisation

| Strengths | Weaknesses |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Proximity to and good transport links to Athens • Advanced infrastructure networks • Natural resources (incl. for energy production) • Strong manufacturing base • Increasing level of human resources for science and technology | <ul style="list-style-type: none"> • Overall low R&D intensity and inexistent business R&D investments • Traditional structure of the economy based on small low-tech companies • Low level of ICT diffusion • Low level of education of the population and limited investment in life-long learning • Low level of science-business collaboration • Lack of innovation culture within firms • Lack of entrepreneurship |
| Opportunities | Threats |
| <ul style="list-style-type: none"> • Enhancement of the competitiveness of agriculture and tourism and increased focus on quality (e.g. green products) • Support to ICT diffusion • Improved support to upgrading of SMEs technological capacity | <ul style="list-style-type: none"> • Economic specialisation in low-tech sectors (agriculture) • Competition from low-cost economies |

Young entrepreneurs that make it into a second three-year period, continue to face obstacles such as bureaucratic procedures, the high cost of employer social insurance contributions, the high cost of energy, the lack of finance to fund business growth, the uncertainty of the entrepreneurial environment, the inability to attract new clients, the lack of liquidity as well as the inability to collect payments from clients. A high share of entrepreneurs stated that important obstacles to growth are difficulties to find specialised personnel in the region and to access funding for R&D (51.4%).

Given the regional specialisation profile, the expert team **recommends** to combine (1) targeted cluster programmes for agro-food, tourism and manufacturing sectors (see also section □) and (2) cross-sectoral support for technological upgrading by identifying key enabling technologies important to the regional business sectors. This will require further analysis and feasibility studies during the RIS3 design phase.

2.2 The strengths and weaknesses of the regional innovation system

In the framework of the Regional Innovation for Peloponnese (RIPE) programme (2002-2005), an extensive survey of innovation capabilities and performance in Peloponnese took place in 2003, combining published data from the Eurostat and the GSRT and survey to 900 companies and technology organizations. The conclusions highlighted that the overall innovation performance of Peloponnese was very low. The composite innovation index (RNSII) was at 56% of the national average and 40% of the EU average (RRSII). This was largely due to dominance of traditional activities in the agro-food, tourism, and construction sectors. R&D was practiced by only a few companies and investments corresponded to 3.6% of the national average and total annual spending about €7m. Equally, the public research tissue was very weak with a few only research units at the UoP and the Institutes for Agricultural and Mining Research. The Chambers of Commerce, professional associations, and European Information Centre offered market and technology information occasionally. At the time of the survey most enterprises didn't dispose of computer and Internet connection. Innovation funding was offered by public funds only as commercial banks are unable to assess the risk of this type of investment. There was a serious innovation-funding gap, which the public domain could not cover with the limited innovation resources of the OP. In the field of technology transfer, the survey revealed significant weaknesses also, such as the absence of technology transfer centres, limited

absorption capacity of technological knowledge, and almost zero demand for technology transfer services. Companies attempted to renew their products relying on their own resources. There was great demand for participation in publicly funded programmes related to modernisation of enterprises, while also very high expectations of cooperation with higher education and technological institutes. In conclusion, the survey revealed on the one hand major weaknesses of the business sector (traditional sectors, low R&D effort, inward looking, limited technological collaborations) and on the other hand the absence of a regional innovation system that could balance weaknesses of enterprises through research institutions, funding, and technology dissemination.

Some 10 years later, the overall regional innovation system remains rather weak (see 0 for a summary of the main actors) and enterprises in the region are apparently not well served in terms of more specialist market and technological advice. The Chambers of Commerce do not appear to offer professional services of a sufficiently high quality. However, as a range of specialist companies and university and public research institutes are located in neighbouring Athens, and to a lesser extent Patras, the region needs to be careful not to duplicate investments in specialist laboratories or technology service providers.

The expert team **recommends** that the Regional authorities consider merging (closing or terminating funding) the various intermediaries into a single regional enterprise and innovation agency that would client management a target group of growth and export orientated companies to support business plan implementation (e.g. see Highlands & Islands Enterprise model from Scotland).

3. Stakeholder involvement and governance of research and innovation policies

3.1 Stakeholder involvement in strategy design and implementation

In the last decade, the Innovative Actions Programme of DG REGIO co-funded two innovation support programmes in the region, RIPE and NETFORCE. The first, RIPE (Regional Innovation for Peloponnese) 2002-2005, focused on:

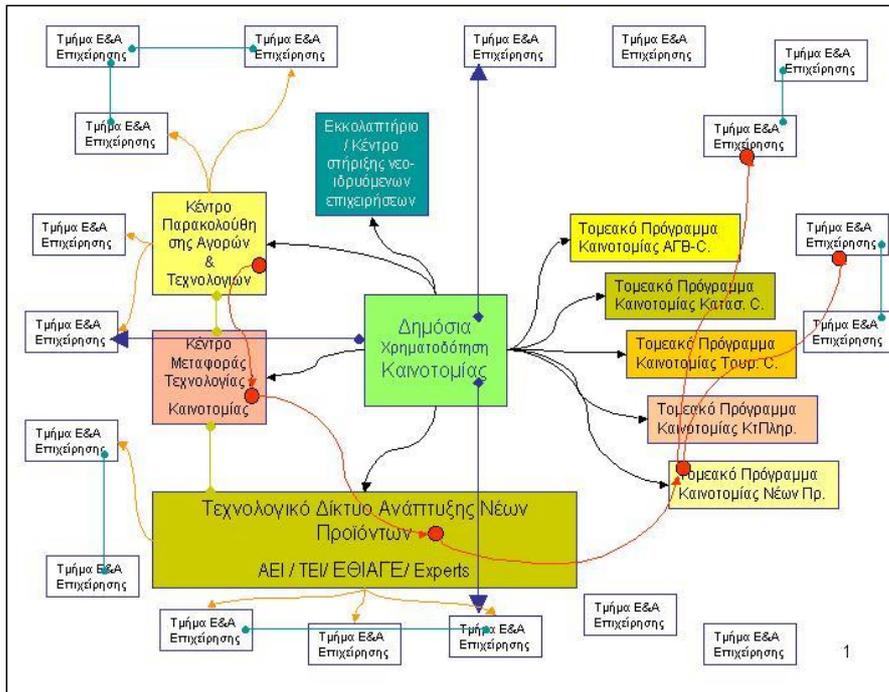
- The assessment of the regional innovation system and the elaboration of a regional innovation strategy to be implemented by the Peloponnese ROP, and
- The implementation of pilot actions intended to strengthen entrepreneurship in three significant economic sectors: food industry, ecotourism, and local products.

Building on the RIPE survey, and experience of other EU regions, the regional innovation strategy and the corresponding innovation action plan aimed to create a structured regional innovation system. Public funding for innovation through regional and national OPs was foreseen in the action plan for:

- The creation of a public network of technology and innovation support, which comprised four centres for (1) markets and technologies watch, (2) technology transfer, (3) new product development, and (4) start-ups and business incubation.
- Enhancing the private network for research and innovation, in the form of small units for R&D and product development in as many businesses as possible.
- A series of targeted innovation programmes for new product development boost and the application of ICT to modernise production processes in the main regional productive clusters (agro-food, tourism, construction).

The overall budget for the implementation of the above actions was estimated at €35m (€22m from public funds and €13m from private). However, as these funds were not made available in the ROP 2007-2013, the action plan was not implemented.

Figure 3: RIPE action plan



NETFORCE (2006-2009) was a direct follow-up to and was managed by the same steering committee⁹ as RIPE, under the leadership of the Chamber of Arcadia. NetForce aimed to reinforce regional innovation potential by implementing a series of cross-sectoral innovative actions. The programme was focused on networking businesses for the promotion of new products and encouraged the establishment of innovative enterprises with links to educational institutions and research centres (Innovation Technology Transfer Support Centre). The programme aimed to provide a framework for the implementation of pilot actions, the results of which would be transferred to the ROP. Main objectives of NetForce were:

- The reinforcement of co-operation networks/clusters between local business of groups of firms and research centres & universities, financial institutions or specialist consultants, etc. for the development of new products/services
- The creation of a support structure for the establishment of a technological strategy for the region (Innovation & Technology Transfer Support Centre).
- The support of the “new economy” through SMEs collaborations and requests of solutions from third parties (outsourcing).

Four pilot actions were implemented in the framework of NETFORCE (see Appendix H). However, NETFORCE ended with a lot of difficulties and a series of conflicts, initially among the chambers of commerce that led to the withdrawal of the Chamber of Lakonia and then the Universities. It was a clear failure of collaboration, mainly due to the management and leadership of the Chamber of Arcadia. Hence, bottom-up is not always a success story, if diverging interests undermine the common effort.

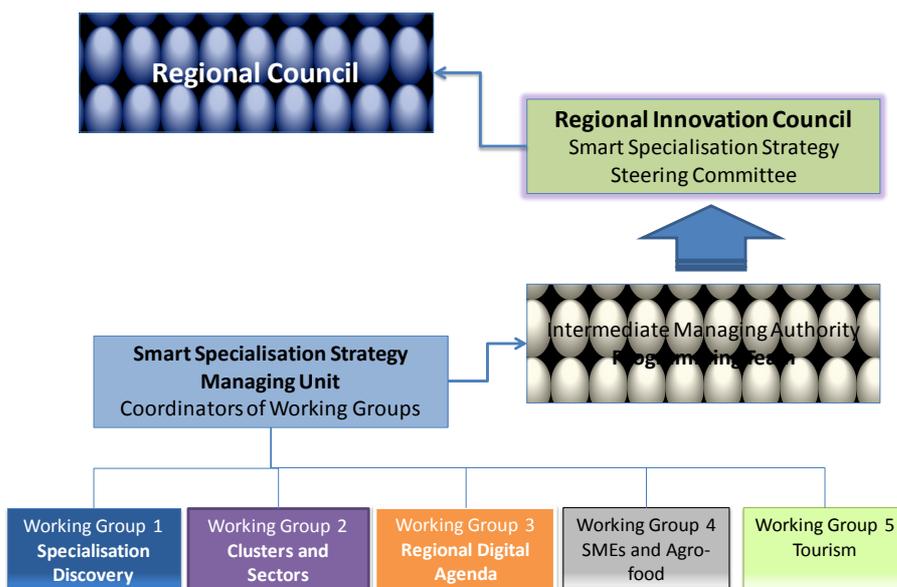
In the period 2007-2013, there was no continuity with the above two initiatives as the regional innovation and digital convergence programmes were designed and managed

⁹ Composed of the Region of Peloponnese, the Chambers of Arcadia, Argolida, Lakonia, Korinthia, and the Universities of Peloponnese, NTU Athens, and Aristotle University.

from Athens. Indeed, the Regional Authority is not even informed about the projects implemented in the region. However, in 2010 following the adoption of the law 3852/2010 (Kallikratis reform), the elected regional councils have the responsibility for economic development, industry, energy, tourism, etc. and have to endorse the regional operational programmes.

A meeting was held in Tripoli, on 9 October 2012, between the DG Regio expert group, the Regional Authority and IMA of Peloponnese, the GSRT and participants from 10 major regional stakeholders (see Appendix A). A presentation and discussion took place on the RIS3 principles (methodology, decision making process), the process for defining niche markets and areas of specialisation, etc. The Regional Authority presented a number of ideas for 2014-2020, including on broadband networks, green energy, and waste management. The Region made it clear that all available funds should be managed regionally, so as not to repeat the negative experience of the current period, and that there is no need for a national RIS3 additional to regional strategies.

Given the initial stage of development of the RIS3 in Peloponnese, the expert team **recommends** adopting the typical RIS3 management and decision making structure, as described in the RIS3 Guide, and the formation of working groups to address the issues of entrepreneurial discovery and specialisation focus. An update of the RIPE strategy and action plan taking into account the current crisis conditions and productive restructuring needs should be the departure point of RIS3 working groups.



3.2 Multi-level governance and synergies between policies and funds

At the time of writing it is not possible to assess the extent to which the RIS3 Peloponnese will take into account synergies, beyond the aim of a multi-fund ROP, with other public funds (national, Horizon 2020, etc.).

3.3 Vision for the Region

Building on the growth characteristics of the Peloponnese region and their evolution over time, compared with the corresponding situation in Greece and the EU, the development vision for the Peloponnese for 2014-20 (Region of Peloponnese, 2012) is: "To maximise the human and technological capital to ensure that the Peloponnese are a model for sustainable development and social cohesion in Greece and Europe."

Specific objectives mentioned in the initial strategy proposal include: to link research with industrial production”, “take advantage of the close proximity and easy access to Attica”, “to develop the fertile areas and rural activity towards high quality branded products”, “to further develop the activity in aquaculture (export sector)”, “to create a new development model with focus on agricultural production and the development of satellite, additional activities, in food processing, tourism and services”, “to develop organic farming”, “to develop interdisciplinary/multidisciplinary collaborations to stimulate tourist activity”, “to design a new model of tourism development with strong regional identity”, “to strengthen the links between agriculture and forestry, and research and innovation”, “to enhance competitiveness and sustainability of fisheries, especially small-scale coastal fleets”, “to promote improved market organization for fishery products and aquaculture products”, etc.

4. Towards a smart specialisation strategy

4.1 The regional research and innovation policy

The current OP 2007-2013 of Peloponnese includes three priority axes as presented in Figure 4 and the objectives of the priority axe for digital convergence and entrepreneurship are summarised in Figure 5. It is clear that research and innovation has a low priority within the current OP. The objectives of R&I concerning the introduction of new technologies in the business process and the modernisation of production and administration of enterprises should also include capability building for design and development of new products in major productive sectors of the Peloponnese, namely agriculture, food and drink industry, and tourism.

Figure 4 Priorities and funding of OP Peloponnese 2007-2013

| Priority axis | Total funding EU + national | % |
|------------------------------------------------|-----------------------------|---------------|
| 1. Infrastructure and accessibility | 111.000.000 | 26,94 |
| 2. Digital convergence and entrepreneurship | 32.900.000 | 7,99 |
| 3. Sustainable development and quality of life | 268.100.000 | 65,07 |
| TOTAL | 412.000.000 | 100,00 |

Figure 5 Regional priorities for R&I – 2007-14

| Policy Documents | Priorities and objectives |
|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational Programme of Peloponnese 2007-2013, Athens 2007. Επιχειρησιακό Πρόγραμμα Περιφέρειας Πελοποννήσου 2007-2013, Αθήνα 2007 | <p>The overall objective of Priority Axis Digital convergence and entrepreneurship refers to modernization of production and administration of enterprises in the region. This overall goal will be to achieve by the following specific objectives:</p> <ul style="list-style-type: none"> a) Introduction of new technologies in the business process b) Modernisation of production and administration of enterprises c) Modernisation and increase the efficiency of public administration in the Region to facilitate business and citizens. <p>Actions will be focused mainly on characteristics and needs of the productive fabric of the region: mainly very small size, lack of integration of new technologies, administrative and manufacturing flaws and direct or indirect connection with (1) agriculture, (2) construction and (3) tourism sectors.</p> |

Most (87.5%) of the Digital Convergence and Entrepreneurship actions were to focus on R&D and innovation with a small proportion (12.5%) for ICT actions. As noted above, funding for R&D and innovation and digital convergence was, however, transferred to the national OPs. According to data from the GSRT (Appendix D), 17 RTDI projects have been funded by the Competitiveness OP in the Peloponnese to September 2012 with a total budget of less than €4m (1.7% of the national budget approved). Some 86% (€3.4m) of the regional total was allocated to firms and 14% (€545k) to research organisations.

The expert team recommendations for regional innovation policy for 2014-2020 are:

- The innovation policy orientations of the Regional Authority (broadband connectivity, Euro-Mediterranean institute of marine wind energy, green economy and waste management, creation of special economic zones) should be implemented through public-private partnerships, leverage private sector funding and be managed by the private sector.
- The regional innovation policy should address the modernisation / diversification of existing industries and services. Platform-type measures should be considered in this domain offering (1) market and technology intelligence, (2) incubation of new companies, (3) export advice and support. Product design and development measures at the company level should be also a priority.
- Actions implementing the RIS3 should be selected using the following criteria: (1) financial sustainability, (2) creation of local capabilities, (3) integrated solutions to technology-production-market-funding, and meet three performance criteria (1) level of private leverage, (2) large number of beneficiaries, and (3) contribution to development goals of wealth and employment creation.

4.2 Cluster policies

Based on the Cluster Observatory star rating system, the sectors in the Peloponnese with the highest combined scores in size¹⁰, specialisation¹¹ and focus¹² are: agricultural products, farming and animal husbandry (3 stars) and maritime, oil and gas, processed food, construction (1 star). There is not a mature regional cluster, however, the dynamic organic clusters listed in Figure 6 could provide opportunities for development if appropriate cluster policies are applied. The emerging clusters also hint at opportunities at the interface between the sectors and other disciplines/industries/clusters and the deployment of cross-clustering measures.

Figure 6: Mature and Emerging Clusters in Peloponnese

Mature Clusters:

None. The following regional entities are, however, members of the microelectronics systems and applications cluster (www.mi-Cluster.gr): Opticon, Computer Systems Lab of the University of Peloponnese.

Emerging Clusters:

Agriculture (growing of crops; market gardening; horticulture, organic, wine, tobacco, wholesale of agricultural raw materials), *Farming & Animal Husbandry* (growing of crops combined with farming of animals (mixed farming), fishing, fish farming and related service activities, farming of animals, wholesale of live animals), *Energy* (manufacture of refined petroleum products, manufacture of coke, mining and agglomeration of lignite, production and distribution of electricity), *Processed Food* (manufacture of tobacco products, processing and preserving of fruit and vegetables), *Manufacture of structural metal products*,

¹⁰ The 'size' measure shows whether a cluster is in the top 10% of all clusters in Europe within the same cluster category in terms of the number of employees. If employment reaches a sufficient share of total European employment, it is more likely that meaningful economic effects of clusters will be present. Those in the top 10% receive one star.

¹¹ The 'specialisation' measure compares the proportion of employment in a cluster category in a region over the total employment in the same region, to the proportion of total European employment in that cluster category over total European employment. If a region is more specialised in a specific cluster category than the overall economy across all regions, this is likely to be an indication that the economic effects of the regional cluster have been strong enough to attract related economic activity from other regions to this location, and that spill-overs and linkages will be stronger. If a cluster category in a region has a specialisation quotient of 2 or more it receives a star. If a cluster category in a region has a specialisation quotient of 2 or more it receives a star.

¹² The 'focus' measure shows the extent to which the regional economy is focused upon the industries comprising the cluster category. This measure relates employment in the cluster to total employment in the region. If a cluster accounts for a larger share of a region's overall employment, it is more likely that spill-over effects and linkages will actually occur instead of being drowned in the economic interaction of other parts of the regional economy. The top 10% of clusters which account for the largest proportion of their region's total employment receive a star.

Manufacture of builders' carpentry and joinery, Tourism & Hospitality (recreational activities, bars), Stone Quarries, Construction Materials (site preparation, cutting, shaping and finishing of ornamental and building stone, building completion).

The Peloponnese Region has no previous experience of **cluster policies**, nor has it identified in its initial strategy for 2014-20 clusters as a tool for regional development. However, the regional strategy does refer to specialisation and actions it will take towards the development of key sectors. Hence, the expert team **recommends** replicating a competitive technology industrial cluster approach to facilitate the rapid spread of good practice (e.g. Corallia Clusters Initiative). Due to the fact that the Region has borders and interconnections with Attica and Western Greece it should consider incentives for the development of trans-regional clusters. Cluster policy should be implemented by a (trans-) regional **cluster secretariat**.

Furthermore, more qualitative focus studies should be carried out in the activity domains where the region shows relative specialisation to identify niches. This involves expert work on **value chain analysis** and on the linkages between clusters/industries/sectors. Due to the fact that tourism is the most significant sector the needs and requirements have to be initially collected, from the main actors in this sector, that is: tour operators, travel agencies, accommodation, vehicle hire, marine transport, land transport, air transport, airports, ports and marinas, sailing, restaurants, etc.

An emphasis should be given to facilitating **cross clustering** and the identification of innovation opportunities at the interface between different clusters (e.g. incorporate ICT in priority sectors to increase competitiveness). Specific funding measures and support should be developed aimed at primary and secondary sector innovation and inter-linkages among agriculture, farming, food processing and tourism (for the primary sector to produce differentiated products and for the secondary to connect the primary sector with tourism, as stated in the regional strategy for 2014-20).

As noted in previous sections, entrepreneurs in the region are facing specific difficulties and in particular, it appears that there are significant obstacles to creating higher-tech or higher value added small companies with export potential. During the 2007-2013 period the interventions did not target efficiently the structural development problems, particularly those of the internal spatial coherence and convergence, but did cover a significant part of the needs in infrastructure, even though they are still not complete, notably in the areas of transport, education and support of the entrepreneurial base. Only a few projects were implemented in the areas of technology transfer, improvement of cooperation networks between small businesses (SMEs), assistance for research and technological development, in particular for SMEs and support services for firms and groups of firms. As noted in section 2.2, it is **recommended** to create a **one-stop-shop** by merging existing structures or a new structure for potential investors/ start-ups with the appropriate improvements and sustainability plans based on lessons learnt and known deficiencies of current implementations.

There are three regional industrial zones, not sector specific and mainly real offering estate services, but no incubator has been established so far. The zones and parks are not referred to in the 2014-20 regional strategy document but the promotion of entrepreneurship is a target by “facilitating the economic exploitation of new ideas and fostering the creation of new companies, through business incubators”. The expert group agrees with this proposal and it is **recommended** to provide incentives for the establishment of an **incubator** only if they are effectively combined with other policies like clusters to host and grow selected strategic niche business activities.

Furthermore, neither regional business angel networks nor regional venture capital funds have been formed in the Region. A regional cooperative bank exists but its impact has not been assessed. It is recommended to support the creation of **business angel networks** and co-investment funds, again most probably based on trans-regional co-operation with Western Greece and Attica.

4.3 Digital economy and ICT policies

Demand for ICT products and services in the Peloponnese region is extremely low, due to low income, and the lack of “digital” skills in a large portion of the citizens. This is reflected in the statistical data; according to the “Internet Users in Greece” survey (March 2010)¹³ of the Observatory for Digital Greece¹⁴, the PC usage and the use of the Internet was measured at around 34%, one of the lowest of Greek Regions.

The most notable ICT projects implemented in recent years were concerned with the implementation of metropolitan access optical networks (MAN) and municipal wireless hot-spots, local e-government services, tourism-related applications, the development of content for the disabled, digitising of cultural archives, natural disaster management system, and the networking of the higher education institutions and the school units to the national research and education network and the Internet.

A limited number of very small regional ICT enterprises exist, focusing on system integration, maintenance, and software support for state agencies and for the other local enterprises. The UoP and the TEI also have some ICT-related activities, but there is a brain drain of ICT professionals, due to the limited demand for ICT products and services. In the absence of a detailed analysis of ICT needs per sector, and in line with the preliminary strategic directions¹⁵, the following observations can be made:

Agriculture and animal husbandry: represents a significant portion of the regional economic activity, with sizable growth potential, if combined with modern ICT tools. The Region could focus on distinct agricultural products that exhibit proven demand from international markets. The related business units should be encouraged to become more efficient by accommodating modern control, administration, monitoring, marketing, and logistics tools. Added value bio-agricultural and alternative agriculture producers can benefit from internet-based marketplace participation, to widen their distribution channels and optimise branding, procurement, packaging etc. Farmers and livestock unit owners could also be supported to optimise their production activity, by employing modern control and monitoring tools, especially in reducing the cost of energy by using renewable sources and other alternative methods, like geothermal resources or biogas.

Food & Beverages: the regional SMEs in this sector are characterised by a sizable growth potential. They may improve their profit margins and boost their sales by better branding and advertising, using new-generation ERP and CRM tools, along with modern e-commerce and procurement platforms.

Energy: the Region produces a significant portion of the national electricity demand and hosts major refinery plants. This huge industry requires several support and maintenance services, offered by SMEs, to cover specialised needs of the production sites. The Region would provide incentives to attract many ICT-related SMEs, able to improve the employment profile of the Region.

Tourism: the Region has numerous areas of unique natural beauty, and several unexploited archaeological and religious sites, capable of attracting a significant number of high-profile visitors. SMEs should be motivated to exploit modern technology and synergies to maximize the outreach of the Region, minimise management and advertising costs, and thus create more and better jobs.

E-government and learning: the low level of regional IT skills implies that the cost of dealing with the regional public services is enormous for both citizens and regional

¹³ Ταυτότητα χρηστών internet στην Ελλάδα”, Παρατηρητήριο για την ΚτΠ, Μάρτιος 2010. http://www.observatory.gr/files/meletes/A100526_%CE%A0%CF%81%CE%BF%CF%86%CE%AF%CE%BB%20%CF%87%CF%81%CE%B7%CF%83%CF%84%CF%8E%CE%BD%20internet%202010.pdf

¹⁴ See: <http://www.observatory.gr>

¹⁵ “Βασικές Προτεραιότητες / Θεματικοί Στόχοι Ανάπτυξης της Περιφέρειας Πελοποννήσου”, Περιφέρεια Πελοποννήσου, Νοέμβριος 2012.

and national government. There is no master plan for e-government services and most (cadastre, e-prescription, e-invoicing, etc) are administered by national authorities. However, other e-services, like local taxation or regional permits, could be administered regionally. All e-government services should adhere to well-defined interoperability standards, and be based on dependable cloud computing platforms¹⁶. Properly designed and interoperable e-government apps would be a major contribution towards efficiency and transparency. These services could be easily combined with proper initial training applications, to overcome the barriers of low IT skills. The region should also to prepare an inventory of ICT infrastructure.

Health: health services are beyond reach for several citizens living in remote mountainous locations. This problem can be partially solved by using new telemedicine or home-care services. The Region should provide support to the private sector, to deploy affordable telemedicine or home-care platforms, for selected classes of citizens. These services would be provided as public-private partnerships (PPPs), in cooperation with local state hospitals and health centres, to ensure sustainability.

Broadband Internet: the availability of affordable broadband connections for all the households is a major European target. The Region should complement all the related national- and EU-level actions, to further extend broadband in the Region. More specifically, it should help making local Industrial Zones/Parks as “FttH-ready”, i.e. bringing fibre connectivity to each hosted enterprise. It is also crucial to facilitate additional actions like setting-up of public free-access hot-spots in public places, in ports, schools, sports/recreation areas, churches, etc. The Region should also investigate ways to improve the utilisation of existing MANs, and provide proper incentives for the fast expansion of next generation cellular networks (e.g. LTE). In the 2014-20 regional strategy, there is no reference to viable plans for the deployment of new, and the extension of existing NGA networks.

Finally, the Region should consider a flexible mechanism, tailored for its particular size and needs, to ensure a substantial private sector involvement in the project cycle and risk sharing. This can be best carried out by flexible PPPs, or by the establishment of targeted ICT Vouchers for selected households or SMEs.

5. Monitoring and evaluation

The capabilities for monitoring, evaluation and analysis of innovation programmes and performance should be further solidified and embedded in both the new regional government structures and the wider partnership. A specific budget line could be set aside for a partnership based regional innovation observatory that could fund studies and doctoral/post-graduate research into innovation practice in regional firms, etc.

Guidance on evaluation methodologies for innovation measures is already available for the 2014-20 period¹⁷ and the IMA, regional authorities, etc, should make themselves aware of and use such materials to develop an evaluation plan. At a minimum, one official should be specifically tasked with setting up an evaluation and monitoring system for innovation measures in the IMA.

¹⁶ http://ec.europa.eu/information_society/activities/cloudcomputing/docs/com/com_cloud.pdf

¹⁷ See: <http://bit.ly/Igzx5T>

Appendix A Organisations attending the RIS3 meeting

1. Πανεπιστήμιο Πελοποννήσου
2. ΤΕΙ Καλαμάτας
3. Κέντρο Μεταφοράς Τεχνολογίας Πελοποννήσου
4. Κέντρο Τεχνολογικής Έρευνας Πελοποννήσου
5. Εμποροβιομηχανικό Επιμελητήριο Κορινθίας
6. Εμποροβιομηχανικό Επιμελητήριο Αργολίδας
7. Εμποροβιομηχανικό Επιμελητήριο Αρκαδίας
8. Εμποροβιομηχανικό Επιμελητήριο Μεσσηνίας
9. Εμποροβιομηχανικό Επιμελητήριο Λακωνίας
10. Ινστιτούτο Ελαίας & Οπωροκηπευτικών Καλαμάτας

Appendix B Key documents and reference materials

Υπουργείο Ανάπτυξης, Ανταγωνιστικότητας και Ναυτιλίας (2012) 1η Εγκύκλιος Σχεδιασμού και Κατάρτισης Αναπτυξιακού Προγραμματισμού 2014-2020 (1st Directive for Setting the Development Programme 2014-2020)

ΓΓΕΤ (2012) Πρόταση ΓΓΕΤ για τη Διαμόρφωση Κατευθύνσεων Αναπτυξιακής Στρατηγικής 2014-2020 (Proposal of GSRT for Defining Directions of Development Strategy 2014-2020)

ΕΣΠΑ (2007) Επιχειρησιακό Πρόγραμμα Πελοποννήσου 2007-2013 (Operational Programme of Peloponnese 2007-2013), Αθήνα 2007.

Chamber of Arcadia (2005) RIPE: Regional Innovation Programme of Peloponnese, European Commission DG Regio.

Region of Peloponnese (2009) NETFORCE: Regional Innovative Actions Programme of Peloponnese, European Commission DG Regio.

Region of Peloponnese (2012) 'Proposal of the Region of Peloponnese for the Priorities of the National Development Strategy 2014-2020, Intermediate Managing Authority of Peloponnese

Regional Innovation Monitor (2012), <http://www.rim-europa.eu/index.cfm?q=p.baseline&t=GR25>

Ierapetritis D.G, Balomenou C.K., Lagos D.G. (2007), Developing youth entrepreneurship in Greece: the case of the Peloponnese region

Invest in Greece (2011), Peloponnese Region - Investment Profile

MERIT, Technopolis (2012), Regional Innovation Scoreboard 2012, Report for the European Commission, DG Enterprise and Industry, available here: http://ec.europa.eu/enterprise/policies/innovation/files/ris-2012_en.pdf

Appendix C Key actors in the regional innovation system

Leading Businesses:

DEI, Motor Oil, CorinGreen, V-Cubes, Heliosphera, Selonda, Aspis Hellenic Juice Industry, Plastiko, Nemean Wines, Andrianakos Group, Mihalakis, Amco, Elsap.

Key Research Actors:

The research fabric is mainly composed of the University of Peloponnese, the Technological Institute of Kalamata, the Institute of Olive and Horticultural Crops of Kalamata of NAGREF.

Financing:

Cooperative Bank of Peloponnesus.

Incubators, Industrial Areas/Zones/Parks

Industrial Zone of Tripolis, Industrial Zone of Kalamata, Industrial Zone of Meligalas.

Principal Intermediaries:

Development Agency of North Peloponnese, Technology Transfer Center of Peloponnese, Innovation and Technology Transfer Centre of Peloponnese, Chamber of Commerce and Industry of Korith, Argolis, Arkadia, Messinia, Lakonia, Technical Chamber (chapter o Peloponnese), Hoteliers Association of Arakadia, Ermioni-Porto Heli, Lakonia, etc.

Appendix D Regional RTDI funding under the OP Competitiveness and Innovation

Allocation by region of GSRT grants for RTDI projects (State Aid) under the OP Competitiveness and Innovation

| Region | Enterprises | Research organisations | Other entities | Grand Total | % share |
|------------------------------------|---------------|------------------------|----------------|---------------|---------|
| Attiki | € 78,383,203 | € 33,291,462 | € 480,411 | € 112,155,076 | 47.4% |
| Central Macedonia | € 22,588,727 | € 13,566,039 | € 38,300 | € 36,193,066 | 15.2% |
| Western Greece | € 22,841,816 | € 8,901,221 | € 7,000 | € 31,750,037 | 13.4% |
| Crete | € 3,623,524 | € 13,728,214 | € - | € 17,351,738 | 7.2% |
| Stereia Ellada | € 9,388,903 | € 1,397,119 | € - | € 10,786,022 | 4.6% |
| East Macedonia & Thrace | € 5,886,928 | € 1,864,884 | € 25,090 | € 7,776,902 | 3.3% |
| Thessaly | € 4,648,471 | € 2,134,643 | € 253,000 | € 7,036,114 | 3.0% |
| Epirus | € 2,403,100 | € 1,887,252 | € - | € 4,290,352 | 1.8% |
| Peloponnese | € 3,382,986 | € 545,200 | € - | € 3,928,186 | 1.7% |
| Βορείου Αργαίου | € 1,813,280 | € 425,506 | € - | € 2,238,786 | 0.9% |
| West Macedonia | € 1,355,665 | € 524,695 | € - | € 1,880,360 | 0.8% |
| Ionian Islands | € 388,000 | € 120,000 | € - | € 508,000 | 0.2% |
| Νοτίου Αργαίου | € 476,000 | € - | € 18,750 | € 494,750 | 0.2% |
| Grand Total | € 157,180,603 | € 78,386,235 | € 822,551 | € 236,389,389 | 100% |
| | 66.5% | 33.2% | 0.3% | | |

Source: data received from the GRST on 10 October 2012. Calculations authors.

Appendix E Total Gross value added at basic prices – Peloponnese

| % of Total Gross value added at basic prices | 2005 | 2006 | 2007 | 2008 | 2009 |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| A - Agriculture, forestry and fishing | 10.18 | 9.06 | 7.69 | 6.94 | 6.43 |
| B-E - Industry (except construction) | 17.68 | 20.22 | 20.73 | 19.26 | 20.77 |
| C - Manufacturing | 12.62 | 14.08 | 14.26 | 13.51 | 14.72 |
| F - Construction | 8.68 | 9.75 | 8.27 | 7.34 | 6.85 |
| G-I - Wholesale and retail trade, transport, accommodation and food service activities | 23.37 | 23.07 | 25.41 | 25.98 | 23.02 |
| J - Information and communication | 2.22 | 2.40 | 2.11 | 1.91 | 2.04 |
| K - Financial and insurance activities | 2.80 | 2.66 | 2.45 | 2.28 | 2.42 |
| L - Real estate activities | 10.70 | 10.02 | 10.72 | 11.90 | 12.33 |
| M_N - Professional, scientific and technical activities; administrative and support service activities | 2.92 | 3.01 | 2.88 | 3.13 | 3.28 |
| O-Q - Public administration, defence, education, human health and social work activities | 16.13 | 14.57 | 15.19 | 16.99 | 17.62 |
| R-U - Arts, entertainment and recreation; other service activities; activities of household & extra-territorial organisations and bodies | 5.32 | 5.24 | 4.57 | 4.26 | 5.23 |
| TOTAL - All NACE activities - in Millions of Euros | 7.624,1 | 8.216,3 | 8.594,0 | 8.691,0 | 8.749,1 |

Source: Eurostat

Appendix F Relative regional specialisation in 20 industries – Peloponnese

| | Industry | Rank in Europe | Specialisation | Employment |
|-----------|-------------------------------------------------------------------|----------------|----------------|------------|
| 1 | Growing of crops; market gardening; horticulture | 4 | 17.13 | 69 562 |
| 2 | Manufacture of tobacco products | 8 | 10.10 | 666 |
| 3 | Manufacture of refined petroleum products | 10 | 4.99 | 941 |
| 4 | Growing of crops combined with farming of animals (mixed farming) | 11 | 2.23 | 8 701 |
| 5 | Mining and agglomeration of lignite | 11 | 6.76 | 868 |
| 6 | Processing and preserving of fruit and vegetables | 11 | 4.72 | 1 766 |
| 7 | Manufacture of structural metal products | 11 | 2.17 | 3 712 |
| 8 | Fishing, fish farming and related service activities | 13 | 6.78 | 1 403 |
| 9 | Manufacture of builders' carpentry and joinery | 15 | 2.86 | 2 378 |
| 10 | Quarrying of stone | 19 | 3.51 | 545 |
| 11 | Production and distribution of electricity | 19 | 2.15 | 2 937 |
| 12 | Other recreational activities | 25 | 1.99 | 1 329 |
| 13 | Farming of animals | 25 | 2.76 | 3 538 |
| 14 | Bars | 25 | 2.38 | 6 145 |
| 15 | Maintenance and repair of motor vehicles | 27 | 1.61 | 3 850 |
| 16 | Site preparation | 27 | 2.29 | 1 723 |
| 17 | Cutting, shaping and finishing of ornamental and building stone | 33 | 2.00 | 566 |
| 18 | Building completion | 33 | 1.59 | 5 492 |
| 19 | Retail sale of food, beverages and tobacco in specialized stores | 37 | 1.70 | 4 444 |

Source: Smart specialisation in Europe: European specialisation data by region Centre for Strategy and Competitiveness, Stockholm School of Economics, April 2011

Appendix G Entrepreneurial attitudes in the Peloponnese

Table 1 Factors leading to entrepreneurship, Periphery of Peloponnese¹⁸

| | NUMBER OF NEW ENTREPRENEURS |
|----------------------------------------------------------|-----------------------------|
| Financial needs in the family | 42 |
| Developing social relations | 12 |
| Seeking recognition – Increase in self-esteem | 17 |
| Interest in exploiting entrepreneurial opportunity | 32 |
| Discontent with existing employment | 16 |
| Interest towards the subject of entrepreneurial activity | 34 |
| Financial security | 32 |
| Unemployment | 12 |
| Other | 0 |

Source: Field Research, Ierapetritis et al. (2007)

Table 2 Main obstacles faced by Young Entrepreneurs and prospective Young Entrepreneurs in the Peloponnese

| PROBLEMS AT START | NUMBER OF NEW ENTREPRENEURS |
|---------------------------------------------------------|-----------------------------|
| Securing financial resources | 59 |
| Fear of failure | 57 |
| Bureaucratic procedures | 63 |
| Lack of experience | 46 |
| Lack of entrepreneurial knowledge | 49 |
| Other | 0 |
| PROBLEMS WHILE MAINTAINING THE ENTERPRISE | |
| Securing financial resources | 52 |
| Bureaucratic procedures | 59 |
| Lack of experience | 39 |
| Dissatisfactory demand | 41 |
| Lack of entrepreneurial knowledge | 33 |
| Lack of IT knowledge and skills | 31 |
| Loan repayment | 38 |
| Taxation | 62 |
| Enterprise administration | 38 |
| Attracting customers | 43 |
| PROBLEMS WHILE DEVELOPING THE ENTERPRISE | |
| Securing financial resources | 42 |
| Bureaucratic procedures | 47 |
| Uncertain entrepreneurial environment | 40 |
| Lack of liquidity – Inability to collect payments | 37 |
| Lack of timely information on market tendencies | 32 |
| Difficulty in entering new markets | 33 |
| Inability to attract new clients | 39 |
| Lack of specialised personnel | 36 |
| High cost of telecommunications | 25 |
| High cost of energy | 45 |
| High cost of employer contribution for Social Insurance | 46 |
| Difficult to secure financing for R&D | 36 |
| Lack of a support mechanism for new ideas and new | 34 |

¹⁸ The methodological framework of the research is based on a series of personal interviews by means of a structured questionnaire with closed and open questions in which participated 70 young businessmen (19-40 years old) from various sectors of the regional economy who have their seat in one of the five Prefectures in Peloponnese: Ierapetritis et al. (2007)

| | |
|------------------------------------------|----|
| products | |
| Difficulty in developing a sales network | 31 |
| Lack of an authority supporting exports | 23 |
| Lack of funding for new investments | 36 |
| Complexity of Development Law | 33 |

Source: Field Research, Ierapetritis et al. (2007)

Appendix H NETFORCE pilot actions

Clusters support: The main objective of this action was to support the creation of partnership networks between firms in the same region makes possible to share tasks and functions, build a common image, increase the opportunities to meet and exchange information, and to structure a production sector (e.g. manufacturing, tourism, agro food sector, etc.).

Regional Innovation & Technology Transfer Centre (ITT Centre): The objective of this action was to enhance regional transfer technology and innovation through the provision of high quality business advice services & information, and by establishing of a structure serving the transfer best practice, disseminate new technologies, promote innovative ideas, analyse technological and entrepreneurial needs of SMEs, search and promote innovation financing, etc.

Business-to-Business cooperation: The aim was to develop an innovative, effective mechanism – framework for implementing Information Society Forums with the participation of regional – local authorities, Chambers of Commerce and SMEs. To develop a web-based environment supporting the concepts and mechanisms of an Information Society Forum using internet application solutions that provide, among other things, connection to dynamic information resources, flexible search and collaborative facilities.

Regional “Special Interest” Tourism Network: The objective of this action was to enhance and support a sector where the region clearly may benefit from competitive advantages provided by its rich cultural and natural heritage, and building a profile as a “special interest” tourism destination. The action aimed at assisting tourism enterprises in the region of Peloponnese in creating distinctive and competitive products, which would enable to attract visitors and secure their prevalence on the changing and demanding tourism market. These “special interest products” included different forms of tourism (rural, eco-, cultural, sports, health, wine tourism), which are developed on the basis of distinctive characteristics as well as the natural and cultural resources of the region.