

Heraklion, Crete, 26-27 September 2013 ARTEMIS SAITAKIS DIRECTOR SCIENCE TECHNOLOGY PARK OF CRETE

Crete at a glance

INTERMEDIATE LEVEL OF DEVELOPMENT IN EU

- The region of Crete is at an intermediate level of development in EU.
- The per capita GDP of Crete was 85% of the average EU 27 countries taking the 170th position in EU.
- Crete is part of a group of 79 regions with a GDP ranging from 80% to 99% of EU average.
- The Region has considerable comparative advantages which have not been transformed through policy initiatives into dynamic competitive advantages.



A DYNAMIC AND BALANCED REGIONAL ECONOMY

- The Region of Crete has exhibited an accelerated growth rate above national average.
- Was 5th in Greece in 2009 in GDP per capita.
- The Region has developed a more balanced structure of economic activities with considerable export and extrovert orientation.

Crete before the economic crisis



- The Region of Crete has improved its economic position within Greece in the period 2005-2009. Economic activity and employment peaked in 2008.
- The main expanding sectors were trade, tourism, real estate, construction and manufacturing while agriculture contracted both in terms of production and employment.
- Despite the rapid growth over the last decade the structure of the regional economy and especially its low competitiveness made it more susceptible to the crisis.

GDP (MILLION EUROS)						
	2005	2006	2007	2008	2009	
GREECE	197.645	213.207	228.180	232.920	231.642	
CRETE	9.504	10.157	11.054	12.854	12.753	
CRETE % GREECE	4,8%	4,8%	4,8%	5,5%	5,5%	



The regional economy under strong pressure from the crisis



	INTERNATIONAL RECESSION	 Drop in tourist revenues (receipts per tourist). Drop in export demand. Negative impact on sales of holiday houses. 	
	FISCAL CONSOLIDATION	Drop in social benefits to households . Drop in disposable income due to increased taxation. Negative impact on the functions of the social educational and health services.	
	RESTRICTED LIQUIDITY	 Reduced financing of companies. Collapse in financing of consumption and housing. Debt overhang strangles economic activity. 	
	COLLAPSE OF CONFIDENCE	 Capital flight accelerates and investment projects shelved. Encourages the brain drain and THE migration of specialized labor. 	

Labour Market under stress



SMART

SPECIALISATION

Intra-regional disparities





NORTHERN COASTAL ZONE

- Historical centres of large urban conurbations.
- Urban coastal fronts along the port zones.
- Tourist developments adjacent to NATURA, POSIDONIA and small wetlands zones.



WESTERN SOUTHERN EASTERN COASTAL ZONE

Areas with considerable potential for tourist development adjacent to NATURA zones coexisting with agriculture (fresh vegetable production).
Areas with considerable potential for alternative tourist development adjacent to NATURA and wetland zones.



MOUNTAINOUS HINTERLAND

- Diverse mountainous areas of Central Western Crete sparsely populated with strong free range animal feeding activities and potential for development of agro tourism activities (White Mountains-Idi).
- Mountainous areas of Central Crete with diversified activities and potential for alternative tourism (Dikti).

Our expectations from the Peer Review Workshop



Our region can benefit from the workshop by:

- Sharing experiences with other regions and learn from their success
- *Refining regional innovation strategy*
- Benchmark our approach with other successful regions
- How can local enterprises and other participants in the entrepreneurial process of discovery be effectively engaged in the process
- How SFs can be used in order to link with Horizon2020 and the innovation process

What other peer-regions can learn from Cretan experience



- Development of a strong Academic & Research landscape and infrastructures
- Local cuisine (Cretan diet), connection with agro-food and tourism
- Development of Regional Transportation Companies (maritime, airlines)

Questions we would like peers to discuss



- Within a S3 context, what particular policy actions should the Region of Crete undertake to manage the risk of weakening strategic advantage through excessive narrowing of R&D specialisation?
- What pre-conditions are necessary for S3 entrepreneurial activity to take place, considering also the regional cohesion goals as identified within the European context? e.g. : How do such pre-conditions differentiate themselves when applied at regions which represent different structural traits and R&D routines? (For example the case of Crete)

Questions we would like peers to discuss



- How can be achieved an effective regulation in order to ensure the correctness and legitimacy of the S3 outcome. How to avoid power interests and conflicts among different local players?
- Crete has a strong research capacity but the links within triple helix are very weak. ("Cretan innovation paradox"). What kind of policies and framework conditions are necessary to strengthen the links and enhance knowledge (generation, diffusion and exploitation)?
- How can we ensure the effectiveness of KETs (ICT etc) within a horizontal strategic context





CRETE: A DYNAMIC AND SUSTAINABLE REGION

- <u>Dynamic:</u> With an integrated exit strategy from economic crisis through investment and support of the most dynamic sectors (agro-food, tourism & culture, environment & quality of life and knowledge economy
- <u>Sustainable</u>: Environmental (protection and push forward of natural and cultural beauties) & social (inclusive growth)

Crete has long experience in designing and managing innovation projects





Governance: Role of partners



MINISTRY OF DEVELOPMENT, GSRT: FRAMEWORK, MONITORING

REGION OF CRETE

Working Group for the preparation of S3 Regional Council approval Region of Crete: Implementation

REGIONAL INNOVATION COUNCIL OF CRETE Active Participation in the process Proposals through its WGs Consultation and evaluation

ACADEMIC & RESEARCH INSTITUTIONS SCIENCE TECHNOLOGY PARK



Active participation in the process Most important knowledge creator Diffusion of innovation

PRODUCTION SYSTEM, BUSINESS, SOCIAL PARTNERS Active participation in the process Design of investment initiatives Proposals for improvement



S3 DESIGN PROCESS



STRENGHTS

- Environmental conditions: Excellent climate and impressive natural beauties
- Cradle of an old civilization with monuments scattered around the island
- Internationally recognised cultural presence (El Greco, Nikos Kazantzakis, etc)
- Safe and established tourism destination
- Adequate air and sea connection with many destinations all over year
- Presence of large tourism and transport enterprises
- Emerging new economic sectors (e.g. Renewable Energies)
- Long term and established interregional collaborations
- Quality agricultural products well known traditional Cretan diet
- Extrovert businesses
- Mature environment for the exploitation of innovative technologies
- Important infrastructures in the area of information/knowledge society
- High level academic and research infrastructures with capabilities to develop and diffuse innovation internationally



WEAKNESSES

- Small number of spin-offs and start ups, seed capital mechanisms
- Family based, low innovative enterprises, in traditional sectors
- Complicated legal framework and bureaucracy
- Limited power of the regional government. Concentrated and bureaucratic state.
- Very low industrial and productive activity, focused only in traditional sectors
- High transportation cost as an insular region
- Very limited investments in generic infrastructures during the last 35 years
- Inadequate environmental conscience and lack of effective planning
- Lack of specialisation strategies
- Failure of systematic collaboration and coordination between academia and local industry
- Low demand in innovative technologies particularly from the agricultural and tourism sectors
- Limited use of e-services
- High dependency of entrepreneurs on state grants



OPPORTUNITIES

- Development of new infrastructures with regional added value (new airport in Kastelli, national road, infrastructures for environmental protection)
- New business activities based on the rich natural environment, sustainable development and support for the enhancement and promotion of cultural heritage (world reference centre for the Minoan civilization)
- **Opportunities for the development of alternative tourism (medical, conference etc).**
- Opportunities from the new programming period programmes 2014-2020 and Horizon 2020.
- Collaboration of local businesses with research and academic institutions, introduction of innovative ICT technologies with strong impact on the emerging economic sectors in the region.
- Exploitation of ICT technologies for upgrading of local businesses and diffusion of new innovative management practices (Primary and Tertiary sectors)
- Development of stronger linkages between the primary and the tertiary sectors through information society
- Collaboration of regional stakeholders through the Regional Innovation Council ¹⁷



THREATS

- Long and ongoing financial crisis
- Delays in administrative & civil service reform
- Increased researchers' disappointment within the research community
- Strong competition in the research area
- Interconnectedness and continuity with R&TD projects and programmes
- Low investment in hi-tech from local SMEs
- Limited/untargeted training in human resources
- Low entrepreneurial activity







Specialization of Crete





Scientific publications in international journals: Crete





Looking beyond the region's boundaries



A long mutual learning process

- During the last 20 years the region participated in a high number of RTDI projects with other European regions
 (Framework programmes for research, interregional and international cooperation, Regions of Knowledge etc)
 - Border regions
 - Other Greek regions
 - Regions from other EU Member States
 - Strong cooperation with other insular regions in traditional as well as new and emerging sectors

Entrepreneurial dynamics



- Assessing entrepreneurial dynamics in the region:
 - «Entrepreneurial dynamics» is understood as a creative combination of knowledge to generate new market activity contributing to a specialized diversification
 - Strong potentials for entrepreneurial discovery in several sectors plus «hidden innovators»
- Involvement of entrepreneurial actors in the region:
 - Participation of the business and academic/research community in the development of the region's RIS3 is very active
 - The most relevant bottlenecks to participation and collaboration are potential conflicts of interest as well as limited intersectoral cooperation

Main objectives of RIS3



Objectives are based on

- Analytical evidence (regional studies, regional, national statistics
- Support by clear stakeholder/societal needs (through consultation and long-term collaboration with the regional authorities in innovation projects)

Main objectives of RIS3



- Elimination of the factors that make agricultural products vulnerable (packaging, quality, organic, creation of brand names) and control of factors which influence their competitiveness in the international markets
- Improvement of tourism services, integration with tradition and culture, use of new technologies for the augmentation of the tourism product
- More friendly use of energy, energy saving and elimination or energy consuming systems, exploitation of renewable energies, improvement of environmental parameters
- Exploitation of KETs and innovation developed by the HEIs through new investment initiatives
- Creation of a favourable environment for <u>dynamic and constant</u> collaboration among key regional players
 ²⁵

Regional priorities



- RIS3 priorities have been chosen using the region's experience from the implementation of similar strategies, regional competitive advantages and specialization through a participatory process
- The priorities are based on the analysis of the region's strengths and weaknesses as well as on the potential for developing new products and services using new technologies

Regional priorities

Lu



C AND SUSTAIN

Mobilisation of the human capital and the productive factors of the regional economy for the strengthening of competitiveness the diffusion of innovation and the reinforcement of intrabranch links.

Creation of an attractive investment environment through the resolution of outstanding institutional issues, the ... of appropriate infrastructure and the promotion of the Region's image and the available opportunities.

Addressing the unemployment problem with the strengthening of employees and business adaptability facilitating access to employment and combatting social exclusion.

Upgrading the environment, ensuring that the development of economic activities is compatible with environmental imperatives and facilitating the adaptation of Crete to climate change.

Regional priorities SmSp sectors



C ULTURAL-TOURISM COMPLEX **ENVIRONMENTAL COMPLEX** Use of multimedia Sustainable constructions Make known & conservation of archaeological places **Energy saving** Upgrading of services offered **Renewable energies** Development / exploitation of Smart water and wastewater ICT tools management High value alternative tourism AGROFOOD COMPLEX Upgrading of basic products New product development Food technology **SMART SPECIALIZATION**

KNOWLEDGE COMPLEX

New educational services Production and promotion of exploitable knowledge Innovative entrepreneurial support

HUMAN RESOURCES + COOPERATION + ENTREPRENEURSHIP + PUBLIC ADMINISTRATION + R&D + DEVELOPMENT & DIFFUCION OF ICT

Regional SmSp sectors





«... Particular emphasis will be given on creating integrated production complexes, consolidating linkages between sectors, upgrading their technological capabilities with the introduction of innovations in the production processes in the areas of specialization of the regional economy in order to enhance competitiveness...»

Digital Growth priorities



- A strategic policy framework for digital growth is planned.
- ICT is a horizontal priority embracing all specialization sectors
- Priorities are linked to the specific objectives

Implementation and budget



- Action plans are in preparation
- Tools for the implementation exist, but budgets are not yet finalized
- The strategy and its implementation will integrate and exploit the synergies between different policies and funding sources and mechanisms (national funds, ERSF, private etc)
- Discussion with regional stakeholders and partners involved in the implementation stage of RIS3
- RIS3 will stimulate private R&D+I investments through the entrepreneurial process of discovery
- Responsibility for the implementation is still under question

Measuring progress



- Mechanisms for monitoring and evaluating the implementation of the strategy are still under question, depending on the schedule (decision by the central government)
- Ongoing work regarding performance and impact indicators
- Evaluation outcomes will be the basis for re-designing the strategy

Crete self-assessment wheel



Summary and next steps



Main challenges and success criteria

- Development of new jobs, retain of graduates and brain gain
- Development of new quality products /new brand names, further exploitation of accumulated knowledge towards a knowledge – based economy
- Exploitation of the competitive advantages of the local cuisine and agro-food sector and integration of local products with tourism
- Enhance intersectoral collaboration

Summary and next steps



Awareness of regional stakeholders

- Ongoing process
- Creating awareness is a time consuming process
- Need to persuade the central administration in order to trust the regional government 's ability to undertake and implement the regional innovation strategy

Next steps: Conditions for successful implementation of S3



Political willingness and understanding of the role of innovation in the regional development Creation & promotion of Clusters

Creation of framework tools to support implementation at regional level Concentration of resources at well defined priorities

Ensuring the continuity at the level of governance (design and implementation)



QUESTION 1

• Within a S3 context, what particular policy actions should the Region of Crete undertake to manage the risk of weakening strategic advantage through excessive narrowing of R&D specialisation?

Sustain a certain level of related variety, in order to avoid lockin situations and ensure that new industries can be created

Do not restrict the creation and distribution of multidisciplinary knowledge

S3 caries policy risks from a strictly narrow specialisation and outlines the danger of leading to suboptimal policy implications and outcomes.

Necessary actions and measures to avoid weakening of strategic advantage



QUESTION 2

• What pre-conditions are necessary for S3 entrepreneurial activity to take place, considering also the regional cohesion goals as identified within the European context? e.g.: How do such pre-conditions differentiate themselves when applied at regions which represent different structural traits and R&D routines? (For example the case of Crete)

Pre-conditions for S3 in moderate regions Cohesion policy in line with regional innovation policy, link with Horizon2020

Role of enterprises and professional associations



QUESTION 3

• How can be achieved an effective regulation in order to ensure the correctness and legitimacy of the S3 outcome. How to avoid power interests and conflicts among different local players?

Mechanisms to be placed to avoid picking winners/regional champions

How to improve collaboration and develop new schemes Monitoring mechanisms

Impact assessment justification



QUESTION 4

• Crete has a strong research capacity but the links within triple helix are very weak. ("Cretan innovation paradox"). What kind of policies and framework conditions are necessary to strengthen the links and enhance knowledge generation, diffusion and exploitation?

Strong research capabilities, top level HEIs, very weak links with the productive system, how to improve the regional absorptive capacity

Framework not friendly

How to build and foster international collaborations within S3 context



QUESTION 5

• How can we ensure the effectiveness of KETs (ICT etc) within a horizontal strategic context

ICT is a horizontal priority how to ensure the diffusion in the selected priority sectors

How to exploit and diffuse KETs to provide Crete with an interregional comparative advantage

No experience on KETs, associated risk, management of generated potential