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REGIONE LOMBARDIA'S RIS3 BACKGROUND

REGIONAL CONTEXT

The gross domestic product (GDP) of Lombardy, amounting to 331,405 million euro (Infocamere, 2015 data), is the fifth GDP among the European regions. The Lombardy region alone contributes 2.61% of the entire European Community GDPand 21% of the national one (Infocamere, 2015).
The Lombard agro-industrial sector is the most important at national level (in 2012 the value of agro-industrial production exceeded 12.2 billion euro, representing 15.6% of the total Italian amount, approx. 3.7% of the total GDP of Lombardy and comprises approx. 61.000 manufacturing facilities).

Despite the growth of the service sector that has concerned all the advanced economies, Lombardy's industrial sector remains stronger than the rest of the Country. Its added value accounts for slightly more than 30% of the total versus the national figure of 21.5%(Istat, 2015). Specifically, Lombardy's manufacturing industry, with its 101,277 businesses (Infocamere, 2015), turnover of 220 billion euro, 68 billion euro of added value and about one million people employed (Istat, 2015), is the leading sector by amount of businesses and fourth by workforce at a European level (Eurostat, 2010).

The service sector in Lombardy has an added value of 206 billion euro (Istat, 2015) with a weight of 68,5% on the total which is lower than the national figure, stabilized at 73,4%.

The Lombard system has a strong vocation towards export and this is why it is more exposed to the changes imposed by globalization. After having recovered in 2012 the levels reached 108 billion euro of export, Lombard exports in 2014 attained a new historic record, by exceeding the threshold of 109 billion euro.

Lombardy is also at the centre of important travel flows (three European corridors), it has significant mobility figures, in particular regarding goods, of almost 286 million tons equal to 21,3% of the national total quantity (Istat, 2013).

SWOT ANALYSIS

The report by the Organisation for Economic Cooperation and Development (OECD)[1] shows that the Lombard system boasts the following strengths and weaknesses:

Strengths	Weaknesses
high economic production	high fragmentation in undercapitalised micro businesses
strong diversification of businesses in the manufacturing and service industries	tendency towards "informal" innovation activities
strong relational dynamics among players in the subcontracting supply chains	low turnover rate of businesses
widespread presence of representative organizations, of deeply-rooted production sectors and industrial	lack of systemic assessment of business support and development programmes

[1] *Report: Boosting Local Entrepreneurship and Enterprise Creation in Lombardy Region (Italy)*, OECD, November 2012

districts	
high quality of advanced education and of the private and public research system	poor communication between education, research and production systems
great diversification and wide distribution of industries, particularly in the traditional and modern manufacturing and service fields	

Since the complexity and the wide diversification of the Lombard innovation system, Regione Lombardia intends to support growth paths of the Region, not only by appealing to the strengths but also by turning weaknesses into opportunities, for instance by capitalizing all the different forms of creativity, knowledge and skills within the territory and by supporting new globally competitive value chains, capable of attaining new market opportunities.

Main growth drivers

- Enhancing synergistic interaction and the inter-sectoral cooperation between entrepreneurial and research worlds (districts, clusters, networks, research centres) and across industries, enabling these relations to evolve according to market expectations;
- Enhancing the *"demand pull"* approach to intercept the new needs of society and to steer market research (for instance aging population, specialized healthcare…);
- Facilitating the enabling conditions to support innovation (in particular eco and social innovation);
- Reinforcing the presence on international markets and developing at the same time the capacity to attract knowledge and investments;
- Planning integrated action in the framework of smart cities, aimed also at increasing the attractiveness of the Region by promoting its territorial, environmental and cultural assets.

PAST AND FUTURE STRATEGY

Over the past decade, Regione Lombardia has spurred Research and Innovation, promoting in particular the scientific and technology-based processes, in many cases pushing the boundaries in terms of purposes and tools, and often setting the pace at a national and European Community level.

The "district-based" industrial policy, started and supported over the years by Regione Lombardia, represents one of the fundamental pillars of this strategic approach that considers the support to enterprises and sectors of excellence, especially the industrial and manufacturing-based, as being cornerstones of growth and productivity not only for the business system, but also for the institutions.

The following chart shows the main stages of the path that, starting from the recognition of the "geographically localized" Industrial Districts with high levels of specialisation in production, gradually departs from a territorial approach to highlight areas of excellence in production - able to represent poles of development with high technology potential - passing from Meta-districts, then redefined as Priority thematic areas (with strong existing or potential connections with the research or innovation production world) to the

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High Technology Districts recognized by the MIUR (Italian Ministry of Education, University and Research), to finally reach the Regional Technological Clusters (CTR). *Recently, according to the European Secretariat for Cluster Analysis (ESCA) requirements, 8 Clusters received Bronze Label and the 9th Cluster (Energy Cluster – "LE2C") is obtaining the Gold Label.*

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REGIONE LOMBARDIA'S PRIORITIES

The analysis of the Lombard context shows a dynamic and diversified entrepreneurial and scientific and technological system with excellences in many sectors and fields.

Regione Lombardia is aware of the growing difficulty of decoding and governing the changes taking place in the Region in order to devise regional policies that address real needs.

There is therefore a strong need to change the way of decoding the Region compared to the past, moving away from a vertical approach, with a perspective on traditional sectors, towards a new horizontal logic based on "systems of competence".

Following the Entrepreunerial Discovery Process, the Specialisation Areas (SA) identified are:

1. Aerospace
2. Agri-food
3. Green industry
4. Creative and cultural industries
5. Health industries
6. Advanced manufacturing
7. Sustainable mobility

The process of identifying the Specialisation Areas in any case requires a continuous and inclusive mechanism always alert to systematically capturing and enhancing new strategic skills.

CHALLENGES TO ADDRESS

A system of dynamic, diversified and broad production and scientific skills, crossing the various SAs, such as the Regione Lombardia system, has strong potential for convergence and cross-fertilization, which must be decoded and exploited to accelerate the evolutionary process and establishment on the market of emerging industries and transformation of the mature industry.

The challenge that Regione Lombardia faces is therefore to help the production system seize and intercept new market opportunities within the SAs through the evolution of their traditional industries into emerging industries, by addressing the needs of the new markets (strengthening the market-driven approach) and helping improve the quality of life of its community (society-driven approach).

In order for the mature industries to evolve into emerging industries, "smart communities" are considered as driver to intercept new needs by aggregating the skills of the Specialisation Areas. Among smart communities issues, emphasis will also be placed on promoting cultural heritage with a view to territorial attractiveness (e.g., living labs for the testing of technologies on the ground, such as technologies for security, preservation, traceability and access to cultural heritage) and as a means of energizing the tourism industry and impacting positively on the rest of the production system.

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TOOLS

To support and accelerate the process of establishment of emerging industries, a series of "tools" has been identified thanks to discussion and approval with stakeholders that will be supported by specific initiatives and that can be classified into two categories based on their purpose:

Tools supporting the creation of enabling environments for enterprises so they can grow and evolve into emerging industries	Tools addressed directly to enterprises to facilitate the evolution of the value chain and develop technologies, products and processes able to meet the new needs of emerging markets
Clusters and other enterprise aggregations as tools to create enabling environments for the birth and growth of emerging industries	Enabling technologies to developed in products and processes that can help innovations make the quantum leap
Open Innovation, networks and platforms of knowledge sharing in order to stimulate the aggregation of economic and scientific entities and to share best practices, experience, and knowledge (creation of living labs, crowdsourcing environments, etc.)	Tools for the dissemination of ICT technology
	Tools to stimulate the demand for innovation on specific, functional and performance requirements unmet by the market, such as pre-commercial procurement and public procurement for innovation to stimulate new emerging needs
	Tools to promote intersectoral cross-fertilization aimed at stimulating the birth of innovations geared to the new market needs (for instance, through clusters or open innovation environments)
	New forms of collaboration between enterprises, including large ones, and research institutions to promote the most effective ways to conduct research and innovation activities

ORIENTATIONS

The following is intended to chart a path in which to place macro-interventions and the issues within which regional actions, contained and implemented in the operational programming, should be designed and implemented to achieve S3 goals.

The roadmap building process was realized in close collaboration with the territory. The entrepreneurial discovery course brings to light confirmations mainly of the strategy that Regione Lombardia intends to pursue

in the coming years, intended above all to support an evolution towards emerging industries as golden opportunities for transformation.

Discussions with the community revealed in no small measure the specific needs Regione Lombardia has clearly understood, and new proposals that have been taken on board, outlining a more incisive plan of action. The ideas that came out can be summarized as follows:

- focusing resources on targeted projects of medium-large dimensions;
- fostering the birth and consolidation of new skills and new professional figures capable of enhancing the competitiveness of the innovation system (for instance enterprise network manager or cluster manager);
- creating and/or strengthening tools that bring together skill systems in traditional industries with new skills to develop new businesses;
- focusing the actions on reinforcing a manufacturing base that fosters the growth of new markets;
- concentrating on new tools, to facilitate the entry of new technologies to the market, that allows enterprises to experiment with technologies by testing prototype functions and efficient, sustainable production processes (for example pilot plants);
- facilitating the creation of "environments" driven by the most promising technologies where prototypes can be tested in a market perspective and developing new product concepts (for example living labs), in order to anticipate the needs of the market;
- creating enterprise networks to make SMEs more competitive and proficient in addressing the global market;
- supporting the creation of ecosystems driven by well-defined technological challenges that facilitate the organic and systemic search for regional skills (for example the clusters);
- enhancing the role of large industries as a driving force for small and medium-sized enterprises.

The lines of intervention will propose a number of actions successfully tested in the past and that will be redirected towards the achievement of the new S3 goals and others that are entirely new. The implementation of the specific actions, the time and methods of their realization will be studied in depth in subsequent documentation that makes up the actual operational programming.

ACTIONS

Meanwhile the Governance mechanism is underlined and is "taking off" (tested model in designing RIS3 phase also), the first operative step regarding the support to the Policy Mix Process was launched:

- were set up, involving directly the territory, the bi-annuale "Research and Innovation" Work Programmes for each Specialisation Area. The Work Programme includes thematic challenge, technological trajectory, the expected **Technology Readiness Level (TRL)**.