



ALLON\_I3



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## Regional Roadmap: Allon\_I3 Project

Sicily

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## 1. Project Background

## **Overview**

The 'Alliance on interregional innovation investments' project is initiated by the Regional Innovation Centre 'Ambitious Gabrovo' (RIC\_AG), Bulgaria, in partnership with two other less developed regions (Italy, Portugal), two regions in transition (Greece, Cyprus), and a more developed one (Denmark), along with an associated partner from Norway. Along these lines, the Allon\_I3 project seeks to enhance interregional cooperation and innovation by exploring and supporting innovation ecosystems across various European regions.

## **Project Objectives**

The Allon\_I3 project centers around three main goals: improving regional connectivity, strengthening existing value chains creating new ones, and enhancing regions' readiness for investment.

Allon\_I3 aims to enhance connectivity of the less developed regions with the others by creating preconditions for a vibrant interregional cooperation and investments along value chains in the target S3 domain of the project. This is to be enabled by experimenting new approaches, delivering solutions, exchanging good practices examples. This would lay the ground for future shaping of an interregional innovation investment ecosystem creating benefits to all three regional groups involved in the Allon\_I3 project and beyond. This spells out in 5 regional roadmaps that outline a set of particular activities, timelines, key drivers and expected outcomes.

## **2. Vision and objectives of Regional Roadmap**

A regional roadmap is a strategic plan that outlines the steps and actions required for a region to achieve specific developmental goals or address particular challenges. It provides a structured approach to guide the region through various phases of development, ensuring coordinated efforts among stakeholders and effective use of resources.

A regional roadmap provides a structured plan outlining the steps and milestones for a region to achieve specific goals, particularly in the context of development projects like the Allon\_I3 initiative. Regional roadmaps will empower the regions and the Q-helix stakeholders with partnership agreements and business cases to evolve and mature in the project follow-up stage.

Along these lines, 5 regional roadmaps that outline a set of particular activities, timelines, key drivers and expected outcomes (roadmaps for 3 less developed regions and 2 for the two regions in transition).

The Allon\_I3 initiative encompasses a variety of European regions, each with distinct qualities that contribute to economic enhancement, technological advancement, and the advancement of sustainable methods. The 5 regional roadmaps will present an analysis from the 3 less developed regions (Gabrovo, Alentejo, Sicily) and the 2 regions in transition (Athens, Nicosia) participating in the project.

### 3. Current State Analysis

#### Strengths and Weaknesses

Regarding the specific field of ICT/Digitalization and Innovation, Sicily highlights a general structural lag in terms of innovation capacity and inclination, but also points to distinctive strengths that can help reposition the regional socio-economic system competitively.

Significant strengths are concentrated in two main technological areas - **microelectronics and biotechnology** - which should continue to receive investments due to their broad applications across various sectors, particularly in industrial production (such as agribusiness and construction) and services (like tourism and cultural heritage), which are well-represented in the region.

Moreover, medium and large regional enterprises show high levels of productivity and export activity, especially in agrifood and electronic components, areas that also the S3 strategy take into account. Additionally, younger segments of the population and local entrepreneurs are becoming increasingly willing to take business risks, leading to the emergence of promising startups, though these remain at insufficient levels. The public research sector is well-structured and represents a significant development lever, complemented by a network of intermediary organizations like clusters and technology districts. These entities are key partners in the generation and dissemination of new knowledge related to economic activities, technologies, and markets, and their role should be further enhanced to capture emerging development trends at both national and international levels.

#### Opportunities and Threats

However, several challenges persist, notably the fragility of the productive system, largely due to its fragmentation and the limited spread of innovation within businesses. There is a pressing need for grassroots initiatives to foster an innovative production base beyond traditional manufacturing. Such actions would help close the competitive gap that characterizes Sicily in the medium term, especially in strategic areas necessary to face upcoming social challenges, such as demographic shifts.

Supporting the creation of new businesses must be paired with efforts to embed innovation processes throughout society by focusing on human capital development and promoting "smart" citizens. Additionally, there is a need to strengthen regional public institutions and improve funding channels to support Sicily's innovation-driven development. Currently, specialized skills remain scarce, and research and innovation spending is still too limited, partly because of competing priorities. The analysis also identifies external threats, such as the brain drain of skilled young professionals, which needs to be addressed through strategic planning. Nevertheless, there are significant opportunities, particularly the substantial investment in research and innovation that Italy is set to receive, which could help overcome barriers to establishing a knowledge-based society.

### 4. Strategic Priorities

## Focus Areas

The focus areas of the Smart Specialization Strategy (S3) in Sicily cover various key sectors across economic, technological, and innovation landscapes:

1. **Economic Landscape:** Key industries include agri-food, tourism, and culture, which are crucial to regional development. There is also emphasis on modernizing these industries through innovative and sustainable practices, contributing to sectors like manufacturing and services.
2. **Technological Landscape:** This includes key enabling technologies (KETs) such as micro-electronics, biotechnology, and advanced manufacturing. Technologies like ICT, AI, and IoT are crucial for driving innovation across industries, enhancing competitiveness, and fostering digitalization.
3. **Innovation Landscape:** Innovation is driven through collaborative research, digital transformation, and public-private partnerships. Initiatives include fostering start-ups, supporting smart cities, and promoting sustainability. Innovation is applied not only in technological advancements but also in social and environmental sectors to meet broader regional development goals.

## 5. Stakeholder engagement

### Stakeholder Identification

#### 1. Government Bodies

- Regione Siciliana (Regional Government of Sicily): The primary authority responsible for regional policies, economic development, and innovation strategies.
- Municipalities (e.g., Palermo, Catania, Caltanissetta): Local government bodies that drive urban development projects, smart city initiatives, and local economic growth.
- Sicilian Chamber of Commerce Palermo-Enna: Facilitates dialogue between the business community and policymakers, promoting regional economic interests.

#### 2. Educational Institutions and Research Centers

- University of Palermo: A leading academic institution, central to research and education, particularly in sectors like biotechnology, microelectronics, and environmental studies.
- University of Catania: Known for its strengths in innovation, ICT, and agritech, this institution plays a significant role in regional R&D efforts.
- National Research Council (CNR) - Sicily Branch: Conducts research in key areas such as renewable energy, environmental protection, and technology transfer.

#### 3. Businesses and Industry Associations

- Enterprise Europe Network, the European business support network for competitiveness, innovation and technology transfer, operates in Sicily through

Confindustria Sicilia. For some years now, the presence of the EEN has enabled many SMEs and regional realities belonging to the world of research and innovation to undertake paths of innovation and technology transfer, through the initiation and consolidation of international collaborations. international collaborations.

- Tourism Industry Operators (Hotels, Cultural Sites, and Tour Operators): Vital for leveraging Sicily's cultural heritage and boosting regional tourism through digitalization and innovation.

- SMEs and Startups: Key drivers of innovation in emerging sectors such as clean energy, digital solutions, and sustainable products.

#### **4. Intermediary Organizations and Associations**

- Polo Meccatronica Valley: The Mechatronics District, promoted and recognized by the Sicilian Region - Regional Department of Productive Activities, was born from the idea of promoting all Sicilian companies operating in a field of high technological specialization and extends over the entire territory of the Region of Sicily.

- ARTES 4.0: "Advanced Robotics and enabling digital Technologies & Systems 4.0" is a MIMIT-funded (Ministry of Enterprises and Made in Italy), highly specialized National Center of Competence of strategic importance in the development of digital technologies and advanced and collaborative robotics for Industry 4.0 and 5.0. Created with the aim of promoting and disseminating knowledge of enabling digital technologies and robotics solutions for the development of innovations in Italy, ARTES 4.0 is managed by a Recognized Association that relies on multiple Members, including Founders, Ordinary, Supporters and Affiliates who are companies of all sizes, universities and research centers, third sector entities and foundations, selected for quality of expertise and technological excellence so as to ensure a comprehensive range of skills, infrastructure, instrumentation and facilities in the areas of interest.
- Cluster Agrifood Sicilia: A sector-specific cluster promoting innovation in Sicily's strong agribusiness sector, driving technological advancements and sustainability.

#### **5. Civil Society and Non-Governmental Organizations (NGOs)**

- Local Community Groups: Play a role in social innovation, contributing ideas for projects that address regional challenges such as aging populations, social inequality, and environmental sustainability.

- Environmental NGOs: Focus on sustainable development, green energy, and conservation efforts, collaborating on initiatives like eco-tourism and renewable energy projects.

- Youth and Entrepreneurial Associations: Support the involvement of young professionals and entrepreneurs in Sicily's innovation ecosystem through training and networking opportunities.

#### **Engagement plan**

Strategies for involving stakeholders in the roadmap development and implementation process:

- **Public Consultations and Workshops:** Organize open consultations and thematic workshops to gather input from diverse stakeholders, including businesses, research institutions, universities, local authorities, and civil society, ensuring broad participation in shaping the roadmap.

- **Partnerships and Collaboration Frameworks:** Establish formal partnerships with key stakeholders such as industry associations, innovation clusters, and public research organizations to promote continuous collaboration throughout the roadmap's development and implementation.
- **Communication Plan:** Develop a multi-channel communication plan (including newsletters, social media, dedicated websites, and press releases) to regularly update stakeholders on the roadmap's progress, opportunities for involvement, and key milestones, ensuring transparency and ongoing engagement.
- **Advisory Boards and Expert Panels:** Set up advisory boards and expert panels consisting of representatives from key sectors to provide guidance and feedback during critical phases of the roadmap's implementation.
- **Surveys and Feedback Mechanisms:** Utilize surveys and digital feedback platforms to allow stakeholders to contribute ideas and voice concerns throughout the roadmap development process, ensuring their input is incorporated into decision-making.
- **Capacity-Building Initiatives:** Organize training sessions and seminars to equip stakeholders, especially SMEs and startups, with the knowledge and tools needed to actively participate in the roadmap's innovation initiatives.

#### Methodology and Approach

The engagement strategy for Sicily's regional roadmap adopts a participatory and inclusive approach, ensuring all stakeholders—businesses, public institutions, research organizations, and civil society—are involved in its development and execution.

The process starts with **public consultations and workshops** to gather input and encourage dialogue across sectors. This is reinforced by **partnerships and collaboration frameworks** with key actors to foster long-term cooperation. A **communication plan** ensures transparency and regular updates via digital and traditional channels, keeping stakeholders informed and engaged.

To provide expert guidance, **advisory boards and expert panels** will be established, while **surveys and feedback mechanisms** will capture broader input, particularly from SMEs and citizens. **Capacity-building initiatives**, including training and workshops, will empower stakeholders to fully engage with the roadmap and leverage innovation opportunities.

## 6. Key proposed initiatives and actions

- Establishment of Innovation Hubs: In the context of the I3, and in line with the main objectives of the Sicilian S3, a new project is emerging in Palermo: The Polo Unico "Innovation Hub" is well placed to become a focal point for strengthening interregional cooperation and increasing investment in innovation. This is in line with all the priorities aimed at strengthening innovative capacity, promoting digitalisation and supporting sustainability. It will also allow for the valorisation of the experience and best practices developed within the "Innovation Hub", serving as a model to promote further synergies between European regions. The "incubator" for the development of a truly innovative, interconnected ecosystem will make a major contribution to attracting investment in European applied research projects, with the ultimate aim of promoting sustainable and inclusive economic growth. It will mean establishing the Innovation Pole as a

focal point for the entire city, open to other innovative actors who wish to follow this path, in order to consolidate the continuous and inclusive growth of the local innovative fabric.

The Polo Unico "Innovation Hub" - the innovation driver for Palermo and Sicily

The Polo Unico "Innovation Hub" is a concrete response to the current challenges of innovation, digitalisation and sustainability, with a view to achieving the objectives of the National Recovery and Resilience Plan. It will be located in Palermo and will be a reference point for urban and social regeneration: an opportunity for suburban development and the strengthening of the local entrepreneurial ecosystem. Obviously, it would be centred on visions of reclaiming urban space and creating opportunities within the community, in this case the Cantieri Culturali alla Zisa.

In addition, the innovation strategies of Sicily will be implemented, enabling the development of collaborative networks involving companies, universities and research centres in the production of applied research projects and advanced technological solutions that will contribute to the economic modernisation of the territory. The best example of this is the ambitious "Digital Twin" project of Palermo: Big Data, created by the virtual model of the city. This is a tool that makes it possible to simulate urban changes before they actually take place, thus minimising risks and optimising resources.

Another important aspect of Polo's commitment is access to national and European funding, promoting the participation of companies in calls such as Horizon Europe, the Digital Europe Programme and the European Innovation Council. To this end, the centre is developing an intensive participation in projects and a support desk function for local SMEs, providing access to funds and helping in the design of innovative initiatives.

With its multidisciplinary approach, the Hub aims to be at the heart of Palermo's transformation into a centre of excellence in technology and innovation, driving economic recovery and creating quality jobs, with a particular focus on sustainability and social inclusion.

### **Integration of the Polo Unico "Innovation Hub" in Palermo in the Allon\_I3 initiative**

The Innovation Hub in Palermo offers one of the greater opportunities within the Alliance for Interregional Innovation Investment - Allon\_I3. It can be a strong facilitator of innovation at the local level and also a strategic node for connectivity within the European landscape. The aim of the Allon\_I3 project is to promote interregional innovation investment by consolidating regional cooperation with companies and institutions in order to create innovative ecosystems that can attract capital, and by improving enabling technologies. This is where the Palermo Innovation Hub fits in. Its contribution is threefold:

#### **1. Access to advanced technologies and skills**

Thanks to innovative infrastructures, the Innovation Hub is able to support the access of Sicilian companies to advanced technologies, allowing the adoption of innovative solutions targeted at the strategic sectors of sustainable tourism, green technologies, smart mobility and digitalisation. In fact, these last sectors are very much in line with the priorities of Allon\_I3, whose aim is to promote investments aimed at stimulating innovation at interregional level and to offer existing platforms and resources to companies interested in developing and testing new technologies.



## 2. Facilitating interregional cooperation

Thanks to its expertise and network, the Innovation Hub can act as a hub for the creation of strategic partnerships between Sicilian companies and other European regions, promoting the exchange of knowledge and the practical application of innovative technologies. The Hub could become a reference point for companies involved in the Allon\_I3 project, offering an ideal environment for collaboration on research and innovation projects, particularly in sectors related to the green & digital transition.

## 3. Facilitating access to European funding

Allon\_I3 is strongly focused on facilitating investment in high-impact innovation projects, using available European funds to stimulate economic growth. The Palermo Innovation Hub is already active in promoting access to European funding for local SMEs and could play a crucial role as a reference point for companies participating in Allon\_I3, helping them to navigate the various funding opportunities and develop projects in line with EU strategic objectives.

In this context, the Innovation Hub would not only support local companies to participate in European projects, but also facilitate the creation of interregional innovation ecosystems capable of attracting investment from other European regions. Its integration into the Allon\_I3 initiative can accelerate the process of interconnection between territories, strengthen synergies between strategic sectors and stimulate sustainable and inclusive economic growth for both Sicily and Europe.

# 7. Collaboration and Partnerships – Good practices

## 1. Specific Agreements and Partnerships

- Bilateral Agreements with Regions Sharing Similar Priorities: Sicily can establish formal bilateral agreements with regions that share common strengths in sectors like agritech, biotechnology, or tourism. For example, collaborating with other Mediterranean regions that face similar environmental challenges (e.g., drought or coastal erosion) can foster joint innovation projects in sustainable agriculture or eco-tourism.

- EU-Supported Interregional Programs: Engage in European Union cross-border programs such as Interreg and Horizon Europe to facilitate knowledge sharing, R&D collaboration, and co-funding opportunities with other EU regions. These programs can support joint innovation projects, especially in areas aligned with Sicily's Smart Specialization Strategy (S3).

## 2. Joint Innovation Projects

- Cluster Collaboration: Promote collaboration between regional innovation clusters (such as those focused on microelectronics or biotechnology) and similar clusters in other regions. This can enhance access to expertise, technologies, and markets, and enable joint ventures or research projects. For example, the **European Cluster Collaboration Platform** provides opportunities for such cross-regional synergies.

- Co-Development of Technological Solutions: Work with regions that have advanced in particular fields (e.g., digitalization, renewable energy) to co-develop technological solutions

that can be applied in both territories. This could involve joint R&D efforts in green energy solutions or smart city infrastructure, benefiting multiple regions.

### 3. Best Practices for Cross-Regional Collaboration

- Knowledge Exchange through Mobility Programs: Encourage the exchange of researchers, students, and industry professionals through mobility programs. Good practices such as Erasmus+ for Higher Education or other mobility programs for professionals foster collaboration by allowing stakeholders to experience different regional ecosystems and bring back valuable insights.

- Living Labs and Collaborative Platforms: Participate in cross-regional “living labs” that test innovative solutions in real-world environments. Sicily could collaborate with other European regions in creating these experimental spaces to jointly address challenges like climate change, digital transformation, or demographic shifts.

### 4. Networking and Participation in International Forums

- Participation in European and Global Innovation Networks: Join platforms like the **European Innovation Partnership (EIPs)** on **Smart Cities and Communities** or other EU-based networks that focus on cross-regional innovation and sustainability. This enables the exchange of ideas, research outcomes, and policy strategies with other regions.

- Joint Conferences and Workshops: Host and participate in conferences or thematic workshops that bring together regional stakeholders from various countries. This promotes mutual learning and paves the way for collaborative projects. Organizing Sicily-specific workshops on key topics like sustainable tourism or biotechnology could be a starting point for forming international alliances.

### 5. Cross-Regional Innovation Ecosystems

- Creation of Transnational Innovation Networks: Sicily can take part in or lead initiatives to form transnational innovation ecosystems that connect regions working on complementary industries or challenges. This could involve setting up cross-regional working groups on shared priorities like renewable energy, digitalization of agriculture, or innovation in tourism.

## 8. Timeline and milestones

#### Timeline:

- **Short-term (1-2 years)**: In the first phase, the Innovation Hub will focus on initial assessments and mapping available competencies, actively engaging local and interregional stakeholders. During this period, pilot projects will be launched to test the

application of advanced technologies and innovative business models, with a focus on the digital and sustainable transition.

- Medium-term (3-5 years): During this phase, the Hub will focus on expanding the initiatives launched, scaling up successful projects, and strengthening partnerships with other regions and European actors. The Hub will broaden its activities, providing increasing support to SMEs, and strengthen interregional collaborations to promote knowledge exchange and the application of innovative solutions on a larger scale.
- Long-term (5+ years): In the long term, the goal is to consolidate sustained and continuous growth, creating a stable and interconnected innovation ecosystem. The Polo Unico "Innovation Hub" will become a permanent innovation engine for Palermo and Sicily, contributing to achieving Allon\_I3's strategic objectives and ensuring continuous innovation by involving new actors and resources.

## 9. Expected Outcomes

The current challenge for the Region of Sicily is to steer the transformation of the production system towards sustainability and innovation, making the most of all the potential offered by digital technologies. It should be a regional ecosystem capable of adapting to future needs through the Smart Specialisation Strategy; it should become a place where innovation is not just a concept but a real driving force for businesses, the territory and the quality of life of citizens. Within this framework, the expected results are included with the aim of strengthening the regional economic fabric by promoting digitalisation and sustainable entrepreneurship.

### Objective 1: Strengthening regional innovation in the production system

The objective is to contribute to the green and digital transition, to increase the technological capacity of the region and to support entrepreneurship, both in traditional and cross-sectoral industries. Thus, the main actions under this axis are:

- Stimulating technological innovation, preventing technological backwardness through the implementation of advanced technologies and inter-industrial techniques.
- Enabling enterprises to access sources of innovation more effectively, with priority given to knowledge-intensive activities and information and communication technologies.
- Improve R&D capacity by developing cooperation between enterprises and research institutions, using technology to improve productivity and strengthening global value chains.
- Business networking and internationalisation
- Encouraging SMEs to invest in smart specialisation projects.
- A regional ecosystem capable of collaborating on research projects and complex technological solutions to support the digital and green transition.

### Objective 2: Encourage the search for innovative solutions

This goal aims to create an innovative and digitised regional ecosystem, reduce environmental impact and address unmet social and economic needs. Key initiatives include

Supporting the creation and development of start-ups and innovative SMEs within the framework of S3 Sicilia, with a focus on sustainability.

Promoting the digitalisation of public administration by improving platforms, security and the efficiency of digital services for citizens and businesses.

Promote data sharing between the public and private sectors, exploiting the value of public information.

Support the digitisation of administrative processes and the interoperability of public data archives.

Promote digital solutions to societal problems through open innovation environments such as living labs and fab labs.

Support the development of data-driven businesses, cybersecurity solutions and digital resilience.

Supporting the transition to low-impact production in line with green and circular economy principles and promoting innovative management of urban and territorial areas.

## **10. References**

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