

## 1. STRENGTHENING RESEARCH, TECHNOLOGICAL DEVELOPMENT AND INNOVATION

### What does the EU want to achieve?

- reverse the economic downturn through investment in research, innovation and entrepreneurship through **3% of EU GDP combined public and private investment in research, technological development and innovation.**

### How ?

Through '**smart specialisation**'. The idea is that every territory in the EU has its own specific assets: identifying these and investing to build economic development on them will help achieve EU2020 goals. The idea is also that building a strong knowledge-based economy will solve the economic crisis.

The EU will fund research and innovation investments through ERDF. For these investments to be efficient, they must be part of a strategic vision. For this reason, the European Commission requires, as a precondition to funding the obligation, the definition of a '**research and innovation strategy for smart specialisation**' ('RIS3') or Smart Specialisation Strategy. This precondition will apply to funding of the two first CSF priorities (Research and innovation and Digital agenda), inclusive of **funding of knowledge transfer and innovation support paid through EAFRD.**

What is a « **Smart Specialisation Strategy** » ?

*“Smart specialisation means **identifying the unique characteristics and assets of each country and region, highlighting each region’s competitive advantages, and rallying regional stakeholders and resources around an excellence-driven vision of their future.** It also means strengthening regional innovation systems, maximising knowledge flows and spreading the benefits of innovation throughout the entire regional economy.”*

A country’s or region’s Smart Specialisation Strategy should be elaborated through a process *“involving key innovation stakeholders. **Businesses, research centres and universities** should work together to identify a Member State or region’s **most promising areas of specialisation, but also the weaknesses that hamper innovation there.** The national or regional authorities must then draw up a document outlining the proposed strategy for that country or region and, in particular, the **planned public and private investments** including from Structural Funds in research, technology development and innovation. This strategy should not only build on and/or aim at regional scientific excellence but also **support practice-based (‘non-technological’) innovation** (for instance, social and service innovations, action to address social challenges, new business models and demand-side measures such as public procurement) and include the adoption and diffusion of knowledge and innovation.”*

Source: [RIS3 Factsheet](#)

The EU has set up a **Smart specialisation platform** to help in the elaboration of strategies:



Click here to learn more: <http://s3platform.jrc.ec.europa.eu/>

**You are a mountain organisation interested in research and or innovation: have you been involved in the design of the Smart Specialisation Strategy? If not, find out who is doing it.**

## How will different EU funds be combined?

The EU finances research and innovation through territorial development policies and through targeted research and innovation funding. In the next programming period, the current Research and Development Framework Programme and the CIP will be merged into one programme for research and innovation, 'Horizon 2020'. To avoid overlaps, the CSF describes which types of actions shall be funded through ERDF in comparison with Horizon 2020.

	ERDF	Horizon 2020
Capacity building	✓	✗
Enhance R&I infrastructures	✓	✓
Modernising universities	✓	<i>Excellence only</i>
Technology audit	✓	✓
Partner search	✓	✓
Information campaigns	✓	
Research and innovation itself	✗	✓

What are « **European Innovation Partnerships** » (EIPs)?

*“European Innovation Partnerships bring together a wide array of stakeholders to work in a collaborative way on shared interests and projects geared towards achieving common goals and promoting successful technological, social and organisational innovation.”*

*“EIPs act across **the whole research and innovation chain**, bringing together all relevant actors at EU, national and regional levels in order to: (i) **step up research and development efforts**; (ii) **coordinate investments in demonstration and pilots**; (iii) **anticipate and fast-track any necessary regulation and standards**; and (iv) **mobilise ‘demand’ in particular through better coordinated public procurement** to ensure that any breakthroughs are quickly brought to market. Rather than taking the above steps independently, as is currently the case, the aim of the EIPs is to design and implement them in parallel to cut lead times.”*

In practice, EIPs seek to improve communication and collaboration between researchers and practitioners through, for example, 'operational groups'. So far, it has been decided to launch EIPs on four themes: **active and healthy ageing, water, raw materials, and agricultural sustainability and productivity**.

Learn more on Innovation Union page: <http://ec.europa.eu/research/innovation-union/>

## How/why mountains can contribute?

Mountain people and businesses are particularly well placed to develop innovative solutions and new ideas because they **face specific challenges that require specific solutions** such as: demographic changes, climate change, increasing international competition in both economies and access to markets, and a growing digital divide. These **challenges are a great stimulus to creativity**. Fostering innovation is the most promising way forward to address these challenges, thus contributing to



economic diversification and to increased competitiveness. **Innovations developed in mountains can be a source of inspiration and solutions for the rest of Europe.**

Examples of innovation taking place in mountain areas are varied and numerous: energy production, new food supply chains, new medical products, new tourism services and approaches, access to distant markets via ICT, innovative organisation of services...

### What do mountains need in order to contribute?

The innovation process is not necessarily specific in mountains. However, creating the conditions required for innovation may be more difficult. Human capital, **people and entrepreneurs** are of key importance. In mountain areas, as in other rural or remote areas, the density of businesses and population is lower than in cities, the number of higher education facilities is smaller, access to infrastructure and services is more difficult, and distances between companies, potential customers, research institutes and appropriate fund providers are often large. These factors result in challenges in organizing meetings and cooperation between actors and in achieving a smooth and intense circulation of ideas. Access to finance is also one difficulty for many smaller businesses found in mountain areas.

### Example of how this priority could be delivered in mountain areas

- **Support innovation in mountain businesses:** *« dissemination and adoption of new technologies, through cooperation between all relevant actors, to help companies develop new products, processes and services and diversify regional economies »*
  - Support innovation in the **key sectors of mountain economies:** life sciences, bio-economy (including agriculture and forestry), energy, materials, e-services, tourism, healthy ageing and, specifically:
  - Support technological innovation in the **forestry sector:**
    - Innovation in the field of mechanisation adapted to high slopes: for example, [ARPANA Formacion Forestal](#) (Navarra) developed new machinery and associated training to implement innovations;
    - [PINS Skrad](#) (Gorski kotar, Croatia) supports innovation and competitiveness of SMEs in the wood manufacturing sector by sharing and transferring technical and organizational know-how to enable wood clusters, wood technological centres and regional development agencies to address structural deficits of SMEs and enhance innovation potentials of the productive sector.
  - Support innovation in the development of **new products and local or territorial supply chains** such as food products, wood products, and crafts:
    - An Interreg project on wool [MEDLAINE](#) has delivered very interesting results in the field of innovation in the wool sector, transforming a traditional, 'old' sector into a modern sector able to produce high-technology textiles with, for example, medical properties.
    - In the olive oil-producing area of Sierra de Segura (Spain), the company [POTOSI](#) produces one of the best olive oils in the world, but quantities which can be marketed at a price that repays production costs are small. Taking advantage of the higher content of health beneficial polyphenols in mountain oil, the company has started to invest in cosmetics, increasing the added value and marketing potential.



- The creation of [Material Banken](#), a company specialised in the exploitation of heavy timber from mountain forests in the North of Hedmark (Norway), led to a better exploitation of local forest resources, reducing imports from Russia and fostering the creation of new wood products for construction and restoration of buildings.
    - Development of new products aiming to valorise abandoned forest areas: for example [TICINORO](#), in Ticino, Switzerland, where new products have been created, bring new income from 20,000 ha of chestnut trees.
  - Support **research and knowledge transfer in mountain agriculture** on, for example:
    - **genetic improvement** of traditional mountain breeds and varieties;
    - **resource efficiency** and **enhancement of ecosystem services** through pastoral management practices;
    - **resource efficiency in permanent crops** (irrigation, fertilisation);
    - **quality improvement** of food and non-food products from mountain farms;
    - efficient **management and organisation of small businesses** and small-scale supply chains.
  - Support innovation in **tourism** to increase the efficiency of resource-intensive activities like winter sports or in relation to seasonality and (re)conversion to four-season tourism:
    - The INTERREG [VETTA](#) project aims to valorize and promote mountain products through the spread of an innovative 'culture of quality' and use of ICT, in order to enhance the attractiveness of mountain touristic areas through innovation.
  - Enhance **transfer of research results to end users** following recommendations from the [mountain.TRIP](#) project ([www.mountaintrip.eu](http://www.mountaintrip.eu)).
- **Develop research and education infrastructures in mountain areas:**
  - Locate university branches or antennas in mountain areas;
    - The [University of the Highlands and Islands \(UHI\)](#) in Scotland provides higher education on a wide diversity of topics. This permits students from the area to get targeted education in sectors that provide jobs locally, and students from other regions to get to know the area and the local economy by coming & studying on-site.
    - The "[Universita della montagna](#)" in Edolo, Lombardia (Italy), delivers targeted education to around 200 students and carries out research on mountains and mountain resources.
  - Create regional centres of excellence with activities targeting the specific potential of mountain areas;
    - Hedmark County, Norway, developed branches of higher education in nature and cultural tourism, engineering, law, finance and creative use of the ICT in kindergartens in the municipalities of Tynset, Røros and Trøndelag. Not only do they provide the local economy with better employed staff, but they attract many experts from different countries. More information: [www.padima.org](http://www.padima.org) (GP Education n°38).
    - In the Pyrenees, [ACAP](#), the association of Chambers of Agriculture had been granted specific competence to operate as a centre of excellence at the massif level to establish specific cooperation with the research and development sector on pastoralism, supply chains, trends in agricultural development and evaluation of public policies.

- **Support mountain networks and clusters:**
  - Encourage **links between research, education and economy** in mountain areas by providing places for face-to-face meetings or virtual meeting facilities;
    - [Tuomas-tecnocat](#) (a company located in Teruel, Spain) is the leading manufacturer of machinery, equipment and accessories for cutting, handling and storing flat glass from the Iberian Peninsula. They have been working with University of Zaragoza - via the Polytechnic University School of Teruel - on various R&D&I projects.
  - Encourage **cross-sectoral cooperation at massif level:**
    - In the Pyrenees and the Massif Central (France), different organisations representing the different economic sectors (agriculture, commerce, industry...) have created common structures to facilitate their collaboration ([APEM](#) for the Pyrenees and [Macéo](#) for Massif Central).
  - Facilitate and encourage **clustering** in mountain areas :
    - The [AlpsBioCluster](#) brings together universities and SMEs in the Alpine Space to address mountain-relevant issues related to life sciences: e-care of isolated patients, pollution monitoring via innovative measurement technologies and indicators...
    - The [mountain tourism cluster](#) in Norway brings together transport, suppliers, knowledge institutions, partners and authorities to create a specialised triple helix.

**More ideas on innovation and mountain areas:**

Euromontana [thematic page on Innovation](#) & the [Lillehammer Declaration](#) (2010)

Innovation in Highland regions: [report of the 4th European Biennale Event of Highland Regions](#)

