



European
Commission

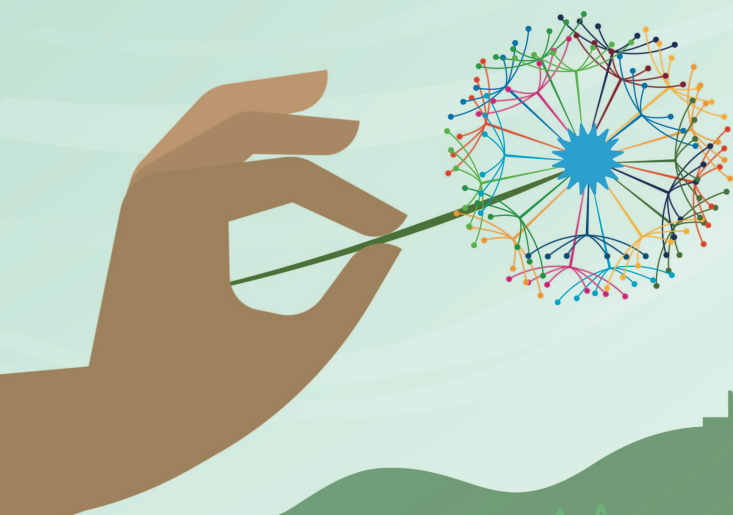
STI Roadmaps for Sustainable Development Goals

Localised Science, Technology
and Innovation Roadmaps
for transformation and development

Poster session

30 June 2020

Local, regional, national and international partnership applications of Smart Specialisation as a localised and transformative STI Roadmap for SDGs



SMART SPECIALISATION STRATEGY IN AUSTRALIA (AU)

Building Capability for Transformation in Australian Transition Regions

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

- ▶ **PARTNERS**
Australia is developing their own Smart Specialisation Platform to stimulate interregional partnership.
- ▶ **STAKEHOLDERS**
Smart Specialisation involves Quadruple Helix stakeholders in the Entrepreneurial Discovery Process that is the key aspect of Smart Specialisation approach.
That allows for stakeholders mobilisation in a meaningful policy process including governance, monitoring, project definition and implementation.

ACTION

- DEVELOPMENT OF A COOPERATIVE MALTING FACILITY
- PROBLEM**
Lack of cooperation and value-added in regional brewing sector.
- INNOVATION**
Bringing social innovation and research into a traditional food production value chain.
- SUSTAINABILITY**
Investment in infrastructure and innovation as drivers of economic growth and development.
- TOTAL INVESTMENT**
Approximately EUR 600,000 capital investment, and then ongoing operational activity dependent on demand.

SMART SPECIALISATION STRATEGY IN POLAND (PL)

S3 in the path for healthy society and sustainable, green and innovative economy

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

- ▶ **PARTNERS**
10 Polish regions are involved in 17 (all together) Thematic Smart Specialisation Partnerships. Poland also takes part in Interregional Collaboration Projects Programme (Interreg Europe) and The European Institute of Innovation and Technology's Knowledge and Innovation Communities (EIT KICs) projects.
- ▶ **STAKEHOLDERS**
Around 560 Quadruple Helix partners in 14 Working Groups on National Smart Specialisations. The Working Groups bring together experts from private sector, science institutes, academia, business organisations, NGOs.

ACTION

DEVELOPMENT AND IMPLEMENTATION OF EFFECTIVE FORECASTING AND MONITORING OF AIR POLLUTION, BASED ON AI TECHNIQUES USING DATA FROM AN EXTENSIVE MEASUREMENT NETWORK

PROBLEM
Smog and air pollution in large Polish cities.

INNOVATION
Using AI technology for accurate measurements and forecast of air quality via Airly sensors.

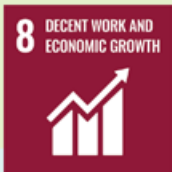
SUSTAINABILITY
Fighting air pollution for a better quality of life and well-being.

TOTAL INVESTMENT
EUR 1,066,000

SMART SPECIALISATION STRATEGY IN ABRUZZO (IT)

Sustainability for environment, society and economy. The "Pescara Charter", a regional model

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

▶ STAKEHOLDERS

About 100 SME's and 8 large enterprises involved.

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PROJECT

CIRCULAR ECONOMY APPLIED IN THE ABSORBENT HYGIENE PRODUCTS (AHP) INDUSTRY

PROBLEM

Each year 900,000 tons of AHP waste are incinerated or landfilled in Italy, 8,500,000 tons in Europe and over 30,000,000 tons in the world. Post-industrial diaper waste is a great opportunity in Abruzzo Region, also known as Nappy Valley.

INNOVATION

Researching and developing prototype technology for the creation of the first-ever bio-refinery in the world, which will use AHP waste to produce high value-added bio-fertilizers. Our project: RECOVER is developing the first hybrid recycling technology, able to recycle post-industrial and post-consumer AHP waste.

SUSTAINABILITY

Towards sustainable industry and production.

TOTAL INVESTMENT

EUR 7,800,000,00

SMART SPECIALISATION STRATEGY IN THE NORTHERN NETHERLANDS (NL)

An SDG-based approach for broad prosperity in the Northern-Netherlands' RIS3

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

STAKEHOLDERS

Quadruple Helix partners: Over 100 partners from business, knowledge producers, government and civic society.

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ACTION

REDUCEPT: ◀

A SERIOUS GAME DESIGNED FOR PATIENTS TO HELP MANAGE THEIR CHRONIC PAIN AS WELL AS EDUCATE THEM ON HOW PAIN ORIGINATES.

PROBLEM ◀

Chronic pain suffered by a large number of patients.

INNOVATION ◀

A unique combination of gaming and education - patients are more able to manage their chronic pain, even after the game has ended.

Through amazing visual graphics, patients will go on a journey through their body and they can be immersed within the experience virtual reality offers.

SUSTAINABILITY ◀

Towards good health and well being.

TOTAL INVESTMENT ◀

EUR 143,220

SMART SPECIALISATION STRATEGY IN SOUTH FINLAND (FI)

Increasing material efficiency and clean energy adoption to support sustainable development

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

▶ STAKEHOLDERS

LUT University, local municipalities, companies.

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ACTION

INCREASING MATERIAL EFFICIENCY AND
CLEAN ENERGY ADOPTION TO SUPPORT
SUSTAINABLE DEVELOPMENT

PROBLEM

Constant improvement of the existing solutions and technologies.

INNOVATION

Creating new environments for experimentation; develop solutions that are able to make a global difference and pilot them in the region. This is done in cooperation across industry, public sector and research and education organisations.

SUSTAINABILITY

Towards clean energy.

SMART SPECIALISATION STRATEGY IN SOFIA (BG)

SofiaLab for Innovations

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

▶ STAKEHOLDERS

Civil society, business, public sector, academic institutions.

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ACTION

SOFIALAB FOR INNOVATIONS

PROBLEM

Lack of co-working and dialog space for quadruple helix actors, which would enable dialog and collaboration between them.

INNOVATION

To foster innovative skills development among students and seniors. It opts to combine three main functions: a physical space equipped with certain computer-controlled tools and appropriate for gatherings/co-working; ongoing support for potential entrepreneurs; and ongoing bottom-up events demonstrating local innovation, entrepreneurship and knowledge transfer for all.

SUSTAINABILITY

Towards quality of education and economic growth.

INTERNATIONAL SMART SPECIALISATION AGRI-FOOD PARTNERSHIP

Consumer Involvement in Agri-food Innovation

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

- ▶ **PARTNERS**
The Partnership connects **4** regional and national administrations from **4** countries: *Food Valley/ East Netherlands, Östergötland/East Central Sweden, Central Denmark, South Ostrobothnia.*
- ▶ **STAKEHOLDERS**
Stakeholders involved are public authorities, food companies, universities, health care services, hospitals and home-care organisations, patient and consumer organisations.
- ▶ **WEBPAGE**
<https://europa.eu/!VU36kM>

ACTION

- PROBLEM** ◀
Malnutrition in an ageing population threatening their health and leading to greater demands on healthcare.
- INNOVATION** ◀
The Partnership facilitates the exchange of knowledge, experience and information. In practice, this is operationalised via World Food Experience Centre where consumers can learn about the origin and composition of food and the effects on the body and the environment.
- SUSTAINABILITY** ◀
The Partnership stimulates and supports common actions relevant to innovation in the agri-food chain from the consumer and user perspective, promoting awareness, education and well-being.

INTERNATIONAL SMART SPECIALISATION AGRI-FOOD PARTNERSHIP

High Technology Farming

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

PARTNERS

The Partnership connects **34** regional and national administrations from **18** countries (15 EU and 3 non-EU countries) with a strong priority related with the innovation and adoption of new technologies in the agricultural sectors: *Tuscany, Galicia, Extremadura, Gelderland, Central Macedonia, Marche, Western Macedonia, Weser-Ems, South Holland, Limburg, North East Romania, Emilia-Romagna, East Sweden, Northern Ireland, Estonia, North Holland, Food Valley/East Netherlands, Pays de la Loire, South Ostrobothnia, Veneto, Noord Brabant, Basilicata, Flanders, Centro, Umbria, Luxemburg, Bretagne, Norway, Friuli Venezia Giulia, Eastern Slovenia, Provincia Autonoma di Trento, Provincia Autonoma di Bolzano, Montenegro, Slavonia.*

STAKEHOLDERS

The Partnership involves industrial companies, ICT-companies, farmers, knowledge institutes with scientific and applied expertise, and public authorities.

WEBPAGE

<https://europa.eu/tuG93UX>

ACTION

PROBLEM

Modernisation of four food value chains: arables, horticulture, protected cultivations and livestock.

INNOVATION

Development of the following technology areas for agriculture: EYES and TOUCH (Meteo sensors, Soil sensors, Canopy sensors, Product sensors; On-board/proximal sensors), MIND (Data acquisition, Data analysis, Layers/images, DSS), INTELLIGENT ARMS (Machineries, Programming/Automation, Robotic), technology oriented SERVICES (Installing, Maintenance, Repairing), and educational oriented SERVICES (Training, Demo farms and sites).

EXAMPLE OF PROJECT:

POULTRY DUST REDUCTION

Is a pilot developed to reduce emissions in livestock keeping.

SUSTAINABILITY

Improving health and welfare of farmers, animals and environment.

INTERNATIONAL SMART SPECIALISATION AGRI-FOOD PARTNERSHIP

Building new and sustainable value-chains for innovative ingredients

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

- ▶ **PARTNERS**
The Partnership connects **10** regional and national administrations from **7** countries: *Wallonia, Flanders, Galicia, Asturias, Central Denmark, Emilia-Romagna, Provence-Alpes-Côte d'Azur, Central Macedonia, La Rioja, Central Transdanubian Region.*
- ▶ **STAKEHOLDERS**
Cluster organizations, regional authorities/public sector, key opinion leaders, industry players, universities, research and technology organizations, and pilot plant facilities.
- ▶ **WEBPAGE**
<https://europa.eu/!WQ64JY>

ACTION

- PROBLEM** ◀
Adaptation of farmers, food companies, retailers to consumers' demand for sustainable and healthy products, by suggesting differentiated products (food quality and functionality, safety, and environmental and social attributes).
- INNOVATION** ◀
The Partnership facilitates the uptake and cross-over of innovation in the field of functional/nutritional ingredients and related application sectors.
- EXAMPLE OF PROJECT: INGREEN** ◀
Is a pilot project that aims at production of functional innovative ingredients from paper and agro-food side-streams through sustainable and efficient tailor-made biotechnological processes for food, feed, pharma and cosmetics.
- SUSTAINABILITY** ◀
Sustainable and industrially validated biotechnological processes.

INTERNATIONAL SMART SPECIALISATION AGRI-FOOD PARTNERSHIP

Smart sensors for sustainable, resilient and smart food system

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

▶ PARTNERS

The Partnership connects **16** regional and national administrations from **12** countries: *Flanders, Wallonia, Asturias, Attica, Austria, Auvergne Rhône-Alpes, Bretagne, Central Denmark, Galicia, Central Transdanubian Region, Lombardy, Navarra, North Brabant, North-Rhine Westphalia, Slovenia, South Ostrobothnia.*

▶ STAKEHOLDERS

The Partnership is based on a network of cluster-like organisations and RTOs active in agri-food or technology fields. All members represents the quadruple helix and support a broad network of companies (>2000), both large and SMEs.

▶ WEBPAGE

<https://europa.eu/!uG93UX>

ACTION

PROBLEM ◀

The barriers for agri-food companies to access and implement the newest smart sensor systems.

INNOVATION ◀

The Partnership supports business ecosystem by connecting agri-food clusters and clusters representing technology and/or digital solution providers together with RTOs and other stakeholders. The Partnership aims to make agri-food companies acquainted with and train them in data management and mining, and thus facilitate the Industry 4.0 transition.

EXAMPLE OF PROJECT: ◀

CONSENSYS

Connecting smart sensor systems for the food industry is a project that aims at setting-up network of open access living labs for industry 4.0, and the development of demo cases and generic business models.

INTERNATIONAL SMART SPECIALISATION AGRI-FOOD PARTNERSHIP

Data boosting a more sustainable, responsible and competitive agri-food sector

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

PARTNERS

Regional cooperation to boost innovation and digitisation in the European agri-food value chain involving **22** regional and national administrations from **11** countries (10 EU and 1 non-EU country): *Andalusia, Emilia-Romagna, Aragon, Basque Country, Bretagne, Central Macedonia, Cork County, Extremadura, Friuli Venezia Giulia, Galicia, Hadjú-Bihar, Limburg, Middle Black Sea, Navarra, Northern Ostrobothnia, Pays de la Loire, Pazardzhik, Sardinia, Satakunta, South Ostrobothnia, South Savo, South Transdanubian.*

STAKEHOLDERS

The Partnership developed regional nodes by connecting more than 1,600 stakeholders, including companies, industries, universities, trade unions and civil associations across EU countries and some non-EU countries.

WEBPAGE

<https://europa.eu/!bT88Gk>

ACTION

PROBLEM

Insufficient digitalisation of agri-food sector value chains.

INNOVATION

The main objective of the Partnership is to encourage, motivate and facilitate the incorporation of the necessary digital technologies in the agri-food sector value chain to make progress towards digital economy.

EXAMPLE OF PROJECT:

COMPLAT

Is a project that offers a communication and traceability tool for the agrifood value chain connecting food producers processors, retailers, distributors and consumers.

SUSTAINABILITY

More sustainable, responsible and competitive agri-food sector.

INTERNATIONAL SMART SPECIALISATION INDUSTRIAL MODERNISATION

Innovative textile and clothing design based on innovation, creativity, knowledge and sustainability

CONTRIBUTION TO SDGs



PARTNERSHIPS AND COLLABORATION

- ▶ **PARTNERS**
Regional cooperation to boost innovation in textile and clothing industry involving **16** regional and national administrations from **10** countries: *North East Romania, Valencia, West Flanders, Hradec Kralove, Auvergne Rhone-Alpes, Baden-Württemberg, Emilia Romagna, Campania, Lombardy, Puglia, Tuscany, Piedmont, Lodzkie, Norte, Catalonia, Västra Gotaland County.*
- ▶ **STAKEHOLDERS**
The Partnership involves public authorities and agencies, stakeholders from the textile, clothing and related industries, as well as their research, technology and education providers.
- ▶ **WEBPAGE**
<https://europa.eu/lbT88Gk>

ACTION

- PROBLEM** ◀
High environmental end energy costs of textile industry.
- INNOVATION** ◀
The Partnership supports international collaboration and investment in the areas of textile sustainability, digitalisation, industry 4.0, as well as design and creativity-based innovation.
- EXAMPLE OF PROJECT** ◀
Pilot projects for textile waste collection and recycling programs and infrastructures.
- SUSTAINABILITY** ◀
Safe and rewarding jobs, quality employment opportunities, life-long learning and fulfilling career development in the textile and clothing sector. Also, establishing consumption patterns of textile and clothing products based on concepts such as circular economy, minimisation of primary resource extraction, avoidance of pollution as well as protection of health and safety of workers and consumers.

All posters are available for download:
<https://s3platform.jrc.ec.europa.eu/knowledge-repository>