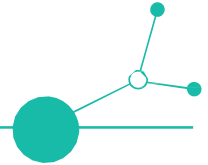


Review of priorities and recommendations for Smart Specialisation Strategies



02 2026





Food4CE

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1. The Food4CE Project in a nutshell

Food4CE is a European project funded by the INTERREG Central Europe Programme, aimed at supporting Alternative Food Networks (AFNs) in their efforts to create sustainable and resilient food supply systems. AFNs are essential for promoting short food supply chains and reducing the carbon footprint of food distribution. However, they face challenges such as lack of knowledge on logistics collaboration, digitalisation and distribution/delivery systems, which are exacerbated by the COVID-19 pandemic.

Food4CE seeks to address these challenges by establishing 5 local and 1 Transnational Innovation Hub (IH), bringing together actors from different sectors including researchers, business experts, food producers, logistic and transport operators, and policy makers. These hubs will focus on advancing AFNs logistics efficiency through the development of innovative tools and solutions.

Two innovative tools are being jointly developed within the project: the Knowledge Transfer Platform and the Matchmaking Platform. The former is intended for sharing logistics best practices and solutions, while the latter is intended for creating new B2B and B2C logistics solutions and services. The aim is to facilitate knowledge transfer and exchange between different regions and actors, and to create a unique mutual support network for AFNs in Central Europe.

Food4CE will also provide jointly developed regional action plans for each participating region and transnational (CE) policy guidelines for AFN support. The project aims to establish a sustainable and lasting AFN support mechanism, which will continue working even after the project end. This will be achieved through the integration of the Transnational Innovation Hub into the existing European Network of Logistics competence centres.

Food4CE is a vital initiative that seeks to support AFNs in their efforts to create sustainable and resilient food supply systems. By establishing local and transnational Innovation Hubs and developing innovative tools and solutions, the project aims to facilitate knowledge exchange and cooperation between different actors and regions, leading to a sustainable and lasting AFN support mechanism.



2. Introduction to Smart Specialization Strategies

The European Commission introduced the S3 concept in the EU Cohesion Policy 2014-2020 as an ‘ex-ante conditionality’ for European regions to obtain funding for research and innovation from the European Regional Development Fund (ERDF) (European Commission, 2012).

Smart Specialisation (S3) is a strategy developed to promote regional economic development and innovation. It involves identifying unique strengths and potential of a region’s economy and working with local businesses, researchers, and community members to decide where to invest for the biggest impact. This process, called the Entrepreneurial Discovery Process (EDP), ensures that everyone has a say in shaping the region’s future.

The idea behind Smart Specialisation is to build on what a region already excels at, rather than trying to copy what works elsewhere. It’s not just about technology—it includes new ideas in social, environmental, and organizational areas too. By concentrating resources on areas where a region has a competitive advantage, this approach aims to boost innovation, create jobs, and support sustainable growth. Regular progress checks help ensure that the strategy stays on track and adapts to new challenges and opportunities.



Figure 1: Smart Specialization Strategy elements

Source: D. Foray, K. Morgan & S. Radosevic, 2018.

Key elements of Smart Specialization Strategies include (S3 Platform, 2024):

- **Entrepreneurial Discovery Process (EDP):** The heart of smart specialization is the Entrepreneurial Discovery Process, a bottom-up approach that involves engaging stakeholders from academia, industry, government, and civil society to identify a region’s key competitive advantages and innovation potential. Through this inclusive process, regions can uncover their latent potential and develop a shared vision for specialization.
- **Priority setting and concentration:** Based on the outcomes of the EDP, regions identify a limited number of strategic priorities that align with their unique strengths and resources. These priorities are areas, where targeted investments and support are concentrated to maximize impact and avoid spreading resources too thinly.
- **Innovation ecosystems:** Smart specialization recognizes the importance of fostering vibrant innovation ecosystems that bring together research institutions, businesses, startups, and other actors. These ecosystems facilitate knowledge exchange, technology transfer, and collaborative partnerships, fostering innovation and entrepreneurship.



- Governance and monitoring: Successful implementation of smart specialization requires effective governance structures to coordinate efforts among different stakeholders and ensure the alignment of policies and investments. Regular monitoring and evaluation help assess progress, identify challenges, and adjust strategies accordingly.

Smart Specialisation Strategies offer several significant benefits. By concentrating on areas of strength, regions can enhance their competitiveness, positioning themselves as leaders in specific industries or technologies. This targeted focus also drives increased innovation by encouraging research and development activities, which in turn lead to the creation of new products, services, and processes. Furthermore, smart specialisation fosters regional cohesion by leveraging local assets and engaging stakeholders in the development process, creating a more inclusive and participatory approach to regional growth and development.

Smart Specialisation Strategies also come with several challenges. Balancing priorities is a key difficulty, as it involves making trade-offs and carefully considering the region's unique capabilities and needs to identify a focused set of objectives. Ensuring collaboration is another significant challenge, as building effective innovation ecosystems and fostering cooperation among diverse stakeholders can be complex and time consuming. Additionally, monitoring and evaluation play a critical role in these strategies, requiring consistent efforts to measure their impact and ensure their effectiveness in achieving the desired outcomes.

To address these challenges and maximize the potential of Smart Specialisation, European Union policies have placed a strong emphasis on aligning strategies with regional strengths while fostering innovation and collaboration. This commitment is evident in the future programming period of EU Cohesion Policy 2021-27, which has allocated the majority of its budget to fostering a Smarter Europe by reaffirming the importance of the Smart Specialisation Strategy (S3). In this context, European regions are tasked with updating their S3 to meet new demands and adhere to the enabling conditions established for the period (Interreg Europe, 2020):

- Up-to-date analysis of bottlenecks for innovation diffusion, including digitalisation
- Existence of competent regional / national institution or body, responsible for the management of the smart specialisation strategy
- Monitoring and evaluation tools to measure performance towards the objectives of the strategy
- Effective functioning of entrepreneurial discovery process
- Actions necessary to improve national or regional research and innovation systems
- Actions to manage industrial transition
- Measures for international collaboration

In continuation, Food4CE recommendations for Smart Specialisation Strategies of each participating country.



3. Review of Smart Specialisation Strategies in Slovenia

3.1. General description

The Slovenian Smart Specialisation Strategy (S5) is a key policy document that outlines Slovenia's strategic approach to promoting innovation, economic growth, and sustainable development. In the 2014-2020 programming period, Slovenian Smart Specialisation Strategy pursued the two fundamental goals of EU policy orientation, the transition to a green and digital society, and was designed as a tool facilitating the economic transformation to improve the ecosystem and step up the funding of actions in the field of RDI, human resources, entrepreneurship and internationalisation. New strategic development and innovation partnerships (SRIPs) were formed as development clusters at the start of the S4 implementation and remain the central mechanism of S5, dictating the focus on breakthrough, competitive economic areas in Slovenia and, as such, the driving force behind the ongoing EDP also in the 2021-2027 programming period (Slovenia's Sustainable Smart Specialisation Strategy, 2023).

Aligned with the European Union's Smart Specialisation Platform, S5 capitalizes on Slovenia's distinctive strengths and resources to enhance competitiveness, drive innovation, and support regional development. By channelling resources and efforts in specific priority areas, S5 aims to position Slovenia as a dynamic and knowledge-driven economy that contributes to long-term prosperity and resilience. The strategy was designed to align not just to national goals, but also with the EU's broader objectives, including the Europe 2020 strategy and the European Green Deal. The S5 for the 2021-2027 programming period places green transition at the forefront of its agenda (see Table 1). This transformation is envisioned as an innovation-driven, low-carbon, digital, and knowledge-based evolution of the economy and society. Key stakeholders from sectors where Slovenia holds comparative advantages, and which are integral to the S5 framework, are instrumental in driving this process forward.

The strategy's strong focus on sustainability is evident in its name, Slovenia's Sustainable Smart Specialisation Strategy (S5), emphasizing its commitment to aligning economic development with environmental responsibility. S5 serves as the primary foundation for allocating funding from the European Regional Development Fund (ERDF) under Policy Objective 1: A Smarter Europe. By prioritizing sustainable innovation, S5 aims to reinforce Slovenia's leadership in the green and digital transition while fostering long-term economic resilience and growth (Slovenia's Sustainable Smart Specialisation Strategy, 2023).

Name	Description
Smart Buildings and Homes including the Wood Chain	Integrated solutions for Managing Buildings and connectivity with Built Environment. Energy, water and waste management. Construction components, including wood, interior, home appliances, building envelope and finishing elements. Specific solutions for smart, almost passive houses.
Smart Cities and Communities	ICT solutions for the areas of Health, Energy, Mobility, Security and Quality of Urban Environments.
ICT - KETs and Horizontal Areas	Digital transformation technologies and business models, including IoT, IoS, Cyber Security, AI HPC & Big Data.
Networks for the Transition into Circular Economy	Horizontal (green processes and technologies) and vertical products and services (i.e. Business models) for the transition into circular economy, including sustainable energy (Renewable Energy Sources and waste), biomass, alternative and secondary raw materials.
Health - Medicine	Translational medicine, active and healing ageing smart solutions, resistant bacteria, bio-pharmaceuticals, herbal and natural medicine, cancer treatment technologies.
Sustainable Mobility	Transformation of the automotive industry and mobility solutions. Advanced infrastructure for e-mobility.



Factories of the Future	Robot systems and components, including advanced sensors and laser systems. High tech smart plasma systems. Intelligent control systems. Smart mechatronic tools. Special magnetic materials and functional coatings.
Sustainable Food Production	Optimisation of agri-food supply chains including novel foods and products, quality raw materials in food Industry.
Sustainable Tourism	Regenerative tourism, smart and zero waste offers, Slovenia SPA, smart cultural and natural heritage destinations in Slovenia.
Development of Materials as Products	New technologies for special steels and alloys, and aluminium. Rapid prototyping and additive technologies. New technologies for recycling, polymers and hybrid materials. Multicomponent smart fibres, textiles and composites. Functional coatings and advanced binders.

Table 1: An overview of S5 2021-2027 priorities in Slovenia

Source: S3 Platform, 2024.

3.2. Recommendations for SSS

To address the challenges of the region and leverage opportunities, the following recommendations are proposed for Slovenia's S5 while ensuring long-term economic viability of AFNs and SFSCs:

1. Acceleration of the Digital Transformation in the Agri-Food Sector

- Promoting widespread adoption of digital tools: Active promotion and subsidization for the adoption of advanced digital solutions tailored for AFNs and SFSCs to overcome the slow pace of digital transformation in the agri-food sector. This includes Information Systems for Supply Chain Linkages to connect members and ensure traceability of production, storage, transport, raw materials, and products.

Leveraging Food4CE's digital platforms: Integration and expansion of the use of Food4CE's KTP for sharing logistics best practices and solutions, and its Matchmaking Platform (MP) for creating new B2B and B2C logistics solutions and services specifically for AFNs. These platforms directly support S5's objective of "Advancing ICT connectivity and digital transformation".

Supporting data-driven logistics and smart agri-food: Encouraging the development and implementation of ICT solutions that enhance urban mobility, energy systems, water management, and liveability in cities and peri-urban areas, benefiting SFSCs through smart logistics and IoT-enabled urban solutions. This involves the development and upgrade of applications for supply chain optimization, such as the existing food catalog for public procurement, and expanding it for use by the hospitality and tourism sector. Supporting the collection and analysis of large datasets from the agri-food supply chain using advanced technologies and IoT for process optimization, increasing food quantity, quality, and traceability, improving resource use, and reducing environmental impact.

Enhancing digital competencies: Focusing on strengthening "competencies of the digital age" among agri-food sector employees through training and education.

2. Increasing and strategic targeting of public investment in RDI for AFNs/SFSCs

- Prioritization of funding for sustainable food systems: Allocation of a substantial portion of the European Regional Development Fund (ERDF) and other national and EU funds towards research, development, and innovation activities specifically for AFNs and SFSCs. Acknowledging and addressing the "limited public investment in science, research, and innovation activities", which were identified as a significant challenge.
- Incentivize private sector RDI: Creating attractive financial incentives and public-private partnership models to encourage greater private investment in developing and scaling sustainable food production and distribution technologies. This should be done through instruments like research and innovation



vouchers and tax relief for R&D.

Supporting breakthrough innovations: Direct investments towards "niche areas with the greatest potential for growth and breakthrough to international markets" within the agri-food sector, ensuring these projects have a clear market potential.

3. Optimizing logistics and distribution coordination for SFSCs

- Facilitating shared logistics infrastructure: Supporting the establishment of shared logistics hubs and distribution centers for small-scale producers to address challenges related to pooling resources and seasonal fluctuations. This could involve leveraging S5's "Mobility" and "Factories of the Future" pillars.
- Promoting carbon-neutral delivery options: Investments in smart infrastructure and alternative drive systems, such as electric vehicles, which are particularly well-suited for short distances in cities, to reduce emissions and improve logistics efficiency for AFNs while ensuring an unbroken cold chain.
- Enhancing supply chain management: Supporting the development and implementation of intelligent control systems and IoT-driven solutions that enable better coordination between producers, processors, and consumers, optimizing agri-food supply chains. This includes the development of logistic activity as a key objective.

Fostering industrial symbiosis: Promoting initiatives where by-products or waste from one producer become raw materials for another, enhancing circularity within the food chain and optimizing material flows.

4. Boosting consumer awareness and market access for local products

- Launching targeted awareness campaigns: Addressing the limited consumer awareness about SFSCs and locally produced food benefits through educational campaigns and marketing initiatives, highlighting aspects like freshness, quality, nutritional value, and reduced carbon footprint.

Streamlining market linkages: Developing mechanisms and digital platforms that help small-scale producers access markets directly and compete with larger agribusinesses, particularly in public procurement processes and larger orders. Emphasizing transparency regarding the origin of raw materials and processing technologies to rebuild consumer trust.

5. Simplifying regulatory and bureaucratic frameworks

- Reviewing and adapting regulations: Simplifying complex regulations concerning food safety, labeling, and distribution for small-scale producers within SFSCs, as they can hinder development. Dedicated support and resources should be provided to help AFNs navigate existing frameworks.

Improving administrative efficiency: Striving for "clear, consistent and feasible legislation" and "fast procedures for acquiring permits" to create a more supportive business environment for agri-food enterprises.

6. Supporting Skills Development and Generational Transition in Agri-Food

- Investing in targeted training and education: Countering the aging farmer population and skill gaps by providing targeted support for education, training, and professional development in modern agricultural practices, food hygiene, and marketing for AFNs. Successful initiatives like Competence Centers for Human Resources Development (KOCs) should be leveraged.
- Developing competence prediction platforms: Implementation and utilization of platforms that forecast the needs for specific competencies based on market trends, ensuring timely training and education for



agri-food workers.

- Promoting interdisciplinary and soft skills: Encouraging the acquisition and strengthening of interdisciplinary and "soft" competencies essential for innovation and adaptability in the modern agri-food sector.
- Fostering collaboration between education and industry: Strengthening cooperation between educational institutions, research centers, and businesses to ensure that study programs are relevant to market needs and to promote professions in the agri-food industry, especially those facing shortages.

Attracting and retaining talent: Implementing programs and incentives to attract younger generations and retain highly educated staff in the agri-food sector, including initiatives for researchers to transition flexibly between academia and industry.

7. Strengthening stakeholder involvement and cross-sectoral collaboration

- Enhancing the Entrepreneurial Discovery Process (EDP): Ensuring continuous and effective functioning of the EDP to identify emerging needs and opportunities for AFNs and SFSCs, integrating input from all stakeholders, including businesses, research institutions, and civil society. Slovenia's Strategic Research and Innovation Partnerships (SRIPs) are recognized as a good practice for ensuring EDP continuity.
- Leveraging Strategic Research and Innovation Partnerships (SRIPs): Strengthening the role of SRIPs as "a good instrument for connecting economy and science" and the main governance mechanism for S5 priority areas. Encouraging SRIPs to drive joint initiatives, promote internationalization, and support the twin green and digital transition within the food and logistics sectors, ensuring alignment with market needs and policy goals for AFNs.
- Promoting cross-SRIP collaboration: Facilitating greater cooperation among SRIPs, particularly those with horizontal themes like ICT and circular economy, to foster important synergies, identify prospective areas, and develop complex value chains.
- Enhancing international collaboration: Active support and promotion of supra-regional and international cooperation and networking for R&D funding measures, accelerating Slovenia's inclusion in European and global research and development programs and initiatives like Horizon Europe and Interreg.

By systematically implementing these recommendations, Slovenia can further develop its agri-food sector, strengthen its SFSCs and AFNs, and enhance its overall innovation capacity, contributing to a more sustainable, resilient, and competitive economy aligned with the goals of S5 and the Food4CE project.



4. Review of Smart Specialisation Strategies in Austria

The RTI Strategy 2030, as outlined by the Austrian government, aims to position Austria as a leader in research, technology, and innovation over the next decade. The strategy is governed by a cross-departmental task force that includes representatives from various federal ministries, ensuring coordinated implementation. Additionally, the RTI Pact establishes cross-departmental research and innovation policy priorities to improve coordination and avoid duplication of efforts.

The RTI Strategy 2030 for Austria outlines three key objectives aimed at enhancing the country's position in research, technology, and innovation. The first one is "Become an International Innovation Leader and strengthen Austria as an RTI location," which includes the rank improvements in international indices as well as support RTI-intensive companies or to drive digital transformation. Objective 2 "Focus on effectiveness and excellence" focuses on the increase in R&D expenditure and successful participation in the Horizon programme among others. In objective 3 (Focus on knowledge, talents and skills) mainly the talents and universities shall be fostered.

European initiatives like the "European Green Deal" and "Partnerships for Regional Innovation" are reshaping research efforts and influencing national policies, sparking discussions on regional innovation. The RTI strategy Austria 2030 and the RTI Pact 2021-2023 emphasize green and digital transformation, focusing on mobility, energy, materials transition, and climate neutrality in various regions. Austria's participation in EU missions, such as climate change adaptation and climate-neutral cities, is complemented by national and regional activities to maximize investment impacts. Consequently, the program landscape is evolving, with federal programs increasingly incorporating territorial approaches.

Smart specialisation in Austria is embedded in different funding programmes but is not existing as a stand-alone strategy. The RTI Strategy is based on a detailed analysis from the OECD and incorporates the European Commission's Smart Specialisation concept, along with cross-cutting issues like sustainable development, digitalisation, and gender equality (ÖROK, 2024).

4.1. General description

Smart Specialisation Strategies (SSS) are designed to foster economic growth and innovation by leveraging the unique strengths and capabilities of different regions. These strategies aim to promote structural transformation towards knowledge-based and innovation-driven growth. By identifying and prioritizing areas where regions have competitive advantages, SSS help to focus investments in research, development, and innovation.

In Austria, SSS involve a collaborative process known as "entrepreneurial discovery," where businesses, research institutions, government bodies, and other stakeholders work together to identify key areas for development. This approach ensures that investments are targeted towards sectors with the highest potential for economic impact and job creation.

The ultimate goal of Austria's SSS is to enhance regional competitiveness, support sustainable development, and integrate Austrian regions into global value chains. By doing so, these strategies aim to create a more resilient and dynamic economy that can adapt to changing global trends and challenges.

4.1.1. Geographical scope

In Austria, the SSS is being implemented in several regions, with each region setting its own priorities. Here are some examples related to food production and food logistics:



The province of Styria is focusing on sustainable food production and intelligent logistics solutions. Projects in this region aim to improve efficiency in the food supply chain and promote sustainable practices (European Commission, 2024).

Innovative Upper Austria 2020: This strategy encompasses five key areas, including food/nutrition and mobility/logistics. Upper Austria has a long tradition of developing innovative programmes and is using S3 to promote regional strengths (European Commission, 2024).

Initiatives are in place here to promote regional food production and to improve logistics by using new technologies. Lower Austria relies on cooperation between research institutions and industry to develop innovative solutions (European Commission, 2024).

The Upper Austrian Food Cluster, which initiates, promotes and coordinates successful cooperation between companies, was won over for the collaboration. As an interface between partner companies, research institutions and decision-makers, it is committed to improving conditions for the food industry in Upper Austria (Lebensmittel Cluster, 2025).

With an area of about 12 square kilometres, Upper Austria is the fourth largest federal state in Austria and, with around 1.5 million inhabitants, the third most populous. Compared to the gross domestic product of the European Union, expressed in purchasing power standards, Upper Austria achieved an index of 132 (EU-28: 100 Austria: 129) (Wikipedia, 2025).

Upper Austria is one of the centres of Austrian industry. Nearly 70.000 commercial enterprises with 576,203 employees generate a gross regional product of around 33 billion euros (Wikipedia, 2025).

Important economic sectors are:

- Metal production
- Vehicle manufacturing and supply companies
- Chemicals and paper
- Mechanical and plant engineering
- Food
- Tourism



Figure 5. Map of Austria's provincial areas

Source: <https://www.touropia.com/regions-in-austria-map/>



4.2. Recommendations for SSS

Regional and municipal authorities, as well as interest groups and service providers, play a decisive role in enabling AFNs and SFSCs. Although national strategies provide an overarching framework, many of the most relevant levers for strengthening AFNs are found at regional or local level. The following recommendations are therefore directed at national and regional governments, municipalities, and regional stakeholders in Austria. They highlight how policy adjustments, infrastructure measures, and awareness initiatives can improve the resilience and visibility of AFNs.

A first priority is the provision of logistics and infrastructure support. Many small producers lack access to scale-appropriate cold storage, distribution centers, and last mile delivery solutions. Regional governments should therefore create dedicated funding instruments to support cooperative logistics schemes but even reworking the current regulatory framework to make it easier to understand and work with would help a lot. Municipalities could provide accessible sites for pilot hubs, which may combine cold storage, micro-depots, and routing services. Such initiatives reduce costs for small producers, enable efficient delivery, and strengthen the rural-urban food connection.

Sustainable public procurement is another important lever. Current procurement frameworks often privilege the lowest price, which disadvantages regional and sustainable producers. Regional and municipal administrations should adjust their procurement guidelines to include sustainability, seasonality, and regionality as weighted criteria. Procurement should be transparent and easy and unbureaucratically accessible. Pilot tenders in schools, hospitals, and public canteens can demonstrate that cost efficiency and sustainability are not mutually exclusive. This would expand market access for regional producers and reinforce resilient local food systems.

Food safety and hygiene regulations are vital for consumer protection, but uniform national standards often place disproportionate burdens on micro-enterprises and redistribution initiatives by being too bureaucratic and expensive. Micromanaging should be avoided. Regional agencies, in cooperation with health authorities, could develop simplified and risk-based monitoring systems adapted to small-scale actors. Pilot projects in municipalities could test flexible documentation methods while safeguarding high safety standards. In this way, regulatory barriers would be reduced without compromising consumer protection.

Consumer trust is crucial for the success of AFNs, and transparency in labelling plays a key role. Regional administrations and chambers of commerce should therefore support communication strategies and labelling initiatives that clearly identify “regional” and “sustainable” products. Campaigns at local level, aligned with national and EU frameworks, would reduce greenwashing, guide consumer choices, and strengthen the visibility of AFNs in competitive markets.

Aimed structure giving governance activity and coordination mechanisms are also needed. AFNs often operate in isolation and risk being overlooked in regional development strategies. Establishing regional food councils or advisory boards that bring together producers, logistics providers, consumer groups, and research institutions could potentially ensure that AFNs have a voice in policy processes. Such cross-sectoral governance structures would help to align policies, create continuity, and strengthen long-term planning without interfering with the strength of the market actors.

Education and awareness building provide the foundation for sustainable food systems in the future by integrating urgent issues in a practical and understanding way for the public. Food literacy should be integrated into regional school curricula, while municipalities can partner with NGOs and civil society



organizations to raise awareness about regional food production, delivery of food, production of food, transparency, food waste, shelf life, organic growing practices, positive impact of local farmer for the landscape and food safety, alternative sources of buying food and nutrition. Informed consumers create long-term demand for sustainable and regional food, which increases both the resilience and acceptance of AFNs.

Finally, sustainable urban mobility is essential for food logistics. Local authorities could support pilot projects for cargo bikes, electric vans, cooled parcel lockers and shared delivery systems by giving an easy and transparent regulatory framework, work with companies in pilots together or fund projects directly or indirectly for example via the state-owned housing company. Investments in charging infrastructure, loading zones, and cycle lanes can provide the necessary framework conditions for logistics service providers to operate efficiently. These measures reduce emissions, alleviate congestion, and ensure reliable supply for urban consumers and gastronomy.

In conclusion, regional and local decision makers have the capacity to create an enabling environment for AFNs by investing in infrastructure, adapting regulations, supporting transparent labelling, fostering aimed governance, promoting food literacy, and enabling green logistics solutions. Embedding these measures into regional and municipal strategies will not only strengthen food security and environmental sustainability but also contribute to vibrant local economies across Austria.



5. Review of Smart Specialisation Strategies in Poland

5.1. General description

The Regional Innovation Strategy for Wielkopolska Region for 2015-2020, which has existed so far, was adopted on 30 March 2015 based on a resolution of the Voivodeship Assembly of Wielkopolska Region (No. V/104/15). It defined 6 priority areas for the implementation of pro-innovation policy (so-called smart specializations).

Main goal of the strategy is improving the region's innovativeness and competitiveness. Achieving such a defined goal requires systemic action of various entities of the regional innovation system: local governments, research entities and business environment institutions, thanks to which regional companies will be able to effectively innovate and compete on international markets. According to the adopted development model, it is companies, as entities introducing innovative products and services to the market, that are crucial in the process of increasing the innovativeness and competitiveness of the region, and the efforts of other entities of the innovation system should be directed towards supporting them in this process.

For this reason, in 2013, an entrepreneurial discovery process was launched in Wielkopolska Region, in which, based on extensive research and analysis and dialogue with representatives of the economic and scientific specialization areas of the region, areas of smart specialization were selected for innovation policy measures. The process of entrepreneurial discovery will continue throughout the entire programming period and may lead to the completion and updating of existing areas of specialization.

This strategy is the next stage of actions aimed at improving the innovativeness of the region, which started with the adoption of the first Regional Innovation Strategy for Greater Poland in 2004 and continued after its update in 2011 and 2015. The basics of the functioning of the innovation system outlined in these documents and the actions implemented have made it possible to raise the awareness of its actors and to move to the next stage based on the conscious development of long-term innovation policy. The strategy considers the provisions of existing European and national documents. It is also consistent with the Development Strategy of the Wielkopolska Region until 2030 (Wielkopolska 2030 Strategy, 2019).

Wielkopolska Region innovation policy is understood as a set of activities of various entities of the regional innovation system, which lead to increased competitiveness and innovation of the region. This strategic paper is a record of the main lines of these actions and the proposed system for their implementation, monitoring and funding. The layout of the strategy and its objectives assumed that they are coordinated by the Regional Government of Wielkopolska Region, which is the entity responsible for implementing the provisions of the strategy, and the courses of action described in the strategy are areas relevant to the region, which may be influenced by the Regional Government. Innovativeness and competitiveness of Greater Poland will also be affected by other activities, autonomously undertaken by the entities of the innovation system.

Due to changes in the region's economy and the expiry of the Innovation Strategy, Wielkopolska Region has undertaken updating the Regional Innovation Strategy to set a new course of action for the following years, i.e. after 2020 (RIS 2030, 2020).



Figure 7: Process of developing RIS for Wielkopolska by 2030 (RIS2030).

Source: RIS 2030, 2020.

RIS 2030 presents the region's innovation policy for the period up to 2030, which is particularly important in the light of the design of support instruments for the new financial perspective 2021-2027. RIS 2030 includes a way for regional and local authorities to stimulate innovation as the main available resources under the new Cohesion Policy. These funds should be used effectively for the purposes of conducting innovation policy in the region, which will consider the endogenous potential of Wielkopolska Region, the adopted areas of specialization at regional and sub-regional level - while maintaining compliance with higher-level strategies (including meeting the basic conditionality) (RIS2030, 2020).

Finally, the dynamic nature of this strategy should also be emphasized. According to the European Commission's current guidelines for the design of Regional Innovation Strategies, the nature of the document should allow for updates during the period of validity. In this respect, effective processes related to RIS 2030 monitoring and the application scheme of application of the entrepreneurial discovery process are of particular importance. In particular, it will be important to look for new niche areas at regional or sub-regional level, the development of which can contribute to the rational reconstruction of the employment structure, including mainly the pro-innovation attitude of young people, the activation of the economic environment, as well as it will be a response to the challenges of climate change and the reduction of the economic burden on the environment and the implementation of the energy transformation (RIS2030, 2020).

5.2. Recommendations for SSS

To address the regional challenges and capitalize on the synergies between the **Food4CE project** and the **Wielkopolska Regional Innovation Strategy (RIS 2030)**, the following recommendations are proposed:

Accelerating Digitalization in the Agri-Food Value Chain

- **Promote ICT Traceability Systems:** Leverage the "Bio-raw materials and food for conscious consumers" pillar to fund and implement digital systems that ensure transparency from production to sale.
- **Integrate Food4CE Digital Tools:** Explicitly support the uptake of the Knowledge Transfer and Matchmaking Platforms within regional SME support schemes to facilitate B2B and B2C logistics solutions.
- **Support Smart Logistics for SFSCs:** Utilize the "ICT-based development" pillar to develop mobile applications and e-services specifically tailored for small-scale local food distribution.

Strengthening Collaborative Logistics Infrastructure

- **Develop Shared Distribution Centers:** Address inadequate infrastructure by funding the creation of regional logistics hubs, silos, and storage facilities that small-scale producers can use collectively.



- **Promote Cargo Consolidation:** Encourage SMEs to adopt specialized logistics processes such as cargo consolidation and logistics outsourcing to increase efficiency and reduce individual costs.
- **Incentivize Eco-Innovative Transport:** Support the transition to environmentally friendly road transport systems to reduce the ecological footprint of local food delivery.

Enhancing the Regional Innovation Ecosystem

- **Strengthen Innovation Hubs:** Invest in the creation of localized Innovation Hubs to provide mentoring, technical assistance, and access to funding specifically for AFN stakeholders.
- **Deepen Science-Business Cooperation:** Facilitate closer ties between the agricultural science sector and food producers to commercialize breakthrough innovations in functional and healthy food.
- **Incorporate Social Innovation:** Broaden the scope of smart specializations to recognize the social value of SFSCs, enabling them to access funding under both economic and social development programs.

Improving Market Access and Consumer Awareness

- **Launch Education Campaigns:** Address the lack of consumer awareness by funding regional marketing initiatives that highlight the benefits of buying local and traditional products.
- **Streamline Public Procurement:** Adjust regional procurement guidelines to simplify the process for small producer groups, ensuring they can compete with large agribusinesses for public contracts.
- **Promote Traditional and Regional Branding:** Support the registration and marketing of traditional products on the list of the Ministry of Agriculture to build consumer trust.

Capacity Building and Regulatory Support

- **Targeted Skills Development:** Develop educational programs focused on modern agricultural practices, digital marketing, and food hygiene to bridge the skill gaps in the aging farmer population.
- **Regulatory Simplification:** Work with regional authorities to simplify complex food safety and distribution regulations that currently hinder small-scale producers.



6. Review of Smart Specialisation Strategies in Hungary

6.1. General description

The Smart Specialisation Strategy (hereinafter: S3) is a strategic policy instrument designed to foster economic transformation and modernization through innovation, particularly within the framework of the European Union's Cohesion Policy. For the 2021-2027 programming period, S3 aims to contribute to the EU's policy objective of creating a "smarter Europe" by strengthening research and innovation capacities, promoting digitization, supporting SME growth, and developing the necessary skills for economic advancement. Unlike the previous cycle (2014-2020), S3 is not merely a directional strategy but a comprehensive framework for delivering policy objectives throughout the programming period. It serves as an enabling condition for Member States, requiring adherence to specific criteria set by the European Commission to ensure effective implementation (Smart Specialisation Strategy, 2021).

The National Research, Development, and Innovation Office (NRDI Office) has been designated as the responsible body for managing S3 implementation, leveraging its experience from the previous cycle. The strategy emphasizes a collaborative approach, integrating policy areas such as research and innovation, enterprise development, and digitization. This integration is reflected in the alignment of S3 with national strategies like the National Digitization Strategy, the Strategy for Strengthening Hungarian SMEs, and the National RDI Strategy 2021-2030. S3 acts as an overarching framework that builds on these strategies to identify high-potential specialization areas, concentrating resources to enhance economic competitiveness and achieve the EU's "Smarter Europe" objective (Smart Specialisation Strategy, 2021).

The development of S3 in Hungary follows a structured, participatory process guided by the European Commission's methodological framework. It incorporates global megatrends, domestic policy priorities, and the experiences of the 2014-2020 cycle. A key element of the S3 methodology is the Entrepreneurial Discovery Process (EDP), which engages stakeholders from the "quadruple helix" (business, academia, public administration, and civil society) to identify niche markets, innovation opportunities, and sectoral strengths. This bottom-up approach is complemented by tools such as nationwide surveys and Territorial Innovation Platforms (TIPs), which facilitate regional collaboration and innovation dissemination. Additionally, macroeconomic modeling has been used to identify sectors with significant growth potential and knowledge flows (Smart Specialisation Strategy, 2021).

S3 therefore serves as a comprehensive planning document to develop a complex concept for economic development, aiming to position Hungary as one of Europe's strong innovators by 2030. Currently ranked as a moderate innovator according to the European Innovation Scoreboard (EIS), Hungary recognizes that achieving this goal requires not only increased investment in R&D and business development but also the strategic and efficient use of EU and domestic funding. S3 is a critical tool in this endeavor, helping to identify regional and national strengths, define competitive advantages, and set specialization priorities that enhance overall competitiveness (Smart Specialisation Strategy, 2021).

S3 framework integrates and aligns with three key national policy documents: the National RDI Strategy 2021-2030, the SME Strategy (2019-2030), and the National Digitisation Strategy (2021-2030) (see Figure 8). These strategies collectively set the foundation for achieving EU policy objective 1, focusing on innovation and economic transformation. The National RDI Strategy aims to create a high value-added, knowledge-based economy by modernizing RDI institutions and funding, enhancing knowledge production, and fostering innovation in enterprises. Similarly, the SME Strategy supports domestic businesses through digitization and technological transformation, aiming to strengthen their participation in global value chains and improve operational efficiency. The National Digitisation Strategy, on the other hand, seeks to position Hungary among the top ten EU economies in digital development by 2030, emphasizing digital infrastructure, workforce skills, business readiness, and public service digitization (Smart Specialisation Strategy, 2021).



Figure 8: Framework for S3 and sectoral strategies

Source: Smart Specialisation Strategy, 2021.

S3 acts as an umbrella strategy, harmonizing the objectives of these sectoral strategies to create a cohesive policy environment for smart specialization. By focusing on areas such as cutting-edge technologies, health, digitization, and energy, S3 leverages the strengths outlined in the RDI, SME, and Digitisation Strategies to drive economic transformation. This integrated approach ensures that resources are concentrated on high-potential sectors, fostering innovation, enhancing competitiveness, and addressing structural challenges such as low RDI performance among SMEs and limited knowledge flows.

6.2. Recommendations for SSS

Hungary's S3 provides a coherent and well-structured framework for innovation-driven economic transformation, with strong links to national strategies on research and innovation, SME development and digitalisation. In order to better exploit the potential of AFNs and SFSCs, however, a more explicit and targeted integration of these approaches into S3 implementation is recommended.

While agri-food is defined as a national priority area, the role of AFNs and SFSCs remains largely implicit. Strengthening this priority would benefit from explicitly recognising short supply chains and AFNs as strategic innovation fields contributing to food system resilience, regional development and sustainability. Dedicated support measures could be developed for small-scale producers, processors and local market initiatives, with a focus on innovation in organisation, logistics and market access rather than purely technological upgrades.

The territorially differentiated approach of the Hungarian S3 provides a strong basis for supporting SFSCs, as these initiatives are inherently place-based and depend on local and regional cooperation. The implementation of S3 could therefore place greater emphasis on regional and local levels, particularly through the enhanced involvement of Territorial Innovation Platforms. These platforms could serve as coordination hubs for agri-food innovation, facilitating cooperation between producers, municipalities, research institutions and SMEs. Pilot actions in less developed regions could test new organisational and business models for AFNs, contributing both to innovation uptake and territorial cohesion.

One of the main bottlenecks for the scaling up of AFNs and SFSCs in Hungary is the limited availability of efficient logistics and digital solutions tailored to small-scale food systems. The S3 implementation framework could more strongly promote collaborative logistics models, shared distribution infrastructure and digital platforms that support ordering, coordination and traceability. Aligning digitalisation and SME support instruments with the specific needs and capacities of small agri-food actors would significantly improve the effectiveness of innovation investments in this field.

Beyond technological aspects, regulatory and institutional conditions play a decisive role in the development



of short food supply chains. Simplifying administrative procedures and clarifying food safety and marketing regulations for small-scale producers, while maintaining high safety standards, would lower entry barriers and encourage formalisation. Improved coordination between agricultural, innovation and regional development policies would further enhance the coherence and impact of S3 interventions related to local food systems.

Human capital development and knowledge transfer should also be strengthened within the S3 framework. The long-term sustainability of AFNs depends not only on production-related skills but also on competences in logistics management, cooperation, digital tools and business development. Targeted training, mentoring and advisory schemes, supported by universities and applied research institutions, could foster practice-oriented innovation and facilitate the diffusion of successful models across regions.

Finally, Hungary's strong commitment to international cooperation within its S3 could be more systematically leveraged in the field of alternative food systems. Participation in transnational projects and networks offers valuable opportunities for mutual learning and the adaptation of proven approaches from other Central European countries, including Slovenia and Austria. Incorporating AFN- and SFSC-specific indicators into the S3 monitoring and evaluation system would help to better capture impacts and guide future policy adjustments.



7. Review of Smart Specialisation Strategies in Italy

7.1. General description

The Smart Specialisation Strategy (S3) is an EU policy framework aimed at fostering regional innovation by identifying and leveraging each region's unique strengths and competitive advantages. S3 was introduced under the EU's Cohesion Policy during the 2014-2020 programming period and focuses on maximizing the impact of EU Structural Funds by encouraging regions to specialize in areas where they have potential for competitive growth.

The framework promotes a bottom-up, collaborative approach, engaging local stakeholders in an entrepreneurial discovery process (EDP) to drive innovation, efficient use of resources, and cross-sectoral partnerships. A S3 strategy is formulated by each EU region every seven years, aligning with the EU Cohesion Policy cycles, the current strategy is the 2021-2027.

The smart specialisation strategy framework relies on three pillars:

1. **Localisation:** place-based approach, building on assets and resources available in the territory;
2. **Prioritisation:** concentrate resources on a limited set of areas;
3. **Participation:** stakeholders from the quadruple helix (public sector, research, private sector, and civil society) must engage throughout the strategy-cycle.

Our case study, Emilia-Romagna Region, carried out its first strategy between 2014 and 2020 mobilizing 3.34-billion-euro (1.67 billion from public funds) financing 10,050 projects. The current review focuses on the 2021-2027 Smart Specialization Strategy (S3) of Regione Emilia-Romagna.

7.2. Recommendations for SSS

The agri-food sector is a cornerstone of Emilia-Romagna's economy, as highlighted both by the Region's Smart Specialisation Strategy (S3) and the context analyses conducted within the Food4ce project. However, the current agro-industrial model, while economically important, has substantial environmental impacts, including high greenhouse gas emissions, intensive resource use, and pressures on local ecosystems. In line with European strategies such as the Green Deal and the Farm to Fork initiative, there is a clear need to transition towards more sustainable agricultural practices that combine economic competitiveness with environmental protection and social resilience.

Beyond its highly developed agro-industrial sector, Emilia-Romagna also benefits from a particularly vibrant ecosystem of Alternative Food Networks (AFNs), fostered by a relatively supportive environment for the solidarity economy compared to other Italian regions. While smaller in scale than mainstream agri-food, these networks—including community-supported agriculture initiatives, farmers' markets, cooperatives, and short supply chains—can contribute significantly to achieving the goals of European strategies such as the Green Deal, the Farm to Fork initiative, the Circular Economy Action Plan, and the EU Waste Framework Directive. Given their maturity and dynamism in the region, AFNs could be supported through the S3 with targeted measures.

The following changes in the S3 strategy are therefore proposed:

1. Recognize Short Food Supply Chains

Rationale: International organisations and policy frameworks—such as the World Food Programme, the Farm to Fork Strategy, and the Milan Urban Food Policy Pact—already identify SFSCs as a key pathway toward more sustainable and resilient food systems.

Proposed action: Acknowledge SFSCs as one of the strengths of Emilia-Romagna's agrifood specialisation



sector.

Expected impact: Greater visibility for the SFSC model, enabling it to attract increased attention and funding.

2. Include AFNs in the regional Clusters

Rationale: In Emilia-Romagna, regional Clusters play a key role in shaping the priorities and implementation of the Smart Specialisation Strategy (S3). Ensuring AFNs are represented within these structures is crucial to bring their perspectives into strategic decision-making.

Proposed action: Integrate AFN representatives into the Clust-ER Agrifood. Alternatively, identify a single AFN with the organisational capacity to act as a reference point and engage in dialogue with other Cluster members.

Expected impact: Together with the first recommendation, this measure would help ensure that the needs and priorities of AFNs are effectively heard and considered in regional innovation processes.

3. Recognize AFNs social value

Rationale: European projects such as SmartChain, along with academic literature, show that actors involved in SFSCs are often drivers of social innovation. The relational proximity between producers and consumers not only supports environmental sustainability, but also contributes to the transition toward more socially sustainable and inclusive food systems.

Proposed action: In the 2021-2027 S3 strategy, the cross-sectoral priority area on Social Innovation and Participation is not considered relevant to the Agrifood specialisation sector. The proposed action is to revise the strategy so that the two areas intersect more explicitly.

Expected impact: SFSC-related initiatives would gain access to a broader range of programmes and calls focused on social innovation, thereby increasing funding opportunities.

4. Promote simplification of regulations

Rationale: As established by the Food4CE consortium and academic research, the small scale of AFNs often limits their capacity to comply with complex regulations across areas such as processing and transportation.

Proposed action: Introduce a general objective in the strategy reiterating the need to explore ways to simplify regulations for SMEs.

Expected impact: Facilitate greater value creation from and for SMEs—for example, through shared transportation and other collaborative solutions.



8. Conclusion

Across Italy, Austria, Slovenia, Poland, and Hungary, Smart Specialisation Strategies rarely position short food supply chains (SFSCs) or alternative food networks (AFNs) as explicit priorities; however, their objectives are indirectly embedded within broader agendas related to sustainable agri-food systems, digital innovation, circular economy transitions, and regional value chain development. Based on shared structural needs and challenges of AFNs, targeted Smart Specialisation recommendations have emerged to strengthen the enabling conditions for SFSC development. These focus on digitalisation, logistics, market access and consumer awareness, regulatory frameworks, and generational renewal.

All regions recognize **digitalisation** as essential for improving SFSC efficiency and connectivity. Slow adoption of ICT tools among small producers, limited digital logistics systems, and uneven access to e-commerce remain common barriers. Recommendations for SSS therefore converge on accelerating digital transformation through accessible platforms, traceability systems, logistics applications, and digital skills training. While emphasis differs – from competitiveness to structural necessity – the shared direction is to make digital tools usable and affordable for small-scale actors, in line with Food4CE knowledge-sharing and innovation platforms.

All five regions highlight **logistics and infrastructure** as a foundational challenge for short supply chains. Logistics fragmentation is a universal constraint. Small producers lack aggregation, storage, and coordinated distribution systems, which weakens their competitiveness against large supply chains. Regions consistently recommend shared logistics hubs, cooperative delivery systems, and low-emission transport solutions. The focus is on collective infrastructure and coordinated routing rather than individual investments, recognizing logistics as a systemic challenge that requires regional cooperation. All regions recognize that without addressing these logistical bottlenecks - from first-mile collection to last-mile delivery - SFSCs struggle to compete with the well-oiled distribution systems of conventional large-scale supply chains.

Limited consumer awareness and restricted access to institutional markets reduce demand for local products. Strategies propose coordinated education campaigns, transparent origin labelling, and branding of regional food to build trust. At the same time, reforms to public procurement are recommended so that sustainability, seasonality, and regional origin are weighted alongside price. Digital marketplaces and matchmaking tools are also promoted to connect producers directly with consumers and bulk buyers.

Across regions, **regulatory frameworks** designed for large industrial supply chains disproportionately burden small producers. Simplification and proportional adaptation of food safety, labelling, and administrative requirements emerge as a shared recommendation. **Public funding** is also seen as critical: regions call for targeted innovation support, blended economic and social funding streams, and better alignment of EU funds with AFN needs. Public procurement reform is highlighted as a key policy lever for expanding market opportunities. Consequently, a **unifying recommendation** across all regions are to **simplify and adapt regulatory frameworks** in favor of small producers and local networks. These recommendations vary from aiming to **simplify requirements for food safety, labeling, and distribution** (Slovenia, Hungary), to developing risk-based, **simplified monitoring systems** for hygiene and safety, specifically adjusted to micro-enterprises (Austria) and to explore **regulatory simplification** for SMEs in the agri-food sector (Italy).

A final theme cutting across the SSS reviews is the human capital aspect: the **aging profile** of many farmers and food artisans, and the **need for new skills** and new entrants to sustain short food supply chains. Aging producer populations and skill gaps threaten long-term SFSC resilience. Reaccommodation's for SSS therefore prioritise training in digital literacy, business management, cooperation, and modern production methods. Capacity-building measures aim to attract younger entrants while strengthening existing actors. This human-centred approach aligns closely with Food4CE's focus on practical innovation through knowledge exchange and stakeholder support.



In conclusion, the recommendations for Smart Specialisation Strategies of these five Central European contexts demonstrate a clear, shared understanding that strengthening short food supply chains can yield multifaceted benefits - from economic resilience in rural communities to environmental sustainability and improved public health.

The comparative themes show a remarkable **convergence in both diagnosing the challenges and proposing policy recommendations**. All regions see digitalization, modern logistics, consumer engagement, supportive policies, and human capital renewal as the pillars on which robust SFSCs must stand. Each country's strategy contributes a piece to the puzzle: Slovenia underscores digital and innovation investment; Austria highlights local infrastructure, procurement, and governance innovations; Poland emphasizes comprehensive support from traceability tech to branding to skill training; Hungary integrates these ideas into a cohesive national framework, pushing for explicit recognition of AFNs and better alignment of innovation instruments; and Italy's region champions the inclusion of AFNs in strategic decision-making and the acknowledgment of their social value. Divergences are mostly in emphasis rather than intent - for instance, Italy's advanced AFN ecosystem brings issues of inter-network coordination and competition with big players to the fore, whereas Poland and Hungary, with more nascent SFSC sectors, stress fundamental needs like infrastructure and basic awareness. Yet, none of these differences suggest disagreement on the end goal.

Crucially, the areas of convergence align strongly with Food4CE's priorities: all strategies seek to create an **enabling environment for AFNs** by investing in physical and digital infrastructure, adapting regulations, fostering transparent labeling and branding, promoting food literacy, and facilitating collaborative governance structures. This integrated, policy-oriented approach is designed to embed short supply chains into regional innovation agendas rather than treating them as marginal or alternative. As these regions implement their SSS in the coming years, their coordination (with support from transnational projects like Food4CE) will be key. By sharing knowledge and scaling up pilot successes across borders, they can accelerate the shift toward more sustainable and resilient food systems.

In sum, although regional contexts differ, the structural challenges affecting short food supply chains are largely comparable, and the policy responses show a clear convergence. This alignment suggests that SFSC development is becoming a shared strategic concern, creating strong potential for mutual learning and coordinated progress across Central Europe.



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