

1 Assessment and recommendations

This introductory chapter sets out the report's overall assessment and recommendations. Switzerland is one of the leading OECD countries, systematically performing highly on innovation, yet, some areas within Switzerland still face acute challenges. To support Switzerland in maintaining its high level of innovation and activate innovation in rural regions, innovation stakeholders in the federal system of Switzerland need to continue to reinforce collaboration and co-ordination mechanisms in delivering innovation and entrepreneurial support.

Rural innovation in Switzerland has many forms. It occurs through networks in places, involves new actors in the traditional sectors, such as the watchmaking and manufacturing sectors, is fostered by a dynamic environment with high competition and benefits from the strong support of place-based policies.

Switzerland enjoys a stable political environment and a thriving economy, ranking among the top OECD countries on a number of innovation-related indicators. It has strong entrepreneurship rates, leading universities and research institutions, a competitive market and policies that enable the free flow of individuals and encourage firm linkages between territories.

As a highly decentralised federal country, Switzerland has a long tradition of consensus building and collaboratively working across federal, cantonal and regional levels. At the regional scale, it has an exemplary and advanced regional innovation programme consisting of six regional innovation systems (RIS). The RIS build functional, generally inter-cantonal and, in some cases, cross-border, economic zones.

The Swiss RIS is an exemplary practice that has incorporated some of the best practices in the field of regional innovation. The following assessments and recommendations are meant to provide guidance on refining the practices regarding innovation and entrepreneurship, considering that the current system itself is already well-developed and at the top of the field. Due to the richness of data and information from various resources, the analysis in this report is conducted on the level of Swiss rural-urban areas, as defined by the Federal Statistical Office (FSO). These include large categories associated with rural areas, peri-urban areas and urban areas. When there are international comparisons, they are conducted using a classification of regions based on the OECD Territorial Classifications in large (TL2) or small (TL3) regions.

Assessment

Switzerland is one of the leading OECD countries, systematically performing highly on innovation; yet, some areas within Switzerland still face acute challenges

Switzerland is a country with a system that provides several good practices and is largely at the top of the OECD countries in terms of promoting regional innovation. However, the strong performance of Switzerland is still hampered by challenges that all OECD countries face today. While innovation is still occurring on an everyday basis, productivity growth has reached a temporal frontier and innovation diffusion has slowed down across the globe (Acemoglu, Akcigit and Celik, 2020^[1]; Akcigit and Ates, 2019^[2]; Jones, 2009^[3]).

Productivity, often used as a measure of innovation adoption, is diverging across territories in Switzerland. From 2012 to 2019, labour productivity grew by only 1% per year on average. Yet, high-density peri-urban areas saw double that rate and rural remote areas and peri-urban low density saw productivity fall by 14% and 5% respectively over the period. Relatively low productivity growth has also been experienced in most OECD economies, giving rise to a new productivity paradox and a number of possible theories to explain the slowdown, including more marginal technological shifts (Gordon, 2016^[4]), less substantial impacts of technologies (Akcigit and Ates, 2019^[2]) and longer lags before the benefits of innovation can be realised (Brynjolfsson, Rock and Syverson, 2021^[5]). Rural areas are exposed to these risks but they are also compounded by those of an ageing workforce (especially in manual occupations in sectors going through transition) and associated skills gaps, exacerbated by the movement of younger workers out of rural regions.

The size and structure of the economy matter for how firms innovate in rural regions

A third of firms and a quarter of jobs are in rural and peri-urban areas of Switzerland, according to the national definitions of rural, in 2017. In comparison, 40% of firms and 30% of jobs are in non-metropolitan

regions in other OECD countries.¹ Over 92% of firms in rural areas have less than 10 employees, as compared to 88% in urban areas. Likewise, small firms account for a larger share of employment in rural areas, close to 40% of the workforce, as compared to 25% in urban areas. In European OECD countries, firms with 1-9 employees account for close to 30% of the labour force in non-metropolitan regions. In metropolitan regions, this share decreases to less than 20%. The share and size of firms in rural areas in Switzerland reinforce the particular importance of targeting small- and medium-sized enterprises (SMEs) for innovation and entrepreneurship policies in rural regions. It also helps explain the trends in productivity and performance in standard measures of high-technology innovation.

Peri-urban and rural areas are continuing the long-term diversification process from traditional primary sectors into trade and services. While agriculture, professional services and manufacturing² remain the most dominant sectors of activity, the other services, which include wholesale and retail trade, transportation and repair, hospitality, information and communication, and financial and real estate, are gaining importance in rural regions. The growth of the services sector, and in particular activities in information and communications, and the financial services industry, is often closely linked to higher wages and salaries and provides opportunities for increased female and older worker participation in the local economy.

There is a strong level of entrepreneurship and competition in Switzerland

Entrepreneurship rates are stronger in rural areas of Switzerland than in other European countries. There are 28 entrepreneurs per 1 000 individuals in Switzerland, as compared to 20 entrepreneurs per 1 000 individuals in European OECD countries. In rural areas of Switzerland, there are close to 40 entrepreneurs per 1 000 individuals, a healthy indicator of dynamism in the private sector.³ Likewise, competition is high across all of Switzerland. Based on regional analysis (TL3), Switzerland has a Herfindahl-Hirschman Index (HHI) of less than 0.25 across all major sector and territorial categories. Nevertheless, there is some evidence of a small share of firms in non-metropolitan regions capturing a large share of the market in the trade and services sector. For example, in the trade and services sector in non-metropolitan regions class to small cities, the HHI indicator is relatively higher than in other sectors and regions (0.18), with the top 10% of firms capturing 70% of the market in terms of sales. While not particularly alarming as the whole of Switzerland is still strongly competitive, this finding reinforces the importance of place-based policy-making for increased competitiveness.

Research and development (R&D) activities gain importance in non-metropolitan areas

Formal R&D investment and jobs are traditionally stronger in metropolitan areas and, in particular, in the manufacturing sector. This type of activity can bring growth and well-being to rural regions if they also produce spill-overs and bring quality jobs. Yet, R&D activities in the trade and services sector are also increasing in rural areas. The trade and services sector in rural areas is experiencing a 36% increase in average jobs per firm and a threefold increase in average R&D expenditure per firm. This demonstrates a shift away from traditional sectors dominating rural regions such as watch manufacturing and food processing activities. The growing importance of the trade and services sector in rural areas, along with a higher proportion of jobs associated with R&D activities in this sector in rural areas, suggests that there is an opportunity to simultaneously support R&D and employment-enhancing policies in rural areas, particularly in the trade and services sector.

Rural firms tend to conduct R&D activities differently than those in other areas. In 2019, close to 35 cents per Swiss franc spent on R&D was outsourced; in rural regions, only 4 cents per Swiss franc left the firm for R&D expenses. According to the statistics, rural firms tend to invest in R&D inwards, whereas those in other areas increasingly invest outward toward other firms and internationally. As a result, in rural areas, the likelihood of direct innovation spill-overs on well-being, for example through local jobs, is higher because rural firms tend to invest in the skills of their employees and equipment used for innovation.

The analysis finds that R&D-based innovation is positively associated with increases in productivity across regions in Switzerland, but there remains room to improve. One additional job in R&D or investment in R&D is not associated with increased productivity in the following period in metropolitan areas, while it is in non-metropolitan regions. Even though this association is positive, it can be reinforced through further reallocation of resources, providing an avenue through which place-based policies can directly reduce inequalities while simultaneously addressing the national productivity slowdown.

Activating female, young and older workers can help mobilise untapped potential for innovation and entrepreneurship in rural labour markets

Demographic disparities in the workforce, based on gender and ageing populations, are a sharper challenge for non-metropolitan regions than metropolitan regions. For example, in low-density peri-urban areas, there are approximately two men per woman working in the active labour force. As is the trend in most OECD countries, there is a stronger share of older workers in non-metropolitan regions. For example, workers aged 55-59 make up close to 11% of the working-age population in metropolitan regions of Switzerland. In most non-metropolitan regions of Switzerland, this figure is higher. In non-metropolitan regions close to small towns and suburbs, close to one-fifth of the population is between 55-59 years of age. The size and skills mix in the local labour market are important factors that impact the ability of people and firms to innovate. While labour markets are small in Switzerland's rural areas and regions, rural areas are missing out on potential labour when there are lower rates of the active female labour force and not enough support for upskilling the older working-age population. Both of these factors contribute negatively to productivity in rural regions, by reducing the pool of skilled workers accessible to rural firms placing upward pressures on wages and downward pressures on outputs. In addition, demographic change in rural regions often results in a relatively high share of retirees and inactive older citizens.

Entrepreneurship rates are favourable for women in Switzerland compared to other countries. There are more female entrepreneurs as a share of total entrepreneurs in Switzerland than European counterparts. According to European Labour Force statistics, in 2019, the ratio of male-to-female entrepreneurs in Switzerland was close to 1 (0.95). In comparison, the ratio of male-to-female entrepreneurs in European OECD countries was 1.5.

However, in Switzerland, as in other OECD countries, there is a penalty for women entrepreneurs in rural regions. In European OECD countries, the ratio of male-to-female entrepreneurs is 2 in rural regions and 1.1 in Swiss rural areas. While compared to Europeans, Switzerland compares very favourably; compared to Swiss metropolitan areas rural women are at a disadvantage. Furthermore, once women become entrepreneurs, challenges remain abundant. Among female founders, reported challenges include attracting venture capital and scaling up that disproportionately impact female founders.

How is Switzerland supporting innovation in rural places?

Switzerland, a federal country, is one of the most decentralised countries in the OECD. Because of its highly decentralised nature, the Swiss innovation system functions as a complex ecosystem. It includes federal actors (e.g. Innosuisse, the national innovation agency; RIS, the regional innovation system), public education and research organisations, cantonal actors and programmes (e.g. Living Labs, individual projects) and RIS as well as private programmes. A study by the State Secretariat for Education, Research and Innovation in 2016 recorded 138 innovation promotion offerings at the national, cantonal and regional levels. This organisation grants individual agents a high degree of autonomy and scope for action. It also allows for tailor-made answers to new emerging challenges. Binding elements of this decentralised approach are principles shared by the main agents in the system, which are subsidiarity, the autonomy of agents, co-operation, competitiveness and quality awareness.

The federal government's New Regional Policy (NRP) is important in financially supporting subnational innovation projects and has allowed regional and cross-cantonal innovation initiatives to be established in most of Switzerland. Part of the NRP is RIS. Complementary to national research-driven innovation activities, their focus is on demand and need-driven services targeting SMEs. The RIS offer co-ordinated support and services in the areas of information, consulting, networking, infrastructure and financing. Yet, RIS impacts are geographically uneven. Evidence shows, that the SMEs and entrepreneurs in regional centres benefit more from RIS support than the more remote regions and mountainous areas. Following this, there are some stakeholders that would like to see a re-definition and re-consideration of the scale of policy intervention. More targeted support for remote rural regions has been part of the political discussion.

The RIS have a relatively strong institutional focus on traditional sectors and technology-driven innovation – there is further opportunity to enlarge the concept of innovation to benefit rural places. The support programmes of the RIS largely reflect the economic structure of the cantons as well as their different business fabric. Yet, specific rural innovation needs are often only partially reflected, leaving scope for improvement. Gaps can be found in catering for small businesses that would like to innovate outside of the technological realm or in opportunities for services that go beyond traditional sectors. Currently, even if many programmes are open to non-technology firms, a lot of support is technology-focused. For instance, the pharmaceutical and precision manufacturing industries are often earmarked for innovation programmes and support is only slowly broadening to other rural sectors such as tourism.

Foresight in anticipating changes to rural regions can be a source of inspiration for calibrating policies to close territorial inequalities and promoting growth and well-being. In light of fast-paced change, a strategic mechanism that helps to foster and implement anticipatory or forward-looking innovation support is lacking in Switzerland. Many OECD countries struggle with this missed opportunity, as programmes that encourage innovation can help solve upcoming social, economic or environmental challenges while also providing positive effects on local well-being and prosperity in rural regions. Detecting change and responding to megatrends and structural change currently happens through the council of spatial planning. The council publishes a report on territorial megatrends every four years. Yet, findings are only incorporated in a piecemeal manner and are limited to the leadership of individual people or entities. For example, in the case of the RIS run by the State Secretariat for Economic Affairs (SECO), demographic and climate change only marginally feature in strategy and programming.

There is a culture of experimentation in Switzerland that can be continuously reinforced to address challenges in rural regions. Building a culture of experimentation provides great potential for rural innovation but is currently underutilised, taking place in selected cantons and RIS. Experimental mechanisms such as regulatory sandboxes and Living Labs are policy instruments, which allow testing of future innovations at the local level, mimicking real-life situations before they are ready to be scaled. Rural places are often particularly suited for these types of experimentation. This is because, in comparison to more urban counterparts, they have the benefit of available space, function as a rather independent system and have lower living expenses. Consequently, by creating a regulatory environment that eases other pressures on firms, individuals in rural regions may experiment more easily than in high-income, high-turnover regions. These types of mechanisms can be useful for testing solutions that need to function in complex systems, reducing barriers to innovation and adjusting existing services on the basis of new learnings that can support experimental mechanisms.

Continuous and consistent monitoring and evaluation of the impact of the RIS programmes on different geographies and population groups can support reform in the future. Understanding what kind of innovation is most relevant in rural regions is an important first step. Continuously monitoring and evaluating how programmes to support innovation and entrepreneurship impact geographies and populations is an important second step. Most RIS do not prioritise an integrated analysis of the impact of current measures for different geographies and population groups, in part due to data privacy regulations. Although data exist and RIS do follow-up with each SME on the degree of satisfaction and collect percentages achieved within the NRP perimeter, results are not shared systematically and reduced importance is given to

geographical components. Especially, within the NRP perimeter, the goal of evaluation is not to specify different kinds of rural geographies or the level to be achieved at each scale. This also means that there is little analysis done to understand if programmes have a substantial impact that varies between rural and non-rural SMEs, or whether participating companies largely come from more regional centres or from remote rural places. As a result, it would be difficult to argue for the need for additional funding to develop specific tools to address specific needs of rurality. More systematic analysis is needed to tailor policy responses to the diversity of rural needs in Switzerland (both in terms of geography and population). More policy evaluation is needed to better understand the impact of current measures within the context of the COVID-19 pandemic.

Despite advancements, access to public innovation support services in Switzerland remains complex with a multitude of competing offers— especially in rural areas. Due to the presence of a multitude of federal, regional and cantonal innovation services, beneficiaries face a complex supply of services that are sometimes duplicated. For example, some cantonal services in mentoring and coaching are provided in parallel to those of the RIS. Challenges are more pronounced in rural areas where the physical presence of services is reduced and can reduce much-needed trust-building processes with local communities. A more co-ordinated system can bring efficiency gains and complementarities to the various programmes. Ensuring simplification and access to public services within the scope of the RIS can improve user experience and uptake.

Closing silos between regional policies and other policies can improve regional innovation integration. The NRP is defined by a geographical range in which specific development problems and opportunities for mountainous and rural areas are the biggest. Only projects that have a majority impact in this area can be supported by the NRP. For instance, funding coming from NRP for the RIS programme areas “Point-of-entry-function of RIS” and “Coaching” requires that 50% of all supported firms fall inside the NRP geographic range. This so-called “funding compromise” regarding eligibility criteria addresses some territorial inequalities between rural and urban regions. At the same time, it also limits the integration of rural and urban areas in terms of innovation support. More needs to be done to integrate rural and urban areas. Especially with regard to other federal policies, there is scope to better support rural innovation. Short geographic distances between Swiss rural and urban areas make policy linkages crucial. There are policy fragmentations across and within federal ministries that are not beneficial to entrepreneurial needs. The fact that Switzerland distinguished between two policies that deal with rural-urban links in the broader sense, namely, the agglomeration policy and the policy for rural and mountainous areas, does too little to reduce institutional and policy fragmentation, in order to better support existing inter-dependencies among territories.

Agricultural policies in Switzerland seek to balance a variety of commercial, social and environmental objectives, yet strong market protections and subsidies impact incentives to innovate. On the one hand, Switzerland is a hub for research and innovation in several industries, including the agri-food sector. The agri-food sector has prospered in the stable and thriving Swiss economy. For example, the food giant, Nestlé, is a testament to the country’s prominent role as an exporter of food and beverages.

On the other hand, farmers are highly supported by agricultural policies such as market price support (through border measures) and direct payments. This support may allow maintaining land and agricultural activities in less-productive uses for providing public services such as landscape conservation or the promotion of biodiversity, but it also slows structural adjustment and may impact innovation at the farm level.

While the Swiss agricultural innovation system (AIS) is advanced, further work on aligning and collaborating between the AIS and RIS could improve outcomes in rural regions. The Swiss AIS is highly sophisticated, efficient and advanced, with national institutions that provide the general agricultural innovation framework and fund and/or carry out agricultural R&D, and with cantonal agricultural offices that implement agricultural policy and execute advisory services and other agricultural matters. The role of the

private sector and the public-private initiatives has been crucial for the sector. However, at the cantonal level, formal and systematic collaboration and interaction between the RIS and the cantonal agricultural offices is limited due to the independent nature of their institutions.

The Federal Office for Agriculture (FOAG) has a well-developed knowledge and innovation system in the agricultural sector but is looking for ways to support farm entrepreneurs looking to become more innovative. Co-ordinating and jointly generating programmes for agricultural and agri-food entrepreneurs in rural areas may help avoid administrative overlap and increase the efficiency of resources.

Recommendations

To support Switzerland in maintaining its high level of innovation and activate innovation in rural regions, innovation stakeholders in the federal system of Switzerland need to continue to reinforce collaboration and co-ordination mechanisms in delivering innovation and entrepreneurial support. The State Secretariat for Economic Affairs (SECO), which is responsible for the regional aspects of innovation promotion, has the important task of considering how to adapt its vision for innovation and ensuring its support is well targeted across all Swiss territories.

This report suggests that SECO, through its RIS programme and in collaboration with other relevant stakeholders such as the Federal Office for Agriculture (FOAG) and Innosuisse, should consider engaging in the following activities:

Policy design

SECO should expand the scope and target groups of rural and regional innovation initiatives by:

- Further broadening the **scope** of innovation programmes beyond purely tech-based innovation.
- Reinforcing the development of **programmes** targeted at small firms, start-ups and nascent entrepreneurs in rural places. This includes outreach to regions not typically covered by the current RIS. Such development can include:
 - Adopting the *OECD Recommendation of the Council on SME and Entrepreneurship Policy (2022^[6])*.
 - Supporting SMEs by facilitating the adoption of digital technologies, strengthening digital skills and encouraging and supporting under-represented or disadvantaged groups; and keeping in mind the accrued challenges for access to finance and resources for rural regions.
 - Encouraging the expansion and development of initiatives to encourage the *creation of new firms* that provide diversified services.
 - Encouraging *networking* events, *challenge-based initiatives* (such as the Innovation Boosters managed by Innosuisse) and interaction with schools to build the *entrepreneurial mindset* from an early age.
 - Considering creating programmes to provide *specific support* to firms run by women and youth.
- Broadening the selection of **coaches and mentors** and increasing the number and variety of potential coaches to foster interlinkages between sectors to reduce existing silos by:
 - Diversifying qualifications for mentors.
 - Exploring more opportunities for peer-to-peer mentoring and coaching.
 - Supplementing coaches with R&D experience or understanding of Innosuisse programmes, such as those in the Innosuisse network, with those having a background in business development or other areas, and encouraging the uptake of information classes for coaches without knowledge of Innosuisse resources.

- Increasing the awareness and demand for **university linkages** among entrepreneurs, such that research initiatives are not primarily led by university research. This can involve awareness-raising initiatives and information dissemination through mentoring, counselling and network events and services.

Building a culture of experimentation

- Engaging in **collaborative initiatives in physical spaces**, such as innovation sandboxes, challenge-based initiatives, Living Labs and experimentation-specific grants that allow innovators to test solutions for the future at the local level, mimicking real-life situations. This could greatly benefit from closer co-ordination with other government bodies such as Innosuisse's Innovation Booster programmes and cantonal and municipal level innovation or development offices. Such initiatives can include:
 - Innovation sandboxes with a narrow, time-limited focus. Based on the outcomes of such experiments, governments can decide whether to adapt policies to encourage the upscaling of such experiments.
 - Challenge-based initiatives that tie funding, mentoring and other opportunities to solving regional priorities (both physical and online).
 - Living Labs with a physical space where individuals may experiment with the development of new products and services, often accompanied by material and in-kind services.
 - Specific grants that allow companies to access physical and digital networks that help them to think outside the box or test prototypes or new services.
- Increasing **flexibility and bottom-up solutions**, by:
 - Allowing for certain agility in the programme, giving entrepreneurs the opportunity to bring forward ideas and requests for funding, for example, through an experimentation fund.
 - Adjusting pre-existing programmes to integrate greater lead times, accept incremental advances as programme outcomes or encourage learning from failures.
- Promoting **public sector innovation** or innovation inside the policy-making process. This can include:
 - The adoption of new policy tools (i.e. open government, foresight and planning tools).
 - New methods of re-enforcing the consultation process with non-government actors.
 - Funds for experimentation pools that can be accessed for testing out new ways of delivering public services before scaling up.

Monitoring and evaluation

SECO, in collaboration with other federal agencies and cantonal ministries, should contribute to monitoring and evaluating innovation programmes in rural regions by:

- Reinforcing how **monitoring and evaluation** practices, such as the existing regional development monitoring, feed into innovation strategies, as is the case in science and technology foresight monitoring in Japan and the monitoring for demographic trends analysis in Korea. This could include:
 - A central strategic unit of RIS in SECO that works in collaboration with the Federal Statistical Office (FSO) and cantonal offices based on:
 - Access to shared data on RIS and non-RIS catchment areas.
 - The sharing of results on good practices as part of the regular co-ordination meetings.

- The improvement of data-sharing and open data practices, between RIS, cantons and the FSO. Include precautionary measures such as aggregation and confidentiality controls that can help provide information while still respecting privacy regulation.
- The implementation of the *OECD Recommendation of the Council on Enhancing Access to and Sharing of Data* (OECD, 2021^[7]) that, for example, recommends adopting and regularly reviewing coherent, flexible and scalable data governance frameworks; and adopting a technology-neutral and agile legal and regulatory environment.
- Piloting a **unified customer relationship management (CRM) system**, which would track individuals' access to different services across and between cantons and RIS, and other agencies such as the FOAG. This can be incentivised through financial mechanisms or through the role of a data champion that pilots the benefits of data-sharing and uses data-sharing best practices (OECD, 2021^[7]) to demonstrate how practical, legal and financial barriers could be overcome. It could provide the following information and measures:
 - Account for the location (municipality/canton/RIS) of the companies, or persons who participate in coaching, information and networking events.
 - Account for the number of companies and location of companies referred by the RIS to other innovation promotion agencies (Innosuisse, etc.).
 - Account for the number and location of companies that are referred to coaches/funding agencies in other cantons of the RIS, as well as the number and location of companies referred to coaches/promotion in other RIS.
 - Account for the number and location of companies that used the individual cantonal antennas (points of entry) and the number of these that have then used: i) a service at the corresponding RIS; and ii) a service at another RIS or another innovation promotion agency and the location of these services.
 - Implementing impact evaluation and monitoring using rigorous measurement procedures that include counterfactuals or randomised control trials.

Co-ordination

SECO, Innosuisse and other cantonal providers of innovation services should increase co-ordination and coherence between and within agencies to improve outcomes in rural areas by:

- Developing strategic **consultations** with local partners and academics to provide input into the inter-agency and cantonal working group on rural and regional development. For example, this can be done at the phase of joint elaboration of Innosuisse and RIS strategies, or through a centre-of-government initiative such as was done in the United States in the White House Rural Council.
 - Reinforce consultation mechanisms with departments in the federal and canton offices in charge of continuous education and upskilling for older workers.
- Increasing horizontal **co-ordination** efforts with relevant federal, cantonal and RIS agencies.
 - This includes, for example, efforts to increase rural-proofing and co-ordination with those in the employment, education and spatial development networks, to create a strategy for addressing demographic disparities in age-based and gender-based participation rates in the rural economy.
 - Consider facilitating co-ordination mechanisms through institutionalising the role of regional brokers that act as a co-ordination mechanism between cantonal and public employment partners on cross-cutting issues such as regional skills development and digital skills strategies.

- Jointly build strategic programmes for rural areas or regions, in particular, programmes between the RIS and FOAG. For example, agricultural policy instruments or programmes such as *Projekte zur regionalen Entwicklung* (PRE), *Förderung von Qualität und Nachhaltigkeit* (QuNaV) or resource projects can be complemented by the RIS, Innosuisse and cantonal programmes.
- Fostering **policy coherence** through rural-urban linkages for innovation across territories, federal agencies, SECO and cantonal offices by:
 - Strengthening the consultation and convening power of the Federal Network on Coherent Urban-Rural Spatial Development to be aware of and assess ongoing co-ordination needs between the Agglomeration Policy, the Policy for Rural and Mountainous Areas, and synergies for sectoral policies.
 - Giving RIS a more prominent role in the promotion of urban-rural partnerships for innovation.
 - Providing incentives to accelerate the adoption of supra-cantonal development strategies.

Enabling conditions: Access to services

SECO, with its relevant federal and cantonal partners, should focus on how to reduce administrative complexity and simplify access to services for innovation, especially in rural areas, by:

- Complementing physical entry points with an *online one-stop-shop* that contains access and details about public innovation support, from RIS, Innosuisse and cantonal offices, making support accessible from anywhere and allowing for the integration of programmes and measures across sectors. This, for example, can be similar to Scotland's Business Gateway programme.
- Designating an *outreach person* that contacts rural SMEs directly and speaks to them to inform them about offers, such as those in the Rural Partners Network in the United States, or the Community Futures programme in Canada.
- Developing *targeted communication and branding strategies* and making sure information is shared in rural areas and through channels in the region, such as entrepreneurs who already live in remote places. This can also include developing specific entry events that inform about the offers of RIS.
- Considering further integrating Innosuisse and RIS services by creating shared support roles where more mentors and coaches jointly take on RIS mentoring and Innosuisse counselling.

SECO and the RIS can better accommodate regional innovation support to address change from megatrends by:

- Considering establishing an **inter-agency monitoring observatory** to monitor trends that signal structural change and projected trends within rural regions that feed into innovation strategies. This entity should:
 - Participate in co-ordination and provide guidance for national and regional innovation strategies and agendas.
 - Be composed of partners from regional and local authorities, academic institutes, the FSO, the private sector and social partners.
 - Anticipate change and develop strategies for supporting the transition of current firms in rural areas into new business models.
 - Encourage adaptability to new market conditions or other global factors such as climate and demographic change, while avoiding over-dependence on traditional industries.
 - Monitor challenges for women, youth, migrants and older workers.

Demographic change

- Improving **knowledge and data** gathering on women- and youth led-innovation and entrepreneurship in rural areas, including by measuring the impact of policies on harder-to-reach populations such as women, older workers and younger workers in the strategy for monitoring and evaluation.
- **Mainstreaming** gender and age diversity requirements into projects and programmes and improving the outreach to these groups.
- Setting **targets** for encouraging entrepreneurship and opportunities for women and other harder-to-reach communities in the NRP through business support measures targeted to different population groups.
- Establishing a **gender and youth strategy** within the RIS structure to evaluate how programme policies can better accommodate female and young entrepreneurs and workers in science, technology, engineering, and mathematics (STEM) learning and adult education.
- Considering adding corporate succession planning and innovation for succession to the RIS coaching to better cater to rural needs.

Climate change

- Adapting RIS coaching to feature **business support on innovation for climate change and net-zero-emission targets**, including by:
 - Considering requiring all businesses that receive support for innovations to demonstrate their compatibility with net-zero-emission targets and contributions to climate change.
 - Helping firms assess possible climate risks (physical, price, product, regulation) and improve energy and waste efficiency in their businesses and across value chains.
 - Supporting firm know-how on building data and monitoring practices for firms focused on emissions and net-zero progress.
 - Encouraging good practices on power sourcing from new renewable resources, minimising waste, saving energy, water and materials, and recycling and reusing materials or waste, while offering green products and services.
- Encouraging RIS staff to facilitate **networks and dialogue** around innovation for climate change, including by:
 - Fostering system thinking and collaboration amongst public, not-for-profit actors and businesses.
 - Exploring assessment tools and competitions for climate-friendly innovations.
 - Strategically connecting to other circular economy initiatives and measures being developed in Switzerland. In this context, the RIS could also further leverage learning from the circular economy toolbox, currently under development, through the NRP.
 - Establishing a strong connection to the Innosuisse Innovation Booster “Applied Circular Sustainability”.

Special focus: Agri-food innovation

To support agricultural innovation, the FOAG, in collaboration with SECO, should work on:

- Considering the implementation of R&D and innovation and technology adoption **data collection and survey** to the agricultural sector, in collaboration with the Swiss FSO and university partners such as the KOF Swiss Economic Institute that conducts innovation surveys on behalf of SECO. Currently, the national R&D survey excludes the agricultural sector.

- **Re-orienting public expenditures** to support agriculture towards investments in innovation systems, covering both knowledge generation and its transfer to the sector, should be made central to agricultural support policies.
- **Co-ordinating and collaborating** with the RIS, for example by:
 - *Incorporating* offers to support entrepreneurs by the RIS in the agricultural supply chain and ecosystem, supplementing with programmes from the FOAG and the independent cantonal agricultural offices.
 - Improving *collaboration* between RIS, the FOAG and independent cantonal agricultural offices, when offering support and services in: information, consulting, networking, infrastructure and financing between RIS and cantonal agricultural advisory services, some of which offer similar but tailor-made support for farmers, for example, Innovativi Puure.
 - Promoting more systematic communication of successful innovation cases from RIS (such as StarTerre) to improve scaling up and institutional learning.
 - Improving *systematic knowledge exchange* between research, advisory services, education and the needs of farmers, to speed-up innovation and technology adoption:
 - Consider creating a *digital platform for a systematic exchange* between research and advisory services, such as those offered by the RIS, that takes into account the needs of the farmer and/or agricultural processing firms, whether these needs are technical, process-related, funding, entrepreneurial or others. This digital platform or website can have two main tabs, one outlining institutional offers and services that farmers can access, the other geared towards knowledge sharing and peer learning for researchers, academics and the like. This online platform can be incorporated as a part of a new structure of supply chain known as “net chains” (a combination of networks and chains). Such a platform would also help outline the knowledge base and analytical tools that are made available and guide decision-making processes, as identified under the monitoring and evaluation recommendations.
 - *Building an FOAG-SECO co-ordination strategy* may include one of the following options:
 1. The FOAG creates a system that mirrors the structure of SECO’s RIS, in consultation and co-ordination with pre-existing efforts.
 2. The FOAG and SECO co-create a national system that incorporates the agri-food subsector into the RIS initiatives. This can be considered an *extension of RIS services* jointly with the FOAG and the cantonal agricultural advisory services, in rural regions.
 3. Cantonal and regional agricultural advisory services, including on a multi-cantonal level, and RIS work closer together by jointly providing discretionary funds that individuals and associations may apply for to request support from the bottom up, through cantons and their choice of beneficiaries. For example, a centralised portal for support and funding available, as outlined previously, could be the platform for this co-ordination.

Under Options 1 to 3, the role of SECO would be to collaborate, co-create and provide access to its network of institutions, mentors, counsellors and advisory services.
 - Under the current legal framework, creating *systematic networking* between all AIS actors that engages both the federal and regional levels including universities, research institutes, agricultural colleges and agricultural offices that provide extension services at the canton level. The FOAG can continue to co-finance multi-actor research and extension projects and networking activities. This initiative can be managed at both federal and cantonal levels, as it proposes a collaboration and knowledge sharing of innovations pertaining to agriculture amongst different relevant stakeholders.

- Developing initiatives by other institutions such as Agroscope or AGRIDEA to *expand efforts to better connect to farmers* through already-created publicly available platforms and by integrating the work of their decentralised research stations and insights from their pilot and demonstration projects on different themes.

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Notes

¹ The countries with available data included in this statistic are Austria, the Czech Republic, Estonia, France, Hungary, Italy, Lithuania, Poland, the Slovak Republic and Spain.

² The services categories are based on the national industrial classification harmonised to International Standard Industrial Classification of All Economic Activities (ISIC) rev 4 classifications. The agricultural sector refers to agriculture, fishing and forestry; manufacturing sectors used in this report refer to all forms of manufacturing, including textiles and chemicals; and the professional services sectors refer to all professional scientific and technical activities, and administrative and support service activities.

³ Author’s own calculations using European Labour Force Statistics from 2019.



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