EUROPEAN CLUSTER
COLLABORATION PLATFORM

Clusters meet Regions event in Graz
“Tradition reinvented: How clusters lead resilient, innovative shifts towards a climate-neutral, digital future”

Input paper

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Executive Summary

The following paper presents observations on the Styrian cluster landscape and outlines some key considerations for the region's future development. These considerations may pose some open strategic questions, which can be addressed in the workshops of the "Clusters meets Regions" event. The following key takeaways are summarised below:

Context: Economic profile of Styria

- Styria has the **fourth largest economy among Austria´s states**, accounting for 12.6% of the national GDP. Significant economic disparities exist between the urban center of Graz, which contributes almost half of the region's GDP, and the more rural areas. Styria is an **important trading centre**, accounting for almost 15% of Austria's total exports, largely driven by its strong automotive industry.
- Styria still has a **strong industrial presence**, as evidenced by the sectoral and ecosystem employment composition. This is reflected in EU industrial ecosystems such as Construction, Agri-Food, Mobility-Transport-Automotive, Energy Intensive Industries, and Electronics, all of which have employment levels above the Austrian and EU averages.
- **Styria's innovation ecosystem shows robust strengths**, underlined by a vibrant mix of multinationals and SMEs engaged in advanced technology and research. According to the 2023 Regional Innovation Scoreboard, the wider region of Southern Austria, which includes Styria, excels as a **"Strong Innovator"** with strengths in public-private co-publications, international scientific co-publications, and high levels of R&D expenditure.

Clusters in Styria and their importance for regional economic development

- Styria presents a diverse cluster landscape, with **ten cluster organisations** covering nine of the fourteen EU industrial ecosystems. The region is thus home to the largest number of ECCP-registered Austrian cluster organisations. The ECCP-registered cluster organisations in the region encompass all six cluster organisations officially funded by the Styrian Business Promotion Agency SFG, which receive basic funding.
- Cluster organisations are **crucial for enhancing regional economic competitiveness** and show positive correlations with key performance indicators like R&D expenditures, labour productivity, and patenting activities. The importance of cluster organisations in facilitating the Twin Transition is also highlighted.
- Styria was considered a **pioneer region in Austria in terms of cluster policy** when cluster-oriented funding was first initiated in the 1990s. Styria's cluster policy was one of the catalysts for the region's transformation away from its former reliance on heavy industry. Today, the **Economic Strategy Styria 2030** underpins the region's current cluster policy, with cross-clustering being a key element of the strategy.

Cross-border cooperation and the involvement of Styrian clusters in European networks and support initiatives

- Two cluster organisations from Styria have participated in **four European Strategic Cluster Partnerships (ESCP)**. These ESCPs, supported by the European Commission, aim to help cluster members to face global competition, by supporting interregional activities for joint innovation and investment projects and facilitating access to other countries and regions across the EU and internationally. In Styria, three clusters participated in the ESCP for Internationalisation (ESCP-4i), focussing on health, photonics and clean tech, while one cluster organisations participated in an ESCP for Excellence (ESCP-4x) project.
- Additionally, two organisations are participating in the **Euroclusters** DESIRE, that seeks to address the challenges that SMEs face when accessing the European e-health and digital health market by formalising, structuring and activating intra-and international collaborations through the DESIRE Collaboration Platform. Finally, the Silicon Alps cluster is participating in the Silicon Europe Eurocluster, which aims to achieve greater European self-sufficiency within the electronics value chain.
- Moreover, a total of three beneficiaries from Styria have participated in two **I3 partnerships**, namely the **I3HIED project** (Human Technology Styria cluster) and the **Hy2Market** project (Montanuniversitaet Leoben & Prozess Optimal Cap Gmbh)

Smart Specialisation in Styria

- Smart Specialisation is a strategic approach developed by the European Commission that requires regions to identify and focus on their unique strengths and capabilities to foster innovation-driven economic growth. The **Economic Strategy Styria 2030**, which functions as the Smart Specialisation Strategy (S3), identifies **seven priority areas.** These include the three lead markets “Mobility”, “Green tech” and “Health tech” as well as the areas “Materials technology”, “Production technologies, Mechanical & plant engineering”, “Digital technologies & microelectronics” and “Creative Industries”.
- Cluster organisations are an important element of the Styrian S3 and play a key role in the implementation of the strategy by developing innovation and lead projects.

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Context: Economic profile of Styria

1. Context: Economic profile of Styria

The **State of Styria** (German: Steiermark), located in Southeastern Austria, occupies an important position in the nation's economic and industrial landscape. Bordered by Slovenia to the south and sharin regional borders with the Austrian states of Carinthia, Salzburg, Upper Austria, Lower Austria, and Burgenland, Styria serves as a central hub for commerce and industry within Austria. As of 2023, Styria was home to approximately 1.27 million people, representing about 13.9% of Austria's total population, ranking it as the fourth most populous state in the country.[1] The district of Graz accounts for the majority of the region's population, with 461,000 people, constituting approximately 36% of the region's population. This is followed by the district of Eastern Styria, comprising more than a fifth (21%) of the population, while the two western districts in Styria, namely Liezen and Western Upper Styria, have the lowest population, with 6% and 8% respectively.[2] Covering an area of 16,398 square kilometres[3], Styria is the second largest state in Austria by area after Lower Austria and is characterised by a diverse landscape.[4] With a population density of around 77.5 per square kilometre, compared to the Austrian average of 109.6 and the EU27 average of 109.1, it showcases a distinct contrast to the more densely populated states of Austria (See Table 1 in the Annex).[5] Graz, in particular, stands out as the most densely populated district in the region, with 380.8 people per square kilometre. However, the other districts tend to be more rural, with population densities ranging from 32.5 in Western Upper Styria to 88.9 in Western and Southern Styria.[6]

The following section will provide a concise socio-economic overview of Styria, encompassing key aspects such as its macroeconomic profile and sectoral specialisation, as well as its innovation and regional competitiveness performances.

Macroeconomic profile of Styria

Styria ranks as the fourth largest state in terms of GDP In 2022, the **GDP of Styria** reached approximately €56.2 billion, accounting for roughly 12.6% of Austria's total GDP.[7] The economic trajectory of Styria has been dynamic in recent years. Following a growth of 4.4% in 2019, the region faced a contraction of 4.0% in 2020, a decline steeper than Austria's overall but less than that experienced by the EU27. Nonetheless, the regional economy demonstrated resilience with a robust rebound of 6.1% in 2021 and further accelerated to 8.3% in 2022, although this was still slightly behind the growth rates of 9% for the EU27 and 10.3% for Austria.[8] The per capita GDP (PPS) of Styria in 2022 stood at €39,700, surpassing the EU average but remaining below the Austrian average. This positioned Styria sixth among Austrian states, trailing regions such as Vienna, Salzburg, and Tyrol. When

[1] Eurostat (2024): Population on 1 January by age, sex and NUTS 3 region. Available under: https://ec.europa.eu/eurostat/web/products-datasets/-/demo_r_pjangrp3 (last access 17.05.2024).
[2] ibid.
[3] Eurostat (2024): Area by NUTS 3 region. Available under: https://ec.europa.eu/eurostat/web/products-datasets/-/reg_area3 (last access 17.05.2024).
[4] https://www.ic-steiermark.at/en/the-ics/region-of-styria/ (last access 17.05.2024).
[5] Eurostat (2024): Population density by NUTS 3 region. Available under: https://ec.europa.eu/eurostat/databrowser/view/demo_r_d3dens/default/table?lang=en (last access 21.02.2024).
[6] ibid.
[7] Eurostat (2024): Gross domestic product (GDP) at current market prices by NUTS 2 regions. Available under: https://ec.europa.eu/eurostat/databrowser/view/nama_10r_2gdp/default/table?lang=en&category=na10.nama10.nama_10reg.nama_10r_gdp (last access 06.03.2024).
[8] ibid.

examining GDP at the regional NUTS 3 level, regional disparities emerge, with the district of Graz alone accounts for almost half (46%) of the total region's GDP, amounting to roughly €24 billion, followed by Eastern Styria, the second most populous district in Styria, contributing 17%. Conversely, Liezen and Western Upper Styria contribute the least, with 6% respectively.[9] The pronounced economic output of Graz is further underscored by its GDP per capita (PPS), standing at €47,000[10], significantly surpassing both the region's and the country's averages. In contrast, the other districts exhibit GDP per capita figures below the country's average, with three districts falling below the EU27 average.[11] In terms of gross value added (GVA), Styria contributed approximately 12.8% of Austria's added value in 2021, with the services sector accounting for 41.3% and the industrial sector for 34.8%, including the construction sector (See Table 1 in the Annex).[12]

The State of Styria also serves as an **important hub for trade**, due to its strategic geographic location and robust industrial sector. In 2022, the region's exports totalled €28.9 billion, constituting 14.9% of Austria's total exports and making it the third-largest exporting state in the country, following Upper Austria and Lower Austria.[13] However, the growth rate of exports was only 12.6% from 2021 to 2022, which is below the national average, positioning Styria among the slower regions in terms of export growth. Germany remains Styria's most significant trading partner, accounting for more than a quarter (26.8%) of its total exports, with exports to Germany increasing by 9.9% from the previous year. The strongest export sector in Styria is the vehicle industry, accounting for 23% of all exports, despite experiencing a decline of 2.6%. The boiler and machinery industries follow closely behind. Notably, the sectors that saw the most significant increases from 2021 to 2022 are mineral fuels, mineral oils, and products of their distillation, along with aluminium and aluminium products, which recorded increases of 53.4% and 51.3%, respectively.[14]

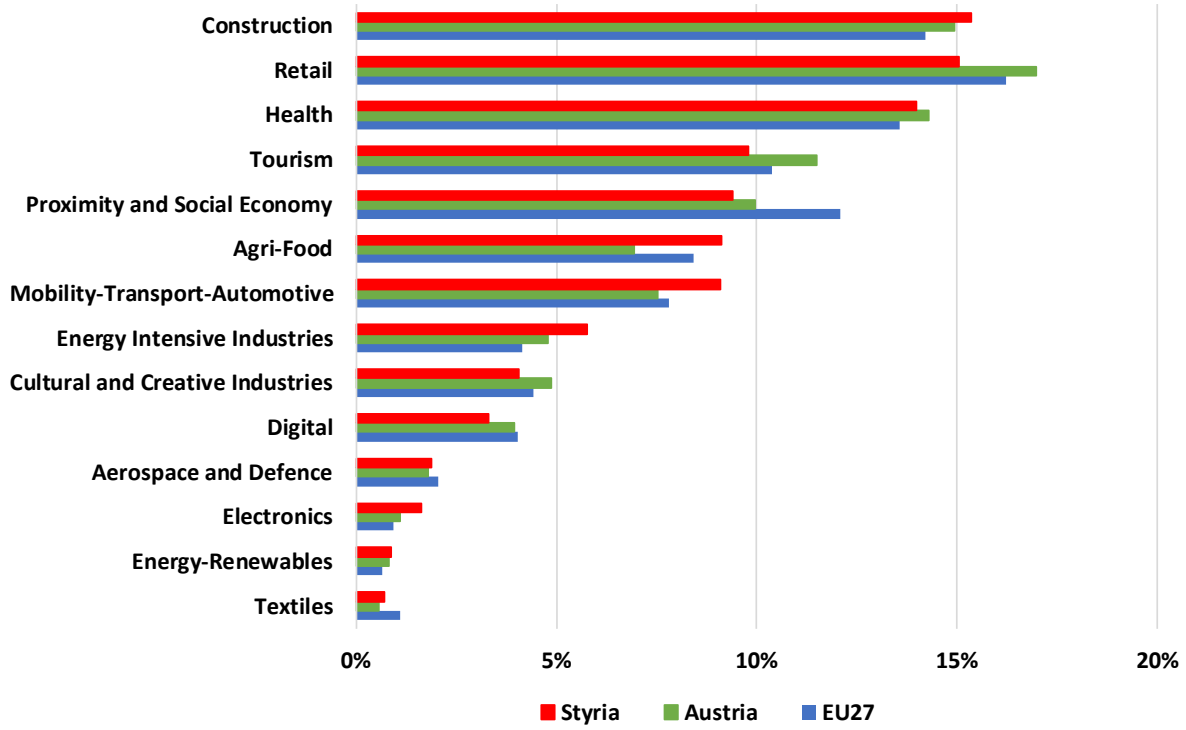
Styrian sector specialisation and employment levels

Looking at Styria's regional employment composition, the **region's strong industrial focus** is highlighted. According to the most recent data provided by Eurostat for 2023[15], the industrial sectors, including construction account for 29.5% of total regional employment together (See Table 1 in the Annex). This figure notably exceeds the Austrian average of 24.2% and the EU27 average of 25.7%, highlighting Styria's central role in Austria's industrial landscape and its prominence above both national and EU levels. A similar observation is made when looking at the employment composition across the industrial ecosystems. As part of its Industrial Strategy (March 2020), the European Commission has identified **14 industrial ecosystems** that encompass all players operating in a value chain.[16] In Styria, the Construction ecosystem stands out as the largest in terms of employment, accounting for 15.4%, which exceeds both the EU27 average of 14.2% and the national average of 14.9%. The Retail ecosystem follows closely at 15%, albeit below both the national and EU averages. Additionally, the Agri-Food ecosystem, which also encompasses agriculture and food manufacturing, accounts for 9.1% of employment across all ecosystems. The significance of the manufacturing sector is underscored by the performance of the

[9] Eurostat (2024): Gross domestic product (GDP) at current market prices by NUTS 3 regions. Available under: https://ec.europa.eu/eurostat/databrowser/view/nama_10r_3gdp/default/table?lang=en&category=reg.reg_eco10.reg_eco10gdp (last access 17.05.2024).
[10] The figures at the NUTS 3 level pertain to 2021, representing the most recent available data year.
[11] ibid.
[12] Eurostat (2024): Gross value added at basic prices by NUTS 3 regions. Available under: https://ec.europa.eu/eurostat/web/products-datasets/-/nama_10r_3gva (last access 17.05.2024).
[13] https://www.landesentwicklung.steiermark.at/cms/dokumente/12658765_141979497/4244cc76/Heft%208-2023%20Wirtschaft%20und%20Konjunktur%202021-22%20-Neu.pdf (last access 17.05.2024).
[14] ibid.
[15] Eurostat (2024): Employment by sex, age, economic activity and NUTS 2 regions (NACE Rev. 2) (1 000). Available under: https://ec.europa.eu/eurostat/web/products-datasets/-/lfst_r_lfe2en2 (last access 17.05.2024).
[16] See here for more information: https://clustercollaboration.eu/in-focus/industrial-ecosystems (last access 17.05.2024).

Energy Intensive Industries, Mobility-Transport–Automotive, and Electronics ecosystems, all of which surpass both the Austrian and EU27 averages in employment. The region's industrial focus is also reflected in the region's regionally relevant sectoral and ecosystem agglomerations.[17] In the case of Styria, a total of **six regionally relevant sectoral agglomerations** can be detected, five of these agglomerations are found in the manufacturing sector (See Table 2 in the Annex). The employment concentration in some of the manufacturing-related sectors is also reflected by the only ecosystem agglomeration Electronics (See Table 3 in the Annex).

Figure 1: Employment across the industrial ecosystems for Styria, Austria and the EU27, in 2021



Source: ECCP (2024), own elaboration based on Eurostat. Note that the classification of the 14 industrial ecosystems has been calculated by aggregating NACE 2-digit activities, following the methodology established by the European Commission (2022).

The above analysis indicates that the regional economy of Styria encompasses a wide range of industrial ecosystems, each offering diverse opportunities for regional growth. To unlock the region's growth potential, leveraging economic and cluster structures is instrumental. Cross-border collaboration and the development of strategic clusters are paramount in this endeavour. **The Economic Strategy Styria 2030**, which functions as the region's S3 strategy, identifies priority areas, which together present promising avenues for future growth and innovation. These strategic areas align with the industrial ecosystems, such as Mobility-Transport-Automotive and Electronics or Health. Aligning regional initiatives with these strategic priorities can pave the way for sustained economic progress and prosperity. These areas of Smart Specialisation will be further explored in Chapter 4.

[17] Specialisation can be measured through Location Quotients (LQ) that reflect the relative specialisation of an activity in a region compared to the EU average. If the LQ for a given activity-region combination is above 1.5, it is considered an agglomeration and if the activity accounts for at least 1 % of total employment in the region, it is considered regionally relevant.

Regional innovation performance of Styria

Styria presents a dynamic economic landscape, enriched by a blend of substantial multinational corporations and cutting-edge small and medium-sized enterprises (SMEs). The region features around 77,000 companies, with nearly 7,350 actively exporting their products and services worldwide. These firms are distinguished by their commitment to innovation and technological advancement, contributing significantly to the local economy. Education and research are central to Styria's identity as a hub of innovation. The region is equipped with nine universities and several universities of applied sciences, which collectively form a cornerstone of educational excellence and knowledge dissemination. Styria is also the site for approximately half of all Austrian research institutions. This infrastructure is also reflected in the R&D intensity. Entrepreneurship, internationalisation and innovation play an important role in the Styrian economy and are driven by ongoing research and development efforts. This strategic approach not only strengthens Styria's position on the global stage but also underscores its commitment to maintaining a cutting-edge industrial and educational environment.[22]

The **2023 Regional Innovation Scoreboard (RIS)** provides another avenue for assessing its level of innovativeness. The RIS contains data on 21 innovation-related indicators across 10 dimensions for European regions at either the NUTS 1 or NUTS 2 levels.[23] It is important to note that for Austria, the data from the RIS is provided only for the three groups of states at NUTS 1 level. Therefore, the analysis focuses on the **region of Southern Austria**, which includes the states of Carinthia and Styria. However, Styria is the dominant economy in this region, accounting for more than two-thirds of the region's population as well as almost 70% of the region's economic output.[24] According to the RIS, the region of Southern Austria stands out as a **"Strong Innovator"** with a RII score of 116.2 (EU27 = 100), exhibiting a higher innovation performance than the EU27 average, but a slightly lower score than the national average (97.0, AT = 100). Over time, its innovation performance has rather stagnated, with a 2.7 % increase since 2016.

The region of Southern Austria exhibits several **considerable strengths within its innovation ecosystem** (see also Figure 2). Among its strengths, Southern Austria shows an exceptional capacity for collaboration between public institutions and private enterprises, as reflected in the "Public-private co-publications" indicator, where it surpasses both Austrian and EU averages. This achievement suggests effective translational activities between research and practical application, enhancing the region's innovation output. The region also stands out in the "International scientific co-publications" indicator, performing well above the EU average, which underscores its strong global research ties and the high quality of its scientific research collaborations. In the realm of intellectual property, Southern Austria excels as indicated by high scores in the "Design Applications" and "Trademark Applications" indicators compared to the EU average, emphasizing a dynamic commercial and creative sector that actively seeks to protect its innovations.

Furthermore, **substantial investments in research and development** are demonstrated in both the "R&D expenditure in the business sector" and the "R&D expenditure in the public sector" indicators, where the region outperforms the EU average, underlining robust support for both foundational and commercial research activities. In relation to its regional GDP, Southern Austrian's total R&D expenditure in 2021 stands at 4.5%,

[22] https://www.ic-steiermark.at/en/the-ics/region-of-styria/

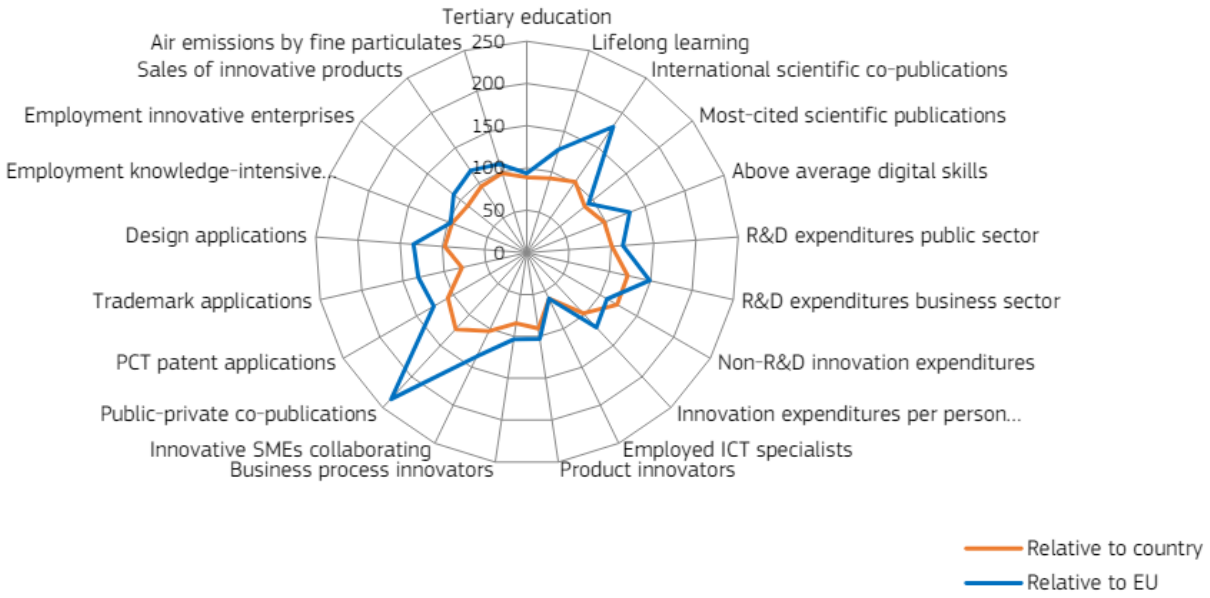
[23] EU Commission (2023); Regional Innovation Scoreboard 2023 – Methodology Report. Available under: https://research-and-innovation.ec.europa.eu/document/download/5357c81b-9222-464b-8468-38ccd83b5624_en?filename=ec_rtd_ris-2023-methodology-report.pdf (last access 17.05.2024).

[24] Eurostat (2024): Population on 1 January by age, sex and NUTS 3 region. Available under: https://ec.europa.eu/eurostat/web/products-datasets/-/demo_r_pjangrp3 (last access 17.05.2024).; Eurostat (2024): Gross domestic product (GDP) at current market prices by NUTS 3 regions. Available under: https://ec.europa.eu/eurostat/databrowser/view/nama_10r_3gdp/default/table?lang=en&category=reg.reg_eco10.reg_eco10gdp (last access 17.05.2024).

exceeding the Austrian and EU27 figures in the same year. This can be traced back to Styria's high R&D expenditure per capita, which, at 5.2%, ranks first nationally and is among the highest in the EU27. Notably, a significant proportion of this expenditure is attributed to the business sector, where 3.8% of investments were channelled into R&D in 2021, the highest rate of any state in Austria.[25]

Southern Austria's innovation ecosystem, while showing areas of strength, also displays several indicators pointing to **potential areas for improvement** when compared to the Austrian and EU27 average. According to the score of the RIS, the region seems to encounter challenges, such as in the digital transformation sector. The "Employed ICT specialists" indicator reveals a shortfall in skilled ICT professionals relative to both Austrian and EU averages, pointing to a potential bottleneck in technological advancement. Additionally, the "Most-cited scientific co-publications" indicator is below both the Austrian and EU averages, suggesting that while the region is active in research, the impact and recognition of its scientific outputs could be improved. Moreover, when it comes to product and business innovators, the region of Southern Austria trails behind the national average, indicating fewer enterprises are engaging in groundbreaking product developments or adopting innovative business models.

Figure 2: Innovation performance of Southern Austria in the Regional Innovation Scoreboard (2023)



Source: European Commission (2023): Regional Innovation Scoreboard 2023. Please note that, due to data availability at the NUTS 1 level, the indicators regarding innovation performance refer to the region of Southern Austria, which encompasses Carinthia and Styria.

[25] Eurostat (2023): GERD by sector of performance and NUTS 2 regions. Available under https://ec.europa.eu/eurostat/en/web/products-datasets/-/RD_E_GERDREG (last access 17.05.2024).

Regional competitiveness level of Styria

To conclude the chapter on the region's economic profile, the focus shifts to Styria's ranking in the **Regional Competitiveness Index**.[26] This index measures key aspects of competitiveness among regions across the EU in three dimensions: the Basic Sub-Index, the Efficiency Sub-Index, and the Innovation Sub-Index.[27]

A detailed overview of the region's performance in various indicators and dimensions of the Regional Competitiveness Index is provided in Figure 12 in the Annex. According to this, the region of Styria performs above the EU average, with a score of 109.6, ranking 69th out of all 234 regions assessed in the Regional Competitiveness Index. Thus, Styria can be classified as a **more developed region**, akin to other regions in Austria. In a national comparison, Styria exhibits a score below the Austrian average of 113.8 and only scores higher than the regions of Burgenland and Kärnten. In contrast, the capital region of Vienna shows an overall score of 118.9.

In all three dimensions, Styria's scores exceed the EU27 average; however, they are lower compared to the national average. The region particularly excels in the **Innovation Sub-Index** with a score of 121.4 (EU = 100, AT = 125.2), driven by strong performances in the **business sophistication and innovation pillars**, with the latter even surpassing the national average. Additionally, Styria shows solid strengths in other pillars across the Basic and Efficiency dimensions, including the **institutions, macroeconomic, and labour market pillars**, when compared to both national and EU averages.

The Regional Competitiveness Index also reveals areas for **potential improvement**. In terms of the infrastructure pillar, Styria falls below both the Austrian and EU27 averages, suggesting a **need for investments and improvements in this area**. Similarly, in the Market Size pillar, Styria trails behind both the Austrian and EU27 averages, indicating potential strategies are required to **enhance market access and scale**. Furthermore, while Styria's technological readiness, as indicated by its performance in the Innovation Sub-Index, is slightly above the EU average, it remains below the Austrian average. This points to opportunities for investing more in **technological infrastructure and fostering a robust innovation ecosystem** to further boost competitiveness and economic growth.

[26] European Commission (2022): EU Regional Competitiveness Index 2.0 - 2022 edition. Available under: https://ec.europa.eu/regional_policy/assets/regional-competitiveness/index.html#/ (last access 27.05.2024).
[27] For more information on the methodology employed in the EU Regional Competitiveness Index 2.0, refer to https://ec.europa.eu/regional_policy/sources/work/rci_2022/eu-rci2_0-2022_en.pdf (last access 27.05. 2024).

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Clusters in Styria & their importance for regional economic development

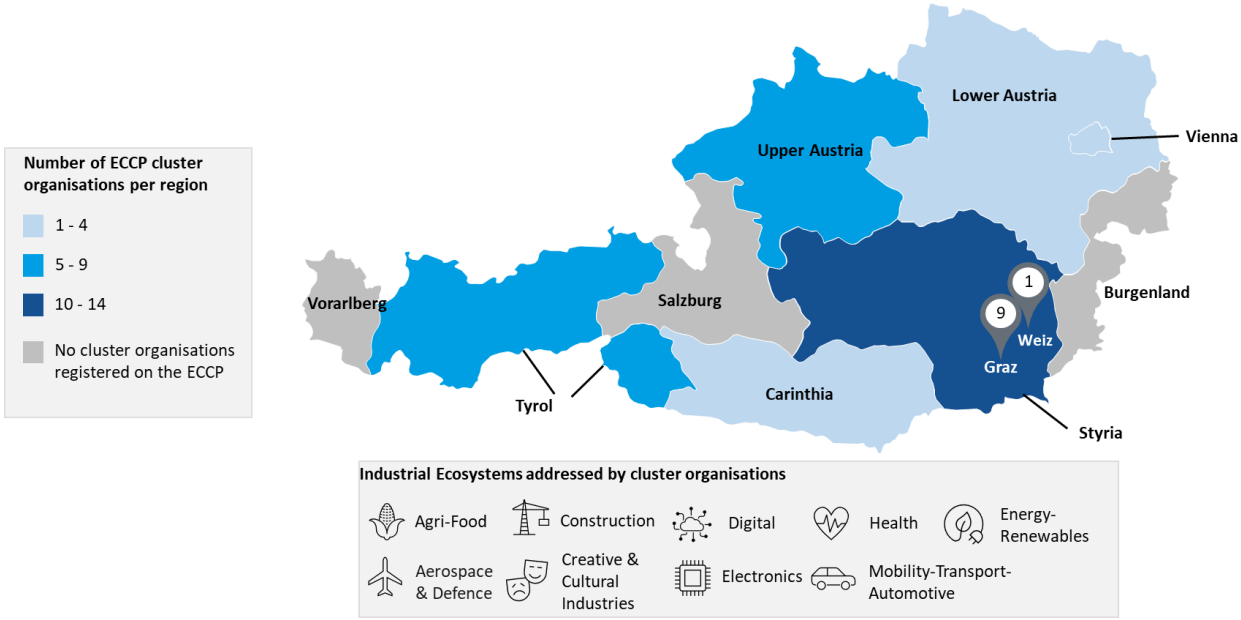
2. Clusters in Styria and their importance for regional economic development

The involvement of cluster organisations in regional economic governance, policy design and implementation at the regional level is of central importance for regional economic development. This chapter will provide an overview of the cluster landscape in Styria and the policy framework under which cluster organisations are operating in the region.

Cluster organisations in Styria

Cluster organisations are **key actors in the European economy**, facilitating collaboration, networking, and knowledge sharing between diverse innovation stakeholders within a geographical or sectoral cluster[28]. The European Cluster Collaboration Platform (ECCP) serves as a one-stop-shop for cluster organisations at the European level. Therefore, the number of registered cluster organisations and other innovation actors in Styria on the ECCP gives the first impression of the intensity of organisations in regional industrial networks. Out of the total 1,169 registered EU-27 cluster organisations on the ECCP, **ten cluster organisations** are located in Styria. Hence, the region is home to most of the Austrian cluster organisations registered on the ECCP, which totals 31 in the country (see Figure 3). This is followed by Upper Austria with nine and Tyrol with five cluster organisations. Styria shows a highly centralised cluster landscape, with nine out of ten organisations located in the district of Graz, while one organisation is located in Weiz in the district of Eastern Styria.

Figure 3: Overview of ECCP-registered cluster organisations in Austria as well as regional and ecosystem distribution of active cluster organisations in Styria



Source: ECCP (2024). Own elaboration based on https://reporting.clustercollaboration.eu/all; last accessed 16.05.2024. A full overview of the nine Styrian cluster organisations is provided in Table 4 in the Annex.

[28] A cluster, in economic terms, refers to the concentration of interconnected business, suppliers and associated institutions that are geographically proximate or related by sector.

The 10 cluster organisations registered on the ECCP encompass **all six clusters that are officially funded by the Styrian Business Promotion Agency** SFG.[29] The SFG is involved as a public stakeholder in these cluster organisations, which are thematically aligned with the Economic Strategy Styria 2030, which functions as the region's S3 (see also below and Chapter 4). These clusters are:

- ACstyria – mobility cluster
- Green Tech Valley Cluster – climate protection and circular economy
- Human.Technology Styria – life science and health technology
- Holzcluster Styria – wood and forest-based industry
- Creative Industries Styria – creative industries
- Silicon Alps Cluster – technology and innovation cluster for electronic based systems

The SFG-supported clusters draw from three different funding sources: One third of the financing stems from basic SFG funding, another third from member contributions and the final third stem from project funding. Taken all together, the six SFG clusters are privately financed by two-thirds.

Box 1: ECCP Cluster Solutions Library – The Green Tech Valley Cluster

Green Tech Valley Cluster

Background

Located in Graz, Styria, established in 2005, the Green Tech Valley Cluster has evolved into one of the **leading clean technology clusters in Europe**, focusing on environmental technologies in a region with a strong industrial base. With more than **300 members**, which altogether yield a Green Tech **turnover of €7.6 billion** (in 2022) across different areas of energy and environmental technologies, the cluster represents the fast-growing clean tech market.

Objective & services

The Green Tech Valley Cluster aims to establish itself as a **global technology hotspot for climate and circular solutions**, driving the dynamic development of Styria's regional innovation ecosystem. Outlined in its 2020-2025 strategy, the cluster seeks to adapt to rapidly evolving industry standards by promoting cutting-edge research, focusing on innovative solutions, and enhancing its international presence.

The cluster organisation provides a **comprehensive range of services** designed to boost innovation and growth within the clean technology sector. This includes support services (for innovation, start-ups, business development, etc.), extensive networking opportunities, and promotional activities, all aimed at fostering advancements in climate protection and the circular economy.

Success stories

After re-shifting its **strategic focus towards green hydrogen technologie**s, the cluster managed to co-initiate the Hydrogen Research Centre Austria in Graz with the aim of attracting new partners. The Clean Tech Valley cluster has had a strong impact on the region's innovative capacity not only in the hydrogen industry (e.g., by significantly increasing the number of hydrogen researchers in the region within 2 years), but also in the key area of recycling and waste management.

The cluster's actions have **led to significant sectoral impacts**, including the establishment of a real-world laboratory for net-zero industry and the NEFI+ innovation laboratory. These efforts are complemented by substantial investments in green steel and initiatives towards decarbonisation in the region.

Source: ECCP (2024). Note: the full case study on the Green Tech Valley Cluster can be found in the ECCP Cluster Solutions Library.

[29] See also https://www.sfg.at/en/settle-and-network/innovation-landscape/ (last access 21.05.2024).

In Box 1, the **Green Tech Valley cluster**, one of the six SFG-funded clusters, is illustrated as an example and it is highlighted how cluster has significantly influenced Styria's transition into a leading hub for clean technology, enhancing the region's capacity for innovation in green hydrogen, recycling, and waste management. The case study also demonstrates successful collaboration between regional authorities and clusters, with the Green Tech Valley cluster and other cluster organisations operating under the Styrian Business Promotion Agency (SFG) to implement regional economic strategies, all the while maintaining strategic independence.

The remaining four ECCP-registered cluster organisations, in Styria, namely Austrian Centre of Industrial Biotechnology (acib), Cluster for Automation & Advanced Technologies Styria, BioNanoNet Forschungsgesellschaft mbH (BNN) and Photonics Austria receive no public basic funding via the SFG.

The cluster organisations in Styria can be related to **9 out of 14 different EU industrial ecosystems**[30] (see Table 4 in the Annex). The strongest industrial ecosystem is Energy-Renewables with four cluster organisations involved. This is followed by the ecosystems Agri-Food, Digital, Health, Mobility-Transport-Automotive, and Electronics with three cluster organisations respectively. The prevalence of Styrian cluster organisations in the ecosystems Digital and Energy-Renewables underlines their involvement in the Twin Transition. Finally, Aerospace & Defence and Construction are represented by two cluster organisations in the region, while Creative & Cultural Industries and Energy Intensive Industries have one cluster organisations each.

Figure 4: Overview of organization, structure, and thematic orientation of ECCP-registered cluster organisations in Styria

Organisation

- Half of cluster organisations (5) in the 11-20 employees bracket (50%; ØEU: 6%)
- Three middle-sized cluster organisations with 6-10 employees (30%; ØEU: 20%)
- Two rather small cluster organisations with 1-5 employees (20%; ØEU: 67%)

Member structure

- One cluster organisation rather small with up to 50 members (10%; ØEU: 34%)
- Three cluster organisations with 51-100 members (30%; ØEU: 27%).
- Six larger cluster organisations with more than 100 members (40%; ØEU: 37%).

Thematic orientation

- Cluster organisations in Styria can be related to 9 different EU industrial ecosystems
- Collaboration often sought in internationalisation, partnering for projects, technology scouting as well as resource efficiency and circular economy

Source: ECCP (2024).

As depicted in Figure 4, half of the cluster organisations registered on the ECCP in Styria have a relatively large staff size, with 5 out of 10 employing a staff of 11 to 20 individuals, while three organisations are mid-sized with 6 to 10 employees. Looking at their membership structure, these cluster organisations typically consist of more than 100 members, while three organisations have between 51 and 100 members. Notably, collaboration

[30] see European industrial strategy. Available under: https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy_en (last access 21.05.2024).

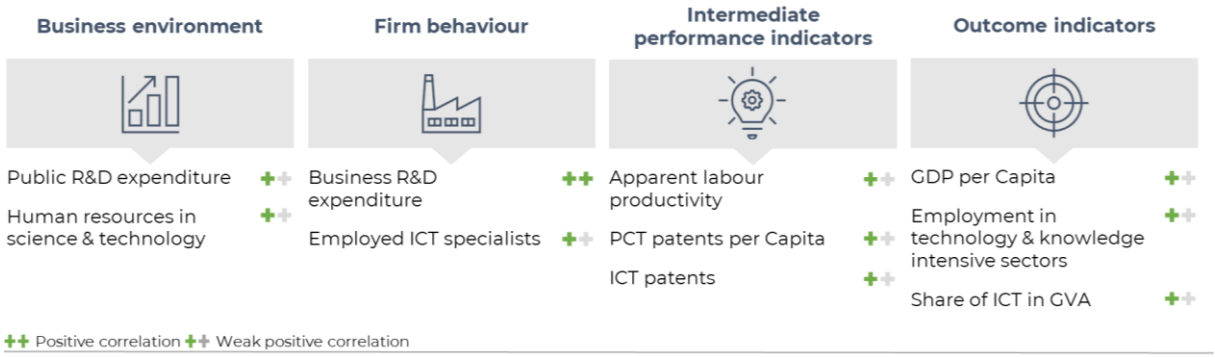
interests primarily revolve around internationalisation, with a focus on project partnerships in technology scouting, efficiency, and the circular economy, highlighting the region's active engagement in the twin transition processes.

The importance of clusters for regional economic competitiveness

The ECCP Summary report on cluster policies and programmes across Europe and priority third countries[31] also examines the relationship between clusters and regional competitiveness. The key findings of this analysis are outlined in Figure 5 below, which shows how the presence of cluster organisations is positively correlated with different dimensions of regional economic competitiveness: Business environment, firm behaviour, intermediate performance indicators and outcome indicators.

This includes, for instance, the R&D expenditures of both the business and the public sector in the dimensions business environment and firm behaviour. Positive correlation is also found between clusters and more intermediate performance indicators such as labour productivity and patenting activities. On a more global scale, it is found that the presence of clusters is positively correlated with GDP per capita and employment in technology and knowledge-intensive sectors.

Figure 5: Relationship of clusters and regional competitiveness, correlation results



Source: ECCP (2024).

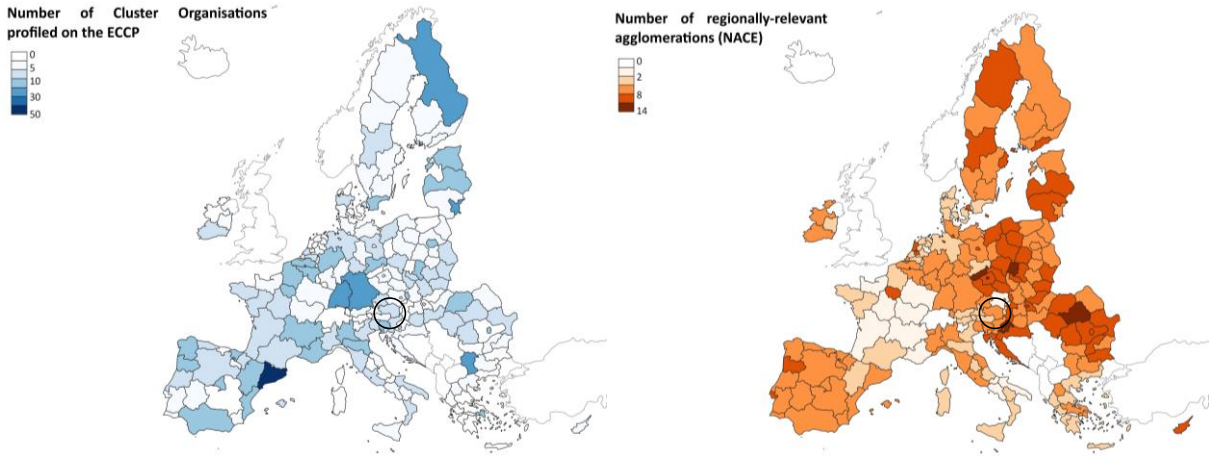
Moreover, this examination also further reveals the **relevance of cluster organisations for the Twin Transition** as there is a positive correlation between clusters and employed ICT specialists, ICT patents and the share of ICT in gross value added. Nonetheless, it is also found that the presence of regional industrial agglomerations is linked with higher air pollution.

In addition to the previous examination of clusters and regional competitiveness, Figure 6 below shows that industries in Styria account for a medium-high number of regionally relevant sector agglomerations[32] but a slightly below-average number of cluster organisations in comparison to other European regions.

[31] ECCP (2022): Summary report on cluster policies and programmes across Europe and priority third countries. Available online: https://clustercollaboration.eu/sites/default/files/sites/default/files/editor/ECCP_Summary%20report%20cluster%20policies_2022_finalv2.pdf (last access 21.05.2024).

[32] From the European Cluster Panorama Report (2021): Region-relevant specialisation agglomerations: When the region is specialised in the sector and the employment share of that sector is relevant for the region (regional employment share > 1%).

Figure 6: Distribution of regionally relevant sector agglomerations and cluster organisations in EU27



Source: ECCP (2024), own contribution based on Eurostat and ECCP data.

Cluster policy in Styria

To start with, one can outline that cluster policy in Austria is largely driven at the regional level. On a federal level, it is worth mentioning that Austria implemented a National Cluster Platform in 2008 at the initiative of the previous Federal Ministry of Economics and Labour that serves as the central interaction and cooperation platform for Austrian cluster stakeholders. [34] Within the framework of the National Cluster Platform, current cluster-relevant trends, technologies and location topics are addressed and joint projects are initiated. The federal activities support the measures in the states and strive to have a complementary effect. Over time, Austria's cluster strategy moved away from supporting specific cluster initiatives towards the implementation of national and regional strategies.[35]

On the regional level, **Styria was a pioneering region in Austria regarding cluster policy** when a cluster-orientated funding policy was proposed as part of the Styrian technology policy concept in the 1990s. This concept came into practice with the founding of the mobility cluster ACstyria in 1996, a pilot project that acted as the first regional cluster organisation in all of Austria.[36] Styria's cluster policy has been one of the catalysts in the region's transformation away from its former reliance on heavy industry.[37] Today, dedicated funding for cluster organisations in Styria is provided by the Styrian Business Promotion Agency SFG[38] which is involved in six Styrian cluster organisations (see also the section 'Cluster organisations in Styria' above)

Styria's Economic Strategy 2030[39], which also functions as the region's S3, is the basis for the region's current cluster policy (see also Chapter 4). It defines openness towards business support across different industries and clusters as a central concern for economic policy. Thus, cross-clustering is regarded as a key element in the strategy. Styria's Economic Strategy 2030 emphasises that clusters should not remain within their respective

[34] for more information see the ECCP Cluster Policy Factsheet on Austria. Available here: https://clustercollaboration.eu/in-focus/policy-acceleration/country-factsheets-on-cluster-policies-and-programmes (last access 03.06.2024)
[35] https://www.newsd.admin.ch/newsd/message/attachments/18658.pdf (last access 06.05.2024).
[36] https://www.politik.steiermark.at/cms/beitrag/11144275/7129389/ (last access 06.05.2024).
[37] MacNeill, S. & Steiner, M. (2010): Leadership of cluster policy: lessons from the Austrian province of Styria. Policy Studies, 31(4), 441–455. https://doi.org/10.1080/01442871003723374
[38] see also https://www.sfg.at/en/settle-and-network/innovation-landscape/ (last access 21.05.2024).
[39] see https://www.wirtschaft.steiermark.at/cms/dokumente/12907475_174367847/3a8cdb3b/Wirtschaftsstrategie_Stmk_2030.pdf (last access 06.05.2024).

communities but rather contribute to new innovations through exchange, networking and know-how transfer, combining different ideas and perspectives.

Moreover, the strategy underlines the importance of the identification and orientation of collaborative work towards forward-looking topics and the strengthening of the culture of cooperation in the respective ecosystem as the basis for the work of clusters in the region. It identifies the development of innovation and lead of projects as the core tasks of clusters and stresses the significance of cross-cluster management and partnerships as building blocks of modern cluster management. Clusters should also take an active role in project development activities in order to improve the exploitation of research results in the region and strengthen the connection of scientific and business-related research. Here, the following Chapter 3 will outline the participation of Styrian cluster organisations in cross-border cooperation, European networks and support initiatives. Chapter 4 will further assess the role of Styrian cluster organisations in the implementation of the Styrian Economic Strategy 2030.

03

Cross-border cooperation and the involvement of Styrian clusters in European networks & support initiatives

3. Cross-border cooperation and the involvement of Styrian clusters in European networks and support initiatives

Findings from the Evaluation Study of and Potential Follow-Up to Cluster Initiatives under COSME, H2020 and FPI of the European Commission (2021) show that cross-border cooperation is perceived by innovation stakeholders as a highly relevant activity for clusters to support sustainable growth and resilience-building of their SME members.[40] To gain an overview of the existing cross-border cooperation of cluster organisations in Styria, a closer look will be taken in this chapter at their recent involvement in relevant European support initiatives (see Figure 7).

Figure 7: Overview of selected EU support initiatives that involve clusters from Styria

Source: ECCP (2024).

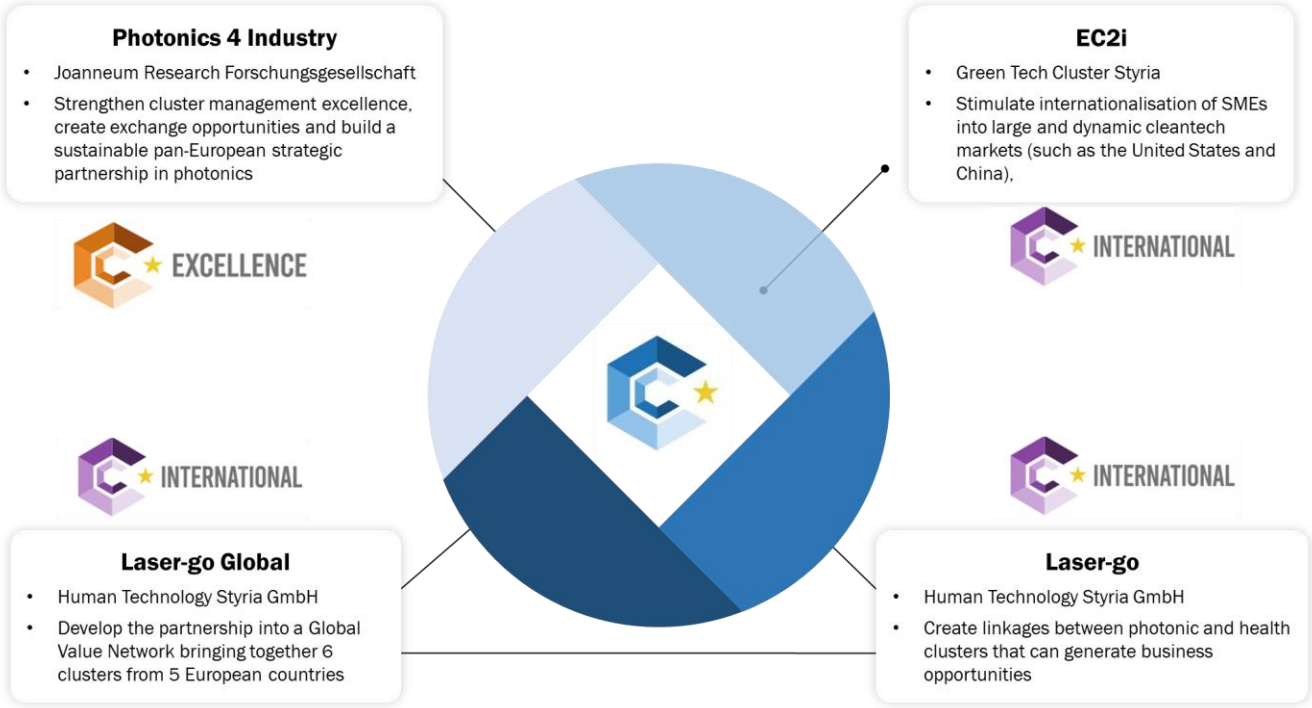
Involvement of Styrian cluster organisations in the European Strategic Cluster Partnerships (ESCP)

The European Strategic Cluster Partnership (ESCP) initiative funded under the EU Programme for the Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME) is a relevant EU support initiative to increase cross-border cooperation of EU cluster organisations and other intermediary organisations. The ESCP initiative established partnerships between European clusters and intermediary organisations from the different EU Member States or associated countries. Those partnerships focused on three different thematic areas which were internationalisation (ESCP for Going International), cluster excellence (ESCP for Excellence) and smart specialisation (ESCP for Smart Specialisation) out of which the ESCP for Going International is still running

[40] Prognos et al. (2021): Evaluation Study of & Potential Follow-Up to Cluster Initiatives under COSME, H2020 & FPI (DG GROW, Unit D2 - Industrial Forum, alliances, clusters). Study on behalf of the European Commission. Available under: https://op.europa.eu/en/publication-detail/-/publication/a2c3e9e1-3deb-11ec-89db-01aa75ed71a1/language-en/format-PDF/source-241039860 (last access on 29.01.2024).

throughout 2024[41] and the ESCP for Excellence[42] has just ended in December 2023.[43] Hence, the participations from Styria in those partnerships is in the focus of the next section.

Figure 8: Overview of participation from Styrian cluster organisations in ESCP initiatives



Source: ECCP (2024).

Figure 8 gives an overview of the three cluster organisations and projects in which they have or are participating. Two cluster organisations have participated or are participating in three ESCPs for Going International (ESCP-4i) projects, while one participated a the ESCP for Excellence (ESCP-4x) project, for a total of €241,000 of requested support. As regards the **ESCP-4i**, the concerned cluster organisations are the following:

- The **Green Tech Cluster Styria** is involved in the **EC2i** project, whose objectives are to stimulate internationalisation of innovative European SMEs into large and dynamic cleantech markets with high growth potential (such as the United States and China), to capitalise on strong common identity and shared vision of opportunities by collaborating in the development of value chains spanning across all five pariticipating cluster organisations, enabling them to take a leading global position in the cleantech space, and develop strategic partnerships with stakeholders in the target markets, identify local market opportunities, raise the profiles of European SMEs, and pursue opportunities for collaborative business development.
- The **Human Technology Styria GmbH** is involved in the **Laser-go** and **Laser-go Global** projects, which initially sought to create linkages between photonic and health clusters that could facilitate the business opportunities aimed at the growing sector of health tech with the key enabling technologies (**Laser-go**) and then further develop the partnership into a Global Value Network by bringing together six cluster

[41] https://clustercollaboration.eu/eu-cluster-partnerships/escp-4i/fourth-generation (last access 27.02.2024).
[42] https://clustercollaboration.eu/eu-cluster-partnerships/escp-4x (last access 27.02.2024).
[43] For more information on the European Cluster Partnerships see: https://clustercollaboration.eu/eu-cluster-partnerships (last access 13.01.2024).

organisations from five EU countries from the healthcare, health tech and photonics sectors (Laser-go global). The project seeks to develop Value Mapping Analysis tools, gather intelligence about the unmet market needs in the target markets and create a network of technology scouts and the network representatives from the local photonics and health tech ecosystems.

Finally, the Joanneum Research Forschunggesellschaft participated in the Escp-4x project **"Photonics 4 Industry"**, whose overall goal is to strengthen cluster management excellence, create exchange opportunities and build a sustainable pan-European strategic partnership in the photonics sector.

Involvement of Styrian clusters in the Eurocluster initiative

For the 2021-2027 funding period, the European Commission has launched the implementation of the EU Industrial Strategy. In this context, so-called Euroclusters[44] are funded under the Single Market Programme. The Eurocluster initiative aims at supporting cross-sectoral, cross-regional European industry clusters cooperating with other economic stakeholders such as companies or business organisations. In total, five Austrian cluster organisations are involved in Eurocluster projects altogether, out of which three are from Styria. The three Styrian organisation are:

- The **Human Technology Styria cluster** and the **ICS** (**INTERNATIONALISATION CENTRE STYRIA**), which have participated in the **Development of E-Health Solutions Improving Resilience in Europe (DESIRE)** project. The project seeks to address the challenges that SMEs face when accessing the European e-health and digital health market by formalising, structuring and activating intra-and international collaborations through the DESIRE Collaboration Platform, which is a new collaboration model involving 100 international stakeholders, as well as a virtual collaboration space via its market channel, the Service Provision Forum. In addition, the Eurocluster identified and co-financed product and business process innovation projects as well as internationalisation actions.
- The **Silicon Alps Cluster** is involved in the "**Silicon Eurocluster**" project, which aims to achieve greater European self-sufficiency within the electronics value chain. The project will support the conversion to value chains that are greener, more digital, and more resilient against disruption. The project seeks to place Europe in a leading position in the development and production of Micro- and Nanoelectronics.[45]

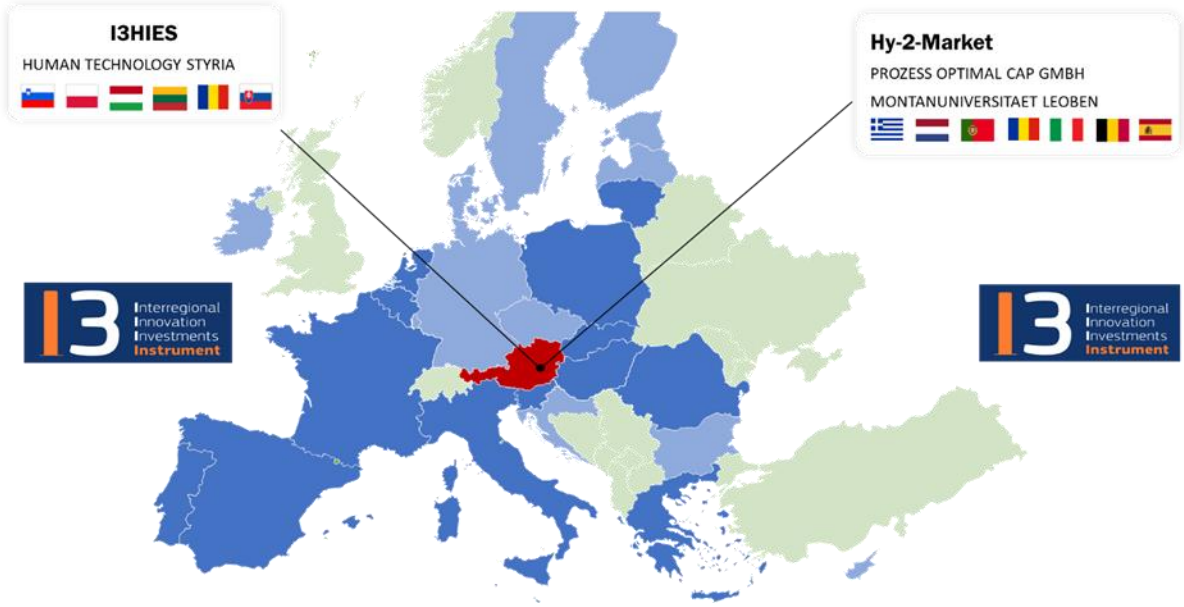
Involvement of Styrian clusters in the Interregional Innovation Investments (I3) initiative

The Interregional Innovation Investments (I3 partnerships) is a funding instrument under the European Regional Development Fund (ERDF) 2021-2027 programming period that provides advisory and financial support through the European Innovation Council and SMEs Executive Agency (EISMEA). Its goal is to assist interregional innovation projects during their mature phases in commercialisation and up-scaling by providing them with the tools to overcome regulatory and other barriers and bring their project to investment levels. For the 2021-2027 programming period, there are €570 million available (up to €10 million per project) and EU contribution covers 70% for all beneficiaries and cost categories.

[44] For more information on the Euroclusters see: https://eismea.ec.europa.eu/funding-opportunities/calls-proposals/joint-cluster-initiatives-euroclusters-europes-recovery_en (last access on 31.05.2024).

[45] More information is available here: https://www.silicon-alps.at/funding/silicon-eurocluster/ (last access on 31.05.2024).

Figure 9: I3 participations from Styria and respective partner countries



Source: ECCP (2024).

Figure 9 illustrates the I3 participations from Styria and the partnerships from different EU countries. A total of three beneficiaries from Styria, both clusters and SMEs, take part in two different I3 projects. The clusters and projects concerned are:

- The **Human Technology Styria cluster** is taking part in the **I3HIES** project, which focuses on the health innovation ecosystems to boost and sustain efficient international collaboration of the relevant quadruple helix innovation actors. The nine partners focused on three thematic focus areas: medical devices, emergency equipment and MDR compliance. More specifically, they will accelerate the development of validated innovation investments in the thematic focus areas of the project and enhance interregional cooperation and participation in EU value chains.
- Two local stakeholders, namely the **Montanuniversität Leoben** and the **Prozess Optimal Cap Gmbh**, are taking part in the **Hy2Market project**, whose main objective is to contribute to building a more mature hydrogen value chain across Europe by targeting investments in green hydrogen production, with a special focus on management systems. To ensure the knowledge transfer from the different parts of the value chain and between all the SME's and regions, the project will develop, amongst others, a knowledge exchange platform.

04

Smart Specialisation in Styria

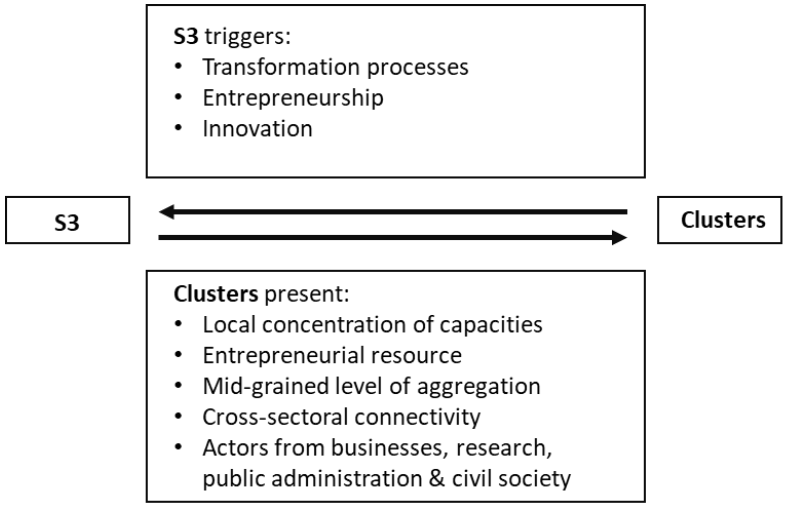
EUROPEAN CLUSTER COLLABORATION PLATFORM

Strengthening the European economy through collaboration

4. Smart Specialisation in Styria

Smart Specialisation is a strategic approach developed by the European Commission that requires regions to identify and focus on their unique strengths and capabilities to foster innovation-driven economic growth. Cluster organisations (can) play an important role in the design and implementation of Smart Specialisation Strategies (S3) since in both concepts, the promotion of economic growth and competitiveness through regional proximity are key elements. S3 can help to transform the efforts of individual cluster organisations into a regional agenda while clusters provide a broad range of actors with specific abilities.[46] The interplay between clusters and smart specialisation is also visualised in Figure 10 below. Box 2 at the end of this chapter provides some good practices of cluster involvement in S3 from other European regions and especially in the Entrepreneurial Discovery Process[47] (EDP). Against this background, this chapter focuses on Smart Specialisation in Styria.

Figure 10: Interaction of clusters and S3



Source: ECCP (2024), own adaptations based on Keller et al. (2019): Implementing S3 with Clusters – An Innovation Model for Transformative Activities.

The S3 of Styria

A key starting point for the analysis of the Styrian S3 2021-2027 is the **Economic Strategy Styria 2030**.[48] This strategy was developed by the Styrian Provincial Government. Cluster organisations play an important role in this integrated strategy as this document also outlines the Styrian cluster policy (see also Chapter 2). For instance, the strategy recognises clusters and cross-clustering as key elements for the implementation of the strategy and

[46] see also European Commission (2013): The role of clusters in smart specialisation strategies. Available under: https://op.europa.eu/en/publication-detail/-/publication/2fe44194-e5a8-42b7-ac14-9c9b8e157de3 (last access 03.06.2024); OECD (2016): OECD Science, Technology and Innovation Outlook 2016 – Cluster Policy and Smart Specialisation. Available under: https://www.oecd-ilibrary.org/docserver/sti_in_outlook-2016-28-en.pdf?expires=1628167848&id=id&accname=guest&checksum=54667669BA762145CD40965A391C05BE (last access 03.06.2024).

[47] The entrepreneurial discovery is an interactive and inclusive process in which the relevant actors identify new and potential activities and inform the government. The government assesses this information and empowers those actors most capable of realising the potential. See https://ec.europa.eu/regional_policy/policy/communities-and-networks/s3-community-of-practice/entrepreneurial_discovery_en (last access 03.05.2024).

[48] See here: https://www.wirtschaft.steiermark.at/cms/dokumente/12907475_174367847/3a8cdb3b/Wirtschaftsstrategie_Stmk_2030.pdf (last access 06.05.2024).

assigns them the core task of developing innovation and lead projects. In addition, the international position of Styria and the export capability of Styrian companies are to be supported by Styrian cluster organisations.

The Styrian S3 2021-2027 identified **seven priority areas** (see Figure 11). These include the three **lead markets** "Mobility", "Green tech" and "Health tech". Technological core competencies of Styria are also provided in the areas of "Materials technology", "Production technologies, Mechanical & plant engineering" as well as "Digital technologies & microelectronics". The "Creative Industries" are regarded as a cross-sectional topic. Overall, the strategy and its priorities combine the strength of the region together with the objective of shifting towards a climate-neutral, digital future.[49]

Figure 11: Priority areas of the S3 2021-2027 of Styria

Source: ECCP (2024), own elaboration based on the Economic Strategy Styria 2030. *identified lead market.

As mentioned above, the **Styrian cluster organisations play a key role in the implementation of the S3** and hence in supporting the regional transition of Styria. In that regard, the Styrian cluster organisations are found to be great drivers of the strategies implementation and create significant impacts since they build networks, foster innovation and support projects.[50] Here, one can mention several projects implemented with the support of Styrian cluster organisations as illustrative examples. For instance, the mobility cluster ACStyria is involved in the project Alp.Lab which is an Innovation laboratory for testing automated vehicles for the mobility of the future. In the context of the lead market "Health tech", one can mention the project "Circular economy in the healthcare sector" which is implemented with the support of the Styrian cluster Human.Technology Styria. The Austrian Centre of Industrial Biotechnology is conducting various projects in the context of the area "Green tech". This includes, for instance, the project "ConCO$_2$rde" which works on the conversion of CO2 by smart autotrophic biorefineries and the project "Bionanopolys" which develops an Open Innovation Test Bed (OITB) environment to boost the development of nano-enabled bio-based materials. As a concluding remark, one can highlight the cross-cluster project ""Cockpit of the Future" project, which was carried out by the ACstyria, Human.technology Styria and Silicon Alps Cluster. The aim of this cross-cluster initiative was to pool the region's technological expertise in the fields of automotive, medical technology, sensor technology and electronics and make it visible in joint projects.

[49] See also the interview with the Styrian Business Promotion Agency from the ECCP Cluster Solutions Library. Available online: https://www.youtube.com/watch?v=qlF7YkK99Xg (last access 13.05.2024).
[50] See also the interview with the Styrian Business Promotion Agency from the ECCP Cluster Solutions Library. Available online: https://www.youtube.com/watch?v=qlF7YkK99Xg (last access 13.05.2024).

Box 2: Good practices of cluster involvement in S3

Good practices of cluster involvement in S3

Basque Country, Spain – Cluster working groups:

In the Basque Country, cluster organisations are actively involved in the identification of key sectors for the definition of the S3 priority areas to ensure an alignment with the strengths of the region. Moreover, cluster organisations are involved in the implementation of the S3 through working groups and special committees which develop project proposals that are submitted to various funding programmes (e.g., ERDF).

Tuscany, Italy – Foresight & Roadmapping:

In Tuscany, clusters were key actors involved in the EDP which built on a 5-step model for strategic planning based on foresight and roadmapping. In this process, the 13 regional Innovation Poles play a key role as they are tasked to organise open workshops in which scientific and technological roadmaps were developed based on foresight exercises on the regional strengths and weaknesses.

Skåne, Sweden – Board of cluster organisations:
In Skåne, the innovation strategy is part of Skåne's Regional Development Strategy (The Open Skåne 2030) and was developed by the Research and Innovation Council of Skåne. The Research and Innovation Council of Skåne is a forum of collaboration composed of a variety of actors from the public, private and the academic sector. Cluster organisations are represented in this Research and Innovation Council through the board of cluster organisations.

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OECD (2016): OECD Science, Technology and Innovation Outlook 2016 – Cluster Policy and Smart Specialisation. Available under https://www.oecd-ilibrary.org/docserver/sti_in_outlook-2016-28-en.pdf?expires=1628167848&id=id&accname=guest&checksum=54667669BA762145CD40965A391C05BE (last access 03.06.2024).

Prognos et al. (2021): Evaluation Study of & Potential Follow-Up to Cluster Initiatives under COSME, H2020 & FPI (DG GROW, Unit D2 - Industrial Forum, alliances, clusters). Study on behalf of the European Commission. Available under: https://op.europa.eu/en/publication-detail/-/publication/a2c3e9e1-3deb-11ec-89db-01aa75ed71a1/language-en/format-PDF/source-241039860 (last access on 29.01.2024).

Annex

Key socio-economic and sectoral indicators

Table 1: Key socio-economic and sectoral indicators of Styria, Austria and the EU27

Indicator	Reference Year	Styria (AT22)	Austria	EU27
Population size (in ths)	2023	1,265	9,105	448,754
Total Area	2023	16,398	83,878	4,225,134
Population density	2022	77,5	109,6	108.9
GDP per capita (PPS)	2022	39,700	44,000	35,400
GDP (in mill)	2022	56,153	447,218	15,905,280
Share of GVA in:				
Agriculture, forestry and fishing (A)	2021	2.2	1.4	1.8
Industry (except Construction (B-E)	2021	26.9	22.1	20.2
Construction (F)	2021	7.9	7.1	5.4
Services (G-N)	2021	41.3	48.5	50.5
Public administration (O-U)	2021	21.7	21.0	22.1
Share of employment in:				
Agriculture, forestry and fishing (A)	2023	4.3	3.1	3.5
Industry (except Construction (B-E)	2023	20.9	17.9	17.4
Construction (F)	2023	8.6	7.8	6.8
Services (G-N)	2023	37.1	41.8	41.1
Public administration (O-U)	2023	29.0	29.4	30.9

Source: ECCP (2024), own elaboration based on data from Eurostat.

Employment Composition and Specialisation in Styria

Table 2: Regionally relevant sectoral agglomerations in Styria

Region	Agglo. 1	Agglo. 2	Agglo. 3	Agglo. 4	Agglo. 5	Agglo. 6
AT22: Styria	C24 - Manufacture of basic metals	C26 - Manufacture of computer, electronic & optical products	I55 - Accommodation	C29 – Manuf. of motor vehicles, trailers & semi-trailer	C28 - Manuf. of machinery & equipment	C24 - Manufacture of basic metals

Source: ECCP (2024), own calculation and elaboration based on Eurostat data.

Table 3: Regionally relevant ecosystem agglomerations in Styria

Region	Agglo. 1
AT22: Styria	Electronics

Source: ECCP (2024), own calculation and elaboration based on Eurostat data.

Cluster organisations in Styria

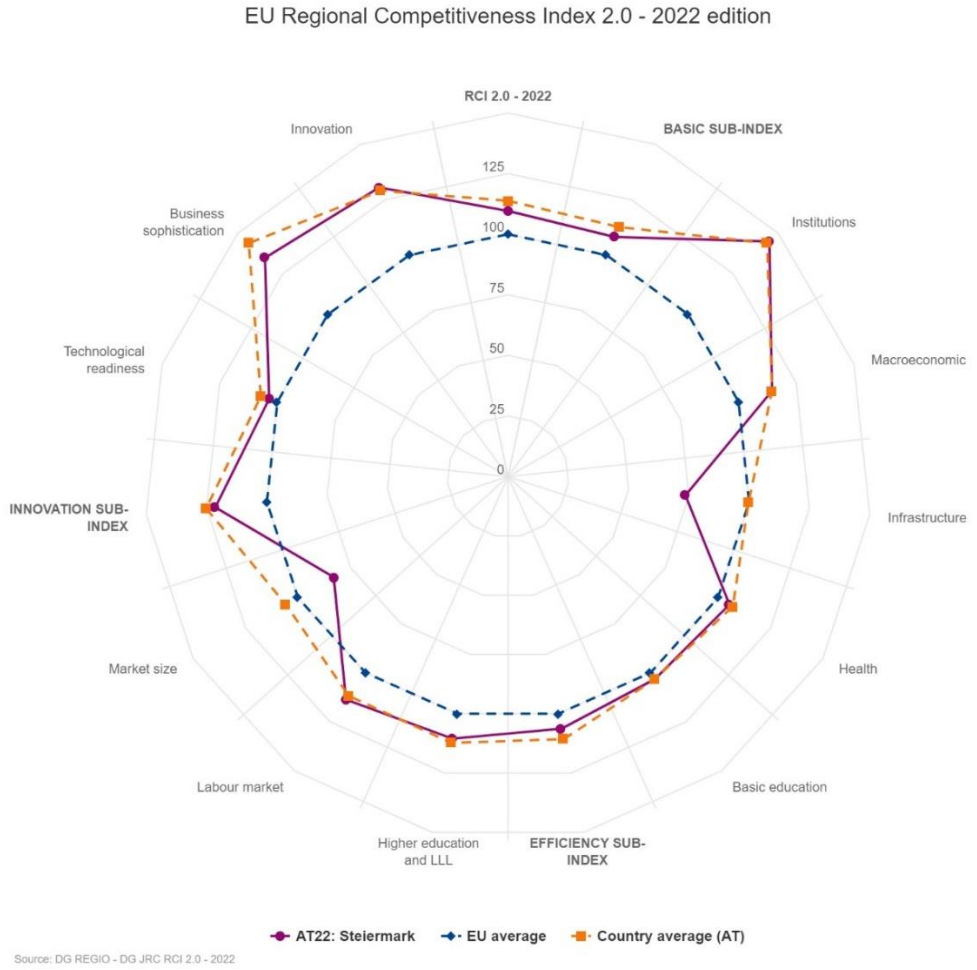
Table 4: Overview of cluster organisations in Styria and their addressed EU industrial ecosystems

N°	Cluster organisation	Industrial Ecosystem
Officially recognised cluster organisations		
1	**ACstyria Mobilitätscluster**	Aerospace and Defence, Mobility-Transport-Automotive, Energy-Renewables, Digital
2	**Green Tech Valley Cluster**	Energy Intensive Industries, Energy-Renewables
3	**Human.technology Styria GmbH**	Health
4	**Holzcluster Steiermark GmbH**	Agri-Food, Construction, Energy-Renewables
5	**Creative Industries Styria**	Creative & Cultural Industries
6	**Silicon Alps Cluster**	Electronics
Other ECCP-registered cluster organisations located in Styria		
7	**Austrian Centre of Industrial Biotechnology (acib)**	Agri-Food
8	**Cluster for Automation & Advanced Technologies Styria**	Construction, Digital, Electronics, Mobility-Transport-Automotive, Energy-Renewables
9	**BioNanoNet Forschungsgesellschaft mbH (BNN)**	Health
10	**Photonics Austria**	Aerospace & Defence, Agri-Food, Digital, Electronics, Health, Mobility-Transport-Automotive

Source: ECCP (2024) and own adaptations.

Regional Competitiveness Index

Figure 12: Performance of Styria in the Regional Competitiveness Index



Source: European Commission (2022): EU Regional Competitiveness Index 2.0 - 2022 edition.