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# Clusters meet Regions event in Eindhoven “Collaboration for Tomorrow – ‘The Brabant Way’”

Input paper

An initiative of the European Union





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Brussels, March 2025



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## Executive Summary

The following paper presents observations on the cluster landscape in the province of North Brabant and outlines key considerations for its future development. These considerations may raise strategic questions to be explored in the workshops of the “Clusters Meet Regions” event. The key takeaways are summarised below:

### Context: Economic profile of North Brabant

- North Brabant contributes around 15% to the national GDP and has experienced a strong recovery in recent years. In 2022, the region's exports reached €166.4 billion. With a GDP per capita (PPS) of €52,300 in 2023, it exceeds both the Dutch and EU averages.
- The region's economy is characterised by a strong high-tech sector, with its export share being twice the national average. This sector is highly concentrated in the Eindhoven metropolitan area.
- In the 2023 Regional Innovation Scoreboard, North Brabant is classified as an "Innovation Leader -", showing steady improvement since 2016. The province excels in intellectual property creation, research collaboration, and a highly skilled workforce, while there is room for improvement in non-R&D innovation investments and the commercialisation of innovative products.

### Clusters in North Brabant and their importance for regional economic development

- North Brabant has the highest number of ECCP-registered cluster organisations among Dutch provinces, with nine out of the 32 registered in the Netherlands. The cluster landscape is highly centralised, with six clusters located in South-East North Brabant, five of which are in Eindhoven. The region's clusters cover seven of the 14 EU industrial ecosystems, with Health being the most represented sector, comprising three cluster organisations.
- The Netherlands supports cluster development through the “Topsectoren” (Top Sectors) policy, which fosters collaboration between business, research, and government in ten key sectors. North Brabant aligns its cluster support with this policy while focusing on regional strengths through its Smart Specialisation Strategy. The province plays a key role in interregional innovation via the Vanguard Initiative and supports entrepreneurship through the Brabant Development Agency (which it co-owns) and via close collaboration with triple helix organisations throughout the province, such as Brainport Development, AgriFood Capital, REWIN and Midpoint.

### Cross-border cooperation and the involvement of North Brabant-based clusters in European networks and support initiatives

- North Brabant is deeply engaged in cross-border cooperation and international collaboration. Its strategic location between major industrial regions, such as the Randstad, the Flemish Diamond, and the Ruhr Valley, facilitates these connections. The region's main collaborations are with Germany and Belgium, particularly through European controlled funds, such as Horizon Europe, ERASMUS + and the Innovation Fund. Other regionally controlled funds, such as Interreg VIA and VIB funds also play a relevant role.
- Euroclusters play a significant role in North Brabant's innovation landscape. Three industrial organisations in the province hold key positions in E-Boost, BioMan4R2, and Silicon Eurocluster, which focus on green and digital transition, health innovation, and competitiveness, aligning with the region's economic priorities.



## Smart Specialisation in North Brabant

- 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 S3 of South Netherlands includes the province of North Brabant and is built around five key societal transitions: energy, raw materials, climate, agriculture and food, and health. A central objective across these areas is improving the access of SMEs to innovation funding to enable their contribution to societal transformation. The strategy also emphasises technological strength and innovation, education and reskilling, and international cross-border collaboration. It serves as a strategic framework that guides innovation investment across different funding sources.
- Cluster organisations play a key role in the governance and implementation of North Brabant's Smart Specialisation Strategy (S3). Actively engaged in addressing S3 priorities, they foster collaboration between businesses, research institutions, and government actors. Additionally, they contribute to interregional cooperation, drive innovation across key sectors, and support the development of projects aligned with the region's priority transitions.



# 01

## Context: Economic profile of North Brabant



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# 1. Context: Economic profile of North Brabant

The province of North Brabant is a province in South Netherlands, bordering Belgium to the south and lies close to Germany to the east. It holds a strategic position within the economic and industrial landscape of the Netherlands. As of 2024, North Brabant has a population of approximately 2.6 million inhabitants, representing around 15% of the Dutch population.<sup>1</sup> The province is divided into four COROP regions. The region of South-East North Brabant, where the city of Eindhoven is located, accounts for the majority of the region's population, with around 809,000 people, constituting approximately 31% of the region's population. This is followed by North-East North Brabant (26%) and West-North Brabant (25%), while Mid-North Brabant has the smallest population share at 19%.<sup>2</sup> Spanning 5,082 square kilometers, North Brabant covers approximately 14% of the Netherlands' total area.<sup>3</sup> With a population density of approximately 526.1 people per square kilometer, North Brabant is slightly above the Dutch average of 517.8 while being significantly higher than the EU27 average of 109.1.<sup>4</sup> This showcases that the region is defined by a more urban landscape. Mid-North Brabant is the most densely populated province with 550.6 people per square kilometer, while the North-East North Brabant province has the lowest density with 490.1 people per square kilometer.<sup>5</sup>

The province of North Brabant serves as a central hub for industry and technology, making it one of the most economically successful and innovative regions in both the Netherlands and the EU. Its geographical position between Belgium and Germany plays a crucial role in trade and innovation. Germany remains the Netherlands' most important trading partner, with five German federal states—Baden-Württemberg, Bavaria, North Rhine-Westphalia, Saxony, and Thuringia—being of particular strategic importance for North Brabant. Cooperation with these regions focuses on trade promotion, innovation collaboration, and social topics.<sup>6</sup> To the south, North Brabant maintains close cooperation with the Belgian province of Flanders, underpinned by European funding mechanisms and cross-border policy frameworks.<sup>7</sup>

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

<sup>1</sup> Eurostat (2025): [Population on 1 January by age, sex and NUTS 3 region](#). Data retrieved on 17.02.2025.

<sup>2</sup> *ibid.*

<sup>3</sup> Eurostat (2025): [Area by NUTS 3 region](#). Data retrieved on 17.02.2025.

<sup>4</sup> Eurostat (2025): [Population density by NUTS 3 region](#). Data retrieved on 17.02.2025.

<sup>5</sup> *ibid.*

<sup>6</sup> Province of North Brabant (2025). Samenwerking met Duitsland. Available online: <https://www.brabant.nl/onderwerpen/economie/internationaal/internationale-samenwerking/samenwerking-duitsland/> (last access 26.02.2025).

<sup>7</sup> Province of North Brabant (2025). Samenwerking met Vlaanderen. Available online: <https://www.brabant.nl/onderwerpen/economie/internationaal/internationale-samenwerking/samenwerking-vlaanderen/> (last access 26.02.2025).





## Macroeconomic profile of North Brabant

In 2023, the **Gross Domestic Product (GDP)** of North Brabant reached approximately €161.9 billion, accounting for around 15.2% of the Dutch total GDP (€1,067.6 billion).<sup>8</sup> The economic trajectory of North Brabant has seen stable economic growth in recent years when examining GDP at constant prices, with 2010 as the base year.<sup>9</sup> After exhibiting steady economic growth from 2010 until 2019 (2,2%) that lies above the Dutch average (1.6%), the COVID-19 pandemic caused the economy of North Brabant to shrink by 2.5% in 2020, mirroring the economic downturn felt across much of Europe. However, the province demonstrated resilience, recovering with a 6.7% growth rate in 2021, 1.8% in 2022 and 1.9% in 2023.<sup>10</sup>

In terms of per capita GDP (PPS), the North Brabant stood at €52,300 in 2023, which was above both the Dutch national average of €50,800 and the EU average of €38,100.<sup>11</sup> When examining per capita GDP at the regional NUTS 3 level, significant disparities emerge within North Brabant. The region of South-East North Brabant stood out with a GDP per capita of €62,800, considerably higher than the average for North Brabant of €52,800. The high GDP per capita in South-East North Brabant is primarily due to its status as a **global leader in innovative high-tech industries**, primarily driven by the Eindhoven metropolitan area.<sup>12</sup> In contrast, the regions of Mid-North Brabant and West-North Brabant report GDP per capita figures below the region's average at €42,300 and €48,000, respectively. The region of North-East North Brabant is more in line with the regional average, recording €51,200. These differences highlight the uneven distribution of economic activity across the province, with South North Brabant significantly outperforming the other regions.<sup>13</sup> North Brabant's total GVA amounted to 145.9 billion in 2023, thus contributing approximately 15.2% of the Dutch total GVA in 2023.<sup>14</sup>

In 2022, North Brabant's **total exports accounted for €166.4 billion**, thus accounting for 20% of the total Dutch exports.<sup>15</sup> The most exported product group were “Machinery and transport equipment” which accounted for 41.9% of North Brabant's exports, which is nearly double the national average (25.1%). This is followed by “Chemicals and related products” (14.4%) and “Food and live animal” (12.8%). The export structure highlights the **importance of the manufacturing and high-tech sector for the regional economy of North Brabant**. From 2015-2021 the region's high-tech exports nearly doubled €14.2 billion in 2015 to €28.2 billion in 2021.<sup>16</sup> The high-tech sector is strongly centralised in North Brabant and is mostly driven by the Eindhoven metropolitan area. Germany remains to be the most important importer of goods from North Brabant, followed by Belgium. Important trade partners of the province outside of Europe are Taiwan, South Korea, China and the United States.

<sup>8</sup> Eurostat (2025): [Gross domestic product \(GDP\) at current market prices by NUTS 2 regions](#). Data retrieved on 17.02.2025.

<sup>9</sup> To account for inflation, GDP at market prices was adjusted using a deflator derived from national-level chain-linked volumes with a 2010 base year, based on Eurostat data.

<sup>10</sup> Eurostat (2025): [Gross domestic product \(GDP\) at current market prices by NUTS 2 regions](#). Data retrieved on 17.02.2025.

<sup>11</sup> *ibid.*

<sup>12</sup> What Europe does for me (2025): [Southeast North Brabant, the Netherlands](#) (last access 17.02.2025).

<sup>13</sup> Eurostat (2025): [Gross domestic product \(GDP\) at current market prices by NUTS 3 regions](#). Data retrieved on 17.02.2025.

<sup>14</sup> Eurostat (2025): [Gross value added at basic prices by NUTS 3 regions](#). Data retrieved on 17.02.2025.

<sup>15</sup> CBS (2023): [Internationale handel naar regio 2008-2022](#). Data retrieved on 27.02.2025.

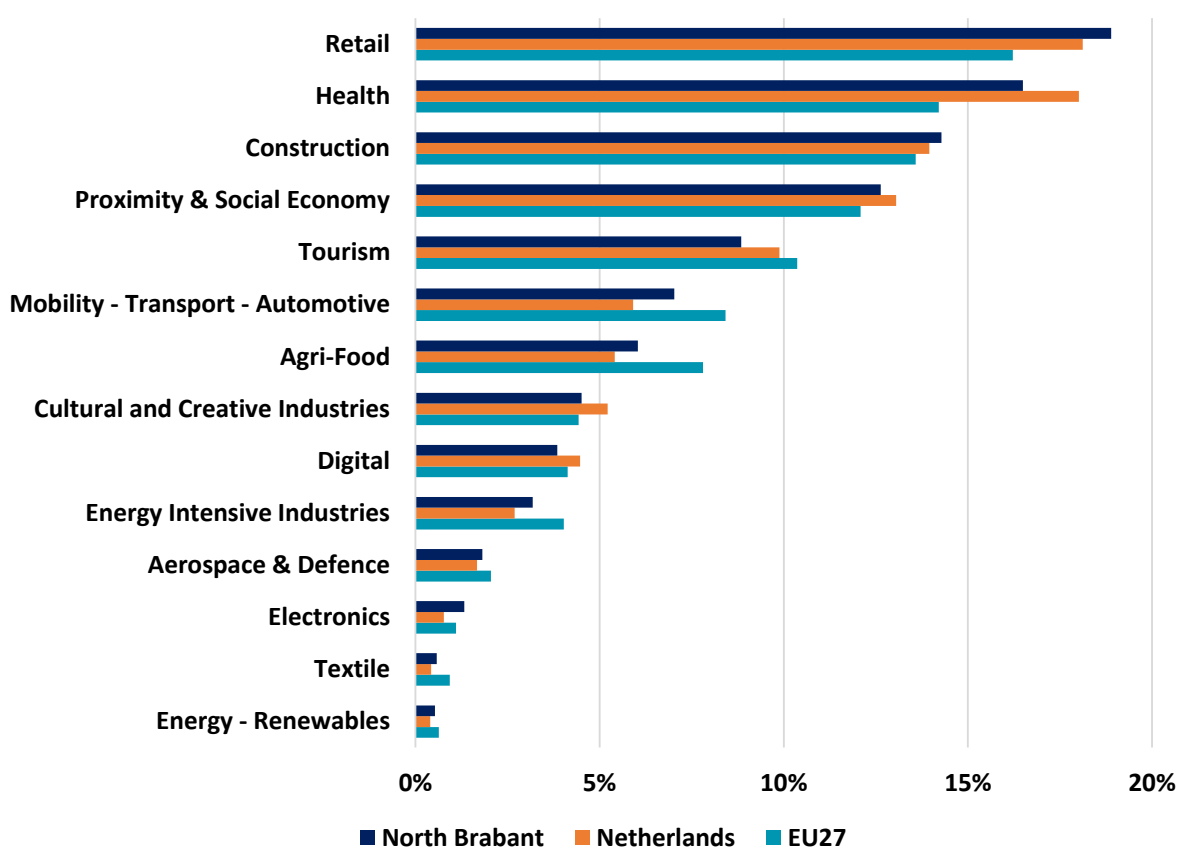
<sup>16</sup> See <https://brainporteindhoven.com/nl/strategie-en-organisatie/agenda-voor-de-regio/brainport-monitor/internationale-handel> (last access 17.02.2025).



## Employment across the industrial ecosystems in North Brabant

In the following, the industrial employment composition of North Brabant by industrial ecosystem will be reviewed. 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. In North Brabant, the Retail ecosystem stands out as the largest in terms of employment, accounting for 18.9%, which exceeds both the EU27 average of 16.2% and the national average of 18.1% (see Figure 1). The Health ecosystem follows at 16.5%, being below the national average but above the EU average. Additionally, the Construction ecosystem accounts for 14.3% of employment across all ecosystems. The significance of the electronics sector is underscored by the Electronics ecosystems' performance, which surpasses the Dutch and EU27 averages in employment.

**Figure 1: Employment across the industrial ecosystems for North Brabant, the Netherlands and the EU27 in 2022**



Source: ECCP (2025), own elaboration based on Eurostat.

The above analysis indicates that the regional economy of North Brabant encompasses a wide range of industrial ecosystems, each offering diverse opportunities for regional growth. To fully unlock the region's economic potential, it is essential to leverage its economic and cluster structures. In this context, cross-border collaboration and the development of strategic clusters play a crucial role.

The Smart Specialisation Strategy (S3) of North Brabant 2021-2027 outlines key transition areas that offer significant potential for future growth and innovation. Health, as one of these S3 priorities, exemplifies the alignment between Smart Specialisation priorities and the strengths of the region's industrial ecosystem. Aligning regional initiatives with these strategic priorities can drive sustained growth and foster innovation in key



industrial ecosystems across the region. These areas of Smart Specialisation will be further explored in Chapter 4. In addition to the S3, the province of North Brabant has identified several key sectors that receive support from the regional government. These sectors include life sciences & health, biobased, logistics, maintenance, high-tech systems and materials, chemical products and finally, agri-food.<sup>17</sup>

## Regional innovation performance of the North Brabant region

The province of North Brabant is a **key innovation hub in the Netherlands and the EU**, characterised by its strong industrial base, high-tech ecosystem, and international collaboration. The region is home to approximately 140,000 companies, ten universities, and numerous leading public and private research centres. A key driver of innovation is Brainport Eindhoven, which has evolved into a global technology hub, anchored by high-quality manufacturing companies such as ASML and a strong network of suppliers and research institutions. North Brabant's high-tech systems and materials (HTSM) sector plays a crucial role in the Dutch and European innovation landscape. The region excels in advanced manufacturing, photonics, semiconductors, and robotics, supporting the development of key enabling technologies.<sup>18</sup> With a strong presence of multinational corporations, high-growth SMEs, and research institutes, the province fosters an environment conducive to open innovation and cross-sectoral collaboration. The innovation-driven economy of North Brabant is further reinforced by science parks and innovation campuses, such as the High Tech Campus Eindhoven, the Brainport Industries Campus, the TU/e Campus, and the Automotive Campus Helmond, which facilitate knowledge exchange and industrial synergies.<sup>19</sup>

The **2023 Regional Innovation Scoreboard (RIS)** provides another avenue for assessing its level of innovation performance. The RIS evaluates 21 innovation-related indicators across 10 dimensions for European regions at either the NUTS 1 or NUTS 2 levels.<sup>20</sup> According to the RIS, North Brabant is classified as an “**Innovation Leader -**”, with an overall score of 129.8, above the EU27 average (100) and slightly above the Dutch national average (128.7). North Brabant's innovation performance has improved by 9.7% since 2016 compared to the EU27 average, and by 0.7% compared to the Dutch average.<sup>21</sup>

North Brabant exhibits **key strengths** in various dimensions of innovation, as shown in Figure 2. Intellectual property (IP) performance is particularly strong, with PCT patent applications and design applications well above both the EU and Dutch averages, indicating a high level of technological and creative output. Additionally, trademark applications also exceed both benchmarks, reflecting the active protection and commercialisation of innovations by businesses in the region. A strong IP portfolio is an important indicator of an innovation-driven economy, as it demonstrates the capacity of businesses to develop and bring new ideas to market. North Brabant also performs well in research collaboration, although it lags behind other Dutch regions. International scientific co-publications, public-private co-publications, and most-cited scientific publications are all above the EU average but below the national average. This suggests that while the province is well integrated into global

<sup>17</sup> Province of North Brabant (2025). Ondersteuning topsectoren. Available online: <https://www.brabant.nl/onderwerpen/economie/innovatie-technologie/ondersteuning-topsectoren/> (last access 26.02.2025).

<sup>18</sup> See <https://brabantisbright.nl/app/uploads/Whitepaper-HTSM.pdf> (last access 03.03.2025).

<sup>19</sup> See <https://brainporteindhoven.com/en/innovation/campuses> (last access 13.03.2025).

<sup>20</sup> EU Commission (2023); Regional Innovation Scoreboard 2023 – Methodology Report. Available online: [https://research-and-innovation.ec.europa.eu/document/download/5357c81b-9222-464b-8468-38ccd83b5624\\_en?filename=ec\\_rtd\\_ris-2023-methodology-report.pdf](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 26.02.2025).

<sup>21</sup> European Commission (2023): Regional Innovation Scoreboard 2023 - Regional profiles Netherlands. Available online: [https://ec.europa.eu/assets/rtd/ris/2023/ec\\_rtd\\_ris-regional-profiles-netherlands.pdf](https://ec.europa.eu/assets/rtd/ris/2023/ec_rtd_ris-regional-profiles-netherlands.pdf) (last access 26.02.2025).

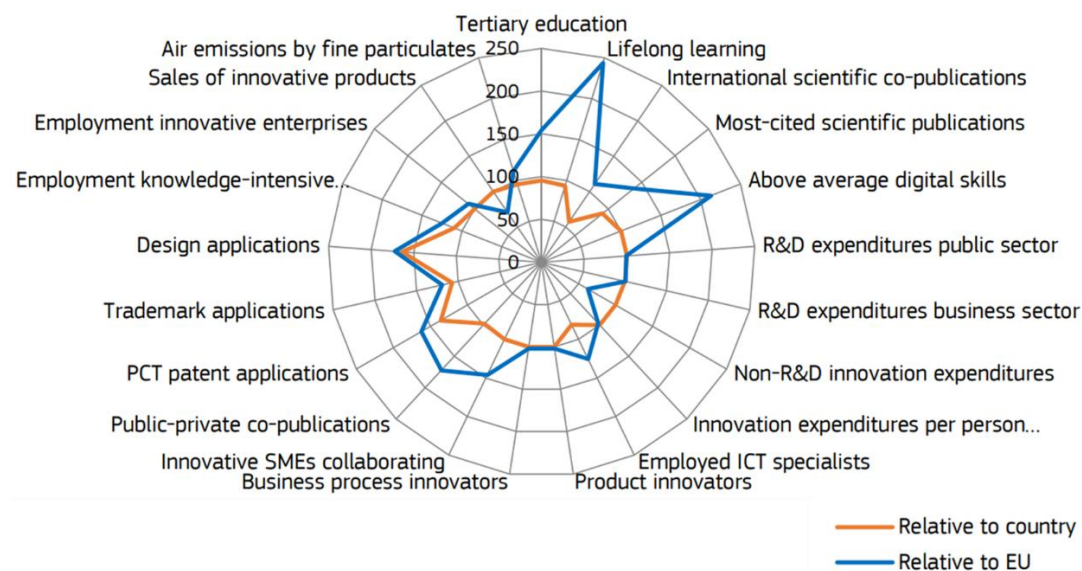


research networks, there is room for improvement in international and cross-sector collaboration to enhance knowledge transfer and scientific impact. The digital skills of the workforce are another key enabler of innovation. The share of the population with above-basic digital skills is above the EU average and in line with the Dutch national average, supporting the adoption and diffusion of digital technologies in businesses and public services. The province also performs well in tertiary education and lifelong learning, both of which are well above the EU average but slightly below the Dutch national average. These factors contribute to a well-educated workforce, which is essential for sustaining long-term innovation potential.

Both public and business sector R&D expenditures are on par with EU and Dutch averages, providing a solid foundation for research and innovation. Similarly, the share of product innovators and business process innovators among SMEs is also in line with both benchmarks, reflecting a consistent level of innovation activity across businesses.

Despite its strong overall innovation performance, the RIS highlights **room for improvement** in non-R&D innovation expenditures and sales of innovative products. Non-R&D innovation expenditures are below the EU average but in line with the Dutch average, suggesting that businesses invest less in activities such as design, training, and marketing, which are essential for translating research into commercially viable innovations. A balanced innovation strategy that combines R&D with non-R&D investments can help firms maximise the impact of their innovations. Similarly, sales of innovative products are below the EU average, potentially indicating that businesses in the province face challenges in bringing new-to-market and new-to-firm innovations to a broader customer base. Strengthening support for commercialisation, market access, and innovation diffusion could help North Brabant fully capitalise on its strong research and development capabilities.

**Figure 2: Innovation performance of North Brabant in the 2023 Regional Innovation Scoreboard**



Source: European Commission (2023): Regional Innovation Scoreboard 2023.



## Regional competitiveness level of North Brabant

To conclude the chapter on the region's economic profile, the focus shifts to North Brabant's ranking in the **Regional Competitiveness Index**.<sup>22</sup> 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.<sup>23</sup>

A detailed overview of the region's performance in various indicators and dimensions of the Regional Competitiveness Index is provided in Figure 11 in the Annex. According to this, the province of North Brabant performs above the EU average, with a score of 140.6, ranking 4th out of all 234 regions assessed in the Regional Competitiveness Index. Thus, North Brabant can be classified as a **more developed region**, akin to other regions in the Netherlands. In a national comparison, North Brabant exhibits an overall score above the Dutch average of 136.9, ranking third out of the eleven regions in the Netherlands, after the regions of Utrecht and South Holland while having the same score as Amsterdam.

In all three dimensions, North Brabant's scores exceed both the EU27 and country average. The province particularly performs very well in the **Innovation Sub-Index**, with a score of 148.7 (EU=100, NL = 144.3), driven by strong performances in the pillars for **technological readiness and innovation**. In addition, the province shows outstanding strengths in other pillars across the Basic and Efficiency dimensions, particularly infrastructure and market size., when compared to both national and EU averages. However, in some pillars like **health, higher education and LLL as well as business sophistication**, the North Brabant performs below the country average, revealing some areas the province could improve.

<sup>22</sup> See [https://ec.europa.eu/regional\\_policy/assets/regional-competitiveness/index.html#/](https://ec.europa.eu/regional_policy/assets/regional-competitiveness/index.html#/) (last access 26.02.2025).

<sup>23</sup> For more information on the methodology employed in the EU Regional Competitiveness Index 2.0, refer to European Commission (2023): EU Regional Competitiveness Index 2.0 -2022 edition (Revised, May 2023). Available online: [https://ec.europa.eu/regional\\_policy/sources/work/rci\\_2022/eu-rci2\\_0-2022\\_en.pdf](https://ec.europa.eu/regional_policy/sources/work/rci_2022/eu-rci2_0-2022_en.pdf) (last access 26.02.2025).

# 02

## Clusters in North Brabant & their importance for regional economic development



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## 2. Clusters in North Brabant and their importance for regional economic development

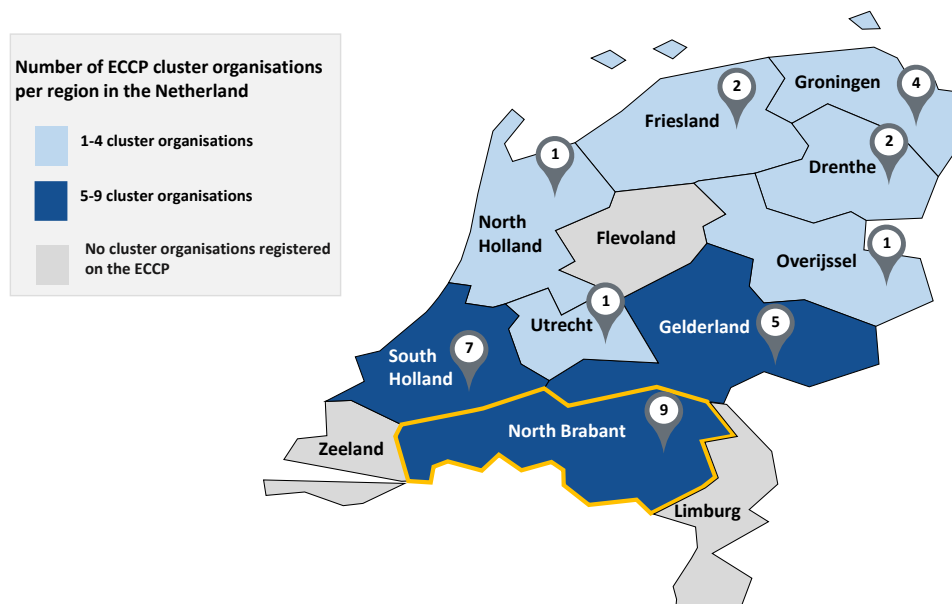
The involvement of clusters in regional economic governance, policy design and implementation at the regional level is of central importance for regional economic development. This chapter will provide an overview of the cluster landscape in North Brabant and the policy framework under which cluster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

### Cluster organisations in North Brabant

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. 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 North Brabant on the ECCP gives the first impression of the intensity of organisations in regional industrial networks.

Out of the total 1,235 registered EU-27 cluster organisations on the ECCP, **nine cluster organisations are located in North Brabant**.<sup>24</sup> In total, the Netherlands is home to 32 cluster organisations registered on the ECCP, with North Brabant being the province with the most cluster organisations (see Figure 3). This is followed by South Holland with seven and Gelderland with five cluster organisations.

*Figure 3: Overview of ECCP-registered cluster organisations in the Netherlands*



Source: ECCP (2025). Own elaboration based on <https://reporting.clustercollaboration.eu/all> (last access 25.02.2025). A full overview of the North Brabant-based clusters is provided in Table 1 in the Annex.

<sup>24</sup> One of the nice cluster is Biobased Delta which is still registered on the ECCP website but not active anymore since 2024. For more information, see <https://www.agro-chemistry.com/news/circular-biobased-delta-lives-on-in-2024-and-beyond/>.





North Brabant shows a highly centralised cluster landscape, with six out of nine organisations located in South-East North Brabant, **five of them in Eindhoven**. The remaining three clusters are located in 's-Hertogenbosch (East-North Brabant), Tilburg (Mid-North Brabant), and in Bergen op Zoom (West-North Brabant).

The nine cluster organisations in North Brabant focus on a wide range of sectors and can be assigned to seven out of the 14 industrial ecosystems, namely: Agri-food, Renewable Energy, Energy Intensive Industries, Health, Electronics, Digital, and Mobility-Transport-Automotive. The Health ecosystem has the strongest representation of cluster organisations in North Brabant with three cluster organisations that can be aligned to the Health ecosystem. To name a few examples, two cluster organisations operating in the Health ecosystem are involved in the sports sector, namely **Cluster Sports & Technology** and the **Orange Sports Forum**. While the first one focuses on innovation and technology within the sports sector, the latter is focused more on promoting Dutch sports organisations.

Another important player in North Brabant's cluster landscape is **High Tech NL**, which aims to promote innovation among Dutch high-tech companies and knowledge institutes. A similar mission is shared by the **Brainport Industries** cluster, which focuses on cooperation, knowledge sharing, and innovation within the manufacturing supply chain.

In addition, a cluster organisation in the Agri-food ecosystem is **AgriFood Capital**. For this cluster organisation, the key findings of a case study from the ECCP Cluster Solutions Library is presented in Box 1 to emphasise cluster activities in North Brabant and their regional importance. The case study highlights how the cluster has played a pivotal role in strengthening North Brabant's position as a leading hub for innovation and technology. Additionally, it showcases successful collaboration between cluster organisations in the region, demonstrating how synergies can be leveraged to drive innovation.

#### **Box 1: ECCP Cluster Solutions Library – AgriFood Capital cluster**

##### **AgriFood Capital**

##### **Background**

AgriFood Capital, established in 2015, is a cluster organisation from North Brabant based in the city of 's-Hertogenbosch, bringing together industry, public authorities, and knowledge institutions to drive innovation and growth in the agri-food sector. The cluster currently comprises around 200 members, including large enterprises, SMEs, start-ups, universities, research institutes, and training providers, as well as more than 60 intermediaries and public-sector stakeholders. Its primary mission is to develop smart regional solutions for global agri-food challenges and to build a strong, resilient agri-food ecosystem in North-East Brabant.

##### **Accelerating Digitalisation and Automation in Agri-Food through the partnership with Brainport Development**

To advance digitalisation and sustainability in agri-food, AgriFood Capital partnered with Brainport Development in March 2024, with the support of the Province of North Brabant. Brainport Development, the economic development agency of the Brainport Eindhoven region, has a strong focus on high-tech manufacturing, artificial intelligence (AI), robotics, and sensor technology. This partnership seeks to accelerate the uptake of digital technologies in the food processing industry, making production processes more efficient and sustainable while also addressing labour shortages and improving working conditions through automation.

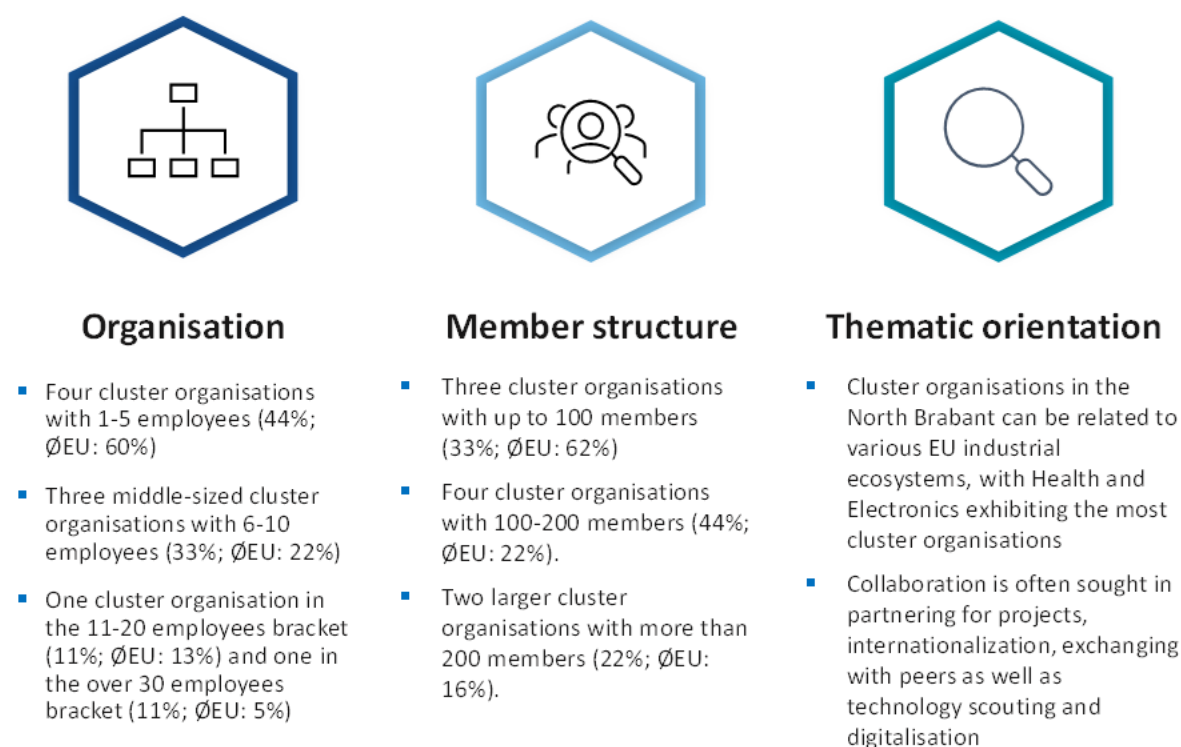


The Next Tech Food Factories collaboration (NTFF), emerges consequently as a need of a closer collaboration between both organisations in the agri-food and high.tech sectors. Thus the two bodies funded the “Meta-Cluster” in 2023, closely cooperating with 50 to 75 regional partners, including companies, universities, branch organisations and clusters. NTFF reflects the policy objectives of the [BrabantAgenda 2023](#), which focuses on cross-institutional collaboration on AI, digitalisation, agri-food and venture building. NTFF supports companies in different ways (innovation vouchers, coaching, training, etc.) in achieving their digital and greens industrial transition objectives. Consequently, this “meta-Cluster” is establishing itself as a key-stone actor within the region’s agri-food ecosystem. The cluster is fully dedicated to fostering the uptake of digitalisation in companies and is active at regional but also European levels, participating in projects like the EUR 450 million [Dutch NXTGEN Hightech](#) programme, among others.

Source: ECCP (2025). Note: The full case study can be found in the [ECCP Cluster Solutions Library](#).

As depicted in Figure 4, nearly half of the cluster organisations registered on the ECCP in North Brabant are relatively small, with 44% employing between one and five staff members, slightly below the EU average of 60%. By comparison, 33% of the cluster organisations in North Brabant have a staff size of six to ten employees, being above the EU average (22%). Notably, two clusters are larger with one cluster organisation having 11-20 employees and one with more than 30 employees. Furthermore, it can be observed that competitive clusters typically have larger management teams, while business clusters generally operate on a smaller scale.

**Figure 4: Overview of organisation, structure, and thematic orientation of ECCP-registered cluster organisations in North Brabant**



Source: ECCP (2025).



**Membership structures** in North Brabant also reveal a notable departure from EU norms. Only 33% of cluster organisations have fewer than 100 members, much lower than the EU average of 62%. This indicates that **clusters in North Brabant tend to operate on a larger scale**, engaging more stakeholders. In fact, 44% of clusters have 100-200 members, and another 22% have over 200 members—well above the EU average of 22% and 16%. The relatively larger member base suggests that the cluster organisations in North Brabant are more integrated into the broader regional economy and act as significant platforms for collaboration and innovation.

In terms of their **thematic orientation**, North Brabant's cluster organisations are strongly aligned with key EU industrial ecosystems, most notably in the Electronics and Health ecosystem, where the highest number of cluster organisations are concentrated. Collaboration within these organisations typically focuses on project partnerships, internationalisation efforts, peer exchanges, as well as initiatives related to technology scouting and digitalisation.

### Cluster policy in North Brabant and the Netherlands

**On the national level**, since 2011 the **Topsectoren** policy (top sectors) has been the Netherlands' central policy to support cluster development.<sup>25</sup> It targets a set of sectors with high potential for innovation, growth, and societal impact, where the Netherlands has strong expertise or potential advantages. These sectors currently comprise the following:

1. Agri & food
2. Chemistry
3. Creative Industry
4. Energy
5. Life sciences & health
6. High-tech systems & materials
7. ICT
8. Logistics
9. Horticulture & starting materials
10. Water & maritime

These Topsectoren are supported through a combination of government funding, research programs, public-private partnerships (PPP), and sector-specific strategies that are developed in collaboration with businesses, research institutions, and regional authorities. Essentially, the Topsectoren offer a forum for representatives of business, research and government to work together and align their efforts on the support of innovation, competitiveness and internationalisation in these sectors.

The sectoral approach of the Topsectoren was complemented by a mission-driven approach in 2019. The missions are defined through the collaboration of six ministries to encourage cross-sectoral cooperation. Another horizontal policy element that has been added to the Topsectoren policy is a focus on key enabling technologies.

Operationally, each top sector is supported by one or more Top Consortia for Knowledge and Innovation (TKI). They unite entrepreneurs and scientists and ensure network formation, knowledge-sharing and collaborative project management. Furthermore, on the scientific side, the Topsectoren are supported by the Netherlands' internationally leading applied research institutes (TO2 institutions).

<sup>25</sup> See <https://www.topsectoren.nl/> (last access 28.02.2025).



On the financial side, the Topsectoren are supported through various schemes including tax instruments, funding instruments and guarantees, as well as consultancy services. Key instruments are the PPP surcharge that tops up companies' R&D investment with government funding, the WBSO tax scheme that reimburses part of the wage costs and expenses of an R&D project, and the SME innovation stimulation for regions and top sectors (MIT), that aims to stimulate cross-border innovation activities by SMEs.

**On a regional level**, the province of North Brabant aligns its cluster development support with the national Topsectoren policy while focusing on its regional strengths and capabilities. The Smart Specialisation Strategy (RIS3) 2021-2027 of the South Netherlands region<sup>26</sup> – of which North Brabant is one of the three constituent provinces – is designed around five transition topics:

1. Energy transition
2. Raw materials transition
3. Climate transition
4. Agriculture and food transition
5. Health transition

North Brabant (respectively the South Netherlands region) is also a founding member of the **Vanguard Initiative**, which aims to improve and leverage the implementation of Smart Specialisation Strategies to strengthen cross-border collaboration in innovation and value chains. In this framework, the province participates in the pilot initiatives for interregional cooperation in AI, bio economy, efficient and sustainable manufacturing (ESM), nano-enabled products, and smart health/personalised medicine, while co-leading the 3D-printing pilot initiative.<sup>27</sup>

The implementation of North Brabant's regional innovation strategy lies in the hands of the Brabant Development Agency (BOM) operating as the executive body of both North Brabant and the Dutch Ministry of Economic Affairs.<sup>28</sup> Its mission is to support entrepreneurship by bringing together business, knowledge institutions and government to drive innovation in four challenge areas: Sustainable food systems, a healthy future, climate-neutral energy solutions, and promising key technologies. Next to its overall business services, BOM has a specific focus on start-up support through its venture building programmes including fund raising assistance.<sup>29</sup>

The center piece of Eindhoven's innovation ecosystem support is the meta-cluster organisation Brainport Development – which shares its name with the Brainport Eindhoven metropolitan area.<sup>30</sup> It acts as the metropolitan development agency and supports Eindhoven's clusters, strategic partnerships and innovation programmes. It offers a range of services to businesses and clusters – for example value chain mapping. Outside of Eindhoven, Midpoint Brabant<sup>31</sup> (Central Brabant), REWIN<sup>32</sup> (West Brabant), and AgriFood Capital<sup>33</sup> (North-East Brabant) serve as North Brabant's other sub-regional development agencies.

<sup>26</sup> Bureau Buiten & IDEA Consult (2020): Regional Innovation Strategy South Netherlands 2021-2027. Available online: <https://www.stimulus.nl/wp-content/uploads/2020/06/Regional-Innovation-Strategy-South-Netherlands-2021-2027-ENG.pdf> (last access 28.02.2025).

<sup>27</sup> See <https://www.s3vanguardinitiative.eu/members/south-netherlands> (last access 28.02.2025).

<sup>28</sup> See <https://www.bom.nl/en/about-bom> (last access 28.02.2025).

<sup>29</sup> See <https://www.bom.nl/venture-building> (last access 28.02.2025).

<sup>30</sup> See <https://brainporteindhoven.com/int/> (last access 28.02.2025).

<sup>31</sup> See <https://midpointbrabant.nl/> (last access 28.02.2025).

<sup>32</sup> See <https://www.rewin.nl/en/> (last access 28.02.2025).

<sup>33</sup> See <https://www.agrifoodcapital.nl/> (last access 28.02.2025).

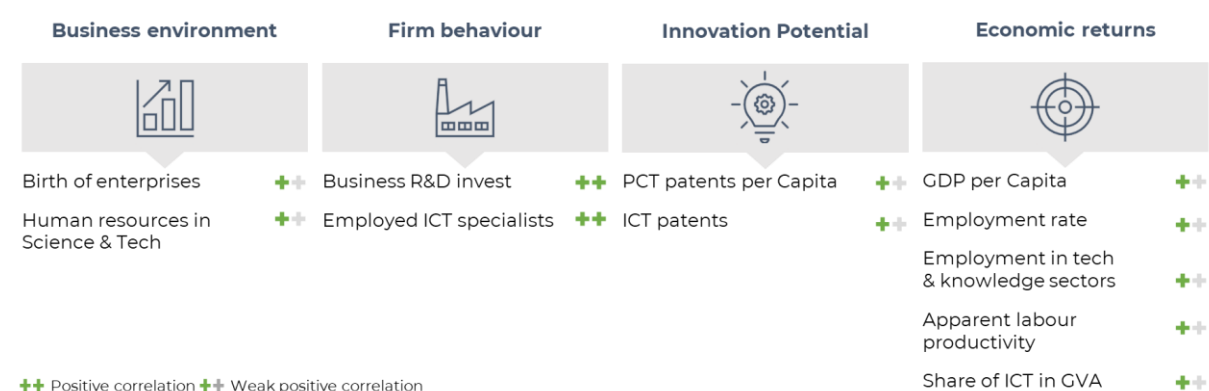


## The importance of clusters for regional economic competitiveness

The ECCP European Cluster Panorama Report 2024<sup>34</sup> examines the relationship between clusters and regional competitiveness. The stand-out findings of this analysis are outlined in Figure 5 below and showcase how the presence of clusters is positively correlated with different dimensions of regional economic competitiveness: Business environment, Firm behaviour, Innovation potential and Economic returns. This includes, for instance, the Human resources in Science and Technology as well as R&D expenditures of the business sector in the dimensions business environment and firm behaviour. Positive correlation is also found between clusters and patenting activities.

On a more global scale, it is found that the presence of clusters is positively correlated with GDP per capita, employment rate, employment in technology and knowledge-intensive sectors as well as labour productivity. 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 also linked with higher air pollution.

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



Source: ECCP (2024): [European Cluster Panorama Report 2024](https://www.clustercollaboration.eu/sites/default/files/document-store/Cluster_Panorama2024.pdf).

In conclusion, North Brabant shows a **well-developed cluster landscape** supported by interlocking supporting programmes and agencies from the national to the sub-regional level. The EU Cluster Panorama Report (2024) in connection with Ketels & Protsiv (2021) further makes the case for cluster organisations as a proven method to stimulate long-term growth and innovative activity on a regional level.

<sup>34</sup> ECCP (2024): European Cluster Panorama Report 2024. Available online: [https://www.clustercollaboration.eu/sites/default/files/document-store/Cluster\\_Panorama2024.pdf](https://www.clustercollaboration.eu/sites/default/files/document-store/Cluster_Panorama2024.pdf) (last access 19.08.2024).

03

## Cross-border cooperation and the involvement of North Brabant-based clusters in European networks & support



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### 3. Cross-border cooperation and the involvement of North Brabant-based 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.<sup>35</sup> To gain an overview of the existing cross-border cooperation of clusters in North Brabant, a closer look will be taken in this chapter at their involvement in relevant European support initiatives (see Figure 6).

**Figure 6: Overview of selected EU support initiatives that involve clusters from North Brabant**



Source: ECCP (2025).

Regarding the support initiatives, divers programmes provide different levels of subsidies. Amongst the most relevant ones, it is important to signal Horizon Europe, which funds more than 300 projects with a subsidy of around EUR 281 million.<sup>36</sup> Other programmes under similar to this include ERASMUS +, which funds around 100 projects with an almost EUR 27 million, and Innovation Fund, which funds few projects but offers a higher subsidie than the previous one, counting with almost EUR 100 million. Taking a look at other funds such as Interreg VIA and Interreg VIB, which promote interregional collaboration, in this case among geographically near regions, provide in total almost EUR 16 million subsidies to more than 40 different projects.<sup>37</sup>

<sup>35</sup> 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 online: <https://op.europa.eu/en/publication-detail/-/publication/a2c3e9e1-3deb-11ec-89db-01aa75ed71a1/language-en> (last access on 28.02.2025).

<sup>36</sup> Panjer et al. (2021): ERAC, EU-subsidiemonitor 2021-2027 Zuid-Nederland, Table 1. Available online: <https://www.stimulus.nl/just-transition-fund/wp-content/uploads/sites/13/2025/02/2021-2027-Bijlage-4-EU-subsidiemonitor-2021-2027-Zuid-Nederland.pdf> (last access on 14.03.2025).

<sup>37</sup> ibid.



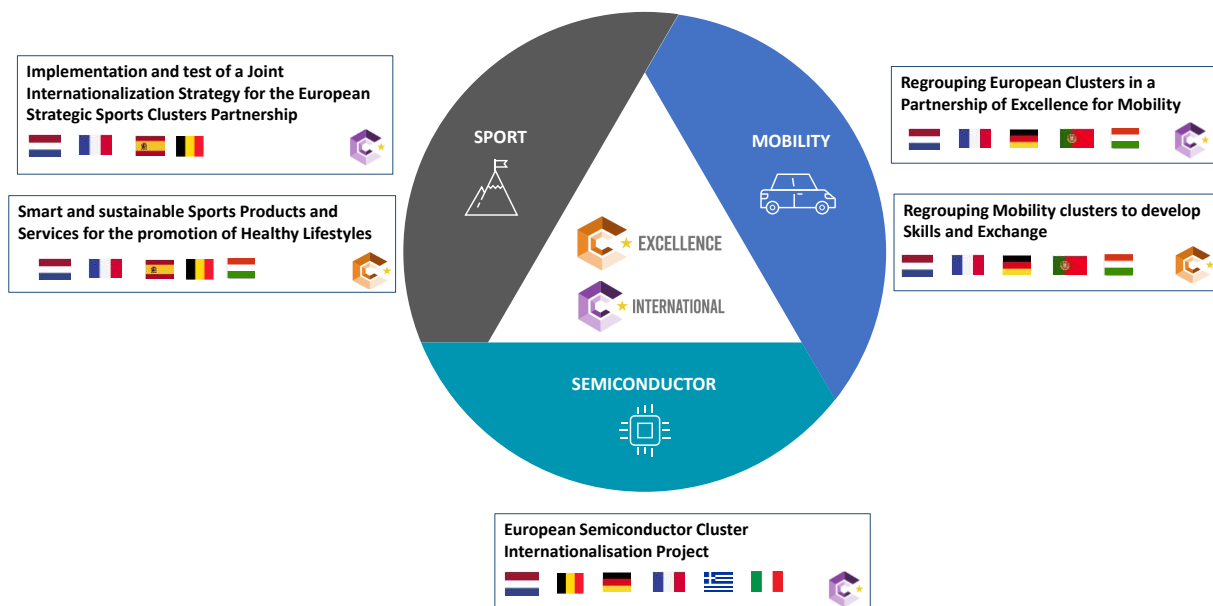


## Involvement of North Brabant-based cluster organisations in the European Strategic Cluster Partnerships (ESCP)

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 of 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 throughout 2024<sup>38</sup> and the ESCP for Excellence<sup>39</sup> has just ended in December 2023.<sup>40</sup>

Figure 7 gives an overview of the ESCP-4i clusters and projects in which they have or are participating. Three clusters have participated or are participating in three ESCPs for Going International (ESCP-4i) and two ESCPs for Excellence (ESCP-4x). Overall, the projects requested grants for a combined value of €532,568. It shows that the projects involved cluster organisations from seven different countries that are active in the areas of mobility, semiconductors and sports. Moreover, the ESCP-4i projects looked towards target markets in Taiwan, Japan, China and the USA. The figure below recaps the participation of cluster organisations from North Brabant in ESCP-4i and ESCP-4x projects.

**Figure 7: Overview of participation of North Brabant region's clusters in the ESCP-4i and ESCP-4x**



Source: ECCP (2025). Note: The flags indicate the origin of the involved project partners while the symbol in the bottom right corner indicates the programme.

<sup>38</sup> See <https://clustercollaboration.eu/eu-cluster-partnerships/escp-4i/fourth-generation> (last access 27.02.2025).

<sup>39</sup> See <https://clustercollaboration.eu/eu-cluster-partnerships/escp-4x> (last access 27.02.2025).

<sup>40</sup> For more information on the European Cluster Partnerships see: <https://clustercollaboration.eu/eu-cluster-partnerships> (last access 27.02.2025).



## Involvement of North Brabant-based cluster organisations in the Eurocluster initiative

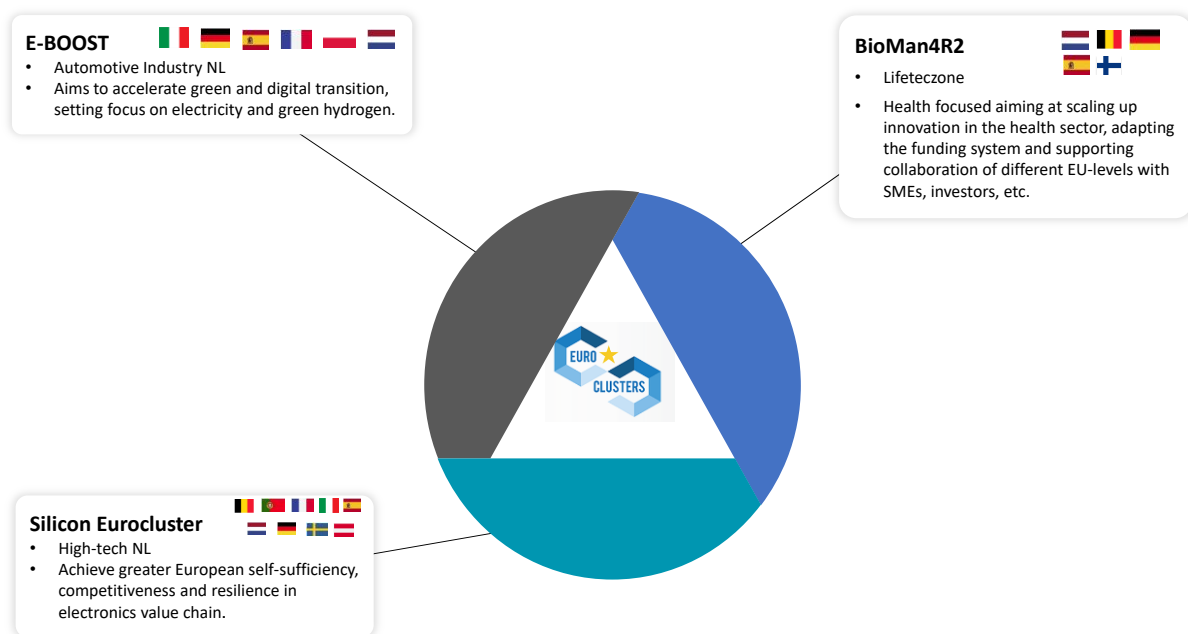
For the 2021-2027 funding period, the European Commission has launched the implementation of the EU Industrial Strategy. In this context, so-called Euroclusters<sup>41</sup> are funded under the Single Market Programme. The Eurocluster initiative aims at supporting cross-sectoral, cross-regional European industry clusters cooperating with other economic stakeholders such as companies or business organisations. As displayed in Figure 8, three cluster organisations of North Brabant are part of three Euroclusters:

- The **E-BOOST** Eurocluster sets its focus on the Mobility-Transport-Automotive industrial ecosystem. It aims to accelerate digital and green transition, especially setting a focus on electricity and green hydrogen, due to their low use in transport modes. Therefore, it supports SME's of the electromobility value chain, so they boost their competitiveness and take advantage of new market opportunities. The North Brabant-based cluster participating in E-BOOST is **RAI Automotive Industry NL**.
- **BioMan4R2** is a health, Medtech and Biomanufacturing focused Eurocluster, which aims at scaling up innovation in the Health Sector through adapting the existing funding. The funding can be done by creating mechanisms for every step of innovation processes and supporting in biomanufacturing and medical products. Additionally, this Eurocluster also tries to develop and support long-term collaboration on the EU-level between the SMEs, investors, research, clinical and knowledge organisations, science and technology parks and other companies in biomanufacturing and medtech industries. **LIFETECZONE**, based in North Brabant, is the Dutch member of this Eurocluster.
- Focused on electronics, the **Silicon Eurocluster** aims at achieving greater European self-sufficiency, competitiveness and resilience in electronics and its value chain. SMEs play a key role on this regard, as they forward the technological expertise and resources to place Europe in a leading position in development and production of, for example, Micro- and Nanoelectronics. **High-tech NL** is the Dutch cluster participating in Silicon Eurocluster.

<sup>41</sup> For more information on the Euroclusters see: [https://eisma.ec.europa.eu/funding-opportunities/calls-proposals/joint-cluster-initiatives-euroclusters-europes-recovery\\_en](https://eisma.ec.europa.eu/funding-opportunities/calls-proposals/joint-cluster-initiatives-euroclusters-europes-recovery_en) (last access on 27.02.2025).



**Figure 8: Overview of participation of North Brabant region's cluster organisations in the Eurocluster initiative**



Source: ECCP (2025). Note: the flags indicate the origin of the involved project partners.

### Involvement of the North Brabant 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 programming period, there are €570 million available (up to €10 million per project) and EU contribution covers 70% for all beneficiaries and cost categories.

A total of 24 beneficiaries from North Brabant (clusters, universities and SMEs), take part in 7 different I3 projects. The projects where the two cluster organisations take part in are:

- The AgriFood Capital cluster participates in the **HIGHFIVE** project. This project aims to foster innovation and investment in the food processing industry, focusing on digital and green growth to support the EU's Farm to Fork strategy. It involves interregional collaboration and targets SMEs to help them implement digital solutions to industry challenges. Key actions include deploying three industry-driven demo projects to provide valuable lessons to clusters and SMEs. Implementing a voucher scheme to fund SME innovation across Europe. Providing support to SMEs to overcome challenges in adopting digital technologies. Sharing lessons learned and results within the network and with other stakeholders. The project involves 39 regions from 9 EU countries, 33 partners, has a budget of roughly €11.6 million, and will run for three years, aims to strengthen the European agri-food value chain and contribute to a more digital, sustainable, and resilient agri-food sector in Europe.



- The cluster Brainport Development participates in the **3DoP** project. This project drives large-scale investments in Additive Manufacturing (AM) to optimise production, enhance productivity, and support smart, green, and competitive transitions. It is structured around four investment packages, each led by a key company addressing specific manufacturing challenges, with SME-led subprojects adapting to or supporting these innovations. Key actions include early-stage integration of post-production workflows to improve scalability, developing industry standards, and sharing best practices. Targeted initiatives such as funding camps, one-on-one coaching, and investment decision support will ensure broader impact beyond the consortium. With a budget of roughly €14.1 million, the project involves 33 partners from 8 EU countries, strengthening Europe's manufacturing landscape.
- The Brainport Development cluster participates in a second project, which is called **AMBITIOUS**. The AMBITIOUS project leverages 5G and emerging technologies to enhance digital solutions, creating new ecosystems and business opportunities across Europe. Beyond connectivity, 5G enables seamless integration of Cloud, Edge, and IoT resources, allowing SMEs to deploy responsive applications and improve service delivery. Key actions include developing a technological infrastructure for data aggregation, AI-driven forecasting, and secure information exchange. By integrating these with existing SME services, the project unlocks new functionalities and commercial potential. With a budget of €6.3 million, it involves 33 partners from five EU countries and aims to drive digital innovation and economic growth.
- Finally, the Brainport Development cluster participates in the health-tech project **Inkjet-bioAM**. Its main focus is set of smart manufacturing of biomedical applications by industrial multi-material inkjet processes. Inkjet-bioAM's aim is to improve patient care as well as EU-citizen's well-being through the digitalisation of medical product's and pharmaceutical production, while at the same time ensuring the sustainability of the healthcare system. The overall mission is to integrate inkjet printing technology into the value chain and manufacturing of medical and pharmaceutical products. First steps are to identify bottlenecks in printing technology and develop pilot lines with technical partners to demonstrate the technology and to expand the EU ecosystems for inkjet printing in the biomedical sector.

# 04

## Smart Specialisation in North Brabant



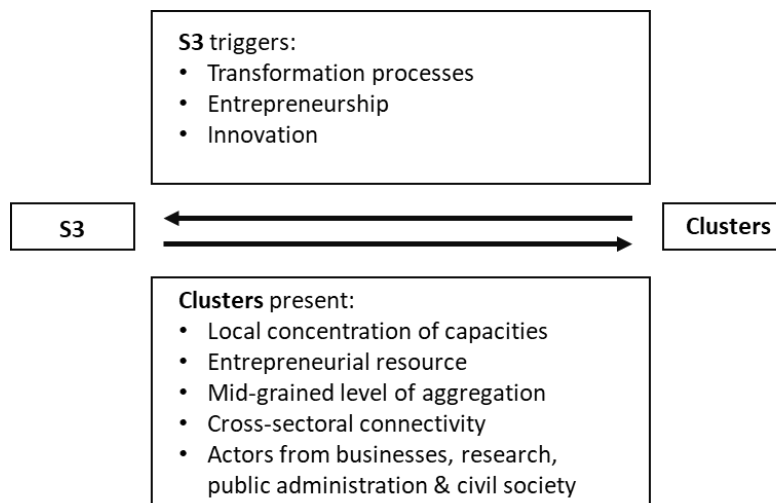
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## 4. Smart Specialisation in North Brabant

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 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.<sup>42</sup> The interplay between clusters and smart specialisation is visualised in Figure 9. Box 2 at the end of this chapter provides good practices of cluster involvement in S3 from other European regions with a special focus on the Entrepreneurial Discovery Process (EDP).<sup>43</sup> Against this background, this chapter focuses on Smart Specialisation in North Brabant.

*Figure 9: 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 Smart Specialisation Strategy (S3) of North Brabant is part of the broader **RIS3 South Netherlands 2021-2027**, which also includes Limburg and Zeeland. Although the three provinces share a common strategic framework each of them has its peculiarities, and so does North Brabant. It is important to highlight that North Brabant's S3 strategy aligns with **five major societal transitions**, which are presented in Figure 10. The first is the energy transition, as it focuses on smart grids, hydrogen production, and renewable energy integration. The second, worth highlighting, is the raw materials transition, as the region is promoting circular economy principles, bio-based materials, and sustainable chemistry. The climate transition is also a focal point, as North Brabant is making efforts to innovate water and soil

<sup>42</sup> See also European Commission (2013): The role of clusters in smart specialisation strategies. Available online: <https://op.europa.eu/en/publication-detail/-/publication/2fe44194-e5a8-42b7-ac14-9c9b8e157de3> (last access 28.02.2025); OECD (2016): OECD Science, Technology and Innovation Outlook 2016 – Cluster Policy and Smart Specialisation. Available online: [https://www.oecd-ilibrary.org/docserver/sti\\_in\\_outlook-2016-28-en.pdf?expires=1628167848&id=id&accname=guest&checksum=54667669BA762145CD40965A391C05BE](https://www.oecd-ilibrary.org/docserver/sti_in_outlook-2016-28-en.pdf?expires=1628167848&id=id&accname=guest&checksum=54667669BA762145CD40965A391C05BE) (last access 28.02.2025).

<sup>43</sup> 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](https://ec.europa.eu/regional_policy/policy/communities-and-networks/s3-community-of-practice/entrepreneurial_discovery_en) (last access 28.02.2025).

management, climate-resilient materials, and digital solutions for sustainability. Additionally, the agrifood transition plays an important role in the region. Key areas include sustainable farming, precision agriculture, and non-animal protein production, among others. Finally, the health transition focuses on the development of personalised medicine, e-health, and AI-driven healthcare solutions.

The required innovations stem from collaboration between different sectors of the economy. As highlighted in the strategy, continuous workforce upskilling to support innovation, will definitely come from collaboration between universities, vocational institutions and businesses to address the shortage of skilled labour, crucial for these sectors. Nonetheless, funding is of utmost importance for S3 development and execution, thus the programm OPZuid, which channels EU Cohesion Policy funds into innovation projects, is closely managed by the region.<sup>44</sup> S3 is also important across the board for the funding priorities of other funds. Consequently, Horizon Europe and the Innovation fund contribute to several programmes with a very solid subsidy. These two understand the two biggest funding sources considering European subsidies.<sup>45</sup>

**Figure 10: Transition topics of the S3 2021-2027 for North Brabant**



Source: ECCP (2025), own elaboration based on the [South Netherlands RIS3 strategy](#) (2021–2027).

**Cluster organisations play an important role in the development of the S3 strategy.** With its strong innovation ecosystem, North Brabant is home to several innovation clusters, not only in the agrifood ecosystem, but also in high-tech and materials, chemistry, life sciences & health or manufacturing. Many cluster organisations in North Brabant are directly involved in addressing S3 priorities and actively contribute to their implementation. In general, the Southern regions of the Netherlands have a strong innovation ecosystem, centered around both national and international top clusters. These clusters focus primarily on high-tech systems, materials, agrifood, chemistry, life sciences, health, and logistics, among other sectors. This dynamic cluster ecosystem has been instrumental in positioning North Brabant as one of Europe’s most innovative regions by supporting the implementation of S3.

The RIS3 in North Brabant did not start from scratch, thanks to this well-established international innovation landscape and ecosystem. Clusters play a crucial role in S3 implementation through internationally leading organisations/clusters such as **High-Tech NL**, as well as through innovative SMEs that strengthen the manufacturing industry. Moreover, North Brabant’s collaborative culture, particularly in the application of knowledge, further enhances S3 implementation across different sectors and ecosystems. The region’s manufacturing infrastructure fosters cooperation, stimulates creativity, and

<sup>44</sup> Bureau Buiten & IDEA Consult (2020): Regional Innovation Strategy South Netherlands 2021-2027. Available online: <https://www.stimulus.nl/wp-content/uploads/2020/06/Regional-Innovation-Strategy-South-Netherlands-2021-2027-ENG.pdf> (last access 28.02.2025).

<sup>45</sup> Panjer et al. (2021): ERAC, EU-subsidiemonitor 2021-2027 Zuid-Nederland, Table 1. Available online: (last access on 14.03.2025).



promotes digitalisation—driving innovation forward.<sup>46</sup> An example of this is **AgriFood Capital** cluster, which operates in the Agriculture and food transition. The cluster focuses on developing smart and sustainable food production systems and strives to foster innovation in the agrifood sector. One project conducted by the cluster organisation is the “Circular Food Center”, which serves as a knowledge hub and meeting point dedicated to addressing food waste. The project’s objective is to reduce food waste, thereby making the agrifood sector more sustainable. In the context of the energy transition, the cluster **RAI Automotive Industry NL** can be mentioned. It is the leading authority in the Dutch automotive manufacturing and supply chain industry. A noteworthy project within this cluster is the “Green Transport Delta initiative”, which aims to develop various hydrogen technologies. Through this project, the cluster contributes to innovation in the automotive sector while also driving the green transition. Another example is the **LifetecZONE** cluster, which operates in the “Health transition”. With a focus on health technology, the cluster brings together stakeholders from the life sciences and medical technology sectors to enhance collaboration and innovation. It regularly hosts network meetings and knowledge-sharing sessions, providing members with opportunities to connect and collaborate on various topics.<sup>47</sup>

### *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).

##### **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.

##### **Walloon Region, Belgium – Coordination cells & Strategic Innovation Initiatives:**

In the Walloon Region, cluster organisations are actively involved in the Smart Specialisation Strategy (S3) 2021-2027 through their participation in coordination cells for each of the five priority areas. These coordination cells, which include both regional administration and cluster organisations, are responsible for monitoring the development of their respective priority areas. Furthermore, Strategic Innovation Initiatives, which are cross-sector consortia aiming to achieve S3 objectives through a set of coherent projects covering the entire innovation chain, play a key role in the region’s innovation framework. Walloon cluster organisations have supported the emergence and structuring of these initiatives and continue to assist in strategy development and ecosystem building to enhance cross-sector collaboration and innovation.

<sup>46</sup> Bureau Buiten & IDEA Consult (2020): Regional Innovation Strategy South Netherlands 2021-2027. Available online: <https://www.stimulus.nl/wp-content/uploads/2020/06/Regional-Innovation-Strategy-South-Netherlands-2021-2027-ENG.pdf> (last access 28.02.2025).

<sup>47</sup> *ibid.*

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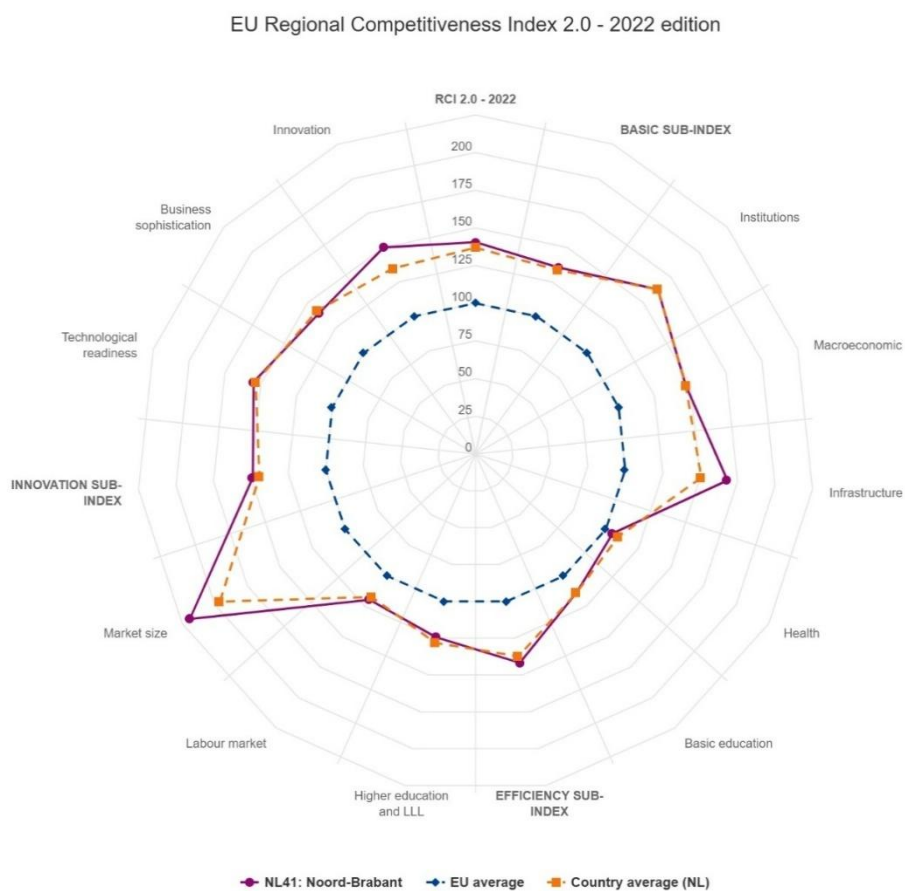
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## Annex

**Figure 11: Performance of North Brabant in the Regional Competitiveness Index**



Source: DG REGIO - DG JRC RCI 2.0 - 2022

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

## List of cluster organisations in the Walloon Region

*Table 1: Overview of cluster organisations in North Brabant and their main addressed EU industrial ecosystems*

No.	Cluster organisation	Industrial Ecosystem
<b>ECCP-registered cluster organisations</b>		
1	<a href="#">AgriFood Capital</a>	Agri-Food
2	<a href="#">Biobased Delta</a>	Renewable Energy
3	<a href="#">Brainport Industries</a>	Energy Intensive Industries
4	<a href="#">Cluster Sports &amp; Technology</a>	Health
5	<a href="#">High Tech NL</a>	Electronics
6	<a href="#">LifetecZONe</a>	Health
7	<a href="#">Orange Sports Forum</a>	Health
8	<a href="#">Photon Delta</a>	Digital
9	<a href="#">RAI Automotive Industry NL</a>	Mobility-Transport-Automotive

Source: ECCP (2025) and own adaptations. Note that according to its website the cluster Biobased Delta is no longer active since 2024. However, it still maintains an active profile on the ECCP; therefore, it is included here.