

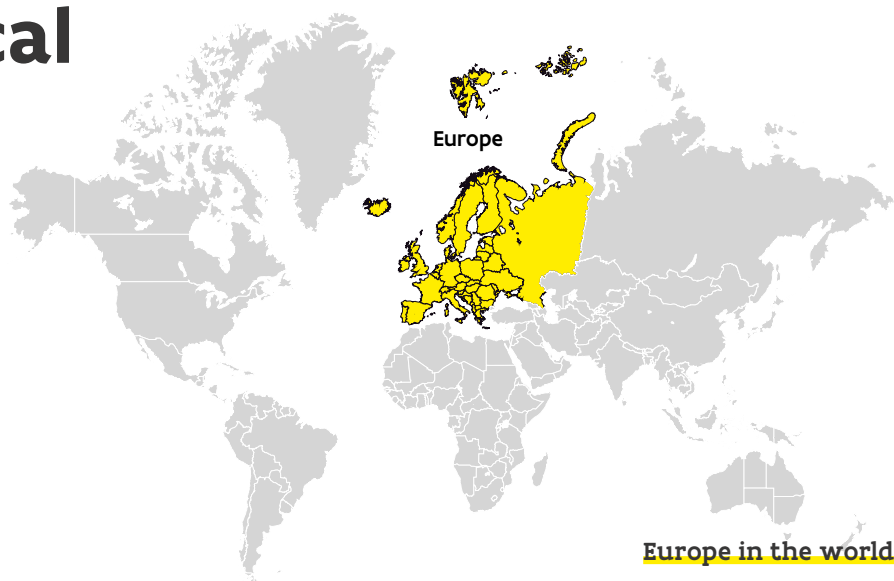
# CHAPTER 1

# FLANDERS: INNOVATION HUB IN THE HEART OF EUROPE

## 1

# Geographical context

Flanders is situated on the European continent. Centrally located within the European Union, it is the northern region of Belgium.

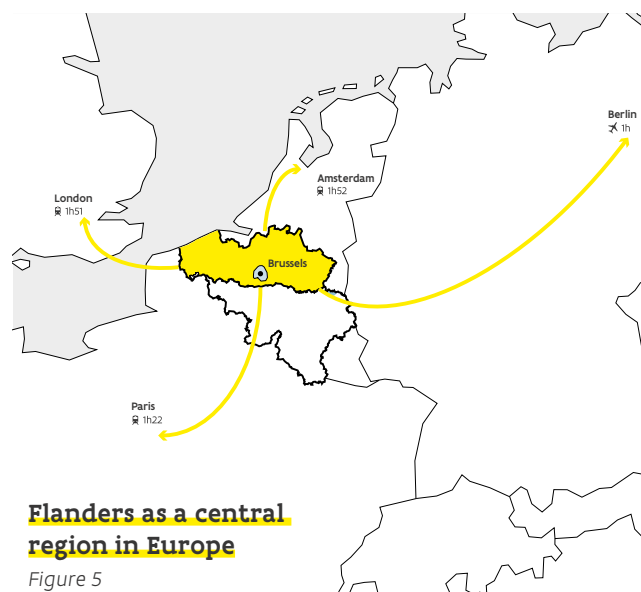


**Europe in the world**

Figure 3



Flanders is part of the area that is sometimes referred to as **the Blue Banana**. This area runs from the north of Italy to the United Kingdom over (parts of) Switzerland, Austria, Germany, France, Luxembourg, Belgium and the Netherlands. It is a series of densely populated urban areas responsible for a substantial part of the economic added value within the European Union.



Belgium's **neighbouring countries** are the Netherlands, Germany, Luxembourg and France. The North Sea forms a natural border with the United Kingdom.

## 2

# Institutional context: division of R&D&I competencies in the Belgian federation

While certain policy areas remain exclusively federal (e.g., defence policy, monetary policy, nuclear power research), other domains have largely or even completely been transferred to either the Communities or the Regions. The latter is the case for the Science, Technology and Innovation (STI) domain: **in terms of legislation and budget, scientific research is mainly a community competence, whereas innovation is almost completely a regional competence.** In Belgium, almost 80% of the total public R&D&I support is managed by the Communities and Regions. Flanders counts for 58% of all Belgian public R&D support (2024). The overall policy budget of Flanders now adds up to 65 billion euro of which 4.672 billion euro aimed at scientific research and innovation (2023i).

The **federal authority** remains responsible for a limited number of research programmes (notably in the field of climate and sustainable development), the support of research infrastructures of national interest, several federal scientific institutes, and a small number of exclusively attributed research themes, including the Belgian space policy, 'sustainable' nuclear energy and polar research at the Antarctic station. In

addition, framework conditions such as IPR, normalisation, standardisation, tax credits and scientific visas for researchers also are exclusively managed by the federal authority. Tax credits aimed at R&D have become very substantial in Belgium in recent years. There is the so-called patent box (a lower tax rate on profits from a company's own innovation), a fiscal exemption of salaries' social contribution for R&D employees at research/scientific institutes and companies in Belgium, a tax credit for investments in patents and R&D-assets, and a tax exemption for regional subsidies.

As a consequence of this state structure, it is not possible to speak about one Belgian research and innovation system. Given the almost complete autonomy of the regions to set up their own system, there are rather **three R&I-systems** (two large and one small) that compete and cooperate with one another, pretty much like the different R&I-systems of the EU Member States do.

The various activities and policy instruments that Flanders deploys in the field of science, research and innovation, can be divided into the following categories:



© Nassorn

## 2.1

### Direct support for R&D&I in the broad sense

This includes:

1. **subsidies** or other support channels for basic, fundamental, cutting-edge and applied research that is conducted by researchers at universities, institutes, companies, knowledge networks, etc.;
2. all **business-oriented support** (e.g., technology transfer, technology advice, technology scans, networking, dissemination of innovation, knowledge and technology, valorisation or research results, feasibility studies, knowledge vouchers, etc.);
3. various forms of **collective research** (joint industry-science research, innovative networks, clustering);
4. **promotion and popularisation of STI** (in education, society, business, science centres, etc.), mobility of researchers, etc.

## 2.2

### Research related to the community

This includes:

1. broad **innovation policy**, as well as scientific research policy (fundamental, applied and strategic basic research);
2. (research at) **higher education institutions** (universities of applied sciences and arts, universities);
3. (research at) **public research organisations** (PROs);
4. (research at) **scientific institutes and policy research centres** of the Flemish Community;
5. (research at) **various institutes** that generate knowledge or scientific output;
6. **infrastructure** in the field of research and innovation (small, medium-scale and large-scale research infrastructure, such as supercomputers, data collections, networks, clean rooms, etc.);
7. **science parks, technology parks, incubator sites**, etc.;
8. **policy research** for the fields for which Flanders is responsible: economic support, industrial policy, entrepreneurship, social economy, public works, employment, environment, nature conservation, forestry, agriculture, energy (except for nuclear energy), heritage, (primary, secondary and higher) education, water management, transport, vocational training, health, culture, tourism, care, health and well-being, data transmission, sports, media, youth, etc.

## 2.3

### Access to finance

Support for start-ups, spin-offs, participations, seed capital, risk capital, guarantees, fast-growing or technology-oriented businesses, business angels, loans, etc.



© Gorodenkoff

## 3

## Socio-economic, technological and scientific context

Flanders' population accounts for about 58% of Belgium's total population, whilst its surface area covers about 44% of the country. The major part of the companies and the active population of Belgium are in its northern region, which also has a higher employment rate.

As a result, the **economy of Flanders** represents about 59% of the Belgian economy (as measured in GDP). It is also a very open economy: According to the ESA 2010 methodology Flemish exports of goods and services accounted for 106.3% of its GDP in 2021 (partly due to the 'transition' effect and the 'gate' (harbour) effect). On the other hand, the relative wealth of Flanders - as

measured in GDP per capita - is about 20% higher than the EU-27 average. The small Brussels Capital Region causes a major "capital city" effect, with its strong presence of company headquarters and public administrations. If the wealth generated by the daily commuters from Flanders into the Brussels Capital Region were attributed to their residence in the Flemish Region, the Flemish GDP per capita would rise to 29% above the EU27 average. Total expenditure on R&D (GERD) in Flanders, which reaches almost

12.54 billion euro (3.52% of Flemish GDP), equates to over 64% of the Belgium total (2023) and the Flemish R&D intensity exceeds the national value for Belgium (for details see Annex III).



## Key figures on Flanders (Flemish Region), Belgium and EU-27

Table 1

|                                                                                                                                                                 | YEAR     | UNIT            | FLANDERS      | BELGIUM | EU-27     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|---------------|---------|-----------|
| <b>SURFACE AREA</b>                                                                                                                                             |          | km <sup>2</sup> | 13,521        | 30,528  | 4,272,773 |
| <b>POPULATION</b>                                                                                                                                               | 1/1/2025 | million         | 6.9           | 11.8    | 450.4     |
| <b>GDP IN CURRENT PRICES</b>                                                                                                                                    | 2024     | billion euro    | 367.5         | 620.3   | 18,801.8  |
| <b>EXPORT</b>                                                                                                                                                   | 2024     | billion euro    | 418           | 510     | 2584      |
| <b>GERD</b>                                                                                                                                                     | 2023     | billion euro    | 12,539        | 19,520  | 385,688   |
| <b>GDP PER CAPITA (PPS)</b>                                                                                                                                     | 2024     | euro            | 47,315        | 46,157  | 39,680    |
| <b>R&amp;D INTENSITY</b>                                                                                                                                        | 2023     | %               | 3.52          | 3.27    | 2.12      |
| <b>ANNUAL PUBLIC BUDGET FOR R&amp;D&lt;br/&gt;FOR FLANDERS, (OF WHICH PUBLIC&lt;br/&gt;BUDGET FOR R&amp;D IN STRICT SENSE),&lt;br/&gt;BY FUNDING AUTHORITY:</b> | 2025     | million euro    | 5,492 (3,106) |         |           |
| FLEMISH AUTHORITY:                                                                                                                                              |          |                 | 4,669 (2,333) |         |           |
| FEDERAL AUTHORITY:                                                                                                                                              |          |                 | 399.9 (399.9) |         |           |
| EU / HORIZON 2020:                                                                                                                                              |          |                 | 373 (373)     |         |           |
| EU / ERDF + INTERREG:                                                                                                                                           |          |                 | 50 (0)        |         |           |
| <b>EMPLOYMENT RATE&lt;br/&gt;(% OF THE 20-64 YEARS OF AGE)</b>                                                                                                  | 2024     | %               | 76.9          | 72.3    | 75.8      |

|                                                                                                       | YEAR | UNIT         | FLANDERS      |
|-------------------------------------------------------------------------------------------------------|------|--------------|---------------|
| <b>ANNUAL PUBLIC BUDGET FOR R&amp;D,&lt;br/&gt;(IN STRICT SENSE), BY FUNDING&lt;br/&gt;AUTHORITY:</b> | 2025 | million euro | 2,732 (0.72%) |
| <b>FLEMISH AUTHORITY:</b>                                                                             |      |              | 2,333 (0.61%) |
| <b>FEDERAL AUTHORITY:</b>                                                                             |      |              | 399.9 (0.11%) |

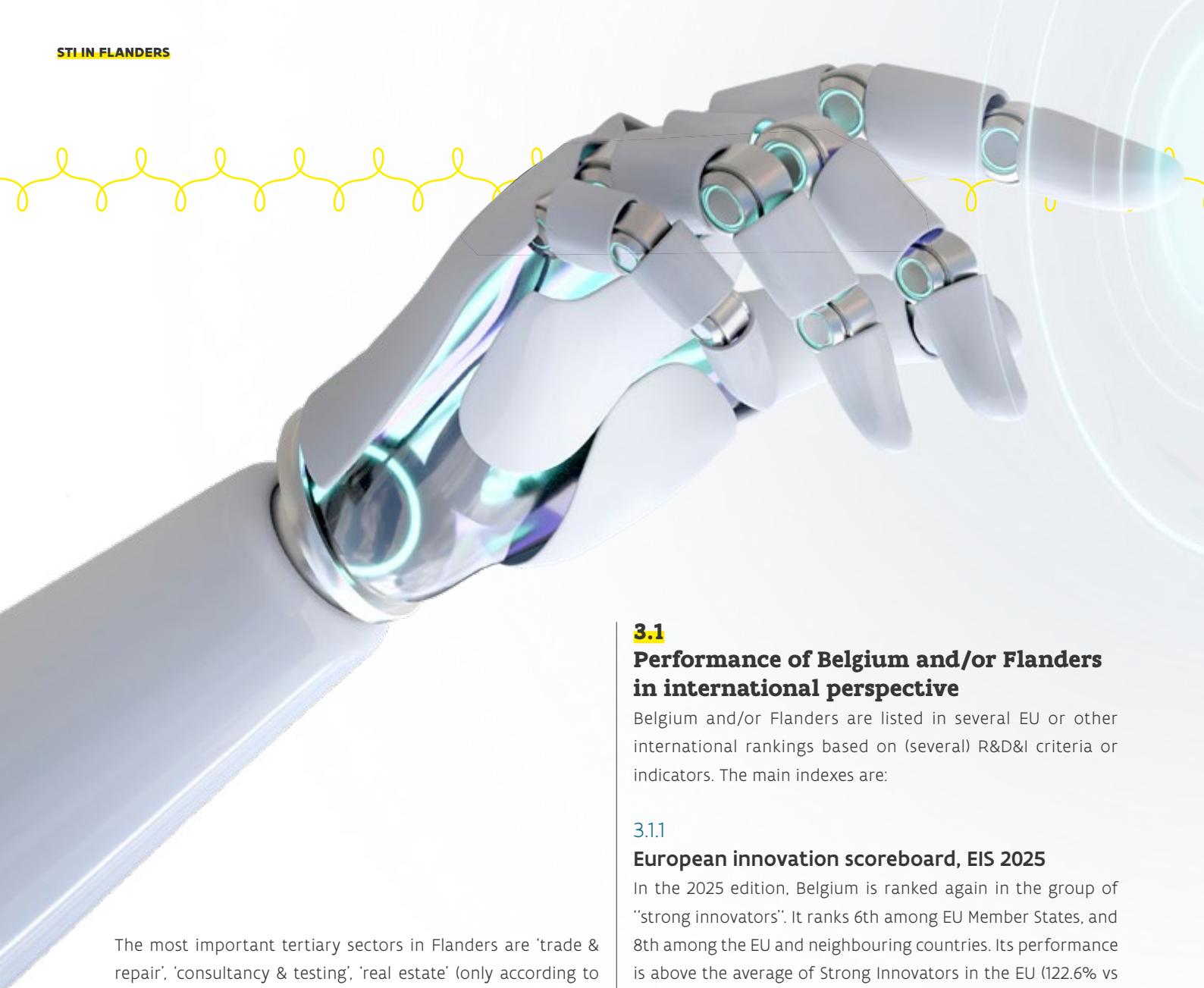
The following table provides an overview of the weight of the main branches in the economy of the EU-27 and Flanders.

**Share of the main branches (and certain sub-branches) in gross value added and in employment in the EU-27 and Flanders, 2024, %**

Table 2

|                                                                            | GROSS VA |          | EMPLOYMENT |          |
|----------------------------------------------------------------------------|----------|----------|------------|----------|
|                                                                            | EU-27    | FLANDERS | EU-27      | FLANDERS |
| <b>PRIMARY SECTOR</b>                                                      | 1.8%     | 1.1%     | 4%         | 1.3%     |
| <b>SECONDARY SECTOR</b>                                                    | 25.7%    | 23.7%    | 22.0%      | 18.8%    |
| INDUSTRY (WITHOUT CONSTRUCTION)                                            | 19.4%    | 17.5%    | 15.3%      | 12.6%    |
| CONSTRUCTION                                                               | 5.5%     | 6.2%     | 6.7%       | 6.2%     |
| <b>TERTIARY SECTOR</b>                                                     | 73.5%    | 75.2%    | 74.1%      | 79.9%    |
| TRADE, TRANSPORT, ACCOMMODATION AND FOOD SERVICE ACTIVITIES                | 18.8%    | 20.4%    | 24.1%      | 20.4%    |
| INFORMATION AND COMMUNICATION                                              | 5.5%     | 4.4%     | 3.5%       | 2.7%     |
| PROFESSIONAL, SCIENTIFIC, TECHNICAL, ADMINISTRATIVE AND SUPPORT ACTIVITIES | 11.9%    | 17.5%    | 12.9%      | 25.4%    |

Source: Regional Accounts (NBB), Eurostat and OECD (2026)



The most important tertiary sectors in Flanders are 'trade & repair', 'consultancy & testing', 'real estate' (only according to gross value added), 'administrative and support services' (mainly according to employment), 'education' and 'transportation & storage'.

Flanders' share of the secondary sector is 23.7% in gross value added and 18.8% in employment. The relatively greater importance of the secondary sector in gross value added than in employment is an indication of its overall greater labour productivity, due to a greater exposure to international competition by trade, and the higher capital investment in these sectors. The main branches, apart from 'construction' are 'food & beverages', 'chemicals' (mainly according to gross value added) and Pharmaceuticals.

### 3.1

#### Performance of Belgium and/or Flanders in international perspective

Belgium and/or Flanders are listed in several EU or other international rankings based on (several) R&D&I criteria or indicators. The main indexes are:

##### 3.1.1

#### European innovation scoreboard, EIS 2025

In the 2025 edition, Belgium is ranked again in the group of "strong innovators". It ranks 6th among EU Member States, and 8th among the EU and neighbouring countries. Its performance is above the average of Strong Innovators in the EU (122.6% vs 114.1% of the EU average in 2025).

Strong increases since 2018 are: Cloud Computing, High-Speed internet access, and SMEs introducing business process innovations.

In terms of indicators, Belgium scores remarkably better than the EU-27 average (=100%) for the following indicators: R&D expenditure in the business sector (rank = 1), Employment in innovative enterprises (rank = 1), Innovation expenditures per person employed (rank = 1)

Compared to 2018, Belgium has improved its score less than the average EU-score (11.7% vs. 12.6%).



3.1.2

Regional innovation scoreboard, RIS, 2025, from the EC

Flanders is a **‘leader - innovator’** (= performance > 125% of the EU average), like some other EU regions such as London (UK), South East (UK), Utrecht (NL), Noord-Holland (NL), Hamburg (DE), Köln (DE), Ostschweiz (CH), Oslo og Viken (NO) and Ile de France (FR). Overall in the EU (ranking of 239 regions) Flanders ranks 31th whereas the two other Belgian regions rank 30th (Brussels Capital Region - ‘innovation leader’) and (Walloon Region 78th - ‘strong innovator’).

However, it is important to note that the RIS ranks a combination of regions both at the NUTS1 and the NUTS2 level. If the Flemish provinces (NUTS2) would be considered separately, as is done

for e.g. the Netherlands or Germany, the resulting score would differ.

The RIS for Flanders shows that relative strengths compared to the EU are in the categories of “International scientific co-publications”, “Public-private co-publications” and “Innovative SMEs collaborating with others”. It scores weaker for “Design applications”, “PCT patent applications” and “Exports of medium and high technology products”. Strong increases since 2018 are: “Broadband penetration”, “Air emissions by fine particulates” and “public-private co-publications”.

The difference with the Belgian average is very limited indeed, which is evident because the Belgian figure and data consist for the largest part of the Flemish data therein.

