

## CHAPTER 6

# INTERNATIONAL ACTIVITIES



Since 1993, the Belgian Communities and Regions have been able to execute their competencies at the EU and international policy level. The international aspects of STI cover a wide range of activities and institutions, embedded at the public, semi-public and private level. Consequently, no single administrative entity or agency has been set up to specifically manage these international aspects. This means that all the different public and private actors that are interested or eligible can initiate their own policy initiatives and programmes at the international level.

Since acquiring **external competence**, a substantial effort has been made to internationalize STI policy. More concretely, this policy is shaped by the preparation and follow-up of policy initiatives at the bilateral (towards a region or a country), inter-regional, inter-governmental, EU and international (OECD, UN) policy levels. The main policy focus is on the EU level.



# 1 EU-LEVEL

Flanders needs to align its priorities in the field of R&D&I as much as possible with the priorities defined at the EU-level regarding the grand challenges, the European Research Area, the Europe 2020 strategy (European Semester) and Horizon 2020 / COSME programmes. Such goals can be achieved by striving towards excellence, increasing budgets, facilitating researcher mobility and participating in EU and international cooperation programmes and networks. This is particularly relevant for the future well-being of Flanders, given its open economy and the high proportion of international companies active in R&D. In addition to funding from the Flemish and the federal authorities, research actors also receive important amounts from various EU programmes (mainly Horizon 2020 and, to some extent, COSME and ERDF).

## 1.1 POLICY PREPARATION AND FOLLOW-UP

In the **Council of the European Union** meetings dealing with research and innovation policy, Belgium is represented by its Communities/Regions, whilst the federal authority acts as assessor. Consequently, Flanders is one of the authorities directly involved in the preparation of decisions within the Council, and takes its turn to represent Belgium according to a rotation system agreed with the other authorities. The meetings of the Council Working Group are attended by the **Flemish attaché for research and innovation**, who is assigned to (and is an integral part of) the Belgian Permanent Representation to the EU. Principal fields of action include the Framework Programme for Research and Technological Development, the European Research Area (ERA) and all related R&D&I matters in the broadest possible sense (for example, SFIC, ESFRI, etc.).

Active involvement in the EU's research and innovation policies includes:

- preparation and follow-up of the ministerial decisions within the **EU Competitiveness Council** (Research);
- the EU's **Horizon 2020** and **COSME** programmes: preparation of the programme themes, act as National Contact Point (NCP), involvement as programme committee members in Horizon 2020, the ERA networks, OMC networks, and other support actions;
- preparation and participation in the meetings of the **ERAC**, the entity that advises the European Commission, the Council and the EU Member States on their research and innovation policy;
- participation in the bilateral meetings between the Commission and Belgium for the European Semester (Fact Finding Mission);
- participation in various **EU initiatives in the field of R&D&I**, such as the JTI (Joint Technology Initiatives), ESFRI (international large research infrastructure), the EIT (European Institute for Technology) and JPI (Joint Programming Initiatives) (see further in this chapter);
- contributions to or revision of the many **reports and consultations** involving the European Commission in the field of scientific research and innovation (e.g. the Flemish and Belgian National Reform Programmes for the European Semester, the various ERA reports, the report of the Research and Innovation Observatory (RIO), the EC/OECD STI Policies report...);
- active involvement in the discussions and preparations for the **programmes under the new EU Multi-Financial Framework 2021-2027**, such as the Digital Europe Programme, Connecting Europe Facility 2 and Horizon Europe.

## 1.2

### EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION AND COSME

A major focus - and a major source of R&I budget - lies at the EU level; namely, the participation in the EU's **Framework Programmes** for Research and Innovation. Framework programmes (FPs) have been implemented **since 1984** and cover a period of several years. Since 2014, the eighth FP named Horizon 2020 is active. The participation data (status October 2020) on the Horizon 2020 programme show that actors in Flanders are participating strongly. With a financial return of 2.68%, Flanders is scoring above the expected level (see also Annex III). The percentages for FP7, FP6 and FP5 were 2.50%, 2.12% and 2.19% respectively. Regarding Horizon 2020 so far, 669 Flemish participants take part some 3,614 times in 2,615 projects, which generates approximately 1,649.5 million euro (from January 2014 until October 2020) or about 190 million euro yearly.

KU Leuven is the strongest Flemish (and Belgian) participant, and the only Belgian university in the top-10 of all academic participants in the FP. Behind **KU Leuven, imec and UGent** complete the top-3 of Belgian participants and together they represent 745 million euro, which is about a quarter of the total Horizon 2020 contribution to Belgium. In total, 7 Flemish knowledge institutes rank in the Belgian top-10: KU Leuven, imec, UGent, UA, VUB, VITO and VIB in descending order.

In January 2020, evidence of the allocated budget for the participation in **COSME**, the EU's programme for small and medium-sized enterprises, shows that close to 40 million euro went towards various actors from Flanders, including the Enterprise Europe Network (EEN) Vlaanderen. This represents a little over 1.5% of the total budget for the period 2014-2020.

**1.3****EUROPEAN AND INTERNATIONAL PARTNERSHIPS & INITIATIVES ON R&I WITH FLEMISH PARTICIPATION****1.3.1****SITUATION UP TO 2021**

Since 2007, various variable geometry initiatives have been set up at the EU level, whereby certain countries can participate in research and innovation as part of or complementary to the EU Framework Programme themes. These initiatives strive towards the accomplishment of a European Research Area. In several cases, actors from Flanders have joined in these projects and have occasionally received public support (from the EWI Department, VLAIO (previously IWT), FWO or Belspo).

The following figure provides a tentative overview of the initiatives in which Flanders or Flemish research actors participate. The figure is mainly about, but not limited to EU-initiatives.

**JOINT TECHNOLOGY INITIATIVES (ARTICLE 187-INITIATIVES):**

- Innovative Medicines Initiatives 2 (IMI2)
- Fuel Cells and Hydrogen 2 (FCH2)
- Electronic Components and Systems (ECSEL)
- BioBased Industries (BBI)
- Clean Sky 2
- EuroHPC (member of the LUMI consortium)
- Shift2Rail
- Single European Sky Air Traffic Management Research Joint Undertaking (SESAR)

**JOINT PROGRAMMING (ARTICLE 185-INITIATIVES):**

- Eurostars
- Active and Assisted Living (AAL)

**JOINT PROGRAMMING INITIATIVES:**

- Neurodegenerative Disease Research (JPND)
- Cultural Heritage and Global Change
- A Healthy Diet for a Healthy Life (HDHL)
- More Years, Better Lives (MYBL)
- Antimicrobial Resistance (AMR)
- Agriculture, Food security & Climate Change (FACCE)
- Connecting Climate Knowledge for Europe (JPI Climate)
- Urban Europe - Global Challenges
- Water Challenges for a Changing World (Water JPI)
- Healthy and Productive Seas and Oceans (JPI Oceans)

**ERA-NETS:**

- |                      |                            |
|----------------------|----------------------------|
| • ANIHWA             | • HDHL INTIMIC             |
| • Aquatic Pollutants | • HERA Cultural Encounters |
| • ASPERA-2           | • HERA UP                  |
| • Biodiversa         | • Heritage Plus            |
| • BlueBio            | • HIVERA                   |
| • CHIST ERA II       | • ICRAD                    |
| • CHIST ERA IV       | • INFECT-ERA               |
| • G-IPM              | • ICT-AGRI2                |
| • CONCERT-Japan      | • ICT-AGRI-FOOD            |
| • CORNET             | • JPCofuND (2)             |
| • EN SGplusRegSys    | • LEAP-AGRI                |
| • ENSUF UE           | • MARTERA                  |
| • ENSUGI             | • M.ERA-NET (III)          |
| • ENUAC              | • Neuron (II)              |
| • ERAfrica           | • NORFACE T2S              |
| • ERACoSysMed        | • Oceanera-net cofund      |
| • ERA-CAPS           | • PhotonicSensing          |
| • ERA-CVD            | • Quantera                 |
| • ERA HDHL           | • RUS Plus ERA-Net         |
| • ERA-IB             | • Smart Grids Plus         |
| • ERA-MBT            | • Solar-ERA-net            |
| • ERA-MIN II         | • Solar-ERA-Net Cofund 2   |
| • ERANID E-Rare 2    | • SusAn FACCE              |
| • E-Rare 3           | • Suscrop                  |
| • EURONANOMED II     | • SUMFOREST                |
| • Eurotransbio       | • Susfood 2                |
| • FACCE Surplus      | • TRANSCAN                 |
| • FOSC               | • Waterworks               |

**EUREKA!:**

- ACQEAU
- CELTIC-Next
- Eureka
- EuroIPIDES
- Globalstars
- ITEA
- Metallurgy
- PENTA
- SMART

**EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY (COST)****EUROPEAN INSTITUTE OF TECHNOLOGY (EIT) - KNOWLEDGE INNOVATION COMMUNITIES (KICS):**

- Climate
- Digital
- Food
- Health
- InnoEnergy
- Manufacturing
- Raw Materials
- Urban Mobility

**EUROPEAN INNOVATION PARTNERSHIPS:**

- Active & Healthy Ageing (AHA)
- Agricultural Productivity and Sustainability
- Raw Materials
- Smart Cities and Communities (SCC)
- Water

**FUTURE AND EMERGING TECHNOLOGIES (FET) FLAGSHIPS:**

- Graphene
- Human Brain Project

**SET-PLAN****EUROPEAN STRATEGY FORUM ON RESEARCH INFRASTRUCTURE (ESFRI):<sup>4</sup>**

- Digital Research Infrastructures for the Arts and Humanities (DARIAH)
- European Social Survey (ESS)
- Survey of Health, Ageing and Retirement in Europe (SHARE)
- Distributed System of Scientific Collections (DISSCO)

- Integrated Carbon Observation System (ICOS)
- e-infrastructure for Biodiversity and Ecosystem Research (LifeWatch)
- Infrastructures for Analysis and Experimentation on Ecosystems (ANAE)
- A Distributed Infrastructure for Life-science Information (ELIXIR)
- European Marine Biological Resource Centre (EMBR)
- European Research Infrastructure for Imaging Technologies in Biological and Biomedical Sciences (Euro-BioImaging)
- Integrated Structural Biology Infrastructure (INSTRUCT)
- The European Organisation for Nuclear Research - Compact Muon Solenoid (CERN-CMS)
- Dutch-Belgian Beamline ESRF (Dubble)
- IceCube Neutrino Observatory (IceCube)
- The European Organisation for Nuclear Research-Isolde Radioactive Ion Beam facility (CERN-Isolde)
- Mid-Infrared ELT Imager and Spectrograph (METIS)
- Système de Production d'Ion Radioactifs en Ligne de 2<sup>e</sup> génération (SPIRAL2)
- Partnership for Advanced Computing in Europe (Prace)

**OTHER INITIATIVES:**

- European Southern Observatory (ESO)
- European Space Agency (ESA),
- European Molecular Biotechnology Organisation/Laboratory (EMBO/EMBL)
- Mercator Telescope
- Einstein Telescope
- ...

<sup>4</sup> For more information, see the brochure "Large scale research infrastructures in Flanders. Flemish participation in international research infrastructures 2020" at: [www.vlaanderen.be/publicaties/large-scale-research-infrastructure-in-flanders-flemish-participation-in-international-research-infrastructure-2020](http://www.vlaanderen.be/publicaties/large-scale-research-infrastructure-in-flanders-flemish-participation-in-international-research-infrastructure-2020)

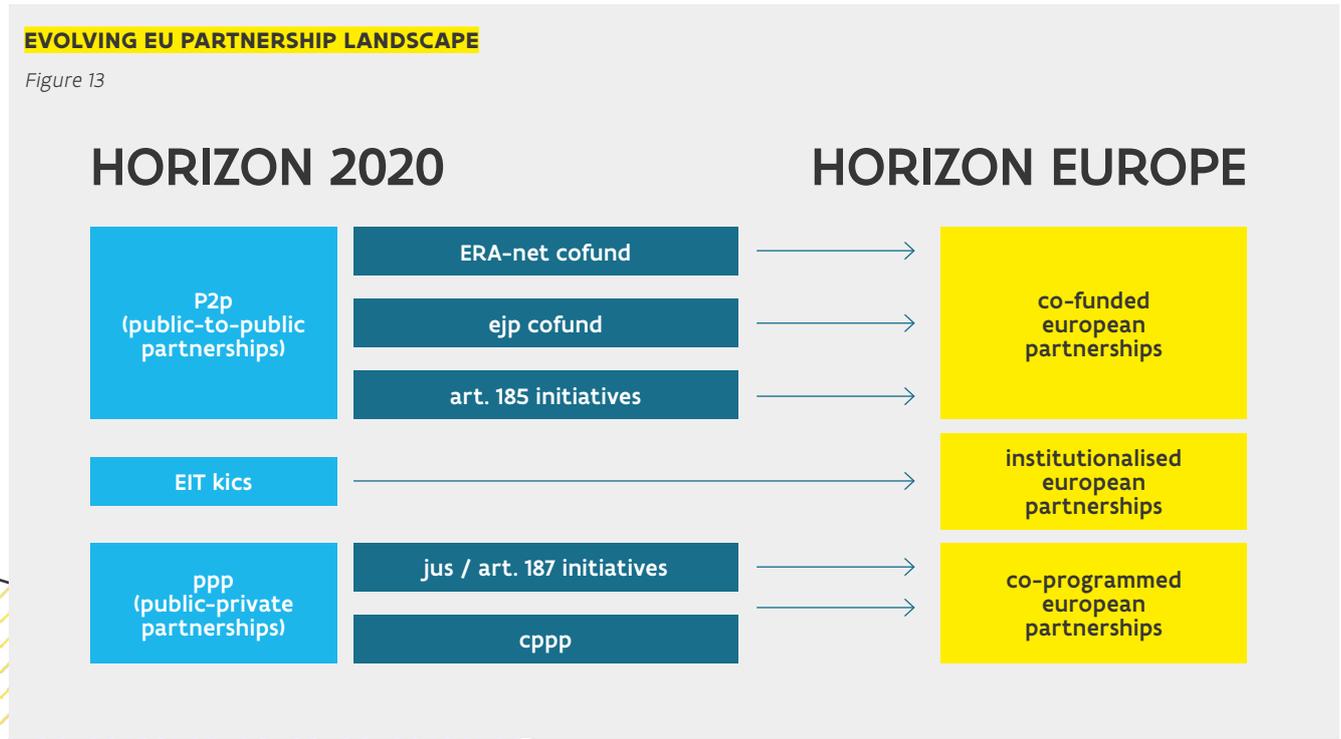
### 1.3.2 SITUATION FROM 2021 ONWARDS

The European partnership landscape will be rationalised and simplified under the new European Framework Programme for Research and Innovation, Horizon Europe. Within the Horizon Europe Programme, only three types of partnerships will continue to be organised:

1. Co-programmed European Partnerships are partnerships between the European Commission and private and/or public partners based on a Memorandum of Understanding and/or contractual arrangements. Each Member State or region is responsible for implementing the R&I activities.
2. Co-funded European Partnerships are European public-public co-funded partnerships between the European Commission and the EU countries. National or regional research and Innovation funding agencies and other public authorities form the core of the consortium. The topics of the call for proposals related to a particular partnership are included in the Horizon Europe's Work Programmes.

3. Institutionalised European partnerships are partnerships whereby the EU member states initiate – or jointly set up – R&D&I funding programmes and the European Union may decide to participate. Three different legal bases can be distinguished, namely Article 185 of the Treaty on the Functioning of the European Union (TFEU), Article 187 of the TFEU which covers public-private partnerships such as Joint Undertakings, and finally the EIT Knowledge and Innovation Communities (KICs) which cover the knowledge triangle.

The idea is that the H2020 partnerships will end, but some of them will undergo a smooth transition towards the rationalised EU partnerships foreseen under 'Horizon Europe'. The following figure illustrates what form the H2020 partnerships will take under Horizon Europe.



In total, the European Commission – through a process of co-creation – has identified 50 potential European partnerships<sup>5</sup> in 2019. These identified partnerships will be subject to a selection procedure through the Strategic Coordination Process, in which the Member States and the European Commission participate on an equal footing. The selected partnerships (i.e., titles or themes) will be formalised via the Strategic Plan that will be drafted for the first wave (set-up from 2021-22 onwards). A second wave of partnerships will be selected and formalised in an updated Strategic Plan (2023-24). The following fourteen European partnerships will be selected for the first wave, with Flanders participating in thirteen of the fourteen partnerships. There is no Flemish contribution to the European Partnership on Metrology, only the Federal Public Service Economy participates.

- Co-programmed European Partnerships:
  - European Open Science Cloud (EOSC) Partnership
- Co-funded European Partnerships:
  - European Partnership for Chemicals Risk Assessment<sup>6</sup>
  - European Partnership – ERA for Health<sup>7</sup>
  - European Partnership on Transforming Health and Care Systems<sup>8</sup>
  - European Partnership – Driving urban transitions to a sustainable future<sup>9</sup>
  - European Partnership for Clean Energy Transition<sup>10</sup>
  - European Partnership Rescuing Biodiversity to Safeguard Live on Earth<sup>11</sup>
  - European Partnership for Blue Oceans<sup>12</sup>
  - European Partnership Water Security for the Planet<sup>13</sup>
  - European Partnership for Innovative SMEs<sup>14</sup>
- Institutionalised European Partnerships based on Article 185
  - European Partnership on Metrology<sup>15</sup>
- Institutionalised European Partnerships based on Article 187
  - EU-Africa Global Health Partnership<sup>16</sup>
  - European Partnership for High Performance Computing<sup>17</sup>
  - European Partnerships for Key Digital Technologies<sup>18</sup>

5 Initially the Commission had identified 49 European partnerships, but due to the COVID 19 pandemic, an additional partnership "Pandemic Preparedness and Societal Resilience" has been announced.

6 Predecessors under H2020 were Human Bio-monitoring (HBM4EU) and a number of other actions.

7 Ca. 10 previous and current ERA-NET actions.

8 Predecessors under H2020 were AAL2 (Art. 185), JPI 'More Years, Better Lives' and others.

9 Predecessor under H2020 was JPI Urban Europe.

10 Predecessors under H2020 were around 10 existing ERA-NET Cofund actions.

11 Predecessors under H2020 were ERA-NET Biodiversity, EKLIPSE and ESMERALDA

12 Predecessors under H2020 BONUS, MARTERA, JPI Oceans, BlueBio.

13 Predecessor under H2020 was Water JPI.

14 Predecessor under H2020 was Eurostars-2.

15 Predecessor under H2020 was EMPIR (Art. 185).

16 Predecessor under H2020 was EDCTP2 (Art. 185).

17 Predecessor under H2020 was EuroHPC (Art. 187).

18 European Partnerships for Key Digital Technologies.

#### 1.4 SMART SPECIALISATION SPEARHEAD DOMAINS IN THE EU CONTEXT

In 2012, following the Communication 'Regional Policy contributing to smart growth in Europe 2020', the EC set up **S3 Platforms** to assist EU countries and regions to develop, implement and review their Research and Innovation Strategies for Smart Specialisation (RIS3). The EC's Joint Research Centre maps the profiles forwarded by various authorities in Europe. The **Flanders' profile** consists of seventeen priorities that are part of a smaller group of specialisation domains.

Examples of the Flemish specialisations include:

- "Micro- and nano-electronics and embedded systems, mechatronics (part of 'Smart systems' smart specialisation domain)";
- "Pharmaceutical applications of biotechnology, with focus on clinical trials, neuro-degenerative and infectious diseases, molecular diagnostics, and nanotechnology for medical applications (part of 'Sustainable chemistry' smart specialisation domain)";
- "Sustainable energy technologies with focus on hydrogen, wind energy and electrical vehicles (part of 'Sustainable living' smart specialisation domain)";
- "Specialised industrial value chains and logistical services for food, pharmaceuticals, recycling, offshore maintenance (part of 'Value-added logistics' specialisation domain)".

The complete overview is available online at the S3 platform.<sup>19</sup>

#### 1.5 EU REGIONAL POLICY

VLAIO is responsible for the execution of the Flemish programmes related to the **European Regional Development Fund** (ERDF). ERDF is one of the five European Structural and Investment Funds. With these funds, the European Commission aims to achieve the Europe 2020 targets. The goal of ERDF is to strengthen the economic and social cohesion by pursuing a better balance between the different regions. To achieve this, the Fund has two strands: (1) invest in growth and employment (with a focus on the less developed regions in the Union) and (2) European Territorial Cooperation through Interreg (to foster cross-border, transregional and interregional cooperation).

The multi-annual operational ERDF programme 2014-2020 sets out 4 priorities:

- Strengthening research, technological development and innovation.
- Enhancing the competitiveness of SME's.
- Supporting the shift towards a low-carbon economy in all sectors.
- Sustainable urban development.

The programme is being executed across the whole of Flanders, with specific strategies for certain regions (Limburg, West-Flanders, Kempen) or cities (Antwerp, Ghent).

The programme has an EU-budget of approximately 175 million euro for the whole period. Together with the national contribution, the total financing amounts to approximately 415 million euro (see also page 123).

**EFRO Interreg** is a collection of multiple programmes that, together with other EU funds or programmes (e.g. the Framework programme for R&I), operate within the same EU 2020 framework aimed at sustainable growth and jobs. Flanders uses these programmes to complement and strengthen the EFRO Flanders programme.

<sup>19</sup> [s3platform.jrc.ec.europa.eu/regions/be2](https://s3platform.jrc.ec.europa.eu/regions/be2)

Distinction can be made between three types of programmes that Flanders manages and executes in cooperation with other regions:

- **Cross-border programmes** are aimed at cooperation between bordering regions of different countries. Flanders takes part in the programmes Flanders-Netherlands, Euregio Meuse-Rhine, France and 2 Seas.
- **Transnational programmes** cover a larger area and are aimed at wider cooperation between multiple regions. Flanders takes part in the programmes North Sea Region and North-West Europe.
- **Interregional programmes** cover thematic cooperation between regions and are not bound geographically, contrary to the two aforementioned types. Flanders takes part in the programmes Interreg, URBACT en INTERACT.

## 1.6 VANGUARD INITIATIVE

An important initiative in the development of a more focused demand-driven approach is the so-called "Vanguard Initiative", an **inter-regional network** of currently 32 regions from 13 EU Member States. Among these regions are for example Baden-Württemberg, the Basque Country, Lombardy, North-Rhine Westphalia, Saxony, Rhône-Alpes, Wallonia, Catalonia, and Scotland. The Initiative's main ambition is to contribute to the European agenda and boost industrial transformation by innovation in the EU as well as set up networks among regions of different (non-bordering) countries in several domains. The cooperation of the regions also aims at generating an evidence base to support the EU Commission in the development of Smart Specialisation Platforms in key growth areas.

As such, the Vanguard Initiative supports the development of **innovative industrial value chains** in Europe by building on smart specialisation (S3) strategies. More specifically, it aims to provide industrial stakeholders with easier access to (connected) demonstration facilities. These activities are based on a four-step Vanguard Initiative methodology: learn, connect, demonstrate, commercialize. This methodology is being applied in 5 industry-led pilot actions, each based on one priority area (KET) in Europe.

Flanders takes the lead in the pilot action called "High Performance Production through 3D Printing". This focuses on creating a (virtual) platform for 3D printing infrastructure, capacities and competences aimed at developing a European demonstration and piloting network. Moreover, Flanders is also involved in all the other existing **pilot actions**:

- Bio-Economy – Interregional cooperation on innovative use of non-food Biomass;
- ADMA Energy - Advanced Manufacturing for Energy-Related Applications;
- NANO - New nano-enabled Products;
- ESM - Efficient and Sustainable Manufacturing.

The Vanguard Initiative seeks to **lead by example** in developing interregional cooperation and multi-level governance for supporting clusters and regional eco-systems to focus on smart specialisations in priority areas for transforming and emerging industries. Vanguard regions want to build synergies and complementarities in smart specialisation strategies to boost world-class clusters and cluster networks, through pilots and large-scale demonstrators. These investments will strengthen Europe's competitive capacity to lead in new industries in the future and develop lead markets that offer solutions to societal challenges.

## 1.7 VLEVA

The Flemish-European Liaison Agency (VLEVA) is a not-for-profit association which is subsidized on a structural basis by the Flemish Government. VLEVA's mission is to **form a link between the EU and the civil society and local authorities** in Flanders. In the field of STI VLEVA monitors the calls from various EU initiatives, in order to provide maximal information on opportunities for EU programme participation for actors from Flanders. It also takes part in the European Regions Research and Innovation Network (ERRIN) for Flanders.

## 2

# BILATERAL AND INTERNATIONAL

## 2.1 BILATERAL AND INTERNATIONAL CO-OPERATION AND AGREEMENTS

### 2.1.1 DEPARTMENT OF FOREIGN AFFAIRS

Flanders acts internationally in all areas for which it has internal jurisdiction such as economy, innovation, education and employment. Flanders has the constitutional right to conclude internationally-binding treaties in these areas, and can appoint diplomatic representatives abroad. **The Department of Foreign Affairs** monitors international policy coherence and is responsible for the coordination between the various policy areas. It is also the first point of contact for foreign embassies and diplomatic representations.

The Department of Foreign Affairs is the responsible administration for **bilateral and multilateral treaties, agreements and declarations of intent**. These agreements are often elaborated through multi-annual working programmes that cover various policy areas, one of which is scientific research and innovation. Consequently, the treaties foresee collaboration between EWI actors and one or more of their foreign counterparts. These agreements are managed by the Department of Foreign Affairs. The current active agreements include those with Estonia, Latvia, Poland, South Africa, Rumania, Lithuania, Croatia, Slovenia, Hungary, Bulgaria, North Rhine-Westphalia (Germany), Catalonia (Spain) and the German-speaking Community (Belgium). Several other agreements are currently being negotiated and various meetings are taking place with other regions and countries. Previously, general agreements were concluded in the field of R&D&I between Flanders and various non-European partners; for example, with Israel for cooperation in R&D in industry (2000) or with Alberta (Canada) for scientific and technological cooperation (1990).

The minister-president of Flanders offers Flemish STI actors (universities, university colleges, research organisations, other knowledge institutes, etc.) the possibility to participate in official missions abroad, based on the so-called “**academic diplomacy**” principle. During these missions, the opportunity sometimes arises to conclude general or specific cooperation agreements with actors from the region or country being visited. Flemish STI actors (universities, innovative companies, knowledge institutes) can also participate in Belgian economic missions or other official missions (e.g. State visits) that take place all over the world. These missions can be led by the King of the Belgians, the Belgian Foreign Affairs Minister, or a Belgian prince or princess. Conversely, official visits of foreign head of state, prime ministers, ministers or other officials to Belgium may also lead to cooperation with Belgian (including Flemish) actors in the field of research, or signing of agreements at the public level or bilaterally among STI actors.

### 2.1.2 FLANDERS INVESTMENT AND TRADE (FIT)

Another important actor in the International Flanders policy area is the **Flanders Investment and Trade (FIT)** agency. FIT supports the international activities of Flemish companies and attracts foreign investors to Flanders. It assists, supports and stimulates companies in international business. FIT offers tailored advice and guidance. Companies can call on its networks of contacts both at home and abroad. And it provides financial support and information on a wide range of financial incentives. Together with VLAIO, it forms the Enterprise Europe Network Flanders.

FIT has a worldwide network of **over 90 offices**. It includes several **technological attachés** that focus on future-oriented, innovative and technological fields of development, specifically in growth markets outside Europe. Each attaché is active in several technological sectors that are most relevant and offer opportunities for the region concerned. Their work is coordinated by the Science & Technology Coordinator Filip De Weerd.

## FLANDERS INVESTMENT & TRADE AGENCY: PRESENCE IN THE WORLD

Figure 14



Source: © Flanders Investment and Trade (FIT) Agency

## TECHNOLOGICAL ATTACHÉS AT THE FLANDERS INVESTMENT AND TRADE AGENCY

Table 3

HOTSPOT	FOCUS AREA	FOCUS DOMAIN
<b>NEW YORK</b>	East Coast US	Digital Tech
<b>PALO ALTO</b>	Bay Area – West Coast US	Digital Tech & Climate Tech
<b>PARIS</b>	France & South Europe	Digital Tech & Health Tech
<b>LONDON</b>	UK	Health Tech & Digital Tech
<b>COPENHAGEN</b>	Scandinavia	Health Tech & Climate Tech
<b>MUNICH</b>	DACH region (Germany, Austria, Switzerland)	Digital Tech & Health Tech
<b>MUMBAI</b>	India	Climate Tech & Digital Tech
<b>SINGAPORE</b>	South & Southeast Asia	Digital Tech & Climate Tech
<b>GUANGZHOU</b>	Pearl River Delta – China	Digital Tech
<b>TOKYO</b>	Japan	Health Tech & Digital Tech

### 2.1.3 EWI DEPARTMENT

The EWI Department manages several multi-annual agreements and their accompanying budgets to implement actions within the framework of the **United Nations** (UN). These are:

- the Flanders UNIDO Science Trust Fund for Industrial Biotechnology (FUSTIB);
- the Flanders UNESCO Trust Fund (FUST);
- the UNU-CRIS (United Nations University - Centre for Regional Integration Studies).

The EWI Department prepares and monitors the **memoranda of understanding (MoU)** that are concluded directly between the administrations or ministers charged with R&D&I. These include, for example, agreements with Slovenia (2008) and China (2012). During ministerial missions abroad or during the official visits of foreign delegations to the Flemish minister or to public EWI entities, such agreements may be discussed and/or signed officially.

In some cases, **treaties** that include topics relating to scientific research exist or are being prepared between Belgium and another country. These may impinge on Flemish competencies in the field of STI. Whenever it is required, the EWI Department acts as the responsible entity to monitor such agreements.

The EWI Department also hosts, or is part of the Flemish delegation, during **visits from foreign authorities, delegations and multilateral authorities**. Conversely, it can be a part of, or represented in, Flanders' delegations abroad.

Through initiatives as the **“Flanders Inspires International Visitors Programme” (FIIVP)**, the EWI Department presents Flanders' strengths in the fields of economy, science and innovation, and learns from other countries and regions. The FIIVP has been on-going since 2010 and is inspired by the US “International Visitor Leadership Programme”. Its aim is to establish long-term relationships with high-level international opinion makers and decision makers by organising (once or twice a year), a broad multi-sectoral programme, usually focussed on a specific theme. Visitors come from all over the world and represent a region, country, or institution from the EU (or an international organisation).

## 2.2 INTERNATIONAL ORGANISATIONS

In addition to the EU level Flanders also has representative functions linked to the preparation and follow-up of the policy-making of various international organisations. This includes the Organisation for Economic Cooperation and Development (OECD) and the United Nations (UN). More precisely:

- **OECD:** participation in the Global Science Forum, Steel Forum, the Committee on Science and Technological Innovation Policy (CSTP), the Technology and Innovation Policy (TIP), National Experts on Science and Technology Indicators group (NESTI), Working Party on Biotechnology, Nanotechnology and Converging Technologies (BNCT) and in thematic subgroups on e.g. ICT, biotechnology, and researchers' mobility. A substantial contribution is provided for the OECD's STI Outlook report (as of 2016: the STI Policy (STIP) report, jointly from the OECD STI Survey and European Commission ERAC survey);
- **UN:** support for the Flanders UNESCO Science Trust Fund (FUST: capacity building in development countries), the Flanders UNIDO Science Trust Fund for Industrial Biotechnology (FUSTIB), United Nations University – Centre for Regional Integration Studies (UNU-CRIS) and the project office of the Inter-governmental Oceanographic Commission (IOC) for IODE at Ostend, for which EWI manages the financial support.

## 2.3 INTERNATIONAL ACTIVITIES FROM RESEARCH ORGANISATIONS

Many institutions and organisations in the field of STI have developed international links, ranging from network memberships over joint initiatives to bilateral agreements and foreign representation. Such initiatives are the result of a gradual trend towards greater internationalisation, whereby companies, universities, research institutes or knowledge centres develop bottom-up cooperation with foreign partners.

All 5 **universities** of the Flemish Community have developed partnership and cooperation agreements with research organisations worldwide and take part in international networks and programmes. Examples include the Coimbra Group (KU Leuven), the Santander Group (UGent), the University Consortium

International (UHasselt) and the Utrecht Network (UA). All 5 universities are a member of the European University Association (EUA). On top of that, they are part of several other international initiatives aiming to shape EU policy, such as the League of European Research Universities – LERU (KU Leuven), The Guild (UGent) and the Young European Research Universities Network – Yerun (UA).

Among the Flemish **strategic research centres**, imec in particular has been very active at the international level. Apart from its home-based offices in Leuven and Leper, it has also agencies in the Netherlands, Taiwan, China, India, the US and Japan. VITO has activities and representations in China, India and the Middle East. VIB has set up initiatives such as EU-life and Core For Life. Eu-life is an alliance of top research centres in life sciences to support and strengthen European research excellence. Core4Life aims at exploring the potential of coordinating and bundling core facility expertise and resources across institutes and countries to advance knowledge and to benefit the entire scientific and technological community.

**VLIZ** concludes cooperation agreements with international universities, research institutions and individual research groups, and participates in international networks and projects in the field of marine sciences. **ITG** works with many scientific institutions, governments and organisations all over the world for the long-lasting improvement of health care and disease control in developing countries.

In addition to the above examples of universities and (strategic) research centres, all other knowledge centres and organisations in Flanders cooperate with international partners in various initiatives, networks or actions.

## 3 GOVERNMENT SUPPORT FOR INTERNATIONAL ACTIVITIES

### 3.1 FWO-INSTRUMENTS

The actions of FWO are crucial to stimulate internationalisation of research and relate to: international mobility including research projects, international collaboration, international contacts, European programmes and involvement in international policy.

#### 3.1.1 INTERNATIONAL MOBILITY

##### Incoming:

- Odysseus programme: a “brain-gain” programme to attract Flemish and other top researchers from around the world (back) to the universities of the Flemish Community;
- Incoming Pegasus Marie Curie Fellowships: attract excellent postdoctoral researchers to Flanders in order to contribute to the advancement of Flemish research.

##### Outgoing:

- Outgoing Pegasus Marie Curie Fellowships: attract excellent postdoctoral researchers to Flanders in order to contribute to the advancement of Flemish research.
- Several grants or fellowships, both for conferences, workshops, courses, short stays as well as for longer stays abroad.

### 3.1.2 INTERNATIONAL COLLABORATION

- **Exchange agreement:** scientific collaboration with other countries through the exchange of researchers via bilateral agreements with academies from: Czechia, China, Romania, Slovakia, Slovenia (Science Foundation);
- **Scientific cooperation:** agreements with a number of countries for the funding of potential exchange projects, namely with: Japan, Bulgaria, Poland, China, Brazil, Argentina, France, South-Korea, Taiwan, Turkey, Mexico, France-Tournesol, Hungary;
- **Bilateral research cooperation:** with Brazil, China, Ecuador, Vietnam, South-Africa, Québec (Canada);
- **Lead Agency Procedures:** with Luxembourg, Austria, Slovenia and Switzerland;
- **Big Science projects:** the “Big Science” programme supports researchers at institutes of the Flemish Community who want to conduct research projects at major international research facilities, the membership for which is paid for by the Belgian Federal or Flemish government.

### 3.1. INTERNATIONAL CONTACTS

- **International Coordination Action:** support for coordination activities of international collaborative associations (i.e. those created in the context of multilateral and supranational entities such as EU, OECD, UN, UNESCO, WHO...);
- **Organisation of scientific meetings in Belgium:** support for researchers for the organisation of scientific conferences where the international and inter-university dimension is a central element of the programme;
- **Scientific Research Network:** support for researchers with the coordination of scientific research networks (= international networks of researchers that encourage national and international cooperation at postdoctoral level).

### 3.1.4 EUROPEAN PROGRAMMES:

FWO acts as **National Contact Point (NCP)** in Horizon 2020 (along with VLAIO) and for COST (along with the EWI Department). FWO also participates in joint calls for ERA-Nets, funds excellent ERC-applicants who have obtained a Seal of Excellence and provides a “top-up” budget for participations (of on-going FWO projects) into joint calls for Joint Programming Initiatives.

### 3.1.5 INVOLVEMENT IN INTERNATIONAL POLICY:

The FWO cooperates with its European and international sister organisations in various **networks** and with other European research organisations or similar institutions; for example, the European Science Foundation (ESF), Science Europe, CECAM and the ECT.

## 3.2 VLAIO SUPPORT

VLAIO is the **National Contact Point (NCP)** for Flanders for supporting applications relating to thematic programmes within the Framework Programme for Research & Innovation, the ERA-nets, EUREKA, some Joint Technology Initiatives (JTIs), and initiatives which have phased-out such as INNO-nets. Moreover, VLAIO shares best practices with other European agencies in the innovation domain (such as TEKES from Finland or VINNOVA from Sweden) and is involved in various international networks and actions. For example, it is a member of the Association for Technology Implementation in Europe (**TAFTIE**), which fosters an exchange of best practice between the leading government innovation agencies supporting innovation in Europe.

In the field of international innovation, VLAIO also provides co-funding for participants from Flanders to take part in European projects, e.g. **EUREKA projects**. EUREKA is an inter-governmental initiative to promote international cooperation through projects (as well as clusters and “umbrellas”) for applied and market-oriented industrial R&D, based on a bottom-up principle. After a quality check, the projects that are approved receive a EUREKA label. Participants from Flanders in the **Eurostars** innovation programme, which is aimed at innovative cross-border SMEs, are

likewise supported by VLAIO. The agency is involved in the daily management of the EUREKA-network and the representation in the management entities of EUREKA, Eurostars and the EUREKA-clusters.

In the field of international cooperation via the **EU Regional Development Fund**, there are several ERDF-Interreg initiatives in which STI actors, public authorities and private partners from Flanders jointly support(ed) multi-annual projects. For the past multiannual period 2007-2013, these included BioBase Europe, Waterstofregio Vlaanderen - Zuid-Nederland (Hydrogen Region Flanders - South Netherlands), NanoSenseEU and Organext, Food2Market, InnoFun (Funding of Innovation), TANDEM, ECO-LASERFACT, GCS, SCINNOPOLI ("Scanning Innovation Policy Impact"), and SPIDER ("Supporting Public Service Innovation using Design in European Regions"), or AMCER ("Advanced Monitoring and Coordination of R&D policies at European level", within ESPON). For 2014-2020, examples of new Interreg projects with the Netherlands are Hydrogen Network 2.0, CrossRoads2, Link2Innovate and Crosscare. Furthermore, cooperation with the neighbouring regions of North Brabant (the Netherlands) and North Rhine-Westphalia (Germany) takes place within the framework of the ELAt (Eindhoven-Leuven-Aachen triangle). In recent years, collaboration has been extended to the domain of sustainable chemistry.

The **Enterprise Europe Network (EEN)** Flanders consists of VLAIO and FIT (Flanders Investment and Trade), and provides companies with information about (innovative) internationalisation.

