

The Researchers Report 2012

Country Profile: Belgium



TABLE OF CONTENTS

1. KEY DATA	3
<i>National R&D intensity target.....</i>	<i>3</i>
<i>Key indicators measuring the country's research performance.....</i>	<i>3</i>
<i>Stock of researchers</i>	<i>4</i>
2. NATIONAL STRATEGIES.....	4
3. WOMEN IN THE RESEARCH PROFESSION	5
<i>Measures supporting women researchers in top-level positions.....</i>	<i>5</i>
<i>Quotas to ensure a representative gender balance.....</i>	<i>5</i>
<i>Maternity leave.....</i>	<i>6</i>
4. OPEN, TRANSPARENT AND MERIT-BASED RECRUITMENT	6
<i>Recruitment system</i>	<i>6</i>
<i>Open recruitment in institutions</i>	<i>6</i>
<i>EURAXESS Services Network</i>	<i>7</i>
5. EDUCATION AND TRAINING	7
<i>Measures to attract and train people to become researchers.....</i>	<i>7</i>
<i>Doctoral graduates by gender</i>	<i>8</i>
<i>Funding of doctoral candidates</i>	<i>8</i>
<i>Measures to increase the quality of doctoral training.....</i>	<i>9</i>
<i>Skills agenda for researchers</i>	<i>9</i>
6. WORKING CONDITIONS.....	9
<i>Measures to improve researchers' funding opportunities</i>	<i>9</i>
<i>Remuneration</i>	<i>9</i>
<i>Researcher's Statute</i>	<i>10</i>
<i>'European Charter for Researchers' & 'Code of Conduct for the Recruitment of Researchers'.....</i>	<i>10</i>
<i>Autonomy of institutions.....</i>	<i>10</i>
<i>Career development.....</i>	<i>10</i>
<i>Shift from core to project-based funding.....</i>	<i>10</i>
<i>Social security benefits (sickness, unemployment, and old-age)</i>	<i>11</i>
7. COLLABORATION BETWEEN ACADEMIA AND INDUSTRY	11
8. MOBILITY AND INTERNATIONAL ATTRACTIVENESS	12
<i>Measures aimed at attracting and retaining 'leading' national, EU and third country researchers</i>	<i>12</i>
<i>Inward mobility (funding)</i>	<i>12</i>
<i>Outbound mobility.....</i>	<i>13</i>
<i>Promotion of 'dual careers'.....</i>	<i>13</i>
<i>Portability of national grants.....</i>	<i>13</i>
<i>Access to cross-border grants</i>	<i>13</i>
<i>Measures encouraging inter-sectoral mobility</i>	<i>14</i>

1. Key data

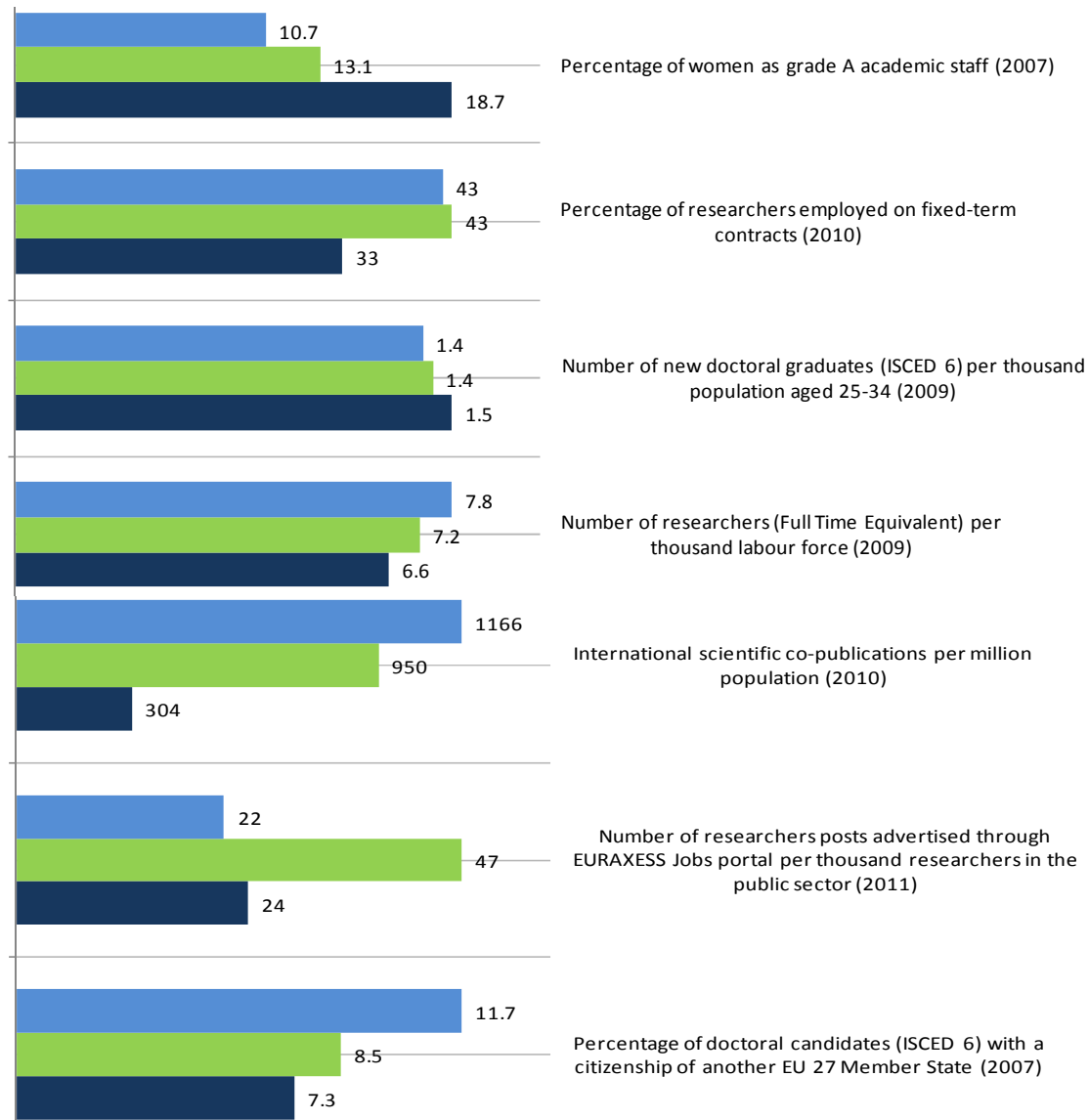
National R&D intensity target

"The R&D intensity in Belgium remained close to 2% during the period 2000-2009, passing from 1.97% of GDP in 2000 to 1.96% of GDP in 2009 as the result of two opposite trends. While the R&D intensity of the private sector decreased from 1.45% to 1.32%, the public R&D intensity increased from 0.52% to 0.62%. Belgium set an R&D intensity target to be achieved by 2020 between 2.6% and 3% of GDP. This target is ambitious with regard to recent trends but is within reach given the current structure of the Belgium economy. Compared to other countries, Belgium has the potential to increase the R&D intensity in existing sectors, both in the high-tech and medium high-tech sectors."¹

Key indicators measuring the country's research performance

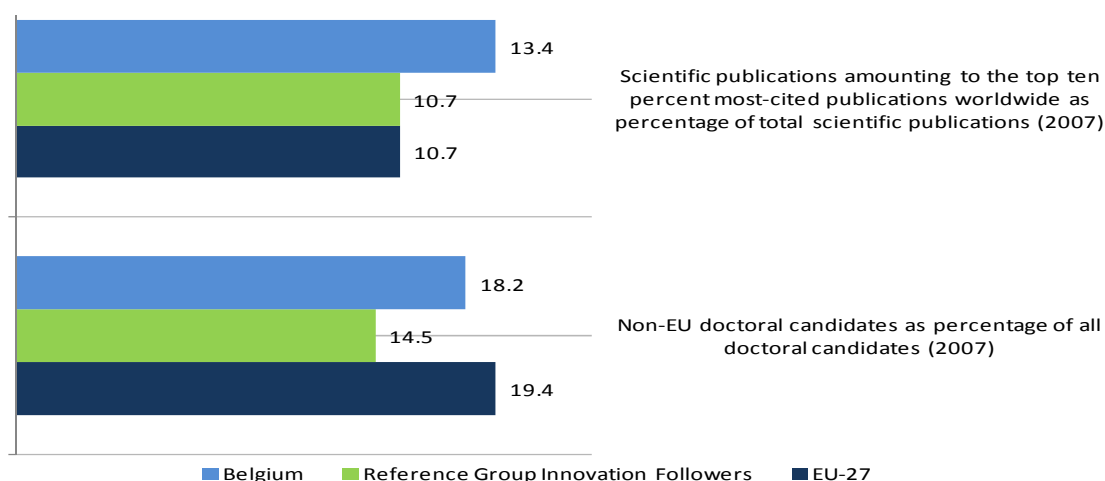
The figure below presents key indicators measuring Belgium's research performance against a reference group and the EU-27 average².

Figure 1: Key indicators – Belgium



¹ European Commission (2011), "Innovation Union Competitiveness Report 2011".

² The values refer to 2011 or the latest year available.



Source: Deloitte

Data: Eurostat, SHE Figures, EURAXESS Jobs Portal, Science Metrix/Scopus (Elsevier), Innovation Union Scoreboard 2010

Notes: Based on their average innovation performance across 24 indicators, Austria, Belgium, Cyprus, Estonia, France, Ireland, Luxembourg, Netherlands, Slovenia and the UK show a performance close to that of the EU27. These countries are the Innovation Followers³.

Stock of researchers

The table below presents the stock of researchers by Head Count (HC) and Full Time Equivalent (FTE) and in relation to the active labour force.

Table 1: Human resources – Stock of researchers

Indicator	Belgium	EU Average
Head Count per 1 000 active labour force (2008)	11.03	9.45
Head Count (2008)	52 723	-
FTE per 1 000 active labour force (2009)	7.75	6.63
Full time equivalent (FTE) (2009)	37 214	-

Source: Deloitte

Data: Eurostat

2. National strategies

In Belgium, the implementation of human resource strategies falls within the jurisdiction of the Communities (the *Vlaamse Gemeenschap* [Flemish Community] and the FWB, the *Fédération Wallonie-Bruxelles* [Wallonia-Brussels Federation]). At Federal level, the State safeguards the legal framework by ensuring access to the labour market, equal opportunities and gender equality. The table below presents key programmes and initiatives intended to implement the strategic objectives to train enough researchers to reach Belgium's R&D targets, to promote attractive working conditions, and to address gender and dual career aspects.

Table 2: National strategies

Measure	Description
Federal level	
Guide for mobile researchers, published under the auspices of the Belgian Science Policy Office⁴ (2011)	The Guide includes practical information for researchers working and residing in- or outside Belgium (e.g. visa, social security benefits and contributions, individual tax status, labour law, relocation and housing).
New federal Government formed in December 2011	The federal Minister is in charge of Science Policy and Development Cooperation. A policy orientation note has been issued, with mobility of the researchers and visa issues high on the agenda. The government does not expect any major changes due to a budget constraint on most of the expenditure (reduction in the 2012 budget of 15% for expenditures pertaining to "functioning").

³ European Commission (2011), "Innovation Union Scoreboard 2010".

⁴ Belgian Science Policy Office, available at: <http://www.euraxess.be/docs/guide.pdf>

Measure	Description
Flemish Community	
Action Plan for Researchers (2010)	The Action Plan for researchers was developed by both the Flemish Ministry of Innovation and the Ministry of Education. It includes 20 actions with the aim of: – multiplying career opportunities for young people and opening up the recruitment process; – supporting the researcher's career (working conditions, social security, training, etc); – promoting researcher mobility and exchange of knowledge; – attracting and maintaining researchers in the open international realm of research.
Action Plan on Gender Equality in academia (planned for 2012)	The Flemish Community is preparing an action plan on gender equality together with the Flemish Interuniversity Council (<i>Vlaamse Interuniversitaire Raad/VLIR</i>). Its main aim is to improve the gender balance among professors, researchers and students.
Action plan on mobility (planned for 2012)	The Flemish Community is preparing an action plan to improve the mobility of professors, researchers and students (2012).
Wallonia-Brussels Federation (FWB)	
The Wallonia-Brussels Partnership for Researchers⁵ (WBP) (2011)	The Partnership includes 25 actions (divided into six chapters ⁶) describing the development and implementation of new legislation/measures for the research profession. It aims to boost investments in research, and in particular in human capital and R&D personnel.

Source: Deloitte

3. Women in the research profession

Measures supporting women researchers in top-level positions

In 2007, the percentage of women grade A academic staff was 10.7% in Belgium compared with 13.7% among the Innovation Union reference group and an EU average of 18.7%⁷.

At Federal level, the Ministry for the Interior and Equal Opportunities together with the Centre for Equal Opportunities and Opposition to Racism and the Federal Public Service for Diversity and Equal Opportunities promote equal opportunities.

The Flemish Community is preparing an Action Plan on gender equality in the research profession, in collaboration with the Flemish Interuniversity Council. This will be implemented in 2012. The Wallonia-Brussels Federation has established a 'Women and Sciences' standing working group aimed at enforcing equality between men and women. The group will implement the Wallonia-Brussels Partnership's actions on gender equality as well as the Walloon Government's Roadmap on equal opportunities.

Quotas to ensure a representative gender balance

The Flemish Government Act of 13.07.2007 includes provisions aimed at safeguarding gender balance in advisory bodies and steering committees. For instance, in the Agency for Innovation by Science and Technology, 30% of the internal scientific advisors are women.

⁵ The Wallonia-Brussels Partnership for Researchers (WBP). Available at: http://www.euraxess-cfwb.be/doc/SPW_DG06_Partenariat_FWB_UK_BD.pdf

⁶ The six chapters included in the Wallonia-Brussels Partnership for Researchers (WBP) are:

1. Open recruiting and portability of subsidies;
2. Social security, tax system, visas and other matters falling under federal authority;
3. Employment and working conditions;
4. Training;
5. Gender equality;
6. Access to jobs after the doctorate.

⁷ See Figure 1 "Key indicators – Belgium".

Maternity leave

For the Flemish Community and the Federal authority, researchers under employment contracts enjoy the same rights (including maternity leave) as all employees. For those receiving a fellowship, benefits vary depending on the institution's policy:

- Research Foundation–Flanders (FWO) fellowships' beneficiaries: the mandate can be suspended during civil service, long illness, pregnancy leave, parental leave or palliative care leave (same holds true for federal fellowships, and for most research programmes). During this time, the welfare system takes over the payment. In these cases, the mandate is extended by the length of the period of suspension. In order to allow the fellows to be competitive when applying for their next grant, fellowships suspended beyond 31 December are automatically extended to the end of the academic year.
- Agency for Innovation by Science and Technology (IWT) doctorates: The payment of the grant is temporarily suspended during long illnesses, pregnancy leave or a stay abroad with alternative funding. The welfare system takes over the payment from the first day of the pregnancy leave.

In addition to social security provisions (including maternity leave provisions), the Walloon Government ensures that all researchers enjoy the same rights to grant extension and alternative incomes during maternity leave. The provisions are applicable to researchers with fixed-term contracts as well as grant beneficiaries.

4. Open, transparent and merit-based recruitment

Recruitment system

Recruitment policies belong to the academic autonomy but the Federal State encourages institutions to recruit as openly as possible (the 'Charter and Code' is endorsed by Belspo, but not by all Federal institutions). The traditions of some institutions and linguistic laws can be seen as barriers to the openness of the recruitment process.

Open recruitment in institutions

The table below presents information on open recruitment in higher education and public research institutions.

Table 3: Open recruitment in higher education and public research institutions

Do institutions in the country currently have policies to ...?	Yes/No	Description
– publish job vacancies on relevant national online platforms	Yes	Institutions publish job vacancies on relevant national online platforms.
– publish job vacancies on relevant Europe-wide online platforms (e.g. EURAXESS)	Yes	Institutions publish job vacancies on relevant Europe-wide online platforms.
– publish job vacancies in English	Yes	Institutions publish job vacancies on relevant Europe-wide and international online platforms.
– systematically establish selection panels	Yes	Institutions at Federal and Community level systematically establish selection panels. This is overseen by 'Selor' for permanent positions (http://www.selor.be).
– establish clear rules for the composition of selection panels (e.g. number and role of members, inclusion of foreign experts, gender balance, etc.)	Yes	Following reforms of the FNRS ⁸ and FWO recruiting system, institutions establish clear rules for the composition of selection panels. For the Federal authority this is overseen by 'Selor' and the Trade Unions.
– publish the composition of a selection panel (obliging the recruiting institution)	Yes	Institutions at Walloon level publish the composition of a selection panels. The composition is public but not specifically published for Federal selection panels.
– publish the selection criteria together with job advert	Yes	Institutions publish the selection criteria together with the job advert.

⁸ National Fund for Scientific Research (FNRS).

Do institutions in the country currently have policies to ...?	Yes/No	Description
– regulate a minimum time period between vacancy publication and the deadline for applying	Yes	Institutions have the legal obligation to publish all long-term contract/permanent positions offered by the State Universities and the Federal Scientific Institutions (FSIs). The texts published in the Belgian Official Gazette become effective within a period of 10 days. The minimum time period is not always respected.
– place the burden of proof on the employer to prove that the recruitment procedure was open and transparent	No	Institutions do not place the burden of proof on the employer to prove that the recruitment procedure was open and transparent. The procedure is monitored by 'Selor' and the Trade Unions, and (for permanent positions) goes through an administrative process.
– offer applicants the right to receive adequate feedback	Yes	Walloon institutions do not have policies in place offering applicants the right to receive adequate feedback. Such rules exist at Flemish level and for the Federal authority.
– offer applicants the right to appeal	Yes	Walloon institutions do not have policies in place offering applicants the right to appeal. Such rules exist at Flemish level.

Source: Deloitte

EURAXESS Services Network

In 2011, the number of researcher posts advertised through the EURAXESS Jobs portal per thousand researchers in the public sector was 22 in Belgium compared with 47 among the Innovation Union reference group and an EU average of 24⁹.

Information on job opportunities, social security and pension contributions, accommodation and administrative assistance is available at EURAXESS portals¹⁰. The Flemish Community does not have a regional-wide job portal. It uses the EURAXESS Jobs portal to advertise researchers' positions. The Walloon Government aims to publish all publicly-funded research jobs online on the EURAXESS portal and at www.doctorat.be¹¹. Following the endorsement of the 'Charter and Code' by Belspo, all vacancies in the FSI's are published on the Euraxess Jobs portal.

5. Education and training

Measures to attract and train people to become researchers

Both the Belgian Federal Ministry and the Communities have created new programmes and improved existing initiatives aimed at increasing young people's interest in (natural) science and technology, with the ultimate aim of attracting them to become researchers. The table below summarises key measures implemented to achieve the above-stated objective.

Table 4: Human Resources – Key programmes and initiatives

Measure	Description
<i>Federal level</i>	
Federal Scientific Institutes (ongoing)	A dozen Federal Scientific Institutes have been established to become Centres of Excellence in close partnerships with Belgian universities in order to enhance the training of human resources. They take part in doctoral schools, at Belgian or EU level, in order to be more visible, to enhance their R&D potential and exchange knowledge.
Legal instruments (ongoing)	Equal opportunities and access to the labour market are protected and promoted in national legislation.
Museum Night Fever in Brussels	The event aims to attract young people to access and to involve them in the

⁹ See Figure 1 "Key indicators – Belgium".

¹⁰ www.euraxess.be; www.euraxess.be/flanders; www.euraxess.be/cfwb

¹¹ The portal offers an online platform for doctorate holders in the Wallonia-Brussels Federation to publish their CVs. Companies and research institutions publish opportunities on this portal. Convergence and synergies between this portal and the EURAXESS jobs portal are currently encouraged.

Measure	Description
(ongoing)	creative use of the museums' exhibit rooms.
Researchers' Night (ongoing)	The event is organised once per year in collaboration with Belgian Universities with a view to informing and attracting (among others) young people (primary school, secondary school and higher education) to become interested in science and the research profession per se.
Flemish Community	
Budgetary increase for doctoral fellowships (year)	The budget for doctoral fellowships (both at the Research Foundation – Flanders (FWO) and the Agency for Innovation by Science and Technology (IWT)) has been raised, thus increasing the number of doctoral graduates.
Support Programme for Young Researchers (ongoing)	From 2011, the Flemish minister for innovation provides a yearly sum of EUR 4 million to reach the following objectives: – train young researchers (doctoral schools); – develop careers and open up career prospects; – reinforce the international orientation of researchers' careers; – cooperate within Flanders.
The Annual Science Communication Action Plan (ongoing)	Since 1994, the Flemish Government (the department of Economy, Science & Innovation) has been investing approximately EUR 9 million per year in the implementation of an Annual Science Communication Action Plan (ca. EUR 7 million in 2011). The initiative aims at attracting pupils, students and teachers into a research career by promoting science, technology and technological innovation.
Wallonia-Brussels Federation (FWB)	
Spring Science Season (ongoing)	The Spring Science Season activities target secondary education pupils and aim to communicate and popularise activities around science and scientific careers.
The Declaration of Community Policy (2009-2014) (2009)	The Declaration of Community Policy enhances synergies and partnerships between the Walloon Community and Brussels-Capital to promote research and innovation. For instance, it promotes doctoral schools and training for researchers working in research centres and private companies and encourages the financing of doctoral theses by companies and the private sector.
Wallonia-Brussels Partnership's action 22: Increase the number of PhDs in the research sector	Action 22 refers to the allocation of new resources to research in the context of the EU 2020 Strategy, and within the limits of budgetary resources. The objective is to maintain the quality of researchers' working conditions and job security. Additionally, support for candidates for European Research Council and European Marie Curie grants or similar grants from the National Contact Point – National Fund for Scientific Research will be strengthened.

Source: Deloitte

Doctoral graduates by gender

The table below shows the number of doctoral graduates in Belgium by gender as a ratio of the total population.

Table 5: Doctoral graduates by gender

Indicator	Belgium	EU average
New doctoral graduates (ISCED 6) per 1 000 population aged 25-34 (total) (2009)	1.4	1.5
Female Graduates (ISCED 6) per 1 000 of the female population aged 25-34 (2009)	1.1	1.4
Male Graduates (ISCED 6) per 1 000 of the male population aged 25-34 (2009)	1.6	1.6

Source: Deloitte

Data: Eurostat

Funding of doctoral candidates

The table below presents information on funding opportunities for doctoral candidates.

Table 6: Funding opportunities for doctoral candidates

Funding scheme	Description
Stipend/Grant	Personal PhD grant – Tax-free; – Full social security coverage;

Funding scheme	Description
	– Duration: maximum 48 months (2 x 2 years or 4 x 1 year); – Financed by Universities, the Agency for Innovation by Science and Technology (IWT), the Research Foundation – Flanders (FWO) and a limited number of research Institutions for the sole purpose of financing free research; – Amount of the grant is based on the salary of a university assistant. Project fellowships – Tax-free; – Full social security coverage; – Duration: maximum 48 months (usually 2 x 2 years); – Amount of the fellowship is based on the salary of a university assistant.
Employment contract	Research assistant (doctoral candidates and post-docs) – Financed from the core budget of the Universities; – Duration: 3 x 2 years (with the possibility of a further one-year extension) or 3 + 2 years; – At least 50% of time should be spent on doctoral research; – Other duties: assist the professor, teaching duties; – Salary scales are set by the Flemish Government. Project collaborators with employment contract – Research projects.
Other	Junior scientific categories that are not expected to complete a doctoral degree, e.g. PhD candidates on short-term research projects or on contract research projects.

Source: Deloitte

Measures to increase the quality of doctoral training

From 2011, the Flemish Community introduced the Support Programme for Young Researchers (see also chapter 7 “Collaboration between academia and industry”) with a yearly budget of EUR 4 million. The Programme targets young researchers, providing them with training, career development incentives, and participation in international events and job fairs.

In the FWB, doctoral schools have been created by the decree of 31/03/2004. Life-long learning initiatives are undertaken individually by universities and doctoral schools. In addition, the Wallonia-Brussels Partnership (actions 12 & 13) promote doctoral training programmes and the participation of doctorates in international doctoral schools. The Partnership encourages the organisation of doctoral training programmes by university academies and promotes the acquisition of transversal competences for researchers¹². The Partnership is also examining the procedures for support to university teams that coordinate and/or participate in international doctoral schools or international networks of doctoral schools.

Skills agenda for researchers

The Support Programme for Young Researchers, managed by the Flemish government, aims to train young researchers (doctoral schools), guide them throughout their career and reinforce their international orientation. In Wallonia, measures to improve researchers’ employment skills and competencies are taken individually by the universities and doctoral schools.

6. Working conditions

Measures to improve researchers’ funding opportunities

The ‘Back to Belgium’ grants for researchers and the non-EU postdoc fellowships introduced by the federal government as well as the Research Foundation-Flanders and the National Fund for Scientific Research grants are a source of funding for researchers. For more information on researchers’ funding opportunities, please see chapter 8 “Mobility and international attractiveness”.

Remuneration

Since 2003, the cost of researchers’ salaries has been reduced for the employer via a subsidy (in fact, a diminution of the employer’s social charges). This applies to all universities, colleges and research centres,

¹² Skills that are not linked with the scientific discipline they are enrolled at.

public and private non-profit institutions and companies (including research personnel in Young Innovative Companies). The reduction amounts to approximately 24% of the gross wage¹³.

Researcher's Statute

The Flemish Community does not provide a universal researchers' statute per se. The Act on the Universities in the Flemish Community (University Act, 1991)¹⁴ provides a 'statute' for all personnel as well as university assistants. Personnel regulations of the Agency for Innovation by Science and Technology (IWT), Research Foundation – Flanders (FWO) and universities set the rules, obligations and rights for their grantees.

In the Wallonia-Brussels Federation, the leading research institutions/universities have proceeded to the implementation of the 'European Charter for Researchers' and the 'Code of Conduct for the Recruitment of Researchers' as well as the application of the Scientific Visa. The European Commission awarded the HRS4R label to three French speaking universities (ULG, UMONS and UCL).

'European Charter for Researchers' & 'Code of Conduct for the Recruitment of Researchers'

At Federal level, the Belgian Science Policy Office¹⁵ (BELSPO) endorsed the 'Charter & Code' in 2011.

All strategic research centres and universities in Flanders have acknowledged and implemented the 'Charter & Code' principles. Most of them are actively implementing the principles while FWO, IWT, all universities and the life sciences research institute in Flanders (VIB) have either received the HR Excellence logo or are working towards it.

In Wallonia, the 'EURAXESS-Rights' group (made up of university representatives), the National Fund for Scientific Research (FNRS) and the Walloon administration have agreed on a communication plan for the implementation of the 'Charter & Code'. In addition, higher education institutions (via the *CGHE - Conseil général des Hautes Ecoles* and the *ADISIF - Entreprises* interface) and research centres (via *ACCORD - Wallonie Association de Centres de Recherches*) have been invited to participate in the initiative.

Autonomy of institutions

Flemish universities enjoy autonomy in their human resource policies and the differentiation of their personnel's salaries – subject to taking into account the general salary levels set by the Flemish Government. One percent of personnel expenditure can be spent on topping up researchers' salaries.

Walloon institutions are also fully autonomous in their human resources' management. However, pay scales for the University of Liège and the University of Mons are legally fixed by the law.

The FSIs retain a certain degree of autonomy for HR policies, roadmap determination, museum activities, etc. Linguistic Laws apply for permanent positions. Specific wage scales are used in FSI's for scientific personnel (determined by the Law).

Career development

The possibility of a tenure track system for researchers studying at Flemish universities was inserted in the University act in 2008. The Flemish Universities can offer tenure tracks with any type of funding. In parallel, the Flemish Government provides a yearly budget for tenure track fellows. The budget was EUR 8.9 million in 2011. In Wallonia, post-doc experience is a prerequisite before a researcher is appointed to a temporary position (e.g. *Chargé de cours*, i.e. lecturer). This temporary position can then lead (after more or less three years) to a stable researcher or professor position.

Shift from core to project-based funding

Following a shift from core to project-based funding, Universities in the Wallonia-Brussels Federation are entitled to draw on public funds to pay the researchers' salaries between two short-term research projects.

¹³ Information is available at http://www.belspo.be/belspo/fisc/rech/univ_fr.stm, (in French and Dutch).

¹⁴ Decreet van 12.06.1991 betreffende de universiteiten in de Vlaamse Gemeenschap.

¹⁵ Federaal Wetenschapsbeleid/Politique scientifique fédérale.

Social security benefits (sickness, unemployment, and old-age)

Under the Belgian social security system, researchers (both doctoral candidates and post-doctorate researchers) are covered with full social security benefits, regardless of their nationality, as they are considered to be publicly-funded researchers. Belgian general scheme of social security covers sickness, maternity, disability, pension insurance, unemployment, accidents, occupational diseases and family benefits. There is no difference whether the researcher has an employment contract or receives a stipend. The general scheme applies to nationals of countries of the European Economic Area (EEA) and Switzerland, or a country tied to Belgium by a bilateral agreement on social security¹⁶. All scholarship recipients from a country that is not linked with Belgium by a bilateral agreement on social security or which is not part of the EEA are entitled to the Belgian limited scheme of social security¹⁷.

7. Collaboration between academia and industry

The following table summarises programmes designed to develop (more) partnerships between industry and academia, and to foster doctoral training in cooperation with industry.

Table 7: Collaboration between academia and industry

Measure	Description
Federal level	
The Federal State has no competence to promote partnerships between academia and industry, except for contracts with the European Space Agency.	
Flemish Community	
Agency for Innovation by Science and Technology (IWT) Innovation Mandates	IWT Innovation mandates are set up with the objective of connecting the academic and the industrial world, and stimulating postdoctoral researchers to improve their skills in maximising the value of their research and to develop their careers, taking a step towards industry. Inter-sectoral mobility is encouraged during the fellowship.
Baekeland Programme (ongoing)	The Baekeland programme funds doctoral projects carried out at a Flemish university in close cooperation with a company. The PhD candidate is supervised jointly by an academic and an industrial supervisor, and spends a considerable amount of time at the company. Projects are co-funded by the company. The orientation of the research project should be strategic.
The Support Programme for Young Researchers (ongoing)	The Programme provides a yearly budget of EUR 4 million to Flemish universities in order to provide a support framework for young researchers. The objectives of the programme are to: – train young researchers (doctoral schools); – develop careers and open up career prospects; – reinforce the international orientation of researchers' careers; – cooperate within Flanders.
Wallonia-Brussels Federation (FWB)	
FIRST Spin-off Programme (ongoing)	The overall objectives of the FIRST Spin-off Programme are: – increase the scientific and technological potential of university research units by undertaking research likely to have a positive impact on the economic and social development of the region; – train future managers of companies in emerging technologies as well as the techniques for creating and managing industrial activities; – encourage university researchers to study the conditions for industrial and commercial exploitation of their research results and if possible create a spin-off in the Walloon Region. FIRST Spin-off grants support projects aiming to develop a new product, process or service, and carrying out a technical-market feasibility study for the exploitation of the results and a business plan, with the general goal of launching a spin-off in the Walloon Region.
Marshall Plan 2.Green (2009-2014)	The objective of the Marshall Plan 2.Green is to encourage enterprise competitiveness and attractiveness and develop synergies with foreign investors. Its five priority axes are:

¹⁶ Belgium has concluded agreements on social security with several countries. For more information, see:

https://www.socialsecurity.be/CMS/en/coming_to_belgium/content/coming_to_belgium/themas/spfsssfods/FODSZ_Convention.xml

¹⁷ For more information, please see: <http://www.coming2belgium.be/>

Measure	Description
	– create competitiveness clusters; – stimulate the creation of activities; – reduce and remove some taxes on companies at local level; – promote research and innovation, in close linkage with enterprises; – improve the skills of the workforce.
PRODOC Programme (2007-2013)	The objective of the Programme is to promote encounters between doctoral candidates, young researchers and economic players via cross-border events, such as the <i>Doctoriales franco-belges</i> and job forums and foster the employability of young researchers and PhD graduates outside academia. Thanks to the participation of the <i>Objectif Recherche</i> association as well as the Wallonia-Brussels and Louvain Academies, this project will cover a majority of the doctorate holders who acquired their doctoral training in the French-speaking Community.

Source: Deloitte

8. Mobility and international attractiveness

In 2007, the percentage of doctoral candidates (ISCED 6) who were citizens of another EU-27 Member State was 11.7% in Belgium compared with 8.5% among the Innovation Union reference group and an EU average of 7.3%¹⁸.

In the same year, the percentage of non-EU doctoral candidates as a percentage of all doctoral candidates was 18.2% in Belgium compared with 14.5% among the Innovation Union reference group and an EU average of 19.4%¹⁹.

Measures aimed at attracting and retaining 'leading' national, EU and third country researchers

The Back to Belgium grants and the post-doc fellowships of the federal government as well as the Methusalem and Odysseus Programmes of the Flemish community and the Ulysses Programme of Wallonia target talented researchers to come/remain in Belgium and perform their research activities. For more details on the aforementioned programmes, see chapter 8 "Mobility and international attractiveness".

Inward mobility (funding)

The table below summarises the funding measures to support researchers' inward mobility.

Table 8: Measures supporting researchers' inward mobility

Measure	Description
Federal level	
Back to Belgium grants (ongoing)	As part of its efforts to promote the ERA, a programme of returnee Back to Belgium grants has been launched. These are designed to promote the reintegration (and long-term stay) and use of the skills acquired during a post-doc stay abroad of highly qualified researchers (Belgian or foreigners who have stayed at least three years in Belgium for studies), who have been working in another country for at least two years.
Non-EU post-doc fellowships (ongoing)	This 30-years old initiative aims at creating links between institutions (abroad and in Belgium) by affording fellowships up to 18 months to approximately 25 non-EU researchers per year. The researcher receives a stipend; all social security expenses are covered by Belspo.
Flemish Community	
Methusalem Programme (ongoing)	The Methusalem Programme targets top scientists who are already active in Flemish universities and provides them with a substantial amount of structural funding for their laboratories on the basis of proven merit. By providing senior Flemish researchers at universities with structural support, the Programme supports them in their efforts to lift their research groups to international quality standards. The structural support is designed to allow these researchers and their research groups to become leading authorities in their field.
Odysseus Programme (ongoing)	The Odysseus Programme is intended to offer start-up funding to a number of outstanding researchers, international as well as Belgian, who have built up a career outside Flanders, in order to develop a research group within a Flemish university or to set up a research line and

¹⁸ See Figure 1 "Key indicators – Belgium".

¹⁹ Ibid.

Measure	Description
	become progressively more involved in the Flemish research establishment. The procedure consists of nominations by one or more Flemish universities and a quality control by the FWO, which also monitors the finances. The total budget is EUR 12 million.
Wallonia-Brussels Federation (FWB)	
Ulysses Mobility (Mobilité Ulysse) Programme (ongoing)	The objective of the Ulysses Programme is to encourage highly qualified Belgian or foreign researchers currently working abroad to develop their career in a university in the French-speaking Community of Belgium. The applicant should have the qualifications needed to lead a research team, have international scientific recognition and been living abroad for at least five years at the time of the application. The mandate is granted for a maximum period of three years via a first mandate of two years, and a possible extension of one year.

Source: Deloitte

Outbound mobility

The table below presents researchers' funding opportunities to spend some time in another country.

Table 9: Measures supporting researchers' outbound mobility

Measure	Description
Flemish Community	
The Research Foundation - Flanders (FWO)	The FWO encourages researcher mobility by providing short as well as long stay grants (five weeks to twelve months).
Wallonia-Brussels Federation (FWB)	
The National Fund for Scientific Research (FNRS) Grants	The FNRS provides a range of grants supporting researchers' mobility at different stages of their career.
Wallonie-Bruxelles International²⁰	Among its funding schemes, the Wallonie-Bruxelles International provides specific grants to sponsor research activities outside Belgium.

Source: Deloitte

Promotion of 'dual careers'

'Dual careers' are not actively supported. However, in the context of Back to Belgium grants and post-doc fellowships of the Federal authority, requests in relation to dual careers are taken into consideration (and most of the time accepted, if the aim is improving the researcher's skills and enhancing the research project).

Portability of national grants

The Flemish Community allows the portability of grants for short to medium-long stays abroad during the mandate. The grants cannot be completely transferred abroad. The grant and fellowship beneficiary should be linked to a Flemish university, most often through their supervisor. The FWB does not permit portability of grants to other EU countries.

International portability is possible for the Back to Belgium grants, for limited periods of time (up to three months). The fact that the Back to Belgium grant and the postdoc fellowship is connected both to the researcher and the host institution makes them difficult to transfer to other researchers or host institutions.

Access to cross-border grants

For the Flemish Community, a candidate of Belgian nationality, or from another EU Member States or the EEA, should possess a university degree in order to enrol as a PhD or final year student. Non-EEA candidates must have a basic degree from one of the Member States of the EEA. The candidate must submit proof to allow the University to grant him/her permission to do a PhD thesis. The candidate should furthermore have a link with a Flemish University, but does not necessarily have to reside in Belgium. For the FWB, national grants or fellowships are open to non-residents. They only have either to live in Belgium or promote collaboration between Belgium and their home country.

²⁰ Wallonia-Brussels International (WBI) is a public sector entity in charge of the international relations of the Wallonia-Brussels Region. It is the instrument of the international policy of by the French-speaking Community of Belgium and the French Community Commission of Brussels Region.

Measures encouraging inter-sectoral mobility

Both the Flemish community (e.g. Baekeland Programme, IWT Innovation mandates) and the Wallonia-Brussels Federation (e.g. PRODOC Programme, FIRST Spin-off Programme) encourage researchers to move from the public to the business sector and vice-versa. For more information on collaboration between the public and private sector, please see chapter 7 “Collaboration between academia and industry”.