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Researchers' Report 2013

Country Profile: France



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1. Key data

National R&D intensity target

“France has set a national R&D intensity target for 2020 of 3%. In 2011, France's R&D intensity was 2.25%, with an average annual growth rate of 1% over the period 2004-2009¹ slightly above the EU annual average growth rate over the whole decade. However, this trend will not allow France to reach its target by 2020 as shown above, unless the reforms and the continuous prioritisation of R&D investment in the public budget allow for changing that trend.

France's public R&D budget has been increasing since 2007 (+7.3% in nominal terms, close to EUR 17 billion in 2011) despite severe budgetary constraints during the economic crisis. According to preliminary data however, this positive trend was reversed in 2012. In addition to the annual R&D budget, EUR 22 billion is being allocated (most of it as capital endowment) over the period 2010-2020 to research actors through the programme *Investissements d'Avenir*. Also, the research tax credit (CIR) has been considerably amplified since 2008 and represented EUR 4.7 billion of foregone tax revenue in 2009². Finally, about 31% (EUR 4.2 billion) of EU FEDER to France is used for R&D, innovation and entrepreneurship. France has been very successful in the 7th EU Framework Programme (the success rate of French applicants is one of the highest at 25.4%) with almost 8 000 French participants in selected FP7 projects up to mid-2012, with a total EC financial contribution of EUR 3.1billion.

France is one of the rare countries where R&D expenditure of the business sector progressed in 2009, in spite of the economic crisis, a trend probably due in large part to the CIR. Together with a decline in GDP, this progress caused a marked increase in overall business R&D intensity from 1.33% in 2008 to 1.40% in 2009. In 2010 and 2011, business R&D intensity further progressed up to 1.43% of GDP. In terms of economic activities, business R&D expenditure in France is dominated by pharmaceuticals (14% of total business R&D expenditure), motor vehicles (14%), aircraft and spacecraft (11%) and radio, TV and communication equipment (10%)^{3,4}.

Key indicators measuring the country's research performance

The figure below presents key indicators measuring France's performance on aspects of an open labour market for researchers against a reference group and the EU-27 average⁵.

¹ Due to a break in series in 2004 and 2010, the annual average growth rate of R&D intensity in France can only be calculated over 2004-2009

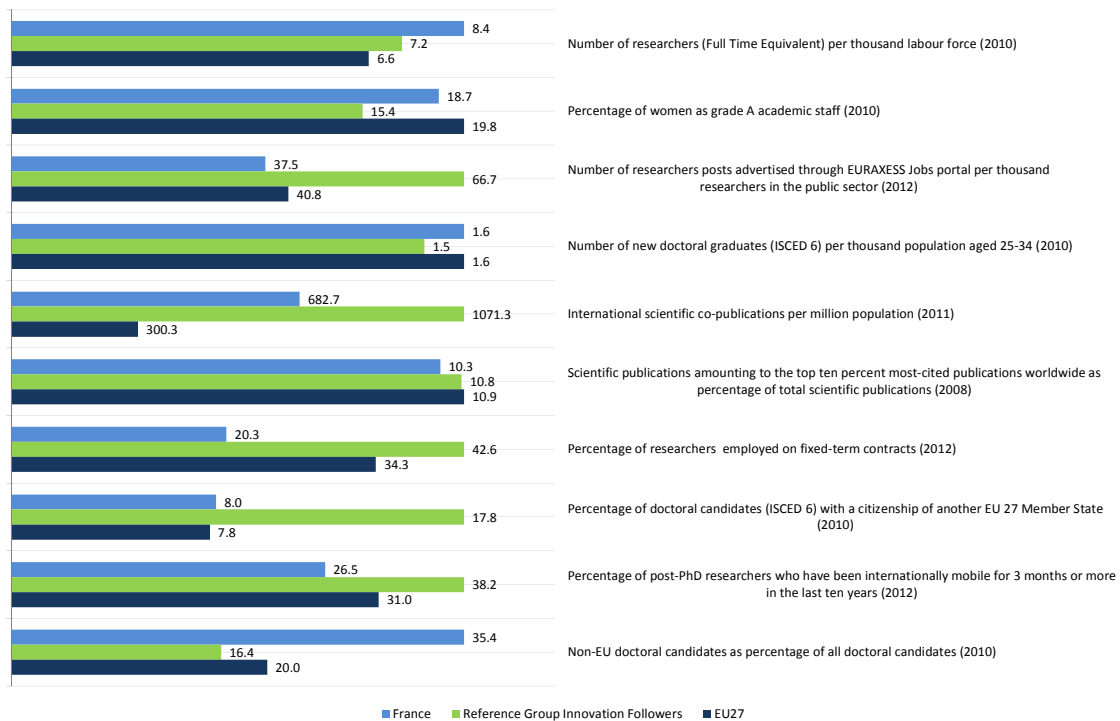
² Not included in the government R&D budget which amounted to EUR 16.8 billion in 2011. Estimations of the foregone revenue due to the research tax credit for 2010 and 2011: EUR 5.05 and EUR 5.1 billion respectively; forecast: between EUR 5.3 and EUR 5.5 billion each year in 2012 and 2013

³ 2007, latest year available, data from OECD, Business R&D expenditure (BERD) by economic activity (ISIC Rev. 3) based on 'product field' information

⁴ European Commission (2013), “Research and Innovation performance in EU Member States and Associated countries. Innovation Union progress at country level 2013”

⁵ The values refer to 2012 or the latest year available

Figure 1: Key indicators – France



Source: Deloitte

Data: Eurostat, SHE Figures, EURAXESS Jobs Portal, UNESCO OECD Eurostat education survey, Innovation Union Scoreboard 2013, MORE2

Notes: Based on their average innovation performance across 25 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 followers⁶.

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	France	EU Average/Total
Head Count per 1 000 active labour force (2010)	11.19	10.17
Head Count (2010)	319 051	2 435 487
FTE per 1 000 active labour force (2010)	8.40	6.64
Full time equivalent (FTE) (2010)	239 613	1 589 140

Source: Deloitte

Data: Eurostat

2. National strategies

The French government has put in place a range of measures aimed at training enough researchers to meet its R&D targets and at promoting attractive employment conditions in public research institutions. The table below presents key programmes and initiatives intended to implement the strategic objectives to train enough researchers to reach France’s R&D targets, to promote attractive working conditions, and to address gender and dual career aspects.

Table 2: National strategies

Measure	Description
Investments for the Future Programme (<i>Investissements</i>)	The Investments for the Future Programme is closely related to the National Research and Innovation Strategy and puts particular emphasis on the links between science

⁶ European Commission (2013), “Innovation Union Scoreboard 2013”

Measure	Description
d'avenir – Initiatives d'excellence) (ongoing)	<p>and society. The two main target groups are:</p> <ul style="list-style-type: none"> – Universities, in order to bring together internationally distinguished academics; and – SMEs in order to encourage their development. <p>The programme contributes to a new approach to the way French research and innovation system is organised by financing the most competitive research infrastructures, labs and organisations, and thus promoting attractive employment conditions in public research institutions. The programme covers sustainable development, science and technology for information and communication, health, nuclear and renewable energy, biotech, green technologies and nanotechnology.</p>
National Strategy for Research and Innovation (SNRI) (2009) (Stratégie Nationale de Recherche et Innovation)	<p>The National Strategy for Research and Innovation provides the overall context for improving the national R&D&I system over a five-year period and thus increasing the attractiveness of scientific careers. By introducing several measures to improve human resources' management in the public research sector, the strategy seeks to strengthen the link between education and research as well as between education and the labour market.</p>
Report on academic excellence and the lessons of international experience, prepared by the Aghion Mission for Minister Pécresse (26 January 2010) (L'excellence universitaire : leçons des expériences internationales, 26 janvier 2010)	<p>This report presented international benchmarks to identify the labour market success factors that lead a university to become excellent. The fundamental success factor it identified is the necessity of funding for the autonomy of universities and HEIs. Three more factors increase the level of an HEI's connection with the job market:</p> <ol style="list-style-type: none"> 1. The diversity and flexibility of the higher education career path; 2. Information (evaluation and monitoring); 3. Progressive specialisation. <p>The report made three recommendations on how France can improve its current situation:</p> <ol style="list-style-type: none"> 1. Increase the amount of money available for higher education (to reach 2% of GDP) and use the 'Investments for the Future' Programme for innovative educational projects; 2. Guarantee more balanced governance of universities by setting up boards of trustees open to individuals from outside academia; 3. Promote the development of university colleges to be responsible for all first cycle courses.
The Young Researchers Plan (2009-ongoing)	<p>The Young Researchers Plan, in line with the Career Plan, focuses on four areas:</p> <ol style="list-style-type: none"> 1. Improving the professional status of young researchers (by signing a doctoral contract); 2. Strengthening the role of doctoral schools for the implementation of open, transparent and merit-based recruitment; 3. Improving professional training and integration with private sector initiatives, such as <i>Conventions Industrielles de Formation par la Recherche - CIFRE</i> [industrial research training partnerships], <i>Crédit d'impôt recherche-CIR</i> [research tax credit], support for innovative SMEs via OSEO⁷); 4. Strengthening the partnership between universities and the private sector through tax exemptions of up to 60%⁸ for businesses financing doctoral training (doctoral sponsorship).
University Freedoms and Responsibilities Act (2007)	<p>The University Freedoms and Responsibilities Act provided that by January 1, 2013 all universities would have budgetary autonomy and be responsible for their own human resources management. Universities will be able to develop projects, make strategic choices, recruit staff, and thus be more attractive internationally. Finally, the Act reaffirmed the universities' mission to support their current students and graduates in entering the job market.</p>

Source: Deloitte

3. Women in the research profession

Measures supporting women researchers in top-level positions

In 2010, the percentage of women grade A academic staff was 18.7% in France compared with 15.4% among the Innovation Union reference group and an EU average of 19.8%⁹.

⁷ OSEO: *Financement de l'innovation et de la croissance des petites et moyennes entreprises (PME)* (Financing entity for SMEs)

⁸ Tax cut equal to 60% of the amount of the funding

⁹ See Figure 1 "Key indicators – France"

In 2013, the Ministry of Higher Education and Research has developed a national gender action plan. As part of this action plan the Ministry has decided to introduce gender provisions in the contracts it signs with each Higher Education and Research institution every five years, including concrete objectives and assessments. In addition, the government is implementing the Equality Charter (in 2013) which applies to the general policies of the HER institutions, notably by requiring gender-sensitive communication, sex-disaggregated data, awareness-raising and preventing violence against women.

Gender equality promotion in the research profession is being tackled in various ways and at various levels as illustrated in the table below.

Table 3: Measures to promote gender equality

Measure	Description
Structures for equality policies	
Conférence Permanente des Chargé-e-s de Mission Egalité et Diversité de l'Enseignement Supérieur (CPRD) (2011-ongoing)	Following the recommendations from the Rectors' Conference on gender equality, the University of Strasbourg was at the origin of the creation of a permanent conference of equality and diversity officers in higher education and research. Thirty-seven universities have joined so far joined this network whose primary goal is the exchange of best practices, notably in human resource management.
Mission parité et lutte contre les discriminations (2001-ongoing)	The Ministry of Higher Education and Research in 2001 created an Office dedicated to equality in science and technology. Today, the Office is responsible for setting up strategies for equal opportunities and the fight against discrimination within the Ministry. Thanks to one of its working groups ("Europe" Group), it also enables the sharing of best practices from Member States and Associated Countries among universities and research institutions.
Mission pour la place des femmes au CNRS (2001-ongoing)	The National Centre for Scientific Research (<i>Centre National de la Recherche Scientifique - CNRS</i>) is the largest French research centre. It established an Office focusing on the place of women in science in 2001. CNRS was the first public research institution in France to set up an operational structure to foster gender equality within the organisation and promote full participation of women in scientific research. The "Mission" reports directly to the President of the CNRS. The CNRS in 2012 organised a series of awareness and capacity-building workshops on gender equality with one-day training schemes, including presentations on the status of women at CNRS, indirect discrimination in research careers, gender stereotypes, etc. The target public for these were Human Resource and Communication Officers as well as research institutes' administrative directors, regional delegates and central department managers.
Pôle Egalité Hommes Femmes, Université Paris Diderot (2010)	The Paris Diderot University (<i>Université Paris Diderot, Paris 7</i>) in 2010 created an Equality Centre to promote and favour gender equality. The Centre carries out surveys, organises training courses and awareness-raising actions (informing students and academics) but it also applies the Equality Charter between Men and Women thus devising policies and actions promoting women in its institution.
National Reports	
Femmes dans les organismes de recherche (2007)	All three of these reports dealt with the subject of women in science. Published by the Ministry of Higher Education and Research, the reports provided a statistical view and comparative analysis of women in R&D at national level, emphasising the need to increase the number of women researchers in France and in particular in the private research sector.
Femmes dans les organismes de recherche (2005)	
Livre blanc 2004 – Les femmes dans la recherche privée en France (2004)	
La parité dans les métiers du CNRS - Bilan social (annually)	The CNRS each year publishes an inventory of the situation in relation to equality between men and women in R&D. The report deals with gender equality in recruitment, training, promotion, qualification, classification, working conditions and salary, as well as the representation of women on boards. The report allows the CNRS to provide explanations for inequalities (demographic, historical, sociological factors, etc.) as well as to spot the factors creating these inequalities (procedures, evaluation criteria, regulatory and common practice, etc.).
Statistiques sexuées et temporelles du personnel titulaire de l'Université Paris Diderot (2000-2009) (2011)	The Paris Diderot University in 2011 published a report on gender statistics in permanent positions over the period 2000-09. The report enables comparison of career progress between men and women by identifying and explaining the reasons for these inequalities.
Specific measures by organisation	
Agreement on Professional	IFREMER (<i>Institut français de recherche pour l'exploitation de la mer</i>) [marine research

Measure	Description
Equality between Men and Women (Accords sur l'Égalité Professionnelle entre les Hommes et les Femmes à l'IFREMER) (2008 and 2011)	<p>institute] in 2008 signed an 'Agreement on Professional Equality between Men and Women' to promote attractive employment conditions. That first agreement ran until 2011 and has been renewed until 2014. Its goals are to:</p> <ul style="list-style-type: none"> – Ensure gender balance in recruitment, promotion, and other committees; – Encourage trade unions to achieve gender balance; – Ensure that no gender factor will be taken into account in career development; – Establish a monitoring committee to oversee implementation of the agreement.
Centre National de la Recherche Scientifique - CNRS	<p>The CNRS is a major partner in the INTEGER (Institutional Transformation for Effecting Gender Equality in Research) project. This began in March 2011 and will last until February 2015. It is funded through the European Commission's Science in Society FP7 Programme (call FP7-SCIENCE-IN-SOCIETY-2010). The objectives of INTEGER are to:</p> <ul style="list-style-type: none"> – Create sustainable structural change to improve the career paths of women researchers in STEM through the implementation of gender action plans; – Use and assess a variety of tools and techniques to support an effective and comprehensive organisational gender management strategy and share experience, tools and learning, through guidelines, case studies, role models, publications, public speeches and other means of dissemination. <p>The 5-year action plan covers four key themes:</p> <ol style="list-style-type: none"> 1. Empowerment of decision makers; 2. Organisational structures; 3. Career progression, development and support; and 4. Work-life balance.
Good practice examples	
Diderot University's 'Gender Action Plan' (2011)	<p>The Paris Diderot University's Gender Action Plan:</p> <ul style="list-style-type: none"> – Encourages all committees, working groups, and councils to reach the European target for representation of women of 40%; – Sets up a 'watch unit' on issues related to violence (physical or verbal abuse, sexual harassment, discrimination); – Requires that all documents be written in gender-neutral language; and – Mainstreams gender issues and actions.
Network of universities' staff (ongoing)	<p>The Paris Diderot University promotes a network of university staff to encourage and help all university personnel, men and women, academics or administrative staff, to draft applications for promotion, carry out research, apply for fellowships, grants and bonuses. Its goal is to prevent self-censorship among university personnel.</p>
Paris Diderot University (ongoing)	<p>The Paris Diderot University encourages personnel rotation in administrative tasks that tend to be carried out by women. The maximum recommended period in these functions is five years. In 2011, the University modified its statute so that elected posts are gender-balanced and gender balance is secured.</p>

Source: Deloitte

As France's research landscape is rather diversified¹⁰, strategies can either be coordinated nationally or devised internally within each research institution.

Table 4: Measures to promote networking activities among research institutions in France on gender equality

Measure	Description
Networking	
Agreements on Professional Equality between Men and Women (Accords sur l'Égalité Professionnelle entre les Hommes et les Femmes à l'IFREMER) (2008-2011)	<p>The three-year agreements signed between IFREMER and the labour unions recognise the importance of professional equality, in particular in terms of access to employment, professional training and career development (mobility, promotion and salary) as well as work-life balance. IFREMER has agreed that the percentage of women promoted every year should be at least equivalent to the percentage they represent in their category. Recruitment salaries are based on qualifications (diplomas) and experience. These guarantee identical pay between men and women. IFREMER has also established specific measures so that when working in the field (at sea and on ships), women can lead missions as easily as men. IFREMER integrates work-life balance in its agreements</p>

¹⁰ The scientific landscape in France is composed of Public Scientific and Technological Institutions (EPST), and Public Administrative Institutions and Universities, but also industrial and commercial institutions governed by private law but carrying out public service missions. IFREMER is one of those. The CNRS on the other hand is an EPST

Measure	Description
Networking	
	with labour unions, thus ensuring fair career development, through various initiatives, such as: <ul style="list-style-type: none"> - Flexible working hours; - Video conferences or conference calls in preference to travel; - Meetings between 9:00 am and 5:00 pm, and not on Wednesdays (when children do not go to school in France) or school holidays; and - Part-time work (equal salary, equal promotions and bonuses, equal level of responsibility).
Dual Career Network (ongoing)	The French universities of Strasbourg and Haute-Alsace are part of the 'Dual Career Network' with the universities of Freiburg (Germany) and Basel (Switzerland), and the <i>Karlsruher Institut für Technologie</i> (Germany). The network welcomes couples, helps them search for jobs in nearby universities or within the same geographic area, and assists them with accommodation and childcare. 'Dual Career Couples' are those in which each spouse has a university degree or equivalent. The network meets twice a year and works on the recruitment procedures of each country, possible salaries and potential positions, putting in contact candidates and university departments or laboratories.
Internal communication schemes (ongoing)	IFREMER uses its internal communication schemes to target women and inform them about the possibilities offered to them to pursue higher level positions.

Source: Deloitte

Measures to ensure a representative gender balance

The French government in 2011 adopted a text ensuring that electoral rolls for university and research institution boards are drawn up with the objective of having gender-balanced representation.

Furthermore, quotas were introduced in the following articles of a Law of March 12, 2012¹¹, relating to various aspects of the civil service, including the fight against discrimination.

- Article 52: the Boards of Directors and Supervisory Boards of state-owned enterprises are required to include 20% of each gender the first time they are renewed after passage of the law, and 40% by the second renewal.

- Article 55: From January 1st, 2015, the administrative authorities in charge of recruitment or promotion of personnel must ensure that juries and selection committees include a minimum of 40% of each gender. However, there are mechanisms for exceptions to the rule if there are specific recruitment problems or needs specific to a particular type of employment (*statut particulier*).

- Article 56: From January 1st 2013, at least 40% of new senior appointments each year in central and most types of local government, as well as hospitals, will have to be of men and 40% of women. The exceptions are if someone is being rolled over in the same position of being appointed to a similar type of position. Financial sanctions are provided for when the law is not respected.

If the 40% threshold has not been reached for the under-represented gender by 2018, financial sanctions will apply to the administrative entity which has failed to comply.

While the law does not apply to the administrations of universities or higher education and research institutions, the ministry Gender Action Plan (GAP) extends the financial penalties to Higher Education and Research governance as well and as a result, the target will be also included in a forthcoming revision of the law on research¹².

Maternity leave

The latest decree on maternity leave in higher education and research¹³ has clarified and stabilised the situation of women and men in relation to maternity, paternity and adoption leave by guaranteeing that:

- Women can take half their total hours off when they go on maternity leave;

¹¹ Available at: <http://www.fonction-publique.gouv.fr/fonction-publique/modernisation-fonction-publique-59>

¹² *Projet de loi d'orientation pour l'enseignement supérieur et la recherche*, 2013

¹³ *Congés légaux NOR : ESRH1220221C circulaire n° 2012-0009 du 30-4-2012ESR - DGRH A1-2*

- Irrespective of when they give birth, their right to annual holidays will be maintained and not replaced by maternity leave; and
- Adoption leave is provided;
- Men and women can ask for a “Leave for Research and Thematic Conversion” (CRCT)¹⁴ after maternity or parental leaves. CRCT beneficiaries are meant to work on a research project for 6 or 12 months without any teaching involvement. Therefore, it is possible to come back from maternity or parental leave and have some time to focus specifically on research before starting again with both teaching and research.

Finally, the text allows universities and institutions to go still further and adopt even more gender-sensitive measures. As a result, universities, such as Paris Diderot, can systematically allow CRCT beneficiaries to continue with their research at the end of their maternity leave or decide not to limit leave to maternity but also to provide paternity or adoption leave for both parents.

Finally, compared to the three years prior to adoption of the new law when the parental leave (for both men and women) was counted as equal to 1.5 years for promotion, the law¹⁵ now (since 2001) ensures that parental leave equals 2 years in a civil servant’s career.

French law guarantees maternity leave and applies to research institutions. Women are normally paid by their employers during this leave and their contract can be extended. If the project would otherwise end during the maternity leave, it is in general extended, as is the funding.

The replacement of women on leave depends on each institution. In IFREMER, for example, the replacement in the team of the person on maternity leave is systematic and women on maternity leave have the same career development as those working (general bonuses, etc.) As part of its gender equality agreement, IFREMER implements specific salary measures to combat inequalities between women and men caused by interruptions to employment (maternity or adoption leaves, or part-time work).

4. Open, transparent and merit-based recruitment

Recruitment system

All public job vacancies at universities for researchers with a teaching position (*enseignants-chercheurs*) are posted on the national ‘GALAXIE’ platform. GALAXIE publishes job vacancies in French with, optionally, a short description of the job profile in two lines in English. Since March 2010, all GALAXIE job vacancies are also posted on the EURAXESS jobs portal (about 4 000 research jobs are published daily).

All universities and public research organisations have their own websites and job portals. Some public research organisations also post their job vacancies on EURAXESS jobs (e.g. *Institut National de la Recherche Agronomique* - INRA), often in French and English (e.g. INRA, CNRS, *Commissariat à l’Energie Atomique* - CEA).

ABG Intelli’agence is an association (funded by the Ministry of Higher Education and Research) dedicated to young researchers and providing a platform where recruiters post job vacancies in both French and English. ‘ABG Intelli’agence’ published well over 3 000 job offers, almost 2 000 PhD posts and about 2225 CVs in 2010 (2010 annual report).

Researchers working at public research institutions (research fellows and research directors) are civil servants (*fonctionnaires de l’État*). In order to be employed, they need to sit a recruitment competition based on qualifications and work experience (decree 83-1260 of December 30, 1983).

Researchers with a teaching position (*enseignants-chercheurs*), both lecturers and university professors (*maîtres de conférences and professeurs des universités*), are also civil servants and contribute to the fulfilment of the public service missions of higher education. They are employed via open competitions within the academic institution (decree 84-431 of June 6, 1984).

¹⁴ For more information see http://www.enseignementsup-recherche.gouv.fr/pid20536/bulletin-officiel.html?cid_bo=23779

¹⁵ *Loi n° 2001-397 du 9 mai 2001 relative à l’égalité professionnelle entre les femmes et les hommes*

Open recruitment in institutions

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

Table 5: 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 have a statutory requirement to post all university public job vacancies for researchers with a teaching position (i.e. professors and lecturers) on the GALAXIE national platform.
– publish job vacancies on relevant Europe-wide online platforms (e.g. EURAXESS)	Yes	Since March 2010, institutions have been publishing all GALAXIE job vacancies on the EURAXESS jobs portal. Some public research organisations also post their job vacancies on EURAXESS jobs (e.g. INRA).
– publish job vacancies in English	Yes	– GALAXIE publishes job vacancies in French with, optionally, a two-line job profile in English; – ‘ABG Intelli’agence’ publishes job vacancies in both French and English; – Public research organisations publish their job vacancies in French and English (e.g. INRA, CNRS, CEA).
– systematically establish selection panels	Yes	Institutions establish selection panels for statutory and long-term job offers. For fixed term contracts, the deputy director and the project officer have the right to recruit without a prior selection panel.
– establish clear rules for the composition of selection panels (e.g. number and role of members, inclusion of foreign experts, gender balance, etc.)	Yes	The Public Scientific and Technological Institutions (i.e. public research organisations) are obliged to safeguard gender balance in the selection panels and to have one external expert, or to justify non-compliance in an official explanation sent to the management committee. Depending on the topic, panels are open to foreign experts.
– publish the composition of a selection panel (obliging the recruiting institution)	Yes	Institutions publish the composition of the selection panels.
– publish the selection criteria together with the job advert	No	Institutions do not publish selection criteria together with the job advert.
– regulate a minimum time period between vacancy publication and the deadline for applying	Yes	Institutions regulate a minimum time period between vacancy publication and the deadline for applying.
– place the burden of proof on the employer to prove that the recruitment procedure was open and transparent	Yes	Institutions place the burden of proof to prove that the recruitment procedure was open and transparent.
– offer applicants the right to receive adequate feedback	No	Institutions do not offer applicants the right to receive adequate feedback.
– offer applicants the right to appeal	Yes	Applicants may appeal against the decision of the institution to reject their candidature.

Source: Deloitte

EURAXESS Services Network

In 2012, the number of researchers posts advertised through the EURAXESS Jobs portal per thousand researchers in the public sector was 37.5 in France compared with 66.7 among the Innovation Union reference group and an EU average of 40.8¹⁶.

General and specific information is available on the EURAXESS France portal. Specific information is also available through the Ministry of Immigration portal. This provides information on the scientific card for non EU residents. The CLEISS (*centre des liaisons européennes et internationales de sécurité sociale*) portal also provides information on social security rights.

¹⁶ See Figure 1 “Key indicators – France”

5. Education and training

Measures to attract and train people to become researchers

The table below summarises key measures to attract and train people to become researchers.

Table 6: Human Resources - Key programmes and initiatives

Measure	Description
<i>Multi-level</i>	
Public Research Organisations (ongoing)	Most public research organisations implement policy measures to attract young people to research and help teachers to involve young people in research. Likewise the CCSTI public research organisations attract youngsters by means of events, visits to scientific sites, lectures in schools, workshops, conferences, competitions, symposiums in partnerships with several research organisations, etc. These actions are presented and led by scientists who have been trained for that purpose.

Source: Deloitte

The Investments for the Future programme offers many opportunities for PhD students in laboratories of excellence or via excellence initiatives in all scientific disciplines, including STEM subjects.

The French government has so far only used awareness and communication tools to increase the number of women students taking science to an advanced level.

Table 7: Women students taking science to an advanced level

Measure	Description
Exhibitions on women (annually)	One of the activities of the CNRS is to organise exhibitions and the annual 'Young female mathematician workshop' in association with 'Women and Mathematics'. Based on a scientific agenda, the workshop provides mentoring and awareness-raising activities on gender-related issues. There are also round tables on career and gender equality as well as presentations by sociologists. The goal of such workshops is to create networks, fight self-censorship and detect potential obstacles in career development. Young male researchers are also welcome to participate.
Irene Joliot-Curie Prize (annually)	The Ministry and the EADS Foundation organise the Irene Joliot-Curie Prize every year. From the 10 th edition in 2011 up till today, the Prize has been co-organised with the Academies of Science and Technologies. The Prize is meant both to propose role models for young researchers and offer highly scientific female profiles to the male-dominated scientific community. Three prizes are generally awarded for: <ol style="list-style-type: none"> 1. Young researchers; 2. The woman scientist of the year; 3. Women scientists in private research.
National Initiatives (ongoing)	National initiatives have been under way for 10 years on the issue of young female students' career choice. They primarily focus on high school students. The Ministry of Higher Education and Research supports numerous associations in their action at local level as well as a website to encourage girls to choose science (http://www.elles-en-sciences.net/). The Ministry is also setting up an action inspired by the German 'Girls' Day' that would institutionalise one day in the year during which girls would go and discover high technology and scientific jobs in research institutions and universities.

Source: Deloitte

Doctoral graduates by gender

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

Table 8: Doctoral graduates by gender

Indicator	France	EU Average
New doctoral graduates (ISCED 6) per 1 000 population aged 25-34 (2010)	1.6	1.5
Graduates (ISCED 6) per 1 000 of the female population aged 25-34 (2010)	1.4	1.4
Graduates (ISCED 6) per 1 000 of the male population aged 25-34 (2010)	1.8	1.6

Source: Deloitte

Data: Eurostat

Funding of doctoral candidates

The table below presents the two different funding paths accessible for doctoral candidates.

Table 9: Funding opportunities for doctoral candidates

Funding scheme	Description
Employment contract	<p>Doctoral contract - The implementation of the new doctoral contract (2009) has significantly improved the working conditions of young researchers as well as the national R&D targets. It mainly aims to:</p> <ul style="list-style-type: none"> - Establish a single contractual framework, providing more protection and applicable to all public employers; - Integrate for each doctoral student in a single contract all activities directly related to the preparation of his/her PhD, but also relevant activities, such as training; - Establish a single remuneration platform; and - Ensure full social security coverage. <p>This is a three-year term work contract for doctoral students in universities and public research institutions. It may be extended for a year for professional or personal reasons, such as maternity leave or sick leave. The doctoral contract guarantees all the statutory social aspects of a 'traditional' employment contract. In September 2010, 5 320 students registered for their first year of PhD studies signed a doctoral contract.</p> <p>The activities assigned to the doctoral student may relate exclusively to research or include other tasks as well: teaching, scientific and technical information, promotion of research, consultancy assignments or expertise to companies or public authorities.</p> <p>Funding primarily comes from public sources (Ministry of Higher Education and Research, research organisations, regional allocations) or through an industrial research training partnership (<i>Convention Industrielle de Formation par la Recherche</i> - CIFRE). The CIFRE is a partnership between French industry or other employment sectors, a research laboratory and a doctoral candidate. During a three-year contract with the company or other private employer, the doctoral trainee benefits from a high level of scientific supervision that will help in writing and defending a PhD dissertation while contributing to research activities. The system is managed by the ANRT (<i>Association Nationale de la Recherche Technique</i>). The State supports the CIFRE financially.</p> <p>Over the period 2009-10, 1 200 CIFRE agreements were signed each year. Over the period 2011-12, the goal is to reach 1 300 agreements annually.</p> <p>Doctoral Contracts for Disabled Students</p> <p>In view of the number of disabled students dropping out of higher education before the doctoral level), the Ministry of Higher Education and Research in 2011 launched a three-year campaign of special funding of doctoral contracts for disabled students. The contracts are identical to those for students who are not disabled, but the funding is attributed as an "extra contract" to the universities at which these students are enrolled. Based on the potential pool of disabled students, the Ministry had planned to fund a total of 32 contracts (during the period 2011-2013) but the success of the first two years (nine contracts in 2011, 25 in 2012) led it to increase the total number of funded contracts. Candidates, university presidents and research directors may apply and a selection is made by a jury on the basis of the excellence of the candidates and the disability policies of the institutions.</p> <p>The <i>Crédit d'impôt recherche</i> (CIR)</p> <p>The CIR tax credit contributes to national R&D efforts by creating tax benefits for companies recruiting young PhD holders.</p>

Source: Deloitte

Measures to increase the quality of doctoral training

The table below summarises the main measures introduced by France in support of doctoral training.

Table 10: Measures to increase the quality of doctoral training

Measure	Description
Doctoral Schools (ongoing)	As of September 2010, 285 doctoral schools (<i>Ecoles Doctorales</i>) with 70 000 doctoral students were accredited by the Ministry of Higher Education and Research. The doctoral schools are established under an agreement between the State and universities (<i>contrats d'établissements</i>). The doctoral schools provide training and development for participants. They offer future PhD holders high-level scientific supervision as well as preparation for

Measure	Description
	entering the labour market.
Doctoral training in cooperation with industry and other relevant employment sectors (ongoing)	<p>The Research Programme Law (2006) on doctoral training includes several actions designed to bring together doctoral training and socio-economic sectors. The reform of doctoral training takes two major aspects of cooperation with industry and other employment sectors into account:</p> <ul style="list-style-type: none"> - Preparing young researchers to enter the labour market; and - Linking doctoral training and R&D better with socio-economic sectors. <p>Of the total of 285 doctoral schools accredited by the Ministry of Higher Education and Research, 131 host doctoral students engaged in original PhD research projects which will enable them to pursue a scientific career in the private sector. These 131 doctoral schools enrol about 33 000 doctoral students. They hear the defence of some 7 500 dissertations each year.</p>
International cooperation (ongoing)	<p>French higher education institutions which wish to develop mutual trust with their partners take part in international cooperation projects such as jointly supervised international doctoral training (<i>co-tutelle internationale de thèse</i>). For example, in September 2010, thirteen institutes and universities launched the 'International Relativistic Astrophysics Doctorate Program' project (IRAP). This programme dedicated to fundamental physics and astrophysics in Europe, which was selected under the Erasmus Mundus Doctorate scheme, leads to a doctoral degree common to all thirteen institutions¹⁷.</p> <p>International partnerships can also be structured in European or international colleges:</p> <ul style="list-style-type: none"> - At the University of Strasbourg, the European Doctoral College gives thirty doctoral students the opportunity to prepare a jointly supervised doctoral research project involving the University of Strasbourg and a university or research organisation in a country chosen by the doctoral candidate; - The PRES 'Université européenne de Bretagne', which has an international doctoral college whose mission is to share and coordinate international doctoral training, has signed several agreements with higher education institutions in Brazil. The jointly supervised doctoral research projects deal with cell and molecular genetics, marine environmental science and cross-language research on memory, identity and territory.
PRES Joint entities (ongoing)	<p>The Research Programming Law (2006) allows French higher education and research institutions to establish joint entities designed to give more visibility to French research, especially in terms of international ranking. These joint entities are called 'PRES' and they are set up as 'public institutions for scientific cooperation' (<i>établissements publics de coopération scientifique</i>) to ensure coordination between doctoral schools. PRES may decide to deal with the coordination of doctoral training (the choice of the Doctoral College 'Lille Nord de France', for example). Other PRES choose to further define the funding policy of doctoral training by doctoral schools and they harmonise the candidature rules from the recruitment process up to the defence of the PhD (e.g. the PRES "Sorbonne Paris Cité" has chosen this procedure).</p>

Source: Deloitte

Skills agenda for researchers

In 2006, France passed a Programme Law for Research¹⁸ to ensure that researchers are equipped with the necessary skills to contribute fully to a knowledge-based economy and society throughout their career, ensure better links between academia and industry during their training and promoting industry financing PhDs and involvement in curriculum development.

There are two key aspects to the reform of the training agenda for researchers with regard to the doctoral training cooperation with industry and other relevant employment sectors:

- Refocusing the doctoral programmes on preparing doctoral students for entering the market; and
- Linking doctoral training and R&D better with the socio-economic sectors.

¹⁷ Université de Savoie, Université de Nice Sophia Antipolis, Observatoire de la Côte d'Azur, Shanghai Astronomical Observatory (China), Free University of Berlin and AEI Postdam (Germany), Tartu Observatory (Estonia), Stockholm University (Sweden), University of Ferrara, University of Rome La Sapienza, International Centre for Relativistic Astrophysics Network (Italy); Brazilian Centre for Physics Research (Brazil), Indian Centre for Space Physics (India)

¹⁸ Loi n° 2006-450 du 18 avril 2006 de programme pour la recherche followed by the implementing decree of 7 August 2006 on doctoral training (Arrêté du 7 Août 2006 relatif à la formation doctorale)

In addition, the CIFRE programme (*Conventions Industrielles de Formation par la Recherche*), as indicated above is a partnership of a research laboratory, a doctoral candidate and French industry or other relevant employment sectors. . During a three-year contract with the company or other private employer, the doctoral trainee benefits from a high level of scientific supervision that will help him/her write and defend a PhD dissertation while contributing to research activities. The programme is managed by ANRT (Association Nationale de la Recherche Technique).

Finally, as part of the “doctoral contract” system (a three-year public contract for doctoral candidates, applicable in universities and research institutions) doctoral trainees are offered a complete package of comprehensive professional experience, and training, and additional activities to help them broaden their research experience.

6. Working conditions

Measures to improve researchers’ funding opportunities

The table below summarises specific action taken by the French government to promote the attractiveness of French research.

Table 11: Measures to improve funding opportunities for researchers

Measure	Description
Investments for the Future	See chapter 2 “National strategies”.
Opération campus (ongoing)	Opération campus is a national programme to promote attractive working conditions for researchers. This plan is dedicated to the renovation of university buildings by investing heavily in universities’ real estate in order to increase the quality of the environment and working conditions of sites like Aix-Marseilles, Bordeaux, the <i>Condorcet</i> Campus for humanities, Grenoble, Lyons, Montpellier, Paris, Strasbourg, Toulouse, etc. The Plan aims to render universities more attractive to mobile incoming researchers (Total budget: EUR 5 billion.)
Joint Chairs (<i>Chaires mixtes</i>) (ongoing)	This measure allows a university and a research organisation jointly to recruit a lecturer whose profile covers an agreed scientific topic. The lecturer is placed in the research organisation and exempted from two-thirds of the normal teaching activity. Researchers with a teaching position receive a scientific excellence bonus of between EUR 6 000 and EUR 15 000 per year, and an enhanced scientific environment by the allocation of funds of between EUR 10 000 and EUR 20 000, depending on the project.
University Institute of France (IUF) (ongoing)	The University Institute of France was established to support the development of high-level research in universities. The objective is to improve the conditions for research for researchers with a teaching position in their university, without abandoning their mission of educating/giving lecturers. The existence of two classes of member – ‘Juniors’ (under the age of 40 when they are appointed) and ‘Seniors’ reflects the desire to support both emerging and pre-existing excellence. In 2011, 335 of the 637 members of the IUF were ‘Juniors’.
Programmes funded by the National Agency for Research (ANR)	
Chairs of Excellence Programme (ongoing)	The Chairs of Excellence Programme offers the best scientists from abroad financial support to complete their research projects quickly. Part of the endowment can be put toward the cost of researchers establishing themselves and living in France. The projects funded are likely to benefit from complementary resources provided by research organisations and/or regional authorities. The measure was re-designed in 2008 with a view to increasing its impact. Three types of Chair are available: <ul style="list-style-type: none"> – ‘Senior’ short-term chairs (18 to 24 months); – ‘Junior’ long-term chairs (36 to 48 months); – ‘Senior’ long-term chairs (36 to 48 months). During 2009-10, 30 projects were funded with EUR 14.8 million. In June 2011, 13 projects were selected.
Post-Doctoral Return Programme (ongoing)	The Post-Doctoral Return Programme targets young French researchers, but also young foreign researchers who defended their thesis in France. The programme is managed through calls for proposals open to all research domains. The successful tenderers receive the appropriate means to pursue their research project in France for up to three years. During the period 2009-10, 48 research projects were funded with EUR 20.2 million. In 2011, 26 new projects were funded.

Source: Deloitte

The setting up of the ANR in 2005 introduced project-based (short-term) research funding. This gave young researchers the opportunity to submit proposals in their own name rather than through a research organisation, thus leading to higher levels of responsibility for individual researchers in submission and management of a project.

Remuneration

The 'Career Plan' increases the opportunities for career progress and facilitates the transfer from one grade to another. As an example, in 2011, 979 candidates were promoted to the rank of professor first class (*professeur de 1ère classe*) compared to 919 in 2010. Similarly, in 2011, 634 university professors were promoted to the exceptional class (*classe exceptionnelle*), significantly more than the 455 and 557 in 2009 and 2010.

The early career remuneration of lecturers has increased since September 2009 by 12%-25% depending on the duration of their activities prior to recruitment, doctoral training, public and private assignments, etc. Bonus policies such as the PES (*prime d'excellence scientifique*) and PRP (*prime pour responsabilité pédagogique*) also improve remuneration. Two decrees of 2009 fix the PES and the rate of bonuses¹⁹.

The 2009 reform of the University Institute of France has also contributed to increasing researchers' remuneration levels: winners of the IUF receive scientific credits to finance their research project. These credits are allocated via their Research Laboratory. Since 2009, each winner has received a yearly credit of EUR 20 000 (before 2009, the yearly amount was EUR 15 000). Moreover the winners of IUF credits automatically receive the PES bonus.

Finally, the 'Investments for the Future' programme is increasing researchers' remuneration levels through attractive contracts (long-term contracts and high salaries) for high level researchers (national or international).

For further information, see the new country profile on remuneration of researchers from the MORE2 study (forthcoming, on the EURAXESS website).

Researchers' Statute

Researchers in public institutions with a teaching position – professors and lecturers (*maîtres de conférence et professeurs des Universités*, who are known as *enseignants-chercheurs*) – are governed by the general civil servant statute and decree 84-431 (of June 6, 1984) and decree 83-1260 (of December 30, 1983) respectively.

On the other hand, each public research organisation is governed by its own specific rules on researchers' salaries, career prospects, employment contracts, social security coverage, freedom of research and participation in decision-making processes.

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

Since 2008, 26 public research institutions have committed to implement the principles of the 'Charter & Code'. The 'Charter & Code' principles have been promoted since then through the EURAXESS France network, the Marie-Curie actions – and more specifically the COFUND, which is supported by the Ministry of Higher Education and Research and implemented by public institutions.

The implementation of the Human Resources Strategy for Researchers (HRS4R) is being promoted by means of information through a dedicated HR network, the 'GTN RH' network.

Autonomy of institutions

In France, research institutions and universities are autonomous in defining their recruitment strategy (recruitment of researchers for permanent positions or recruitment of the staff for permanent or temporary positions). The University Freedoms and Responsibilities Act (2007) allows universities to provide bonuses and other financial incentives to researchers and researchers with a teaching position. The initiatives under the Investments for the Future Programme provide more flexibility in researcher recruitment (especially because

¹⁹ Décret n° 2009-851 du 8 juillet 2009 relatif à la prime d'excellence scientifique and Arrêté du 30 novembre 2009 fixant les taux de la prime d'excellence scientifique). The PRP is fixed by two decrees (Décret 99-855 du 29 septembre 1999 et arrêté du 4 octobre 1999)

part of the recruitment will be carried out through private foundations) and more attractive salaries and benefits.

Career development

The Career Plan (2008) is one of the strategies implemented by the Ministry of Higher Education and Research aimed at improving researchers' career opportunities. It focuses on:

- Attracting the best young people to teach/carry out research at universities;
- Enhancement of professional commitment and excellence; and
- Mobility programmes and adequacy of university management.

Researchers with a teaching position benefited from the Career Plan in an amount of EUR 252 million over the period 2009-11, including:

- Better remuneration (a salary of between EUR 2 347 and EUR 2 861 gross per month);
- An evaluation of all educational activities, including practical work;
- More or fewer hours of instruction depending on each year's priorities;
- Increased opportunities for career progression and facilitation of the transfer from one grade to another; and
- Bonuses for scientific excellence (the PES).

Shift from core to project-based funding

Project-based research funding develops independence and responsibility in project management, set-up of the project and its integration in the laboratory; hence the project holder demonstrates that the project is an integral part of laboratory activities.

According to the ANR (National Agency for Research) 2010 annual report²⁰, project-based funding is suitable both for cognitive research and targeted research, whether conducted in the public sphere or in public-private partnerships. The ANR acts as an accelerator and amplifier of research topics that emerge within different scientific communities, be they universities, research organisations, alliances (groups of research organisation) or, in some cases, firms and clusters. It offers French research teams a strong programming framework that meets current priorities while leaving 50% of its budget to non-thematic programmes, thus offering greater freedom to innovative projects, particularly at the frontiers of knowledge.

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

All researchers with employment contracts have the right to receive full social security coverage (including sickness, unemployment and pension benefits). All ANR (National Research Agency) fellows are recruited under doctoral contracts. Both doctoral and post-doctoral candidates working under doctoral contracts enjoy sickness and unemployment rights.

7. Collaboration between academia and industry

The 1999 law on innovation and research established three provisions which allow research civil servants (*agent du service public de la recherche*) to work with private companies. They may participate in the start-up of a company intended to develop research activities they are dealing with as part of their civil service job. They may also participate in long-term scientific consultancy affairs (*concours scientifique*), hold up to 20% of the company's share capital and be a member of the board or supervisory board promoting dissemination of public research results.

Moreover, researchers (*chercheurs*) and researchers with a teaching position (*enseignants-chercheurs*) have the right to take part-time jobs with a private company which is carrying out tasks for a university or EPST. Similarly, an academic researcher may be made available full or part-time (*mis à disposition à temps incomplet ou complet*) to a company or private organisation, French or foreign, on specific remuneration terms. The transfer of a civil service researcher to the private research sector is allowed for five years renewable. Researchers and researchers with a teaching position receive one-year additional seniority (*bonification d'ancienneté*) if they follow a mobility programme for at least two years.

²⁰ Available at: http://www.agence-nationale-recherche.fr/fileadmin/user_upload/documents/2011/ANR-Rapport-annuel-2010.pdf

Finally, the young innovative companies (*jeune entreprise innovante - JEI*) and young university enterprises (*la jeune entreprise universitaire - JEU*) schemes further strengthen cross-sector mobility. A JEI carrying out R&D enjoys tax and payroll reductions for highly skilled employees, such as engineers and researchers. Similarly, JEU status encourages entrepreneurship by students and those involved in research in higher education institutions because it carries significant exemptions from social security payments and tax deductions.

The following table summarises programmes designed to boost collaboration between academia and industry and to foster doctoral training in cooperation with industry.

Table 12: Collaboration between academia and industry

Measure	Description
Carnot Institutes Network (2006)	The creation of the Carnot Institutes aims to improve inter-sectoral knowledge circulation through partnership research, building on the model of the German Fraunhofer institutes. The Carnot institutes are receiving a new EUR 500 million endowment under the Investments for the Future programme.
CIR (Crédit d'Impôt Recherche)²¹ (ongoing)	The CIR (<i>Crédit d'Impôt Recherche</i>) is a research tax credit which aims to encourage private sector companies to carry out more R&D. To be eligible, companies must hire young PhD holders to carry out research. This tax credit is available for the first 24 months of the employment contract, providing it is the researcher's first long-term contract.
Technological research institutes (<i>instituts de recherche technologique</i>) (ongoing)	Technological research institutes bring together public and private laboratories dedicated to a specific area of technology, in which France aims to become a world leader. They help adapt higher education to business needs, thus encouraging the major French and foreign large companies to invest and create research jobs in France. The projects are co-financed by up to 50%. The total budget is EUR 2 billion for the period 2010-2020.

Source: Deloitte

8. Mobility and international attractiveness

In 2010, the percentage of doctoral candidates (ISCED 6) who were citizens of another EU-27 Member State was 8.0% in France compared with 17.8% among the Innovation Union reference group and an EU average of 7.8%²². In the same year, the percentage of non-EU doctoral candidates as a percentage of all doctoral candidates was 35.4% in France compared with 16.4% among the Innovation Union reference group and an EU average of 20.0%²³.

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

The table below present a key measure aimed at attracting and retaining leading national, EU and third-country researchers to France.

Table 13: Measures to attract and retain 'leading' national, EU and third country researchers

Measure	Description
Chairs of Excellence Programme	The Chairs of Excellence Programme offers the best scientists from abroad financial support to complete their research projects quickly. For detailed information, see chapter 6 "Working conditions".

Source: Deloitte

Inward mobility (funding)

Salary is the main obstacle to inward mobility. In the framework of the Investments for the Future programme, better salaries are being used to make it more attractive for researchers and for 'senior' researchers to come and remain in France and run projects. The Programme provides for open recruitment of international candidates, flexibility in the recruitment procedure and medium-to-long term contracts. Furthermore, favourable tax provisions motivate French companies to recruit high-level foreign researchers and thus to attract them to France.

²¹ Available at: <http://www.industrie.gouv.fr/enjeux/innovation/credit-impot-recherche.php>

²² See Figure 1 "Key indicators – France"

²³ Ibid

Recruitment through competition to obtain the status of researcher in France could be seen as an obstacle for both incoming and outgoing researchers. However, a permanent research position remains very attractive and public institutions (universities and EPST) may recruit researchers on permanent contract. France has implemented the hosting Agreement (“Scientific Visa”) scheme, facilitating the inward migration of third country researchers to the country. Since 2011, France’s consulates have granted a “VLS-TS visa” (Extended-stay research scholar visa) to holders of a master’s degree or higher wishing to enter France to take up scholarships, engage in research or teach at university level. Public and private institutions of higher education and research organisations may use this visa category to bring doctoral candidates, research scholars and research faculty to France to perform research or teach at university level.

A residence permit entitled “research scholar visa” allows the holder to perform research and teaching activities in France under the terms of a hosting agreement. Foreign researchers may obtain residence permits for more than 1 year but no longer than 4 years. The permit’s duration reflects the time required or expected to be required for the work to be delivered as described in the hosting agreement. The prefecture for the applicant’s place of residence has jurisdiction (CESEDA, article L313-4)²⁴. All the beneficiary’s family members are automatically eligible for a residence permit entitled “*vie privée et familiale*” (covering spouse and children who entered France as minors, article L. 313-8 of CESEDA as amended by law 2011-672 of June 16, 2011).

Finally, for foreign scientists from developing countries, the cost of travelling to France and the cost of living in France are also obstacles.

The table below presents the key measure and policies in support of researchers’ inward mobility.

Table 14: Measures to improve inward mobility

Measure	Description
Post-Doctoral Return Programme (2009)	The Post-doctoral Return Programme targets young French researchers, but also young foreign researchers who defended their thesis in France. For detailed information, see chapter 6 “Working conditions”.
Hosting foreign researchers	
<p>The proportion of young foreign researchers recruited by Public Scientific and Technological Institutions is approximately 1/5 and by universities 1/6. Eight percent of assistant professors are recruited from a country of the European Union and 8% from the rest of the world. In 2010, 2 300 residence permits were issued to scientific researchers from outside the European Economic Area (which is comparable to 2009). More than 90 different nationalities were represented, but six countries accounted for more than half the permits issued: China (14%), India (9%), Algeria (9%), Brazil (8%), the United States (7%) and Japan (6%).</p> <p>Since the University Freedoms and Responsibilities Act (2007), universities have had the tools to conduct their own recruitment policy, and be more attractive nationally and internationally. In addition to these tools, the procedure for applying for a Scientific Visa was simplified by the entry into force of Act 2011-672 (of 16 June 2011) on immigration, integration and citizenship.</p> <p>France has 20 EURAXESS Services Centres to provide foreign researchers with the information they need on everyday life, children’s education, accommodation, cultural integration and French language courses.</p>	

Source: Deloitte

Outbound mobility

Mobility to a foreign institution is an essential asset for a young researcher wanting subsequently to obtain a position as a lecturer in the university or as a researcher in an EPST. Young French researchers are encouraged to apply for mobility programmes, short and long, depending on their post-doc discipline.

According to a survey conducted in 2011 and covering life sciences, information technology and communication and physics, only 25% of the 12 900 doctoral graduates in 2010 continued with postdoctoral studies. Just over half (51%) went outside France for this – 21% to another EU country and 30% elsewhere.

Promotion of ‘dual careers’²⁵

See chapter 3 “Women in the research profession” for information on ‘dual careers’.

²⁴ Available at: <http://www.enseignementsup-recherche.gouv.fr/cid56284/accueil-en-france-des-scientifiques-et-rangers.html>

²⁵ Researchers face a ‘two-body problem’ when moving. The challenge is to find positions for both members of a couple.

Portability of national grants

ANR fellowships are not portable. The agency may not pay researchers to carry out research in other EU countries. Researchers living in another EU country may answer an ANR call for proposal, but must lead the project in France.

The CNRS and ISERM (French National Institute of Health and Medical Research), as part of a strategy to increase the mobility of researchers within the European Research Area, have joined the EUROHORC Money Follows Researcher (MFR) scheme, allowing researchers moving to other scheme countries to take the rest of their current grant with them.

Access to cross-border grants

ANR fellowships are open to non-residents, as are those of all French research organisations.