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BEIPD-FP7-MC Cofund Project

Final Report

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1. Executive summary

The BeIPD-Cofund project (2013-2019) allowed the University of Liege to offer 136 positions to worldwide postdoctoral researchers with the purpose of establishing themselves as experienced researchers. Fellowships were awarded across all disciplines to 104 Incoming Postdocs (IPD) who were new to the University of Liège or to Belgium and were looking to join one of our top research units. 32 Outgoing Postdocs (OPD) were awarded to young researchers looking to develop their careers and skills elsewhere in the world.

Selection of the best candidates was administered by the University of Liège Research Councils with the help of the Research Office, in accordance with the disciplines of the applications and applicants (Human and Social Sciences, Sciences and Techniques, and Life Sciences). Candidates had a 1/5 chance at being selected.

ULiège focused on three key achievements: (1) science, (2) career development and (3) improving the quality of HRS4R practices specifically the open, transparent and merit-based recruitment of researchers (OTM-R).

- (1) Scientific outcomes: Approximately 1800 works were published by the fellows and were made available in Open Access (<http://orbi.uliege.be>): 585 scientific publications, 225 books or book chapters, 800 conference presentations and 190 speeches, outreach activities, and educational publications. ULiège formed new networks and deepened their partnerships with existing institutions.
- (2) Career development:
 - a. Dedicated support was offered to assist fellows in developing their career competencies. Training topics included Personal Effectiveness, Engagement-Influence-Impact (including teaching), Knowledge of Governance and Organisation, Dissemination-Outreach and Networking.
 - b. Fellows were offered opportunities to meet with industry partners and to apply for future grants and funding. Several researchers were awarded noteworthy positions in Belgium and abroad.
 - c. Activities were organised to promote the research projects and outcomes and included events such as participation in local and international/EU Events (Researchers' night, MSCA, Science Café, HRS4R Master Classes, peer program development support).
- (3) Improvement of ULiège HRS4R practices:
 - a. Top applications were selected using transparent OTM-R procedures which assessed the applicant based on their project, merit and CVs (including career breaks or other considerations). ULiège gained experience in writing guidelines for applicants and assessors, managing numerous applications within a short time frame, incorporating external evaluators in the process, training assessment teams and offering feedback to the applicants.
 - b. Trainings and events which included tailored career support were developed to reinforce the existing internal support structures.
 - c. ULiège adapted and supported the needs of the postdocs': clarification regarding their academic status as a researcher and employee was offered, adjustments for work-life balance (flexibility, parental leaves) were made and requests for "after BeIPD support" were met.
 - d. Finally in order to ensure the sustainability of the procedures put in place by this project, ULiège implemented quality assurance procedures within the framework of this project to address GDPR complaints, dissemination, and integration of the HRS4R Action Plan.

What's next? The quest for excellence continue with new calls for STEM+Agrobiotech postdocs. Contact with past fellows will be maintained to ascertain the long term impact of the programme and to promote MSCA opportunities and membership. Best practices from this project will be shared through publications and events.

Project Public Website: <http://www.uliege.be/cofund>

2. Context and objectives

2.1. Background

From 2006 to 2012, the University of Liège ran an international incoming postdoctoral fellowship programme aimed to support young researchers in attaining an independent position at the top of their research field. The project had many successes: 120 fellows, hundreds of joint publications, and many new skills were developed aiding the researchers' careers to flourish. The applicants' projects were based on a bottom-up approach in which they defined their own research project in conjunction with a supervisor, resulting in a win-win situation for science and career development. All research disciplines were recognised. Fellowships included a salary and a travel-mobility-research allowance of 15,000 EUR/year.

However, due to the high cost, ULiège was not able to support salaries for outgoing post-docs as employers of incoming fellows benefitted from tax breaks that divided their costs by two. To compensate, a 3 month mobility allowance was offered to those who had a position at ULiège and wished to go abroad.

Evaluation and selection procedures had previously been developed in a fair and transparent process at the university, relying on the detailed reviews of internal experts, evaluation reports and ranking applications. Pertinent and positive feedback was sent to candidates.

An informal internal survey revealed that incoming postdocs (IPD) preferred to lengthen their fellowships to 2 years whereas ULiège outgoing postdoctoral researchers (OPD) preferred a one-year fellowship as this gave them the experience required to apply for ambitious longer term positions and funding (i.e. FRS-FNRS or ERC). The BeIPD project was submitted in order to enable ULiège to increase its funding capacity, and to take into account an internal strategy and the postdocs' needs. A budget of about 16 million EUR was earmarked for the project, with an EU contribution of up to 7 million euros. The university's contribution remained equivalent to that of the initial programme: 1,8 million EUR/year.

2.2. Project objectives

The BeIPD FP7-People-Marie Curie Actions-Cofund Project (2013-2019) sought to offer positions across all disciplines to worldwide postdoctoral researchers with the purpose of establishing themselves as independent researchers in all aspects of society, including academia. Postdocs were offered the opportunity to develop research excellence in high quality research labs, to enlarge their professional networks, to enhance their personal skills, to reflect on their careers and to engage with the broader society.

The project was initially scheduled for 60 months, with 100 2-year Incoming post-doctoral fellowships and 28 1-year Outgoing postdoctoral fellowships amounting to 228 years of research. In the end, taking into account those who relinquished their contracts, fellowships were awarded to 104 Incoming Postdocs (IPD), for those new to ULiège or to Belgium and looking to join one of our top research units, and 32 Outgoing Postdocs (OPD) for young postdocs looking to develop their careers and competencies elsewhere in the world.

In addition to a commitment to excellence, the BeIPD project offered the opportunity for the university to review and enhance its HRS4R practices. Although ULiège has a proven track record, the project focused specifically on Open, Transparent and Merit-based Recruitment (OTM-R) procedures and career development support. The experienced ULiège Research & Development Office managed the project and established career development support for researchers (training workshops and individual consultations) as part of Euraxess.

ULiège saw its external collaboration practices evolve as external partners were convened for the application assessments (evaluation and selection process). An internal review was conducted annually by the Quality Assessment Office in order to improve practices and guarantee the success of the programme.

3. Achievements

Achievements were classified into 5 categories:

- (1) General achievements
- (2) Recruitment, selection and onboarding: advertisement, evaluation, selection, welcoming seminars
- (3) Research activities: scientific publication and communication, ethical issues
- (4) Career development : training and teaching, networking, outreach activities
- (5) Dissemination

3.1. General achievements

3.1.1. The EU contract

At the start of the programme, ULiège expected to launch 4 calls for 25 two-year IPD fellowships and 4 calls for 7 one-year OPD fellowships, for a total of 128 positions. These numbers did not take into account that postdocs would want to seize new and unplanned professional opportunities or career breaks (i.e. parental leave) that came about during their contracts. As such, several fellows relinquished their grants prior to the end date.

31 Postdocs (17 Males, 14 Females) requested to relinquish their fellowship prior to the end of their contracts and were granted permission without penalty. Within the context of this project, they were given the status of “Early Leaver”. Several months of funding was at risk of being lost when an “early leaver” postdoc left in the middle of their contract but the University of Liège felt that it was important to support postdocs in advancing their careers even if this came at a cost to the project in progress. Some requests specifically for career breaks (6 months of maternity leave or 1 month of paternity leave) extended beyond the scheduled BeIPD timeline.

Fortunately, successful discussions with the EU-REA enabled positive solutions to emerge, allowing ULiège to recover the unused budget from the Early Leavers' contracts and convert it into new grants or to extend a fellowship due to parental leave. As a result, the BeIPD grant agreement was extended to 31/7/2019.

Upon completion, the project offered fellowships to a grand total of 104 IPDs (4 calls for proposals) and 32 OPDs (5 calls).

3.1.2. ULiège involvement in the project

ULiège dedicated a project manager to oversee and diffuse this project. Additional internal staff, mostly from the R&D Office were involved as needed but all worked to support the stakeholders.

A successful promotional campaign yielded more than 800 applications of which 90% were eligible for consideration. Each applicant required the support of an ULiège or external supervisor who helped them write their proposal and develop their research.

Thousands of hours of evaluations, discussions and reviews were incurred by 88 ULiège academics and 952 external international experts who gave their time to assess each application.

Throughout this project, several institutional practices evolved. One notable change was the increased support from the University's Board (Rector, Vice-Rectors, Research Council presidents) for the project and project manager.

Efforts were made to increase efficiency when distributing and storing BeIPD information on the website, by moving to online applications, reports, working documents and database storage. The GDPR Regulation EU 2016/679 was imposed midway through the project. One of the provisions imposed was to draft and maintain a register with all personnel data from the institution. In the spring of 2019, the R&D office completed the provision relating to the management of external funding agreements, which included this project.

As of 2018, the Wallonia-Brussels Federation requires all researchers who benefit from public funding to upload their research publications in an open repository with an embargo period of 12 months for Human Sciences and 6 months for STEM and Life Sciences. ULiège has required this from all its employees since 2008 and all BeIPD fellows were required to upload their publications into Orbi (<http://orbi.uliege.be>) from the beginning of this project. This practice was helpful in conforming to EU and national requirements.

Finally, the Research & Development Administration continued to develop projects with the aim of advancing the HRS4R strategy, supporting career development and disseminating results. These projects were supported by the Federation Wallonie-Bruxelles or by EU funding (Interregional or Erasmus+ programmes). The deliverables were carefully designed for PhD candidates, postdocs and staff, and were used extensively in fulfilling the requirements of this project (trainings and tools).

3.2. Recruitment, selection and onboarding

3.2.1. Advertising phase

Digital media was the preferred platform to advertise the open positions. The table below summarises the channels where calls were published. On each site, the following information was posted: fellowship eligibility, a link to the BeIPD-Cofund portal, deadlines and a contact person.

IN (IPD)	OUT (OPD) restricted to ULiège graduates
https://euraxess.ec.europa.eu/jobs	ULiège Intranet message to all academics
www.academicpositions.eu	www.uliege.be/cofund portal
www.uliege.be/cofund portal	ULiège LinkedIn page
ULiège Jobs web page	ARD Facebook page
ULiège LinkedIn page	ULiège Alumni jobs webpage
ARD Facebook page	
ULiège Intranet message	

Figure 1: Channels where calls were published

Some researchers shared information on Scoop-it, Twitter or LinkedIn. Several faculties, institutions and scientific associations also published the calls on their webpages (i.e. in 2014 Copenhagen University, CNRS France, EuroScienceJobs, RMBLF, SPF)

3.2.2. Application phase

The following call documents were prepared and made available on the BeIPD portal (www.uliege.be/cofund):

- Guide for Applicants (In & Out versions, published in French and English), including guidelines for the application, evaluation, selection and complaint procedures
- Guide for Evaluators (In & Out versions, published in French and English)
- Application form (In & Out versions, published in French and English) & ethics checklist

The documents were subsequently amended following feedback and clarification questions from candidates to include information about:

- the value of career development (impact on the project and the budget)
- the fellow's status (impact on eligibility due to Belgian Law on Fellowships)
- the eligibility and complaint procedures (clarification on the procedures in place)
- letters of support to be submitted by the applicant as part of their project (this was strongly questioned by some external academics who refused to support applicants and questioned the need for mandatory transparency procedures which were in place to ensure career support for all fellows)

A hotline was set up to help applicants with their administrative questions. A Frequently Asked Questions (FAQ) page was also added to the portal which decreased the number of inquiries – both emails and telephone calls.

Starting with the second call, all applications were submitted online. This change made the submission and evaluation process much more efficient.

As explicitly addressed in the *Guide for Applicants*, an eligibility check was the first step in the acceptance process. It is worth noting that no external pressures influenced the application process. Some modifications were made in order to improve the decision-making process, specifically regarding the lengths of the application (text was limited to a given number of characters rather than a limited number of pages) and only reference letters written within the previous three months were accepted.

Redress requests (18 of the 39 decisions ranked as ineligible) were submitted to the ULiège Quality Unit (SMAQ) for review. None of the requests led to a change in decision.

3.2.3. Response to calls

817 young PhD graduates from 88 countries applied for a BeIPD-Cofund fellowship. 622 IPD and 113 OPD applications were completed and eligible.

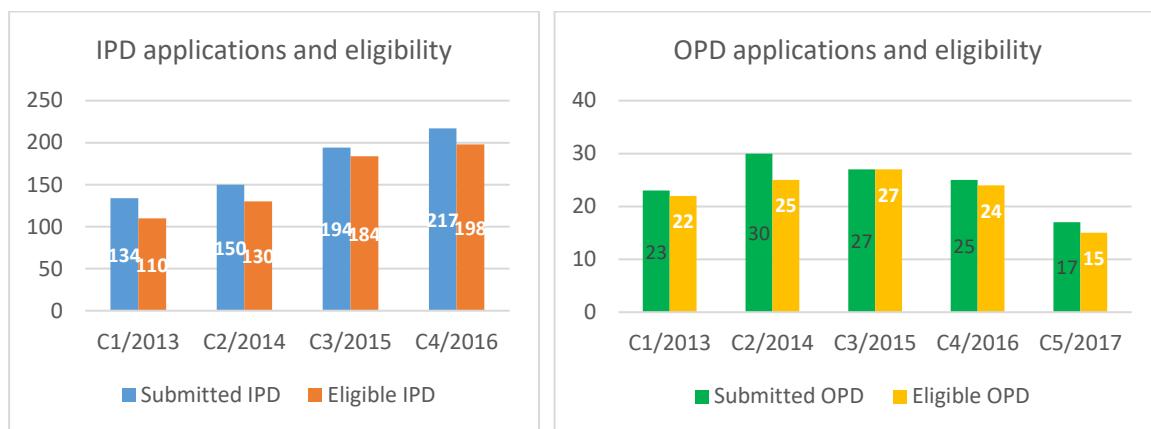


Figure 1: Applications and eligibility

The number of IPD applicants increased over time (+60% in 4 years), resulting in a decrease in a candidate's chance at being accepted from 1 in 4 to 1 in 8. Applications from non EU-countries increased with each subsequent call: from 39% in 2013 to 53% in 2016, whereas the number of EU applications remain quantitatively steady (more or less 100 applications/call). The number of ineligible applications decreased (12% to 3% to 1%) as a result of the improved information that was provided. However on the last call, there was an increase of ineligible applications (10%) due to a higher number of non-EU applicants who misunderstood some of the requirements.

The number of OPD applicants was steady. Ineligibility was mainly due to incomplete submissions. There was a 25% chance at being selected for an outbound fellowship, a significantly higher rate than was found among calls for national funds.

3.2.4. Evaluation and selection

The evaluation and selection process relied on the assessment and expertise of the Sectoral Research Council (SRC) and the University Research Council (Fig. 3).

Applications were revised by 4 assessors: 2 internal from ULiège and 2 international. All assessors were required to sign a confidentiality agreement and decline any applications with which they had a Conflict of Interest (COI).

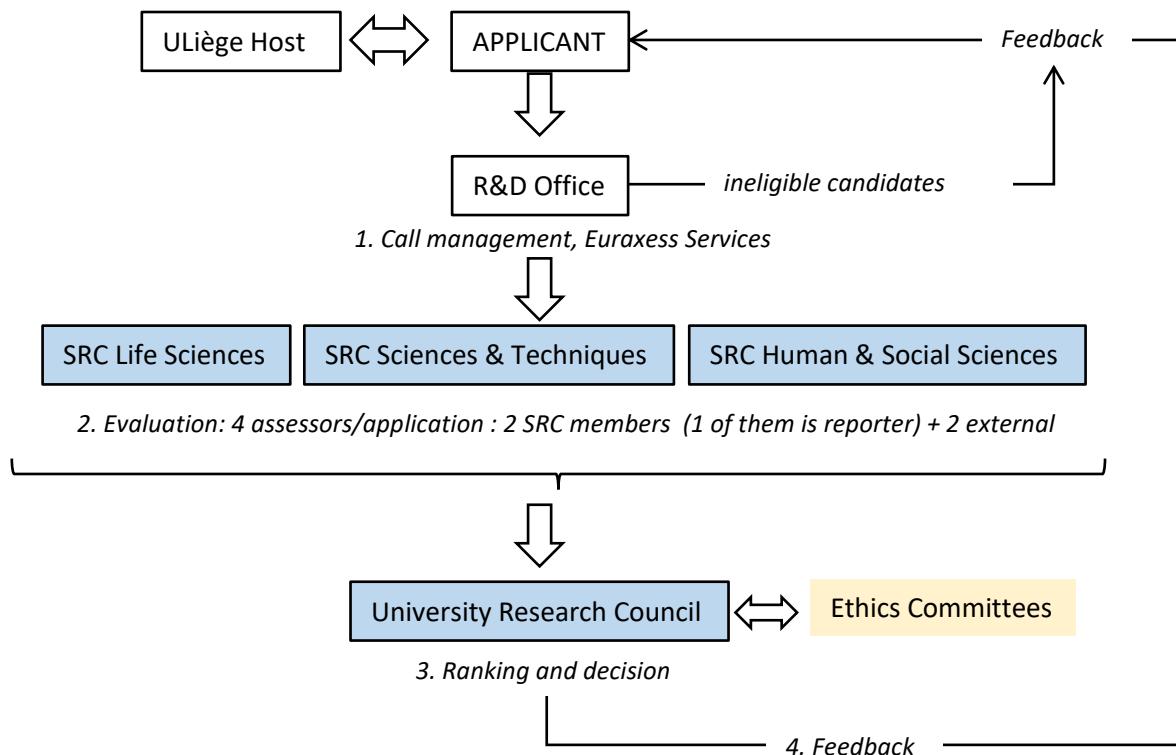


Figure 3: Evaluation and selection process

International assessors were selected based on their subject matter expertise. Special attention was placed on gender balance within the group. Assessors were recommended by the applicants themselves or selected from publications, expert databases or online searches. If they were not available to serve as an assessor, they were asked to suggest or nominate another colleague; very often they suggested young up-and-coming postdocs. Internal experts were members of the Sectoral Research Councils (Human and Social Sciences; Sciences and Techniques; Life Sciences), selected according to the discipline of the projects. The same rules applied to them regarding COI and confidentiality. One internal assessor on each team was selected as the lead assessor, with the responsibility of overseeing the evaluation, writing the feedback report and getting approval from all the team members.



Figure 4: Origin of assessors

A guide for evaluators was written to facilitate the process and ensure the requirements were understood by everyone. It was disappointing that some assessors did not complete the tasks as diligently as expected. For example, they didn't always evaluate the feasibility of the budget, nor did they review the ethics checklist or comment on the plausibility of career development. It was for this reason, among others that a partnership between the project manager and the lead assessor was critical to ensure that all these points were taken into account for each application.

Evaluation criteria was based on the quality of the applicant, the academic value of the project and the research environment in which the project would take place. Marks were awarded on a scale of 1 to 5, ranging from insufficient to excellent. In actual practice, some assessors had difficulty determining the difference between a "very good" and an "excellent" proposal, so the score grid was adapted to include a broader range. Evaluation reports were then entered online.

There were no major discrepancies between the assessors' results and any differences were easily solved with a short discussion. However, in the future, an online scoring system with suggested scores and checklists could be created to improve the evaluation process and improve consistency among the scoring.

The evaluation reports were submitted to the Sectoral Research Councils for a ranking by sector, then to the University Research Council for the final selection of fellows. All applications were ranked into 3 categories ("Priority list", "Reserve list" and "Rejected list"). The applicants were informed of their ranking and positions were offered accordingly. Though some candidates declined the fellowship, the number of strong applications was so great that all fellowships were easily awarded to talented candidates.

Due to the magnitude of applications and assessors, including a significant number of external evaluators, there were several elements that needed careful attention:

- The appointment of an international assessor in the Postdoc evaluation process was new for ULiège. We gained relevant experience and confidence throughout this process and despite the end of the BeIPD, this new evaluation approach has been applied to the 2019 calls for institutional funds.
- The divergence of scoring among assessors (often the over or underestimation of criteria) was problematic, as well as the difficulty of ranking by categories, especially in cases where candidates were just above or just below a threshold. These challenges were solved by an open discussion between the assessors and the members of the research councils.
- Written feedback for the applicants: The project manager helped with the editing process to ensure consistency and relevancy. The Research Council members were especially helpful when colleagues contested if a candidate was not selected.
- Management of confidentiality and COI: A minor misconduct was reported (information was given to the supervisor prior to the official announcement) but the board decided it was not serious enough to notify the Ethics Committee of the case.
- The question of how many applicants each supervisor should be allowed to sponsor remains a pertinent discussion. Top teams could potentially be awarded several fellowships. Although teams should be ambitious and supervisors should have the freedom to support as many applicants as they feel they can handle, it's important that supervisors be forthcoming in their recommendation letters about their ambitions and commitments. In future programme calls, it would be useful to establish a quota from the beginning. It is also important to separate the evaluation and the selection committees to avoid bias.

3.2.5. IPD fellows

Origin

As indicated on the maps below IPD fellows came to Liège from all over the world, with the majority coming from Europe. France, Spain and Italy were the top three nationalities represented in the group. All OPD fellows were Belgian citizens.

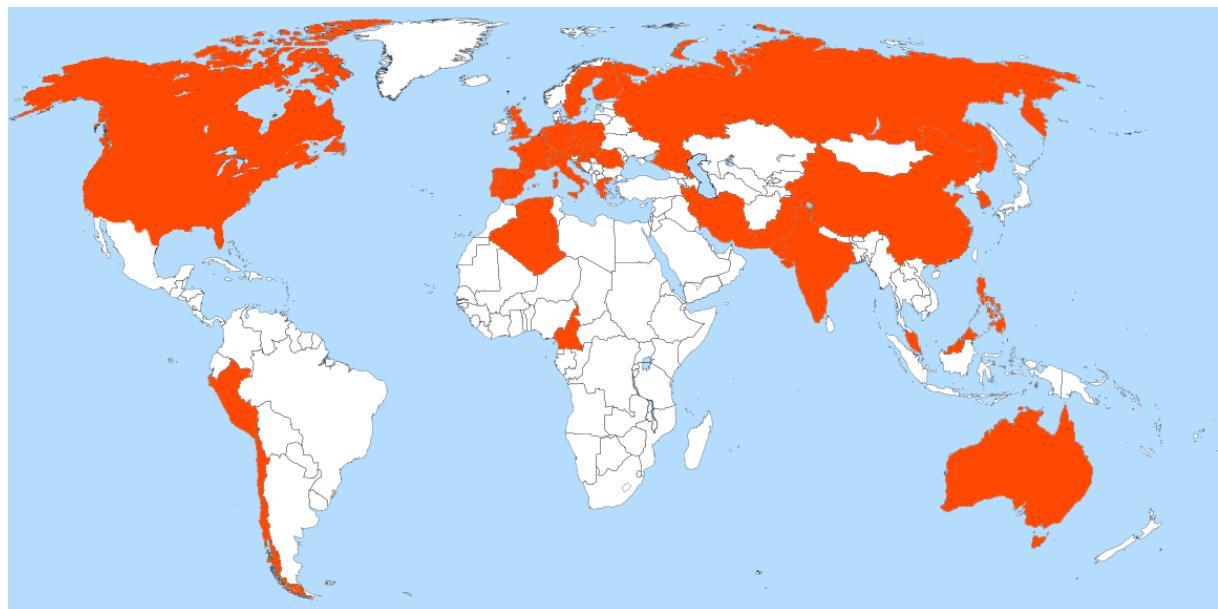


Figure 5: Origin of fellows

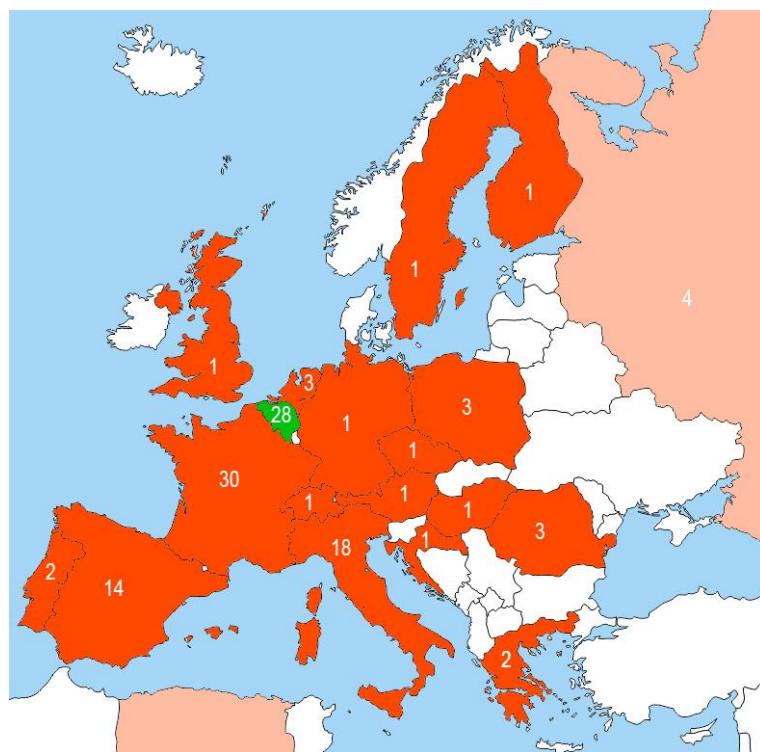


Figure 6: Number of selected fellows per nationality

Gender

ULiège took into account maternity leave for female applicants and extended their eligibility period accordingly (1y/child with a maximum of 2 years).

The gender distribution among applicants was 59%-41% (M-F) while the proportion of selected fellows was 56%-44% (M-F). Within each discipline, we observed significant disparities between the genders for fellows in Engineering (10M-1F) and Life Sciences (7M-21F). These numbers are on par with international graduation rate statistics within these disciplines/fields.

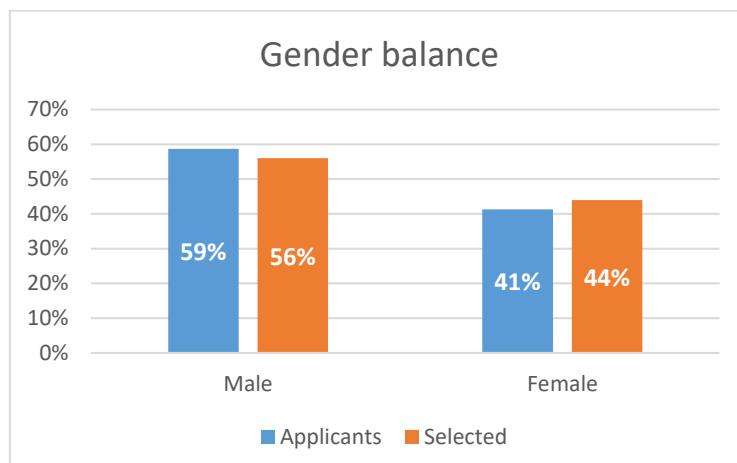


Figure 7: Gender balance

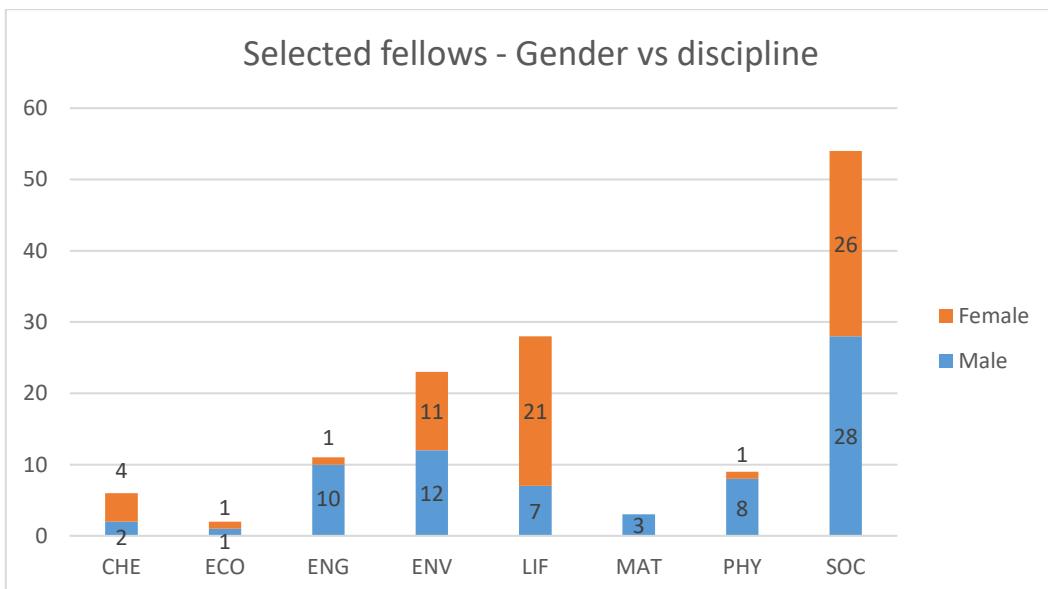


Figure 8: Number of fellows and gender balance per discipline

One interesting factor observed among the fellowships was the high number awarded in Social Science and Humanities. This is due to the aggregation of many disciplines within the MSCA science descriptors. Based on ULiège criteria, research topics within each sector were attributed. Of the 58 fellows in Social Science and Humanities, which includes Social Sciences and Humanities (SOC) and Economic Sciences (ECO), 28 fellows were in the Life sciences (LIF) and 52 fellows in Sciences and Techniques. Lower

results in LIF were due to less applications submitted in this sector; a question that should be analysed further internally.

3.2.6. Welcoming & onboarding fellows

Once the Postdocs accepted their fellowships, they were directed to the ULiège Euraxess Mobility Centre. The centre oversees all the documents needed to obtain a scientific visa and provides individual assistance for logistical questions relating to the fellows' time in Belgium (<http://recherche.uliege.be/euraxess>).

In the framework of this programme, ULiège created a "Welcome guide for incoming staff and visiting researchers" with pertinent information regarding life, culture and integration into the ULiège community and the surrounding city. Information and support was also available for the postdocs' families for issues arising before, during or after their stay.



Figure 9: Euraxess support services: From welcome guides to income tax workshops

After the initial institutional welcome session with supervisors, it was quickly apparent that further induction seminars would be necessary. Internal administrative procedures and legal questions were not always understood and additional guidance was needed.

Topics that were reviewed included contracts, personnel benefits (i.e. personal computer as a benefit in kind, eligibility of expenses, reimbursement forms, purchasing consortia, insurance, etc.) and forms were translated into English. Each spring, income tax information sessions were organised to assist fellows with submitting their tax declaration forms in Belgium.

3.2.7. OPD fellows

Fellows who were awarded an OPD developed their projects throughout the world, with a high percentage of them working in a European institution (25/32). Having previously worked as researchers at ULiège, they were well versed on internal rules and regulations; their main requests for support were for visas, insurance and other formalities related to their travels and stay.

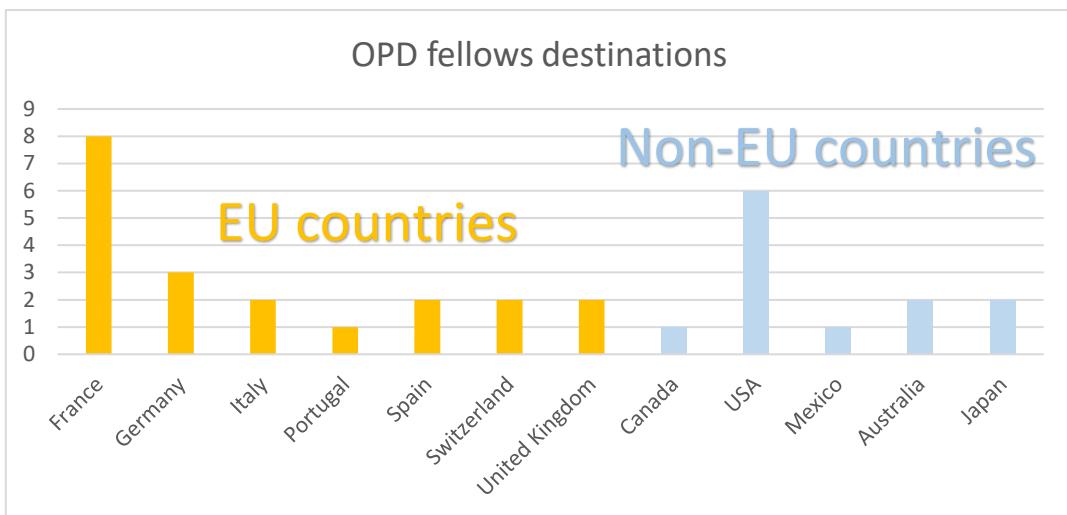


Figure 10: Destination of OPD fellows

3.2.8. Feedback from applicants

The project manager launched a survey in 2016 to three IPD cohorts with the goal of collecting feedback on the elements they considered important in the application process.

In addition to excellence, career and network development was revealed as a top priority; administrative support throughout the process was also valued by the candidates. The survey results confirmed that ULiège's priority to ensure the fellows' expectations matched the goals of the BeIPD project was achieved. The full analysis of this survey is available in the ULiège repository (<http://hdl.handle.net/2268/204682>).

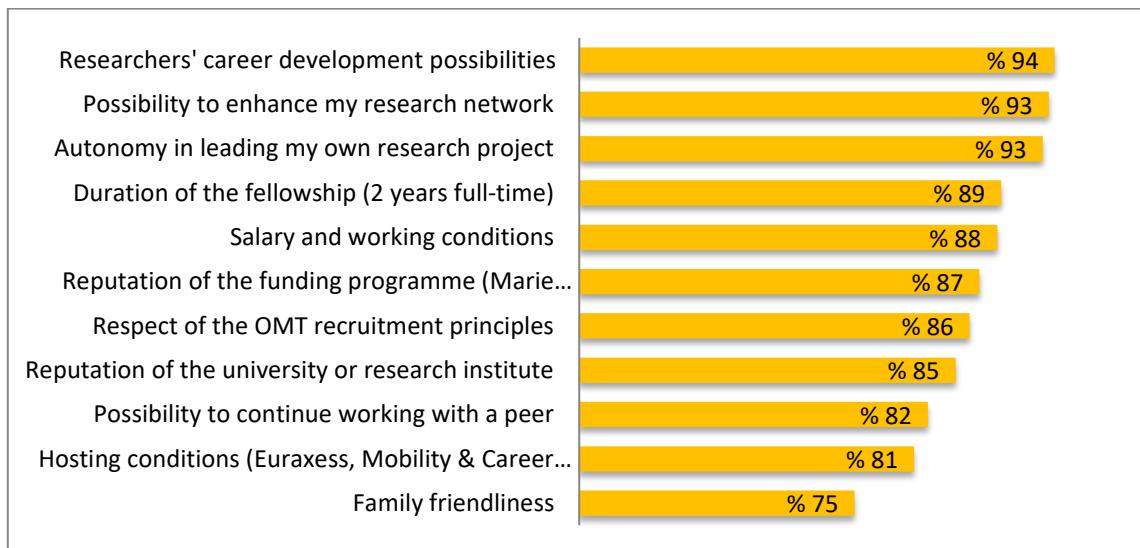


Figure 11: Fellows survey

3.2.9. Feedback from international expert assessors

Feedback was also collected from 33 assessors in 2016 after the 3rd call. As per the results, the following criteria were highly valued: the impartiality and transparency of the application process, the documentation provided, the flexibility and professionalism of the project manager, and the consideration of the assessor's opinion in the consensus report. Young reviewers mentioned the added value of their participation in this project for their own career development.

3.3. Research activities

3.3.1. Scientific publication and communication

As of 2018, the Wallonia-Brussels Federation requires all researchers who benefit from public funding to publish their research publications in an open repository with an embargo period of 12 months for Human Sciences and 6 months for STEM and Health Sciences. ULiège has required this from all its employees since 2008 and all BeIPD fellows were trained and required to upload their publications into ORBI (<http://orbi.uliege.be>). They also uploaded presentations (posters, oral presentations) and past publications.

3772 publications were uploaded into Orbi of which 1797 were related to research performed by fellows after they started their fellowship at ULiège. 809 scientific publications, books and book chapters were counted, along with 800 communications presented at congress or symposia and 71 publications related to small audience conferences, reports or learning materials.

	Number of records
Scientific journals: article, short communication, book review, letter to editor, single issue	583
Books: books published as author or translator, collective works published as editor or as project supervisor	74
Parts of books: chapter, contribution to collective works, contribution to encyclopaedia or dictionary, preface, postface, glossary	152
Scientific congress and symposium: unpublished conference/abstract, paper published in a conference book, paper published in a journal, poster	801
Patent	1*
Other: speech, conference, reports, learning material, learning and teaching material	186
Total	1797

* This patent is related to previous work of the fellows and rights are cannot attributed to ULiège

Figure 12: Summary of publications uploaded in ULiège ORBI repository

Figure 13 below shows the number of publications in scientific journals, books and book chapters per fellow (in blue, IPD; in red, OPD) from 1/1/2014 to 30/8/2019. Some fellows were very productive (up to 33 uploads). No correlation was found between productivity and discipline.

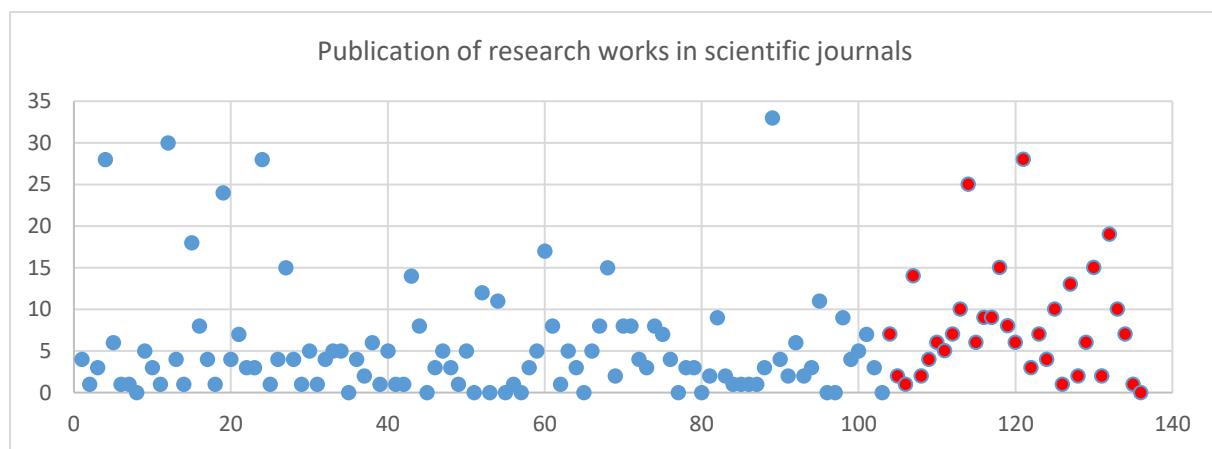


Figure 13: Number of publications per fellow (X=fellow ID; Y=Number of publications)

Unfortunately, when postdocs left the university, ULiège could no longer require them to archive publications in Orbi. However supervisors could eventually be asked to enter the fellows' future publications. A follow-up survey in the next 2-3 years could be of added-value to document achievements related to funded projects. The ULiège Cofund alumni could also serve as an important network and opportunity for future collaborations.

3.3.2. Ethical issues

All fellows who benefited from EU funding were required to conduct an ethics self-assessment, including a check-list, to consider possible issues and disclose any potential consequences.

Special attention was given to lead assessors by providing assistance in completing the "ethics screening". Additional support was offered for projects where ethical issue were raised and with the completion of the ethics recommendation report. According to ULiège regulations the supervisors are responsible for the ethical assessment of a project, as they are well versed with the procedures to follow, the role of ethics committees within their faculty and the institutional regulations (www.recherche.uliege.be/ethics).

In 2014, ULiège developed a new tool for ethical assessment based on an integrated approach of Training-Forum-Appraisal-Analysis-Regulation

(https://www.recherche.uliege.be/cms/c_9167585/en/ethical-and-responsible-research). The Ethics and Scientific Integrity Council (CEIS) was charged with managing the new approach. Their role was to analyse and provide recommendation for special cases (IT, Dual use or Development) and when grievances were submitted, they led the misconduct analysis procedure.

In 2016, an ethics committee for Social and Human Sciences was created, adding to the existing committees in Psychology, Humans and Animal Sciences.

The application of the ethics assessment was slightly different for outgoing postdocs who may have been subject to additional rules and procedures by their host institution. If a feedback report had recommendations for the ethics assessment, the host institution abroad was required to ensure that all existing and required rules were followed. Additional documentation may have been requested to ensure credibility of the project.

In total, 42 projects that required an ethical assessment were identified.

Discipline	IPD	OPD
CHE	0	1
ECO	1	0
ENV	5	3
LIF	11	11
SOC	7	3

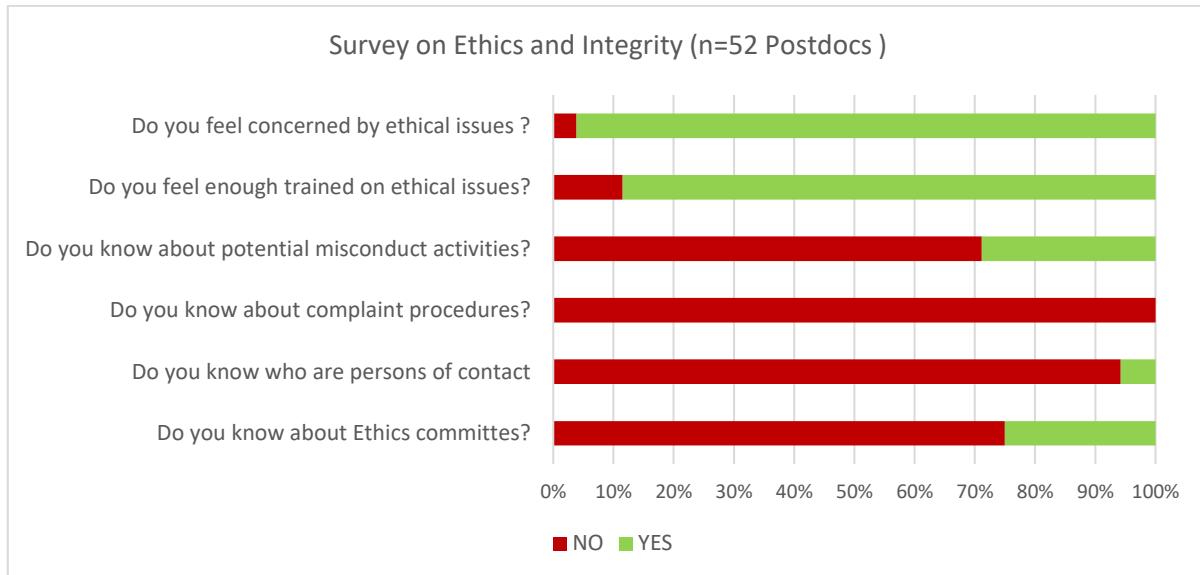
Figure 14: Number of project requiring an ethical assessment

The list of ethical issues reported by fellows is provided in the Attachment section of this report (Ethics Assessment list). Throughout the BeIPD programme, research projects using hESCs were not funded.

Each of the projects with ethical considerations were adequately assessed by the supervisor and the fellow who provided additional information, authorisations and justifications as needed.

3.3.3. Ethics training

It became clear very early on that many fellows were not well-versed in assessing ethical issues. A short survey that was launched in 2015 confirmed that Recognised Researchers (R2 = postdocs) had concerns but were not confident about what actually constituted misconduct. Moreover, they were unaware of who to contact and the resources available to assist them. When compared to PhD candidates, they were no further ahead in their understanding or evaluation of ethical issues.



Source: ARD-ULiège survey on Ethics and Integrity, 2015

Figure 15: Survey on ethics and integrity

Tools and trainings on ethics were organised by ULiège for researchers covering topics from sensitisation (Ethical principles, Professional attitude, Good practices in research) to advanced questions (reproducibility). (https://www.recherche.uliege.be/cms/c_9167585/en/ethical-and-responsible-research; https://www.recherche.uliege.be/books/formations-transversales/22/p_64).

Fellows were encouraged to participate. Assessors and supervisors could moreover suggest that fellows pass the FELASA certification for animal housing, handling and experiment training. 4 IPDs received the certificate.

3.3.4. Supervisor Feedback

Follow up interviews held with supervisors and members of the evaluation/selection teams showed that BeIPD fellows had a very positive impact on their research units:

- *The programme enabled labs to recruit high level postdocs and to increase the internationalisation within the research teams*
- *Fellows from institutions that ULiège has previously not worked with, brought new ideas and views on current and future research*
- *Numerous publications were accepted in renowned journals*
- *Scientific networks were enlarged helping to increase international visibility*
- *Experience in the research units boosted the careers of the PhD students (Early Leave Researchers)*
- *Laboratories and research units benefited from intercultural exchanges, both on a scientific and a social level.*

- All parties benefited from a positive and successful experience of mobility
- A greater case was made for increased institutional support for child care as this is a problem for all ULiège researchers

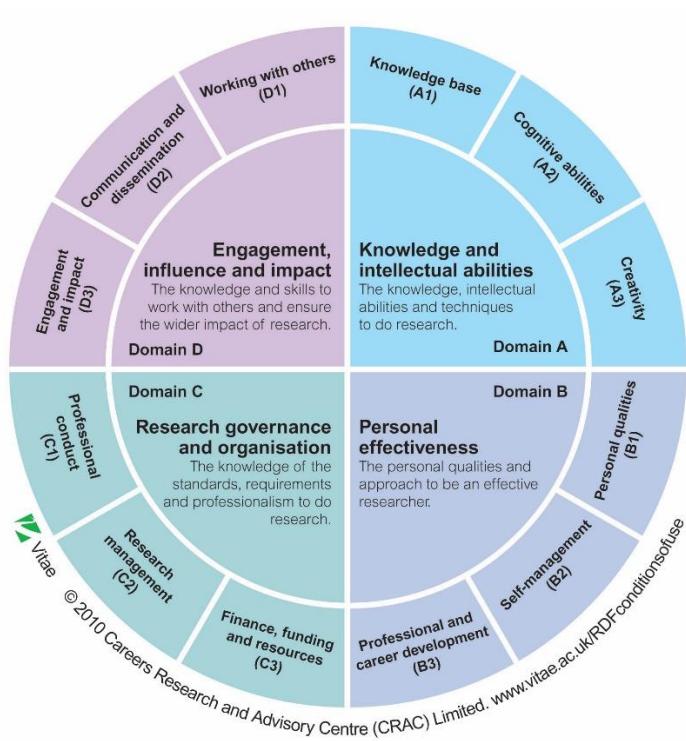
Through further discussions, it was apparent that postdocs were more aware than their supervisors of the available support and training offered for career development.

Only two supervisors indicated problems of insufficient research or lack of motivation on the part of their fellows. However one third of IPDs left before the end of their contracts for career purposes. In these instances, ULiège worked hard to obtain bilateral agreements for the researcher and the research unit, taking into account the unmet research objectives and proactively addressing intellectual property concerns. At this point in time, it is too early to determine the actual impact of the “Early Leavers” on research, but what is sure is that the fellows were not replaced in the research unit and potential research was lost.

3.4. Career development

3.4.1. Training and teaching

The development and growth of a fellow’s career was at the heart of this programme. A budget of up to 15,000 EUR/year was earmarked for initiatives that supported a postdoc’s professional development: conference attendance either as a participant or an organiser, publications, training, etc.



The Vitae-UK Researcher Development Framework (RDF) was used as a reference for the classification of skills.

Seminars, trainings and events were organised free of charge in all domains, enabling the postdocs to develop their skills. An annual programme was published online and organised according to institutional HRS4R priorities:

- For researchers at all levels: https://www.recherche.uliege.be/cms/c_9022734/en/training ;
- For employees including researchers: <https://www.ulg.ac.be/books/formations-professionnelles/2018-2019/>

Figure 15: Vitae-UK Researcher Development Framework (RDF)

If a programme was not available in house, postdocs were invited to join external sessions. 17% took advantage of external opportunities.

Domain A - Knowledge and intellectual abilities: Depending of the acquisition and comprehension of various concepts, postdocs selected curriculum to enhance their competencies. The most requested courses were in statistics and data management: (Bio)Statistics, Multivariate statistics, Time series analysis, Data management.

Several postdocs in Life Sciences attended training sessions on the use of animals in research and received the FELASA (Federation of European Laboratory Animal Science Associations) certification.

Domain B - Personal effectiveness: Fellows attended training sessions on Intercultural communication, From evaluation to motivation, Team Management, Conflict management, Use of social network for career development, Professional skills for research leaders, and writing an Academic CV. Some participated in a unique and creative pilot programme (see below Link'in Wallonia)

The ULiège Foreign Languages Institute offered courses in national and foreign languages : French, German, Spanish, Chinese, Japanese. Many fellows benefited from the classes and greatly improved their level of French, the university's official language, successfully passing the DELF (Diplôme d'études de langue française) - DALF (Diplôme approfondi de langue française) exams.

Domain C - Research Governance and organisation: Fellows attended training sessions on writing grants and article reviews, and on professional conduct (ethics, intellectual property rights, Open Science, health and safety, hazardous waste management).

Domain D - Engagement, Impact and Influence: All post-docs attended a congress or conference, primarily to present their results. They were involved in tutoring, mentoring and supervising students and young PhD researchers. Many contributed to lectures and some were even involved in developing course curriculum. Postdocs were also offered the possibility of attending a training on teaching organised by IFRES, but none of them took advantage of the opportunity.

They were given media training and tools to effectively communicate their scientific research to the general public. Public speaking and presentation skills were also developed as part of their professional development.

Some decided to spend a month or two visiting other labs in Italy, the UK and Switzerland for the purpose of collecting data or gaining experience with specific techniques.

Professional Skills for Research Leaders

Postdocs were offered the opportunity to participate in a long term seminar on leadership development (www.recherche.uliege.be/psrl). This programme was developed on the basis of an Epigeum online course, with the support of University College Cork. It was personalized for the ULiège community by a steering committee comprised of young established researchers and Vice-Deans for Research. The development of this project, supported by the Federation Wallonie Bruxelles, was reported on Orbi (<http://hdl.handle.net/2268/233231> ; p.9 ss). It was presented at a Staff Training on leadership organised by the Freie Universität Berlin in June 2018 (<https://orbi.uliege.be/handle/2268/226197>)

3.4.2. Networking

Postdocs attended networking activites and participated at conferences and researcher events. ULiège created two new original initiatives, developed with the support of the Federation Wallonie-Bruxelles.

- **Linkin' Wallonia**, a programme launched in 2013-2014, invited postdoctoral fellows to learn about the political, socio-economic and research structures in their host region of Wallonia. A series of conferences and seminars were given by experts from different institutions, which enabled postdocs to gain insight into the different regional structures. Ideas were presented on the different roles they could have in designing Wallonia's scientific future, regardless of whether they stayed in the local area in the long term. They had the opportunity to visit the Walloon Parliament as well as the European Parliamentarium to discuss their research with politicians, regional research leaders and industry researchers (Union Wallonne des Entreprises).



Figure 16: Fellows participating in the Linkin' Wallonia programme

A part of this programme took them “out of the lab” with an opportunity to develop a personal project relating to Walloon culture: theatre, football, visits, or any other week-end activity that could be organised with their family.

The only requirement was to present their findings in an artistic manner (photography, poster, video, collage, sculpture, etc.) at a wrap up session with internal and external visitors, including the Minister for Research and the Rector of the University. The foreign postdoc feedback was very positive, even if initially they were concerned about taking time outside of the lab for the programme. In the end, they were proud of their work and more importantly proud about their integration into Belgian society and the connections made with peers. Life as a career researcher can be lonely and this programme provided the opportunity for social and cultural enrichment during the fellowship.

ULiège had the opportunity to circulate results from this programme at the Vitae Conference in Birmingham in September 2018. A webpage of the project can be found here: https://www.recherche.uliege.be/cms/c_10304549/en/projects

- **Meet & Greet** gatherings which discussed BeIPD research project topics were organised twice a year as after work events. Key note speakers from outside academia were invited to dialog with the postdocs and the public. This event allowed researchers to exchange and consider ideas and practices with professionals and peers. 8 meetings were organised from February 2016 through fall 2018, and required mobilising ULiège partners. Information and short reports were published on the Facebook page of the Euraxess Mobility Centre.



Figure 17: Meet & Greet events

3.4.3. Outreach activities

The purpose of the outreach activities was to explain the benefits of research to a large audience and to bring knowledge and expertise on a particular topic to the general public. These activities offered an interaction between the researcher and the receiver of the message, therefore the engagement was a two-way communication between the researcher and the public.

BeIPD Cofund postdocs contributed to the European Researchers' Night where they had the opportunity to explain their research to hundreds of visitors from different walks of life in a public mall (see the video entitled 'MSCA Researchers @ULiege : from the lab to the mall on <https://youtu.be/Vq-IODRTQsM>). A European Corner was designated where MSCA projects and researchers were featured.



Figure 18: European Research Night in a mall – Outreach activities by fellows

In 2016, Delphine Franssen, an OPD Cofund fellow, was awarded second price for her "Research in 3 minutes" during a science "slam" session at the European Research Night at the EU Parliament.

3.4.4. Feedback from fellows

Everyone who participated in a ULiège training was asked to complete an evaluation form and to suggest future topics of interest that could be added to the training portfolio. Fellows requested workshops on Academic CV writing, grant writing and network management. These trainings were added to the course catalogue.

Fellows from the first 3 cohorts responded to the questionnaire and evaluation form. 90% were convinced that transferable skills training were critical for their career development. Most were looking to improve their research and networking skills. Teaching skills were lower on the priority list.

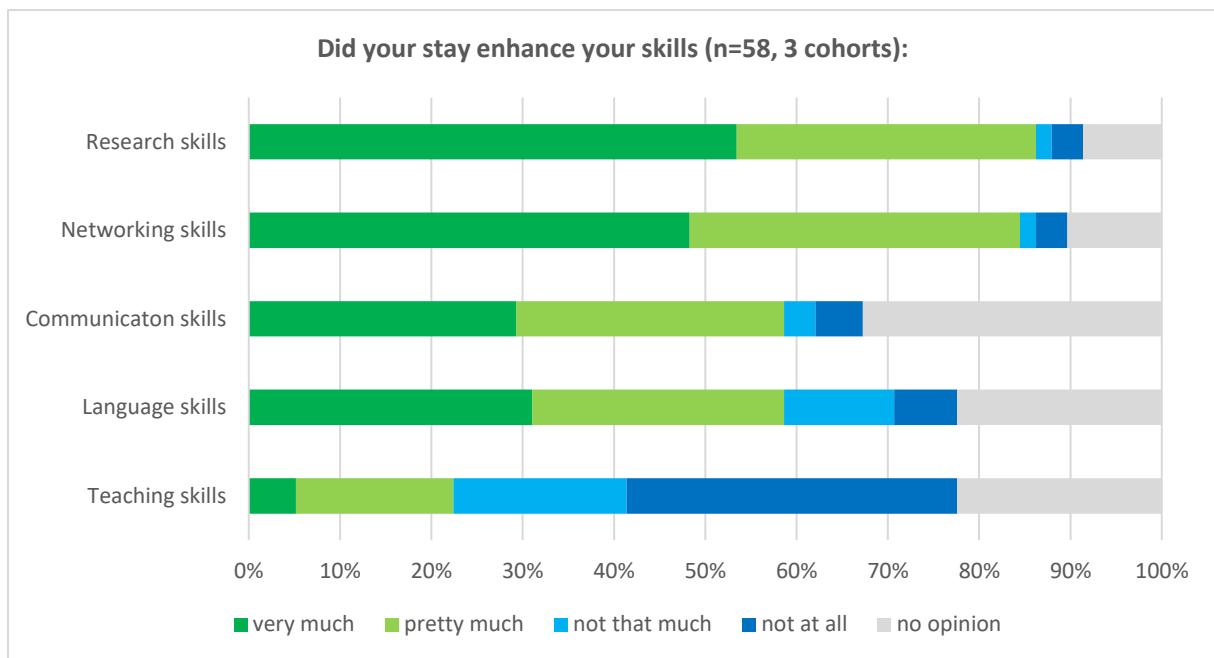


Figure 19: Skills survey

3.5. Dissemination, Promotion and Communication

Diffusing and communicating the postdocs' research was important to the success of this project. The goal was to promote the results within the research and innovation community and with internal and external stakeholders in order to maximize the impact of the BeIPD project and the resulting research. This was achieved by publishing the calls and related documents on visible and public platforms and making publications, flyers, presentations, videos and events accessible to all.

Information about promoting publications, scientific communication and outreach activities was highlighted earlier in this report.

Listed below are some of the ways in which the programme and the research was promoted and featured:

3.5.1. Videos

Videos were posted on ULgTV to promote the programme, and were available in both French and English.

- *Liège, Ardente et émergente*, bilingual presentation of the programme and the fellows: https://www.recherche.uliege.be/cms/c_9194559/en/liege-ardente-et-emergente (2014)
- *Chercheurs Marie Curie : du labo au centre commercial - Marie Curie researchers : from the lab to the mall* : <https://www.youtube.com/watch?v=Vq-IODRTQsM> (2017)
- *Post-doc à l'ULiège: Deux ans après - Outcomes of a Post-Doc in Liège*: <https://www.youtube.com/watch?v=dJ-ul4If9GA> (2018)
- Videos were also promoted in journals such as l'Avenir.net (Comment les chercheurs étrangers perçoivent-ils la Cité Ardente ? https://www.lavenir.net/cnt/DMF20140507_00472655)

3.5.2. Publication on ULiège media platforms

The Cofund portal www.uliege.be/cofund published links to articles and news. All information was posted on social media (Facebook, LinkedIn, and Twitter).

Several other publications featuring the programme and the fellows were distributed with the support and assistance of the ULiège Communications department. Some examples are highlighted below:

Reflexions, the University website that makes knowledge accessible to all, published articles on research conducted by COFUND fellows and included their CV:

- http://www.reflexions.uliege.be/cms/c_380819/en/laenen-benjamin :
http://www.reflexions.uliege.be/cms/c_380824/en/bryophytes-have-certainly-evolved
- http://www.reflexions.uliege.be/cms/c_417017/en/westhoff-martijn :
http://www.reflexions.uliege.be/cms/c_417022/en/math-for-understanding-water-flow

Le 15e jour, the ULiège Journal widely consulted by the ULiège community, alumni and other Belgian stakeholders, frequently published articles on the project, calls and results in their “Brèves”

- Du soutien pour les postdocs: http://le15ejour.uliege.be/jcms/c_49096/fr/du-soutien-pour-les-postdoc (Nov. 2015/246)
- 7 Post-docs à l'étranger: http://le15ejour.uliege.be/jcms/c_48544/fr/7-post-docs-a-letranger, (April 2015)
- Postdocs In & Out – La première cohorte termine ses mandats en 2016 :
http://le15ejour.uliege.be/jcms/c_50735/fr/post-docs-in-out (May 2016)
- Highlights of prize winners (ie Antonio Ricciardetto, Zographos Price),
http://le15ejour.uliege.be/jcms/c_51298/fr/alma-mater-en-2-mots (Sept. 2016)
- All articles can be found using the search engine on le15ejour.uliege.be



Figure 20: Portrait of postdocs

Portraits and testimonials of the postdocs were presented on Euraxess webpages:
https://www.recherche.uliege.be/cms/c_9157066/en/testimonials.

“These are a few of my favourite things...” 3 Postdoc fellows share what they love about ULiège
https://www.recherche.uliege.be/cms/c_9920387/en/les-coups-de-coeur-de-trois-post-docs-a-l-uliege

3.5.3. International coverage

The best ambassadors for the project were the post-doc themselves. In their own unique way, they each communicated, presented and promoted their research through the vehicles described above.

The project manager was frequently called upon to share best practices and speak about the project in informal settings. However several formal invitations were extended and are detailed below:

Media and Press releases

- EU Research Magazine : Building the foundations of tomorrow's research, https://www.ulg.ac.be/upload/docs/image/png/2016-08/eu_research_magazine.png, Aug. 2016

Presentations at International Meetings

- *Implementing OTM-R principles in BEIPD. Paving the way towards enhanced evaluation practices. A case study.* Raphaëla Delahaye, Erasmus Staff Training on HRS4R, Liege, May 2017, https://www.recherche.uliege.be/upload/docs/application/pdf/2017-12/stt-2017-delahaye_r.-implementing_otm-r_principles_in_beipd.pdf
- *MSCA-Cofund success story: Be International Postdoc @ULiege.* Isabelle Halleux, MSCA2019, Bucharest, June 2019, <http://hdl.handle.net/2268/236324>
- *Think Out-of-the-box @ULiège.* Raphaëla Delahaye and Thérèse Dupont, Workshop, Vitae Annual Conference 2019, Birmingham, Sept. 2018. https://www.vitae.ac.uk/events/browse-event-presentations-reports-outcomes/presentations-from-2018-events/presentations-and-posters-from-vitae-conference-2018/workshops/b6-out-of-the-box_integration-at-uliegeraphaela-delahaye-and-therese-dupont.pdf
- *Round table with Victoria Osorio, IPD fellow about being a female researcher in Liege.* Carrières, trajectoires professionnelles et conditions de travail des femmes scientifiques Liège, Cité miroir, 8/3/2017.

Publications in Open Access

- BEIPD-COFUND satisfaction survey – Results. Raphaëla Delahaye, Report, 2016, <http://hdl.handle.net/2268/204682>
- See communication links above.

Booths

- ULiège booth at the MSCAA Alumni Annual Conference, Leuven, March 2018. Six BeIPD fellows were part of the presentation team.
- MSCA & BeIPD Cofund booth at the European Researchers Night in Liege, held by Ophélie Ladrière, Raphaëla Delahaye and Cofund fellows (2016, 2017, 2018).



Figure 21: MSCA booths, Leuven and Liège

3.5.4. Indirect contributors

Many people contributed indirectly to the promotion and dissemination of this project from international institutions or associations that published the calls on their webpages to experts who added the assessor role to their CV or fellows who referred to their BeIPD MSCA Cofund fellowship on their LinkedIn profiles. It is impossible to capture the full extend and breath of reach that this project attained, knowing that thousands of researchers and dozens of institutions benefited from the BeIPD research projects.

4. Impact

This section summarizes the impact the programme had on (1) science, (2) career development and (3) ULiège practices in HRS4R (including OTM-R).

4.1. Impact on Science

Since 2014, fellows from all disciplines have uploaded 1797 publications into Orbi (<http://orbi.uliege.be>): 583 scientific publications, 226 books and book chapters, 801 conference presentations and 186 speeches, outreach activities, teaching and learning publications. Some publications are still under review and in the process of being revised. An analysis of the full impact should be revisited in 2-3 years once joint publications with host institutions are published.

During their time at ULiège, IPD fellows were invested and engaged in the Belgian society, met with industry partners and developed new partnerships and networks that positively impacted their career, their personal research and the research of their host lab. OPD fellows also devoted countless hours to research initiatives, outreach activities, events and meetings at their host institutions.

4.2. Impact on Career development

Fellows took advantage of the numerous opportunities to develop their skills and professional careers during their stay in Liège or abroad. They developed knowledge of best practices in professional conduct (Ethics, IPR, Open Science, Health and Safety) and increased their language competencies. They were made aware of the importance of the Charter and Code for researchers and HRS4R.

They were given:

- An explicit budget for the purpose of career development. It was not always easy for them to devote funds to their personal needs when research costs (such as lab expenses, materials, etc.) were often the priority. Fruitful discussions took place with the BeIPD project manager regarding opportunities to develop e-journals rather than paper journals or to publish in open access given the price, to find sponsors for their congress, etc. The development of these important new skills had a positive impact on improving their decision-making skills and job organisation.
- Detailed information regarding contracts, rules and regulations and restrictions that applied to employees. This was an invaluable contribution to their development as established researchers and team leaders.
- A broad range of training sessions and individual support for their personal development. Opportunities such as Linkin'Wallonia, offered unique experiences that challenged them to think "outside the box" and to experience new ways of expression and interaction.
- Networking opportunities to meet non-academic partners (politicians, industry managers and other professionals) who had the potential to influence their research careers and their research fields.
- Sessions on scientific writing for researchers. This was helpful for writing grants or applications, especially when learning what constitutes "science". Once fellows better understood the governance structures, they could apply their knowledge and be more effective when applying for grants and funding. Several researchers were awarded noteworthy positions in Belgium and abroad as a result.
- Opportunities to work with others, to gain experience in a supervisory role, to train and mentor younger researchers and to develop their teaching skills.
- Opportunities to engage with the wider society and to develop their ability to disseminate their research using different media platforms.

Since many postdocs only recently completed their fellowship, it is difficult to estimate what the actual overall impact is on a researcher's career but this could be analysed over a longer period.

A study was performed to determine the current positions of OPDs. Of the 32 fellows, 28 are still involved in research in academia, one is working as a Director at an institution and three joined companies developing research. The figure below shows that 17 of 32 fellows came back to Belgium. Two of them have permanent positions as university professors in Belgium and three of them are in the private sector. Four have received a 3-year grant from the National Research funds (Chargé de recherche FRS-FNRS). Eight fellows are continuing their research in their host institution abroad; and seven went on to new horizons with temporary or permanent contracts (two in the USA). These results exceeded all expectations after such a short term.

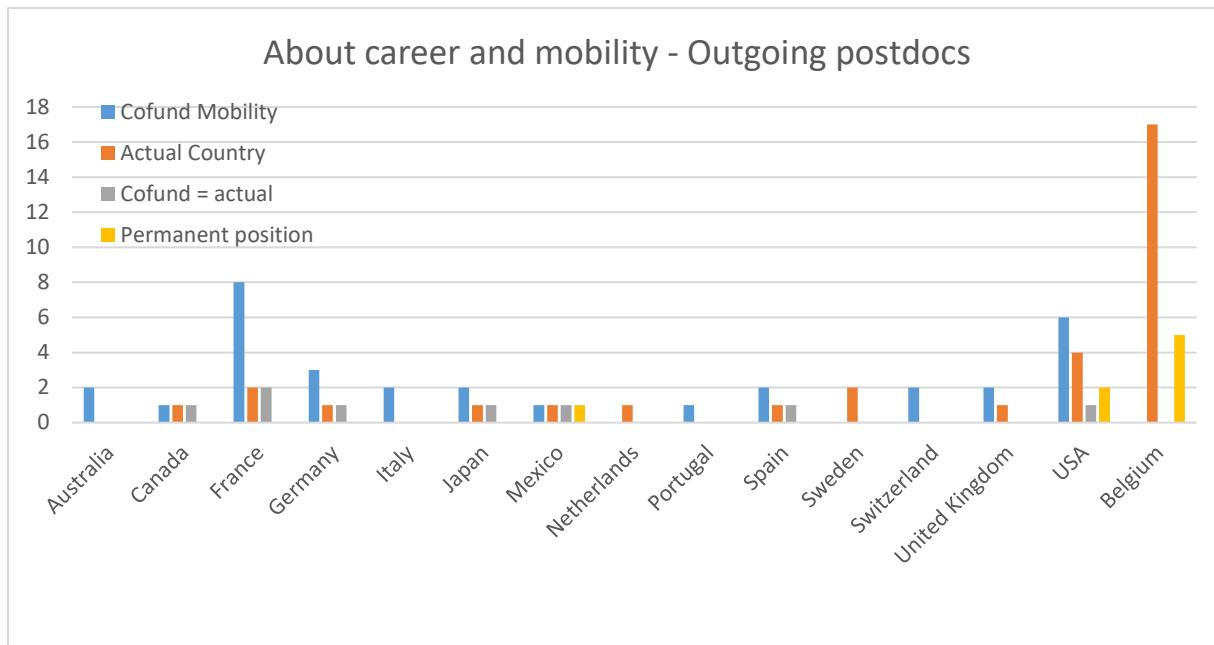


Figure 22: About career and mobility (OPD)

4.3. Impact on ULiège practices

Many institutional procedures improved during the BelPD-Cofund project. ULiège was recognised with the HRS4R award in 2011 and this programme helped define and implement several elements in the action plan, notably the OTM-R procedures.

- Top applications were selected using transparent OTM-R procedures according to the applicant's project, merit and CVs (including career breaks or other considerations). ULiège gained experience in writing guidelines for applicants and assessors, managing numerous applications within a short time frame, incorporating external evaluators in the process, training assessment teams and offering feedback to the applicants
- Training workshops and events which individual career support were developed to reinforce the existing internal support structures.
- ULiège adapted to the needs of the post-docs' academic status, including employment status clarifications, adjustments for work-life balance (flexibility, parental leaves) and requests for "after BelPD support".
- Finally ULiège implemented quality assurance procedures into the framework of this project for GDPR complaints, dissemination and integration of the HRS4R Action Plan to ensure the sustainability of the procedures.

ULiège submitted proposals for new MSCA Cofund programmes in 2016 and 2018 but were not successful. The feedback received noted that the procedures in place seemed to be efficient and effective therefore there was no need for the changes proposed in the new projects. Through the lens of an external assessor, the process in place may appear to be sufficient, however it has not met the changing needs of the postdoctoral fellows, nor will the current procedures support the institution's long-term plans to increase excellence across all disciplines. As we gain data to support these arguments, a stronger case will be made for a need for future projects. Despite this setback, a call was launched in 2019 for fellows in the STEM+Agrobiotech field.

Contact with past fellows will be maintained to ascertain the long term impact of the programme and to promote MSCA opportunities and membership. Best practices and results from this project will be shared through publications and events after approval of this report.

5. Project Public website

Information related to this project is available on <http://www.ulg.ac.be/cofund>

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