



## Linking Research & Innovation for Gender Equality

# ULB's Gender Equality Plan for the STEM

GEP Second version

19/10/2022



UNIVERSITÉ  
LIBRE  
DE BRUXELLES

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# 1 Introduction

This document presents the Gender Equality Plan (GEP) that the *Université libre de Bruxelles* (ULB) has designed for its two STEM<sup>1</sup> faculties, the Faculty of sciences and the Brussels School of Engineering, within the framework of the EU funded CALIPER project<sup>2</sup>. This Horizon 2020 project aims at enhancing the gender balance in STEM fields, thereby contributing to the European Research Area (ERA) priorities on Gender Equality and stimulating a dialogue and collaboration between academia, public authorities, professionals and industry players in order to tackle gender inequalities. The ERA objectives on gender equality are the following<sup>3</sup>:

1. Removing barriers to the recruitment, retention and career progression of female researchers;
2. Addressing gender imbalances in decision making processes;
3. Integrating the gender dimension in research and innovation content.

The Council of the EU's Conclusions on the New European Research Area (adopted on 1 December 2020)<sup>4</sup> give even greater priority to gender equality in research and innovation. The Council recalls with great concern that there continues to be a major gender imbalance preventing Europe from using the full potential of its R&I system aiming for excellence. Indeed, gender equality offers many opportunities and benefits to universities and research organisations<sup>5</sup>:

- **It fosters the attraction and retention of talents.** Universities and research organisations are in constant competition for talent. Training qualified and creative researchers is costly and takes time. It is thus important to attract talented people and to avoid the abandonment of scientific careers. This is especially true for the 'leaky pipeline'<sup>6</sup> of women in science, which carries an important loss of knowledge and an organisational cost.
- **It leads to economic benefits.** Gender equality is an increasingly widespread criterion to access public funding, since funding agencies are bound to the objectives of the European Research Area on gender matters. This is clearly the case of the EU work programmes Horizon 2020 and Horizon Europe. Moreover, gender-balanced teams, gender expertise and gender dimensions of research can lead to a broader set of needs, expectations and usages of knowledge.
- **It increases excellence and research quality.** Adopting a gender perspective in research and innovation can increase the quality of research, leading universities and research organisations to become more competitive. It allows addressing gender biases in research and teaching, building more evident-based knowledge. Additionally, teams with a balanced number of women and men tend to perform better.

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<sup>1</sup> STEM stands for Science, Technology, Engineering and Mathematics.

<sup>2</sup> <https://caliper-project.eu/>

<sup>3</sup> Council of the European Union (2015), *Conclusions on advancing Gender Equality in the European Research Area*. <https://data.consilium.europa.eu/doc/document/st-14846-2015-init/en/pdf>

<sup>4</sup> <https://www.consilium.europa.eu/en/press/press-releases/2020/12/01/new-european-research-area-council-adopts-conclusions/>

<sup>5</sup> European Institute for gender equality (2016), *Gender Equality in Academia and Research. GEAR tool*. Luxembourg: Publication Office of the European Union.

<sup>6</sup> Metaphor used to describe the progressive "evaporation" or disappearance of women as they advance in the career (Dubois-Shaik & Fusulier, 2013).



- **It creates better work environments.** Organisations are gendered and their staff should be able to freely develop their skills and work in a gender-friendly environment. Adopting a gender-sensitive approach thus is key to the well-being of staff.
- **It is leverage for organisational change.** Gender equality work involves different kinds of staff and cooperation between them. This is a great opportunity to enhance the sense of community and belonging. It also leads the organisation to higher transparency and accountability. It helps identifying biases that go beyond gender issues and thereby improve the institution as a whole.
- **It is a matter of fairness, democracy and credibility.** Women and men should have the same opportunities, resources and power. They should be able to participate equally in all areas of society, higher education and research. The innovation that universities bring to society is not limited to technical matters but includes also social and cultural innovation. Social inequalities should not thus start at the university level. Gender equality helps universities and research organisations to reflect more accurately the reality of the society in which they are inserted and to make sure that the different needs and interests of the population are taken into account.

In the aforementioned Conclusions, the Council calls on the Commission and Member States for a renewed focus on gender equality and mainstreaming, through the instrument of gender equality plans (GEPs). Against this background, the present GEP seeks to promote gender equality in STEM fields, thus contributing to both scientific excellence and the core values of the ULB, a committed university which defends the principle of free inquiry, refuses all arguments of authority and promotes democracy, freedom, equality, and social justice.

A GEP is a set of actions aiming at conducting impact assessment of procedures and practices to identify gender bias; identifying and implementing innovative strategies to correct any bias; and setting targets and monitoring progress via indicators<sup>7</sup>. This GEP is the product of the analysis carried out during the first work package of the CALIPER project (Gender equality assessment<sup>8</sup>), as well as of the discussions held with more than 80 different internal and external stakeholders during the second one (GEP design). Three internal groups and one external group have been established to carry out the project (figure 1). The CALIPER team is in charge of project leadership and project management. The steering committee is formed by members from the high and middle management of the University and the STEM faculties, actors and actresses of the University's gender policy and STEM representatives. It has a consultative and monitoring role. The working group is formed by STEM professors and researchers. They played a key role in the gender assessment carried out during the first phase of the project. Finally, a Research & Innovation Hub has been created with external stakeholders from ULB's R&I ecosystem. The R&I Hub has a consultative role, but it also aims at exchanging good practices and looking for common solutions and collaborations for gender equality in the STEM.

The current GEP presented here is a new, refined and second version – crafted in response to evolving project needs [original GEP designed in August 2021].

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<sup>7</sup> European Commission Communication on 'A Reinforced European Research Area Partnership for Excellence and Growth' (COM(2012) 392 final). [https://eige.europa.eu/sites/default/files/era-communication\\_en\\_2012.pdf](https://eige.europa.eu/sites/default/files/era-communication_en_2012.pdf)

<sup>8</sup> The assessment can be found in deliverables D1.2 (Internal Gender Equality Assessments Results) and D1.3 (Gender analysis of research and innovation ecosystems and reports from the local R&I).



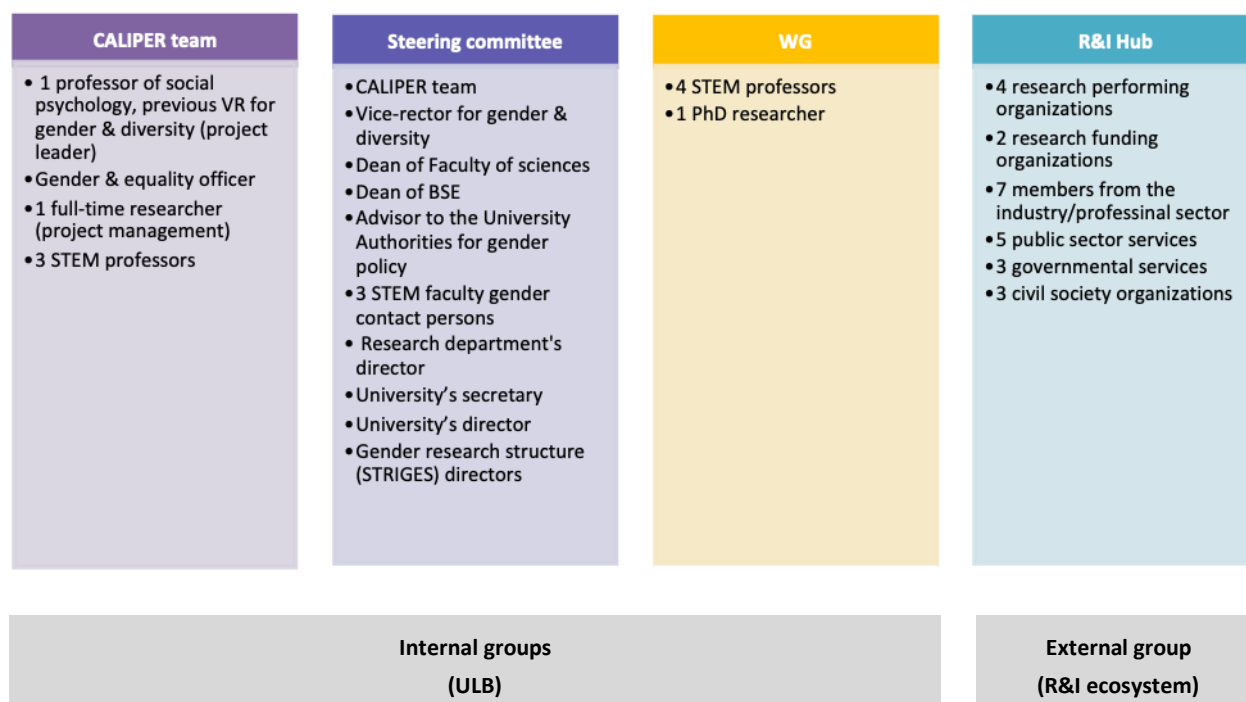


Figure 1. Composition of CALIPER project internal and external groups at ULB

The results of the analysis were presented to ULB members in four open thematic workshops and to the external partners of the project in three dialogues with the R&I Hub to identify possible strategies, courses of action and collaborations and the construction of possible change scenarios. Then, a meeting was organized with the two Deans of the STEM faculties and the Vice-rector in charge of gender and diversity to prepare the strategy to be followed, the priority areas of intervention and possible courses of action. The strategy, priorities and courses of actions were next discussed and refined with the steering committee<sup>9</sup>. Following the step and based on the strategy and priorities set, one dialogue with external R&I Hub members and twelve meetings with different ULB members were held in order to define the specific actions. A first set of actions was then presented to and discussed with the consultative WG. Based on the feedback received, the actions were redefined and/or improved and included in the first draft of the GEP.

The GEP was then presented to the Faculty council of the Polytechnic school of Brussels on 23<sup>rd</sup> June 2021 and the Faculty council of the Faculty of sciences on 1<sup>st</sup> July 2021. In both cases, it was unanimously approved. As a final step, the GEP was presented to ULB's Academic council for its approval on 30<sup>th</sup> August 2021 and signature by the Rector, the Vice-Rector for gender and diversity and the two STEM Deans (Faculty of sciences and Brussels School of Engineering – BSE). The whole process is described in figure 2.

<sup>9</sup> This group is formed by the two STEM Deans, both the current and former Vice-rector in charge of gender and diversity, the advisor to the University Authorities for gender policy, three STEM faculty gender contact persons, the director of the Research department, the University's secretary, the University's director, the University's gender and diversity officer and the gender researcher in charge of the CALIPER project.



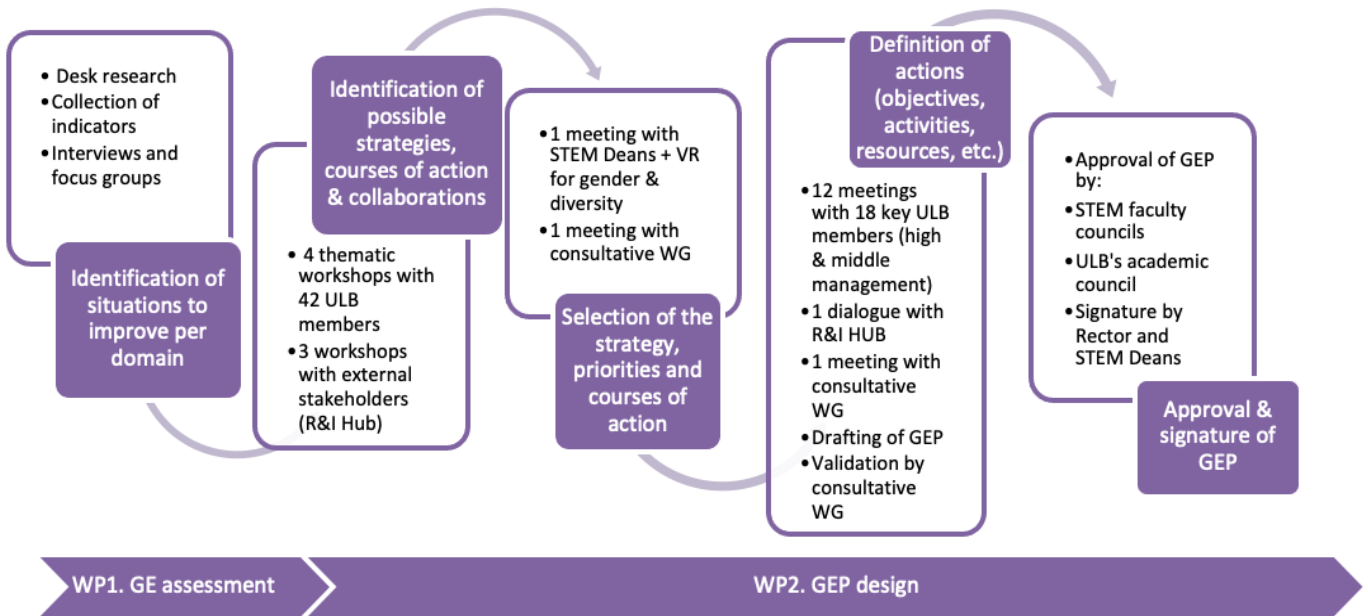


Figure 2. GEP process design





## 2 Gender Equality Strategy and Key Priority Areas

The CALIPER project aims at promoting gender equality in the STEM fields in research performing and research funding organizations. As ULB is not a technical university, the **GEP is designed for its two STEM faculties** (Faculty of sciences and Brussels School of Engineering – BSE). During the assessment phase, gender equality problems and gaps have been identified both at the institutional and faculty levels. Indeed, some gender inequality situations are transversal to different disciplinary areas and/or concern the whole institution. However, there are also some gender equality issues that are specific to the STEM fields, such as the low proportion of female students and professors or the very limited integration of the gender dimension in research content.

The strategy that the GEP adopts is thus twofold: it focuses on *both STEM-specific situations* to improve *and* on **transversal problems** that will be, however, only **addressed at STEM faculty level**. Regarding STEM-specific situations, it is important to note that, in some occasions, these are related to general institutional processes (e.g. recruitment and selection procedures). In those cases, actions will be taken at the institutional level (e.g. feasibility studies) and the whole University may benefit from them. Transversal problems not specific to STEM (e.g. the limited knowledge of services and protocols to prevent and handle harassment) will be addressed at the faculty level, thereby serving as pilot experience for the future of the University's gender policy. Only measure 7, the proposal for a gender-balanced participation in Advisory Boards, focuses on a transversal problem that will be addressed at the institutional level. These boards being *institutional* decision making bodies, the solution can only be implemented at this level.

The gender equality analysis was carried out in 2020<sup>10</sup> in nine different areas<sup>11</sup>: human resources, governance, research (contents), innovation and transfer to market, teaching, students and student services, communication, sexism and sexual harassment, and intersectionality. The following situations have been identified:

<i>Human resources</i>	1. Much lower proportion of women than men in the academic body of the STEM faculties (23.8% in the Faculty of sciences and 8.6% in the BSE).
<i>Institutional governance</i>	2. Limited institutionalization of GE policies at faculty level. 3. Unavailability of gender indicators at discipline level, making it difficult to identify specific STEM disciplinary areas or fields in which women are particularly underrepresented, as well as to monitor progress. 4. Low participation of women in certain decision-making bodies at the institutional level (some Advisory Boards).
<i>Research</i>	5. Sex/gender perspective generally absent in STEM research contents. 6. Low presence of women in PhD juries.
<i>Transfer to market</i>	7. Much lower proportion of women than men leading STEM research projects and spin-offs (27.1% in the Faculty of sciences and 6.9% in the BSE).
<i>Teaching</i>	8. Sex/gender perspective is generally absent in STEM teaching.

<sup>10</sup> Therefore, data refer mainly to the three previous years (2017-2018, 2018-2019 and 2019-2020). The situation has hardly changed since then.

<sup>11</sup> As suggested in the analytical methodology provided in the deliverable D1.1 Internal and external assessment methodologies and guidelines.



<i>Students services</i>	9. Much lower proportion of female students than male students in the STEM faculties, particularly at the undergraduate level (30% in the Faculty of sciences and 21% in the BSE).
<i>Institutional communication</i>	10. Association of STEM studies and professions with men and masculinity still remains.
<i>Sexual harassment</i>	11. Limited knowledge of, and thus access to, existent services and protocols to prevent and effectively deal with cases of discrimination and harassment
<i>Intersectionality</i>	12. Lack of data on some diversity grounds (i.e. ethnic/migration origin) and difficulty to operationalize intersectional actions.

**Table 1. Situations identified during the assessment phase**

The low proportion of women in the academic body of the STEM faculties (Situation 1) is a key priority problem upon which it is essential to act. This low proportion is linked to problems in other domains such as innovation/transfer to market (S6) and governance (S2, S3, S4) since it has an impact on the actual number of women available to lead research projects and participate in decision-making bodies. Indeed, the percentage of female leaders of STEM research projects is similar to the percentage of women in the academic bodies of each faculty and the low proportion of female academics makes it difficult to attain a gender-balanced participation in STEM decision-making bodies.

The underlying problem regarding the low proportion of women in the academic body of the STEM faculties resides particularly at the academic body's entry level (recruitment), which is, in turn, partly explained by the low proportion of female applications received for STEM vacancies, itself linked to the low proportion of female post-doctoral researchers, a key transition period in the academic career. If we go further back in the academic career, the fundamental problem is the low proportion of female students at the undergraduate level (S8). However, a mutual influence can be hypothesized: not only the lack of female STEM students translates into a lack of women in the STEM academic body in the future (assuming that women are also scarce in the STEM departments of other universities), but the absence of feminine role models and the overall masculinization of STEM fields can also discourage young girls to pursue STEM studies<sup>12</sup>. It is therefore essential to intervene at both levels, reason why both human resources and students are priority areas of the GEP.

Also of greatest importance is the area of governance because it sets the conditions for the implementation, monitoring and sustainability of the other gender equality measures. On the one hand, gender-balanced participation in decision-making is obviously important. On the other hand, the institutionalization of gender equality principles at the faculty level and the establishment of indicators for its monitoring will guarantee the sustainability of the GEP and its long-term impacts. Therefore, **human resources, students and students services, and governance are the three main priority areas of the GEP**. Accordingly, most of the **structural measures** included in this GEP are situated in these areas.

However, other areas are also included in the Plan. **Research (S5 and S6), teaching (S7), communication (S9), sexism and sexual harassment (10) are also important areas addressed** by the GEP. Hence, the GEP comprises measures aimed at integrating a gender dimension in STEM research (when relevant) and teaching contents and practices, at promoting inclusive communication practices, and at preventing discrimination and harassment. Measures in these "secondary" domains will strategically support change in the three main

<sup>12</sup> See, for instance, Carrell, S. E., Page, M. E., & West, J. E. (2010). Sex and science: How professor gender perpetuates the gender gap. *The Quarterly Journal of Economics*, 125(3), 1101-1144.



priority areas of the GEP - human resources, students and students services, and governance. With some exceptions<sup>13</sup>, the actions in these areas are mainly ‘soft’ measures aimed at raising awareness, disseminating knowledge and facilitating access to services.

Only two of the areas initially analysed are not directly covered in this GEP: women’s participation in transfer to market and intersectionality. The first one is indirectly addressed by means of the actions on human resources, since the main problem is the under-representation of female STEM academics. The question of spin offs and entrepreneurship is not addressed in the GEP because it is linked to specific institutional dynamics and processes that extend beyond gender issues and are out of the scope of this GEP. The second one, intersectionality<sup>14</sup>, is not considered as an area in itself. Within this GEP, intersectionality is considered a transversal strategy to design all actions of the Plan. Hence, the GEP adopts a **gender+ strategy**<sup>15</sup>: gender remains the main contemplated type of inequality but its interaction with other sources of inequality and grounds of discrimination is taken into account in the design and implementation of the GEP measures. When possible, intersectional indicators have been added to the measures.

Regarding the timeframe for the GEP’s design and implementation, a specific strategy has been designed according to the type of action (structural vs. soft). Structural actions aim at modifying fundamental and complex institutional structures and/or processes and thus require a longer time to define and implement, often with the involvement of many university stakeholders, whereas soft measures are usually easier to define and implement. For this reason, most structural measures are included in the GEP as **‘study-oriented actions’** with the objective of assessing their feasibility and defining the procedure to implement them in the future. In this sense, at this stage, measures that aim at structural changes are strategies that lead the way rather than fully operationalized actions. However, **a combination of structural and soft actions** is included so that progress on gender equality will be achieved, especially regarding awareness-raising about gender inequalities, while at the same time, we set the path for structural change in the medium-long term. **Two years** are foreseen for the implementation of the GEP, with an **intermediate evaluation** between the two. This evaluation will allow for **adjusting the Plan** in the course of its implementation.

Finally, the CALIPER GEP aims at **complementing ULB’s already existent policy on gender and diversity**. This policy is included in the areas of competence of a Vice-Rectorate (Vice-rector of academic policy and career management, in charge of gender and diversity policies) and the mandate of an advisory function to the Authorities (Adviser to the University Authorities for Gender Policy). The different gender equality measures and actions can be found in the Gender equality charter<sup>16</sup>. They address the institutional governance, human resources, teaching, research, students and communication. Since 2019, the University has a Diversity Plan (including a focus on gender, gender identity and sexual orientation) funded by the institution. The way the CALIPER GEP complements ULB’s gender and diversity policy is presented in the description of each area of intervention.

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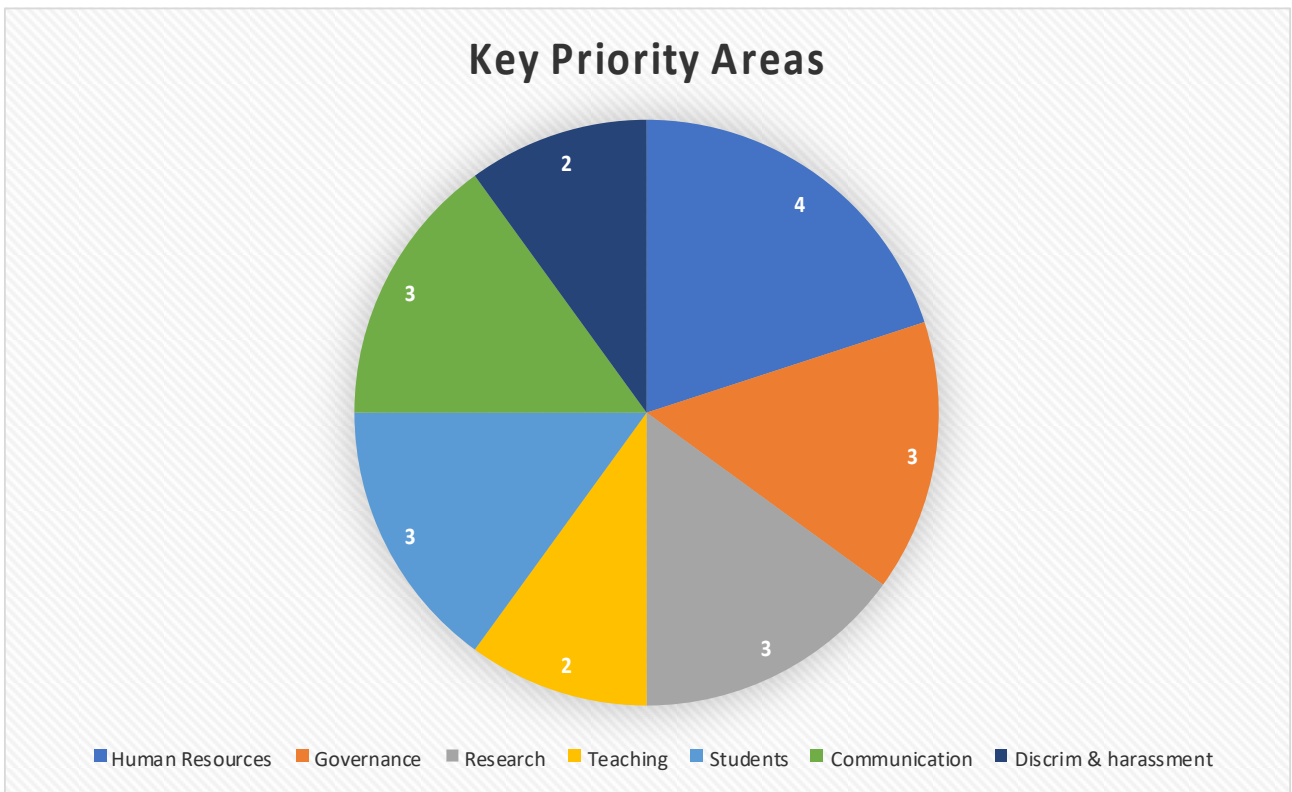
<sup>13</sup> Measure 12.

<sup>14</sup> Intersectionality is understood as an analytic tool and as a theoretical framework which has its origins in critical race and feminist theory. As an analytic approach, it uses multiple axes of identity as a framework to examine the relationships among multiple dimensions and modalities of social relations and subject formations as simultaneously experienced by individuals and the hierarchical power relations that are central to this positioning. As a theoretical framework, it attempts to explain how various social locations such as race, class, ability, gender, health status, and other dimensions of identity intersect, including social practices, institutional arrangements, and cultural ideologies and the outcomes of these interactions in terms of power (Treloar, 2014).

<sup>15</sup> The first time the term “gender+” (gender plus) was used was in the framework of the European research project QUING (“Quality in Gender+ Equality Policies in Europe”, 2006-2011). [www.quing.eu](http://www.quing.eu). It was initially coined by Mieke Verloo, its scientific director, and has become generalized in many spheres.

<sup>16</sup> <https://www.ulb.be/fr/egalite-des-genres/charte-genre>





**Figure 3. Number of actions in each key priority area**



**GEPs Actions Comprehensive Table**

Action Number	Title	Area of intervention	Other relevant Area	Intersectional (YES/PARTLY)	Collaborative (YES/PARTLY)	Structural /soft	Redesigned/refined /new/cancelled
1	Toolkit to attract more female candidates to STEM positions	Human Resources				Soft	Refined (timeline)
2	Action-oriented feasibility study 'Affirmative actions for academic recruitment'	Human Resources			Partly	Soft	
3	Action-oriented feasibility study 'Correction standard for career breaks due to childcare leaves'	Human Resources				Soft	
4	Action-oriented feasibility study 'Extension of post-doctoral contracts for the duration of childcare leaves'	Human Resources				Soft	
5	Gender+ commission in STEM faculties	Institutional governance				Structural	
6	Gender indicators within different STEM disciplines	Institutional governance				Structural	Refined (timeline)
7	Proposal for a gender-balanced participation in Advisory Boards	Institutional governance				Structural	
8	Gender target in STEM PhD juries	Research	Governance			Structural	Refined
9	Dissemination of guideline on the inclusion of the sex/gender dimension in (STEM) research	Research				Soft	Potential Redesign
10	Exhibition 'Sex/gender+ in STEM research'	Research	Institutional communication		Partly	Soft	
11	Guide on gender-sensitive teaching	Teaching	Student services	Partly		Soft	Refined (timeline)
12	Consultation for an explicit integration of a sex/gender+ and diversity perspective into STEM curriculum competency frameworks	Teaching	Student services			Structural	Refined (timeline)
13	Consultation for a new ULB science and technology qualification program to teach at secondary schools	Student Services	Students services			Structural	Refined (timeline)
14	Gender technical support to mainstream the gender+ perspective in ULB science outreach activities	Student Services				Soft	Refined (timeline)
15	Joint ULB-g4g WIN event	Student Services		Partly	Yes	Soft	
16	Hands-on training on inclusive communication for STEM webpages administrators	Institutional communication				Soft	Refined (timeline)
17	Review and update of the communication of current STEM websites	Institutional communication				Soft	Refined (timeline)
18	Dedicated webpage for the gender+ measures of STEM faculties	Institutional communication				Soft	
19	Advertising of training on discrimination and harassment targeting STEM faculty authorities and departments/services leaders	Sexual harassment	Human resources			Soft	Refined (timeline)
20	Permanent poster campaign	Sexual harassment			Partly	Soft	



### 3 Human resources

#### ***Current situation and general objective***

The proportion of women in the academic body of the STEM faculties (Faculty of Science and Brussels School of Engineering) is much lower than the proportion of men. In 2018-2019, women were only 23.8 % of the academic body at the Faculty of Science and 8.6% at the BSE (figures 4 and 5).

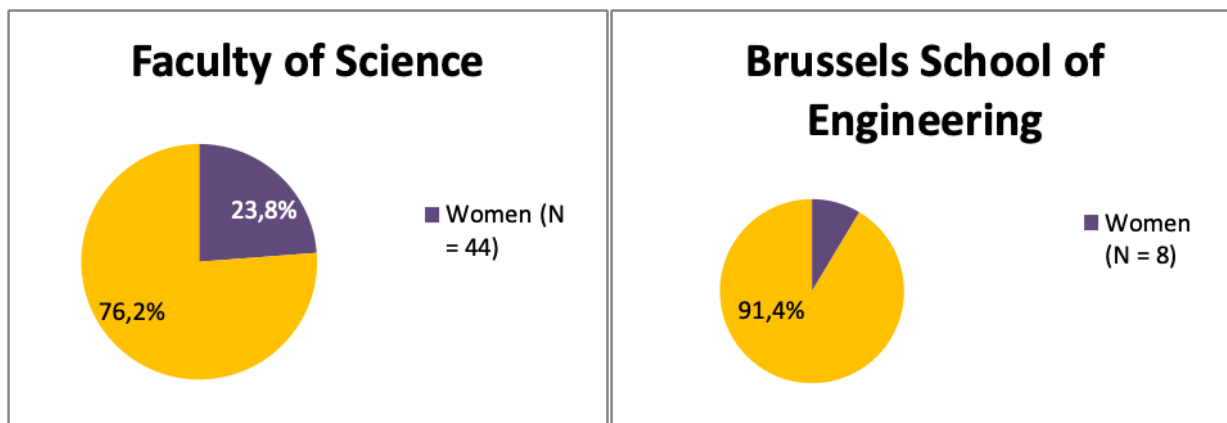


Figure 4. Gender proportion of academic staff in faculty of science in 2018-2019 Figure 5. Gender proportion of academic staff in Brussels School of Engineering in 2018-2019

It is important to note, however, that comparisons between these two faculties must be made with caution given the difference in size between them. The Faculty of Science is a very large faculty composed of eight departments<sup>17</sup>. According to the interviews and focus groups conducted, there are significant differences between the departments in relation to the proportion of women and men in the academic body, with women being particularly few in computer science and physics. However, figures on the gender ratio within departments and/or services are not available yet, reason why the GEP includes an action on gender disaggregated data at this level (see *measure 6*).

Regarding career evolution and promotions, the number of women at the Faculty of Science is lower in the higher ranks of the academic body, whereas it remains very low at all levels at the Brussels School of Engineering (figure 6).

<sup>17</sup> Organismal Biology; Molecular Biology; Chemistry; Interfaculty School of Bioengineering; Geosciences, Environment and Society; Computer Science; Mathematics; Physics.

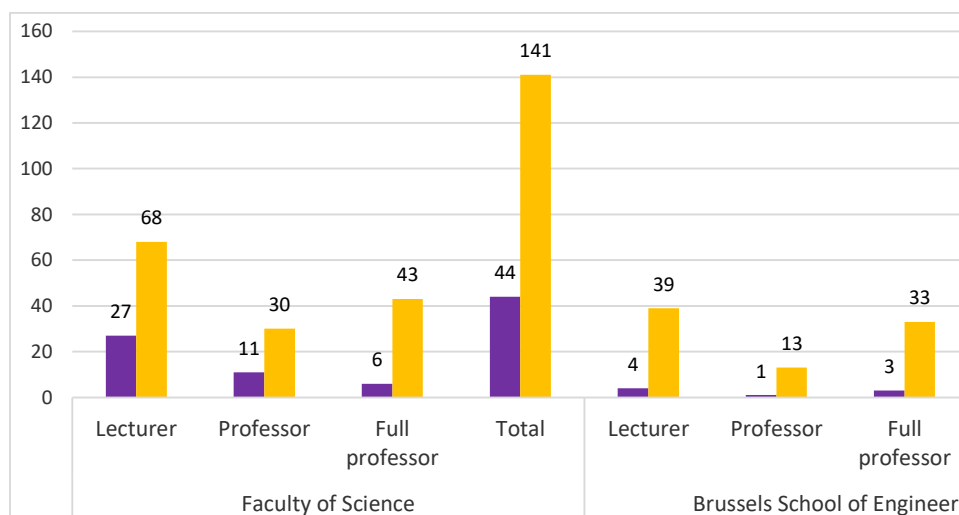


Figure 6. Gender proportion in different rank of the faculty of science and the Brussels school of Engineering in 2018-2019

ULB has already adopted a measure (the "Cascade" measure) to fight against the erosion of the gender balance at the university ("leaky pipeline"). Adopted in 2016-2017, this measure establishes that the female/male distribution within the promoted ranks must be at least equal to that same proportion in the previous career level (proportions at institutional, not faculty, level). This measure applies to promotions to the titles of professor and full professor. According to the latest data for the year 2018-2019, the measure is respected: the overall proportion of women promoted within the University is slightly higher than the overall proportion of women in previous levels (table 2).

	Professor			Full professor		
	Population at level -1	Applications	Promotions	Population at level -1	Applications	Promotions
Women	39%	35%	43%	30%	31%	33%
Men	61%	65%	57%	70%	69%	66%

Table 2. Gender ration of promotions 2018-2019 ("Cascade" measure).

However, when we look within the different disciplinary areas (table 3), the number of promotions of women has been equal to or greater than that of men in the humanities and social sciences and health sciences over the three years analyzed (2016-2017 to 2018-2019), but lower in the STEM fields. Specifically, at BSE no women were promoted in this same period. However, according to the interviews, no women at BSE applied for promotion during this period. This is partly due to the very low number of women who could have done so. In this case, we can see inter-faculty differences attributable to the starting female-male ratio and not to the "Cascade" measure per se.

	Professor		Full professor	
	Women	Men	Women	Men
HSS	9	7	3	2
HEALTH	3	3	3	1
STEM (total)	5	12	2	5
Faculty of Science	5	7	2	3
Brussels School of Engineering	0	5	0	2

Table 3. Promotion by gender from 2016-2017 to 2018-2019.

The successful "Cascade" measure aims at gender balance in promotions *within* the academic body, but it does not act in the previous levels of the "leaky pipeline" (post-doctoral researchers, lecturers). Concerning

the proportion of STEM female post-doctoral researchers, in the two STEM faculties we can see a significant decrease in the proportion of women from level D (doctorate) to levels C (post-doctorate) and B (lecturer)<sup>18</sup> (figures 7 and 8).

Figure 7. Gender proportion from level D to level A in the Brussels School of engineering in 2018 – 2019.

Figure 8. Gender proportion from level D to level A in the faculty of sciences in 2018 – 2019.

Regarding the proportion of women in the first ranks of the academic career, according to the analysis of the recruitment files of the last 3 years (2017-2018 to 2019-2020) (figure 9) the overall proportion of men and women recruited for full-time academic vacancies<sup>19</sup> (all disciplines combined) has been around 50% of each gender. This is despite the fact that there were overall fewer female applicants (23-32% female vs. 68-77% male). The proportion of women in the short lists was also slightly higher than the number of female applications. However, if we take into consideration the disciplinary field (social sciences and humanities, STEM or health) (figure 8), the proportion of women recruited in the two STEM faculties (Fac. of Science and BSE) is only 36% for the 3 analyzed years (vs 50% in social sciences and humanities and 50% in health).

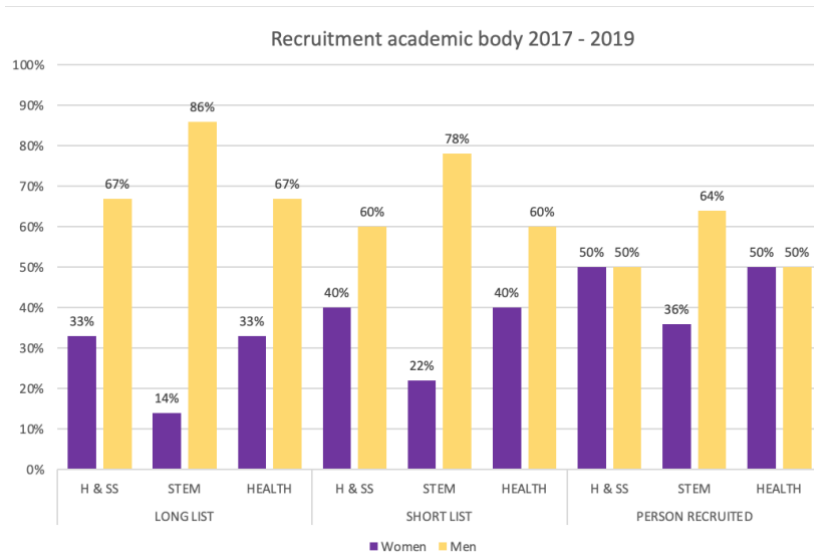


Figure 9. Gender proportion of recruitment of academic body from 2017-2018 to 2019-2020.

Based on the above, the general objective or long-term impact we would like to achieve within the area of human resources is **to increase the proportion of women in the STEM academic body**. However, this can

<sup>18</sup> Classification of the European Commission. We have considered level A: full professor + FNRS research director; level B: professor + FNRS research master and 1st assistant + lecturer + FNRS qualified researcher; level C: post-doc; level D: doctoral students.

<sup>19</sup> The analysis was carried out only for the *chaires profilées*: vacancies that seek a specific profile for the position based on teaching needs. The other type of vacancies is *chaires non-profilées*, which aim at recruiting excellent teachers-researchers, regardless of their discipline.





only be realized by **increasing both the proportion of STEM female post-doctoral researchers and the proportion of STEM female scholars in the first levels of the academic body (lecturers)**. Both strategies are equally important and needed<sup>20</sup>.

### ***Underlying problems and strategies to solve them***

According to the interviews, the **post-doctoral period** is a key moment in women's scientific careers: many women abandon their academic careers after finishing their thesis, a moment that coincides for many with the age of having children. In Belgium, the maternity leave is 15 weeks<sup>21</sup> and the birth leave (for the father or the co-parent<sup>22</sup>) is currently 15 days<sup>23</sup>. In addition to that, both parents can benefit from a parental leave. This leave allows each parent to temporarily suspend or reduce the number of worked hours to care for child(ren) under the age of 12 for the equivalent of 4 full-time months. Data concerning the number of parental leaves taken by ULB personnel are only available for the academic body (professors). From 2016 to 2019, this number was quite low for both women and men (7 and 8 leaves respectively, including both 1/5 time reduction and total suspension). However, it is important to note that 86% of the academic body is between 40 and +65 years old and thus they probably do not have young children<sup>24</sup>. For a matter of age, post-doc researchers are logically more affected by maternity, paternity and parental leaves (86% of ULB researchers are under 40 years old) but unfortunately, no data concerning parental leaves for ULB researchers are available. However, we know that, in the Brussels-capital region 73% of parental leaves are taken by women (all modalities combined – the proportion increases to 83% for total suspension leaves)<sup>25</sup>. This trend is most likely the same in other countries.

Moreover, postdoctoral stays abroad are often expected in today's increasingly internationalized academic context<sup>26</sup>, leading to many post-doctoral researchers to move to (and have children in) a foreign country in which they do not have the support of the family network. Responding to the high demands of the academic career and raising children at the same time is extremely difficult, especially if children are young<sup>27</sup>, and overall post-doc contracts are not extended for the duration of the childcare leave. As explained above, in Belgium the paternity leave is only 15 days, whereas the maternity leave is 15 weeks, and women are also the majority of parents taking parental leave (up to 4 full-time months). Therefore, women's scientific careers are particularly impacted and **childcare leaves need to be taken into account in post-doctoral research contracts**.

Regarding the proportion of women in the first ranks of the academic career, it is important to examine both recruitment and selection procedures. Based on the analysis of the recruitment files mentioned above, the lower proportion of women recruited in STEM disciplines as compared to social-human and health disciplines can be partly explained by the low number of female applications received for STEM vacancies (14% in STEM

<sup>20</sup> It is equally important to raise the proportion of STEM female students. This strategy is presented in section 8 (students).

<sup>21</sup> Up to six weeks before delivery (including one mandatory week) and 9 weeks after.

<sup>22</sup> Same-sex partner in a same-sex couple.

<sup>23</sup> 20 days from 1st January 2023.

<sup>24</sup> In Belgium, the average age of the mother at the birth of her first child is 29.2 years and 34.1 years for the father (Statbel, 2019).

<sup>25</sup> ONEM (2020).

<sup>26</sup> At ULB, the Coordinated Text no longer requires it, replacing the stay abroad by "international experience" that can be achieved by other means – such as the participation in international projects.

<sup>27</sup> According to the survey carried out (see Deliverable D1.2), both women and men at university experienced conflict between their personal/private lives and their work lives. However, women experienced this conflict more than men. The division of household tasks between partners had a negative influence on the work performance of 23% of women vs 11% of men (all ages combined).



vs 33% in SHS and health). The proportion of women on short lists was 22% in STEM vs. 40% in SHS and health sciences. There is thus the **need to increase the number of female applicants for STEM lecturers' positions**.

A first possible way to do so is through **affirmative actions**, which involves the use of measures to “enable or encourage members of ‘protected groups’ (such as women) to overcome or at least reduce current or past disadvantages (including discrimination); to meet the needs of the protected group that differ from other groups; or to enable or encourage those in the protected groups to participate in a particular activity where they might otherwise be under-represented”<sup>28</sup>. Although they are frequently confused with the (often controversial) quotas, affirmative actions actually include many different kinds of measures. These measures are strictly delimited by specific legal and regulatory frameworks that need to be explored in order to determine which kinds of actions, if any, are possible to implement at the University.

A second way to increase the number of female applicants for STEM positions in the short/medium-term is by **avoiding any unconscious gender bias in the recruitment process**, paying attention to how job offers are formulated and disseminated. For instance, a study<sup>29</sup> found that a job-advertisement with a photo of a man and text emphasizing “aggressiveness and competitive spirit” received only 5% of female applications, whereas when the same job advertisement was modified to add the photo of a woman and a text emphasizing “enthusiasm and innovation” it received 40% of applications.

However, the increase in the number of female applicants is essential but not sufficient to raise the proportion of women hired for STEM positions because, as explained above, many female candidates may have had career breaks longer than most of the male candidates, but will be evaluated without taking this into account. It is thus important to intervene, not only in the recruitment process to increase the proportion of female applicants, but also in the selection process to increase the number of women finally hired for STEM vacancies.

This can be achieved by means of **affirmative actions** (described above). It can also be carried out by **establishing an even greater egalitarian evaluation system in the selection process that takes into account childcare leaves**. ULB has already implemented many actions to guarantee an egalitarian evaluation system. As established in ULB regulations<sup>30</sup>, candidates are evaluated and selected upon the three missions of the University: research, teaching and services to the community. A detailed evaluation grid needs to be applied and fulfilled by the selection commission to evaluate short-listed candidates. This commission must be composed of at least 1/3 of members of each gender. However, careers breaks due to maternity, paternity and parental leaves are not taken into account.

Based on the above and to achieve the long-term objectives, the GEP adopts the following strategies:

- Recruitment and selection*
- a. Promoting the avoidance of unconscious gender biases in the recruitment process to increase the proportion of female applications to STEM positions
  - b. Determining the feasibility of affirmative actions at the University to increase both the proportion of female applications and the proportion of women hired in STEM academic positions.
  - c. Taking into account career breaks due to childcare leaves in the selection process to establishing a more egalitarian research evaluation

<sup>28</sup> European Commission (2019, p. 10).

<sup>29</sup> Criado Perez (2020).

<sup>30</sup> *Texte coordonné des dispositions relatives à la carrière du corps scientifique et du corps académique* (dernière version - 10 mai 2021).



system.

*Work-life balance*

- d. Considering career breaks due to childcare leaves in post-doctoral contracts to increase the support female STEM post-doc researchers.

## **Actions**

To meet these specific objectives, a toolkit to avoid unconscious gender bias in the recruitment process will be produced and three action-oriented studies will be carried out.

ULB is committed to the avoidance of unconscious biases in recruitment and promotion within the University. A video<sup>31</sup> to avoid unconscious biases<sup>32</sup> in these processes has already been produced and disseminated in the institutional channels. **Measure 1** will thus complement this mission by producing a **toolkit** providing specific good practices and practical solutions to avoid gender unconscious biases in recruitment processes, with a particular focus on STEM vacancies. The toolkit will include evidence-based solutions and good practices (e.g. how to write job descriptions, how to disseminate job offers, etc.).

The three studies (measures 2, 3 and 4) will examine the feasibility of three structural actions to be eventually implemented in the long term: the implementation of affirmative actions at the University for academic recruitment, the definition of a correction standard for career breaks due to childcare leaves in selection processes, and the potential extension of post-doctoral contracts for the duration of childcare leaves. Given the legal, institutional and sometimes budgeting complexity of these HR actions, an in-depth examination is needed in order to define well the measures and to involve and engage all the relevant university stakeholders.

The **study ‘Affirmative actions for academic recruitment’ (measure 2)** is a ‘bridge-action’ aiming at examining if affirmative actions (typology that includes quotas but also other types of measures) are feasible at ULB from both a legal perspective and an institutional one, as well as the consideration of which type of action would be the most convenient to improve the balance of women and men in the STEM academic body. Although the origin of the study and its main focus is the gender imbalance in STEM faculties, this study may benefit other faculties in which gender imbalances are also present.

The second **study ‘Correction standard for career breaks due to childcare leaves’ (measure 3)** consists of reviewing the different types of corrective standards for career breaks due to childcare leaves already implemented in research performing/funding organizations (e.g. age limit extension in research funding calls) and carrying out an consultation process with internal and external key stakeholders to assess their feasibility.

The last **study ‘Extension of post-doctoral contracts for the duration of maternity, paternity and/or parental leave’ (measure 4)** will first explore the different childcare leaves situations and needs according to type of post-doctoral contract (ULB postdoc mandates can already be extended of 1 year in case of maternity, but this is not the case for all types of contract). Then, good practices and conditions for contract extension will be identified. Internal and external sources of funding will be identified and a consultation process will be carried with them to assess possibilities for contract extension. Trade unions and other relevant stakeholders will also be consulted.

The main conclusions of the three studies will be presented to the CALIPER steering committee for them to discuss and decide upon the next steps to follow in each case to increase both the proportion of female applications and the proportion of women hired in STEM academic positions; to establish a more egalitarian research evaluation system; and to support female STEM post-doc researchers who are mothers.

<sup>31</sup> [https://www.youtube.com/watch?v=MZeL4Vt2FMk&ab\\_channel=ULBTV](https://www.youtube.com/watch?v=MZeL4Vt2FMk&ab_channel=ULBTV)

<sup>32</sup> Gender and other types of bias (based on background, age, etc.).



N.	Measures/actions	Objective (short term)	Timeframe of implementation
1	Toolkit to avoid unconscious biases in recruitment	To provide STEM recruitment and selection committees with HR solutions and good practices in recruitment to avoid gender unconscious biases	September 2021 – March 2023
2	Action-oriented feasibility study 'Affirmative actions for academic recruitment'	To assess the feasibility and relevance of affirmative actions for recruitment and hiring at the University	February – June 2022
3	Action-oriented feasibility study 'Correction standard for career breaks due to childcare leaves'	To assess the feasibility of a correction standard for career breaks due to childcare leaves in selection procedures for academic vacancies	September 2022 – January 2023
4	Action-oriented feasibility study 'Extension of post-doctoral contracts for the duration of childcare leaves'	To assess the feasibility (in terms of type of contract and budget) of post-doctoral contract extension for the duration of childcare leaves	February – June 2023

Table 4. Summary of human resources actions

## Measure 1: Toolkit to attract more female candidates to STEM positions

### *Toolkit to attract more female candidates to STEM positions Sources:*

Criado Perez, C. (2020) *Femmes invisibles. Comment le manque de données sur les femmes dessine un monde fait pour les hommes*. Paris : FIRST éditions.

Gaucher, D., Friesen, J., & Kay, A. C. (2011). Evidence that gendered wording in job advertisements exists and sustains gender inequality. *Journal of Personality and Social Psychology*, 101(1), 109.

Johnson, S. K., Hekman, D. R., & Chan, E. T. (2016). If there's only one woman in your candidate pool, there's statistically no chance she'll be hired. *Harvard Business Review*, 26(04).

Mohr, T. S. (2014), Why Women Don't Apply for Jobs Unless They're 100% Qualified, *Harvard Business Review* (25).

Knight, R. (2017). 7 Practical ways to reduce bias in your hiring process. *Harvard Business Review*.

University of Viena (2013) *Application procedure URBEM-DP – documentation*, [http://www.geecco-project.eu/fileadmin/t/geecco/geecco/URBEM-DK\\_application\\_procedure\\_documentation\\_eng\\_GESAMT.pdf](http://www.geecco-project.eu/fileadmin/t/geecco/geecco/URBEM-DK_application_procedure_documentation_eng_GESAMT.pdf)

### *Target audience:*

*STEM recruitment and selection September 2021 – March 2023*

### *Timeframe:*



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## *committees*

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### **Goals & Objectives**

- Short-term: to provide STEM recruitment and selection committees with HR solutions and good practices in recruitment to avoid gender unconscious biases
- Medium-term: to increase the number of applications from women for STEM academic positions.
- Long-term: to increase the number of women in the academic body of the STEM faculties.

### **Activities**

- Examination of the current HR practices and needs in the STEM faculties (desk research + interviews) (Sept-Dec. 2021).
- Identification of HR evidence-based solutions and good practices to avoid gender unconscious biases (desk research + interviews) (Sept-Dec. 2021).
- Drafting of toolkit (January 2022).
- Dissemination of toolkit to STEM recruitment and selection committees (February 2022).

### **Available Resources**

- 1 gender researcher from the CALIPER team.
- 1 intern (ULB).

### **Targets & Indicators**

- Short-term:
  - ✓ Production of toolkit: yes/no.
  - ✓ Dissemination of toolkit among STEM recruitment and selection committees: yes/no.
  - ✓ Dissemination of toolkit in the intranet of the STEM faculties: yes/no.
  - ✓ Use of toolkit in recruitment processes for 2022-2023 STEM vacancies: yes/no.
- Medium-term:
  - ✓ Number of female applications for STEM academic positions: 10% increase.
  - ✓ Short-lists: at least 2 female candidates<sup>33</sup>.
- Long-term:
  - ✓ Number of female STEM academics: 2-5% increase.
- Intersectionality indicator(s):
  - ✓ The toolkit includes the gender+ perspective (gender + other axes of inequality and their intersections): yes/no.

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<sup>33</sup> “Two in the pool effect”: when the final candidate pool has only one female candidate, she has virtually no chances of being hired. If there are at least two female candidates in the final candidate pool, the odds of hiring a female candidate are 79 times greater (194 times greater if there are two) (Johnson, S. K., Hekman, D. R., & Chan, E. T., 2016).



### Facilitating & Hindering Contextual Factors

The top management of the STEM faculties has expressed their willingness to increase the proportion of women in the academic body.

## Measure 2: Action-oriented feasibility study ‘Affirmative actions for academic recruitment’

### Feasibility study ‘Affirmative actions for academic recruitment’

#### Sources:

Seierstad, C., Gabaldon, P., & Mensi-Klarbach, H. (2018). *Gender Diversity in the Boardroom: Volume 1: The Use of Different Quota Regulations*. Palgrave Macmillan.

European Commission (2019) *Gender-based positive action in employment in Europe. A comparative analysis of legal and policy approaches in the EU and EEA*. European network of legal experts in gender equality and non-discrimination. Luxembourg: Publications Office of the European Union. Retrieved from <https://www.equalitylaw.eu/downloads/5008-gender-based-positive-action-in-employment-in-europe-pdf-1-9-mb>

University of Otago is committed to the principle of Affirmative Action in the advertising, selection, appointment and promotion processes for academic and general staff since 1994: <https://www.otago.ac.nz/administration/policies/otago003035.html>

Affirmative action and equal employment opportunity policy, New York University. The University has taken affirmative action to recruit and advance qualified women, racial and ethnic minorities, persons of minority sexual orientation and gender identity, individuals with disabilities, and veterans: <https://www.nyu.edu/content/dam/nyu/hr/documents/policies/AffirmativeActionEqualEmploymentOpportunityPolicyStatement-012819.pdf>

#### Target audience:

*Female (and minority) candidates for STEM academic vacancies*

#### Timeframe:

*February – June 2022*


### Goals & Objectives

- Short-term: to assess the feasibility and relevance of affirmative actions at the University from a legal, institutional and evidence-based perspective.
- Medium-term: to provide an institutional framework for affirmative actions in recruitment and hiring at the University.
- Long-term: to increase the number of women and to foster diversity in the academic body of the STEM faculties.

### Activities

- Conduction of a study on the feasibility and relevance of affirmative actions at the University from a legal, institutional and evidence-based perspective (February – May 2022).
- Drafting of main conclusions (June 2022).
- Presentation of main conclusions to CALIPER steering committee (July 2022).

### Available Resources

 This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement no 873134.

- 4-5 law master students supervised by 1 scholar from the ULB’s Equality Law Clinic (analysis).
- 1 gender researcher from the CALIPER team (drafting and presentation of main conclusions).

### Targets & Indicators

- Short-term:
  - ✓ Conduction of the study: 1 report.
  - ✓ Report with main conclusions drafted: yes/no.
  - ✓ Report presented to the aforementioned stakeholders: yes/no.
- Medium-term (depending on the authorities’ decision):
  - ✓ Proposal for an institutional framework for affirmative actions in recruitment and hiring at the University drafted: yes/no.
  - ✓ Proposal discussed with the corresponding decision-making bodies and other key stakeholders: yes/no.
- Long-term (if institutional framework approved):
  - ✓ Number of female STEM academics: 2-5% increase
- Intersectionality indicator(s):
  - ✓ The interaction of gender with other inequalities is contemplated in the study: yes/no.

### Facilitating & Hindering Contextual Factors

The study will be carried out in collaboration with the Equality Law Clinic<sup>34</sup> (ULB), a law clinic that gives students the opportunity to serve society through innovative teaching. It allows them to deepen their legal skills while contributing concretely to the promotion of social justice, equality and fundamental rights, by working for the benefit of disadvantaged or excluded groups, using a combined local and global approach. ELC’s action-research is conducted in several areas, including gender, disability, migrants’ rights, and trans-identity.

## Measure 3: Action-oriented feasibility study ‘Correction standard for career breaks due to childcare leaves’

### *Feasibility study ‘Correction standard for career breaks due to childcare leaves’ Sources:*

Università di Bologna (2017-2020) *Gender Equality Plan: Introduction/retention in the RPO’s internal research evaluation procedure of the consideration of maternity and parental leave periods in order to reach a more equal assessment*, <https://www.plotina.eu/wp-content/uploads/2019/12/tablematernityleaveUNIBO.pdf>

Hungarian Academy of Sciences (2009) *Age limit extension in calls for female researchers with children under 10*, <https://eige.europa.eu/gender-mainstreaming/toolkits/gear/examples/age-limit-extension>

### *Target audience:*

### *Timeframe:*

<sup>34</sup> <https://equalitylawclinic.ulb.be/>

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***Female and male candidates for STEM academic vacancies***    *September 2022 – January 2023*

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**Goals & Objectives**

- Short-term: to assess the feasibility of a correction standard for career breaks due to childcare leaves in selection procedures for academic vacancies.
- Medium-term: to contribute to a more equal evaluation system in selection procedures for academic vacancies that takes into account childcare work.
- Long-term: to increase the number of women in the academic body of the STEM faculties.

**Activities**

- Identification of different types of correction standards for career breaks due to childcare leaves in selection procedures and their effects (September-December 2022).
- Consultation with key internal and external stakeholders (September-December 2022).
- Drafting of main conclusions (January 2023).
- Presentation of main conclusions to CALIPER steering committee (February 2023).

**Available Resources**

- 1 gender researcher from the CALIPER team (supervision and drafting of main conclusions).
- 1 intern (ULB) (conduction of study).

**Targets & Indicators**

- Short-term:
  - ✓ Conduction of the study: 1 working notes document.
  - ✓ Report with main conclusions drafted: yes/no.
  - ✓ Report presented to the aforementioned stakeholders: yes/no.
- Medium-term (depending on the authorities' decision):
  - ✓ Proposal for a correction standard for career breaks due to childcare leaves in selection procedures for academic vacancies: yes/no.
  - ✓ Proposal discussed with the corresponding decision-making bodies and other key stakeholders: yes/no.
- Long-term (if measured approved):
  - ✓ Number of female STEM academics: 2-5% increase
- Intersectionality indicator(s):
  - ✓ Different types of caring needs other than childcare (e.g. official leaves for caring other household/family members) have been at least examined for drafting the proposal: yes/no.
  - ✓ Different types of childcare needs and duties have been contemplated in the proposal: yes/no.

**Facilitating & Hindering Contextual Factors**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 873134.



See measure 1.

## Measure 4: Action-oriented feasibility study ‘Extension of post-doctoral contracts for the duration of childcare leaves’

**Feasibility study ‘Extension of post-doctoral contracts for the duration of childcare leaves’**

**Sources:**

In case of postdoctoral fellowship suspension during the period of prolonged sickness leave, pregnancy leave, breastfeeding leave, parental leave, palliative leave or leave for medical assistance, FWO (the Research Foundation – Flanders, Belgium) extends postdoctoral fellowships by the period during which no payments were received: <https://www.fwo.be/en/faq/postdoctoral-fellowships/>

**Target audience:**

**Female and male STEM post-doctoral researchers at ULB**

**Timeframe:**

February – June 2023

### Goals & Objectives

- Short-term: to assess the feasibility (in terms of type of contract and budget) of post-doctoral contract extension for the duration of childcare leaves.
- Medium-term: to prevent the duration of post-doc research contracts from being shortened due to childcare leaves.
- Long-term: to improve the balance of women and men at the postdoctoral level in STEM scientific careers at ULB.

### Activities

- Identification of different leave situations according to the type of post-doctoral contract (February-March 2023).
- Identification of existent good practices and conditions for contract extension (February-March 2023).
- Identification of and consultation with internal and external sources of funding for contract extension (February-March 2023).
- Consultation with trade unions and other key stakeholders (April-May 2023).
- Drafting of results (April-May 2023).
- Presentation of main conclusions to the CALIPER steering committee (May-June 2023).

### Available Resources

- 1 gender researcher from the CALIPER team.
- 1 intern.

### Targets & Indicators

- Short-term:
  - ✓ Proposal drafted: yes/no.
  - ✓ Proposal includes medium- and long-term indicators and targets: yes/no.



- ✓ Proposal presented to the corresponding decision-making bodies: yes/no.
- Medium-term (if measure approved):
  - ✓ Number of female STEM post-doctoral researchers benefiting from measure: to be defined in the study.
  - ✓ Number of male STEM post-doctoral researchers benefiting from measure: to be defined in the study.
- Long-term (if measure approved):
  - ✓ Number of female STEM post-doctoral researchers: to be defined in the study.
- Intersectionality indicator(s):
  - ✓ Different types of caring needs and duties have been contemplated in the proposal: yes/no.

#### *Facilitating & Hindering Contextual Factors*

A potential hindering factor is the eventual lack of funding and the large diversity of contract types.



## 4 Institutional governance

### **Current situation and general objectives**

In the area of governance, ULB does not have a gender equality unit as such, but it has established a rich network of people and services implicated in gender equality work, including the high management:

- A Vice-Rector on Gender Equality and Diversity.
- A full-time Gender and diversity officer (permanent position).
- A part-time researcher (2-year contract) within the Diversity Plan.
- An advisor to the University Authorities for gender policy (a gender scholar, member of the academic staff, who advises the high management on gender matters).
- A ULB gender contact person in charge of disseminating relevant information regarding gender issues to external members.
- A network of gender contact persons at each faculty in charge of disseminating relevant information regarding gender issues to internal members.
- In some faculties (e.g. Faculty of Psychology) there is a gender commission which organizes awareness raising activities and other gender equality actions.
- ULB also has a feminist student association.

At the **two STEM faculties there is still no gender commission**. However, as several good practices show (see Plotina project below), the establishment of gender units contributes to the institutionalization of gender policies.

Regarding gender-disaggregated data, a report on gender equality ("*Rapport Genre*") at the University is prepared annually. The report includes gender-disaggregated indicators concerning students (bachelor's, master's and PhD's enrolment and obtain of degrees per faculty), ULB staff (administrative, academic and scientific staff) and the composition of ULB management bodies. It also includes gender-disaggregated data on other information such as the number of PhD scholarships received, the number of Doctor Honoris Causa and other recognition prizes attributed, the attribution of research funding, and the number of participants in the Erasmus programme. The report contains a very important section on University's good practices for gender equality in different areas: institution, human resources, teaching, research and community services and an inventory of master's and doctoral thesis adopting a gender perspective. However, these data are aggregated for each faculty and/or disciplinary area (STEM, human and social sciences, etc.). Therefore, **indicators regarding the gender composition of the academic, scientific and student bodies within the different STEM disciplines or domains are not available yet**. This indicator is, however, essential to identify in which specific STEM disciplines or domains it is a priority to act and to design more targeted actions.

In relation to the participation of women in decision-making, the gender composition of ULB's management bodies changes depending on the type of body. According to the latest available data (1 June 2020)<sup>35</sup>, among the University's managers, we find 54% women and 46% men. However, this proportion varies significantly depending on the type of position (figure 10). **Since September 2020, the position of rector is held by a woman**. In the deaneries, men are in the majority but there are more than a third of deans of each gender (58% male deans and 58% male vice-deans vs. 42% female deans and 42% female vice-deans). In the general

<sup>35</sup> This is an update with respect to the ULB data published in the deliverable D1.2. Those data came from the previous gender report (2018-2019).

University administration, there are 55% of male directors and 45% of female directors. On the other hand, the majority of faculty administration is headed by women (91%).

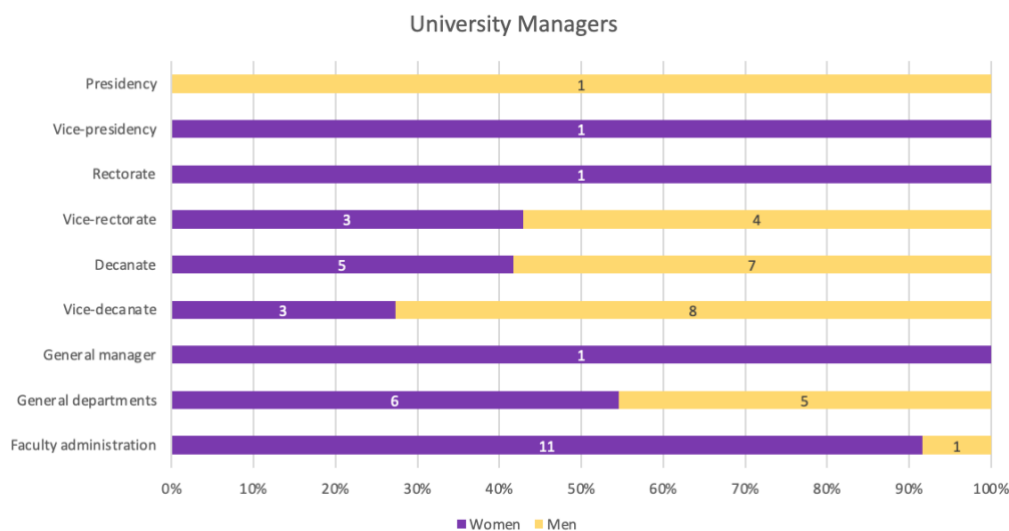


Figure 10. Gender proportion among University managers in 2020.

The governing bodies (Plenary Assembly, Board of Directors, Academic Council and its Bureau) (figure 11) are globally composed of a proportion of approximately 40% women and 60% men, except for the Bureau of the Academic Council which has perfect parity. Only in the office of the Board of Directors are women in the minority (29%).

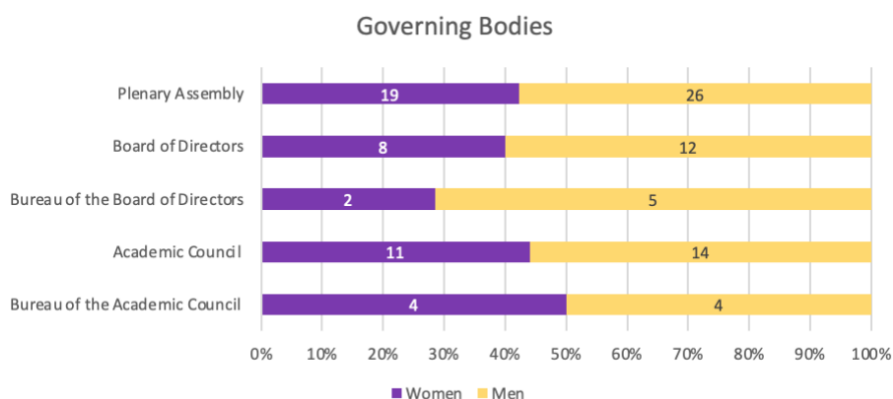


Figure 11. Gender proportion among governing bodies in 2020.

However, some bodies with advisory powers remain highly masculine (figure 12). The Research Council<sup>36</sup> and the Cultural Commission<sup>37</sup> are predominantly male (75% and 71% men respectively). The male-female ratio of the Study Council<sup>38</sup> and the Student Social Affairs Commission<sup>39</sup> are currently more balanced (43% women-57% men in the first case, 38% women, 62% men in the second case) but this situation could change in the future. These bodies have their own rules of operation but they all depend on the Academic Council

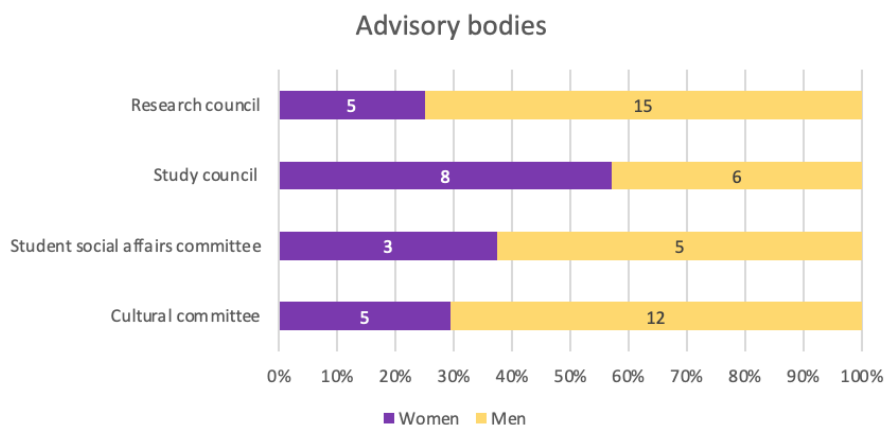
<sup>36</sup> The Research Council advises the authorities and the deans on the attribution of institutional research funds to specific research projects.

<sup>37</sup> The Cultural Commission examines requests for the creation or registration of student associations and circles and gives its opinion to the Board of Directors.

<sup>38</sup> The Study Council is a place for reflection on the organization of teaching and learning, on the policy of promoting student success, and on teaching quality procedures.

<sup>39</sup> The purpose of the Student Social Affairs Commission is to develop and coordinate social action in favor of the University's students and to promote their participation in the organization of their living environment.

and the Board of Directors, for which they carry out preparatory work to examine files and propose decisions. Therefore, they all play a key role in the University functioning. For this reason, the CALIPER GEP will strategically focus on advisory bodies in order to promote a more gender-balanced composition.



*Figure 12. Gender proportion among advisory bodies in 2020.*

Following the above, the **general objectives or long-term impacts** we would like to achieve within the area of governance are:

- To ensure the sustainability of the gender+ policy initiated by CALIPER at the faculty level (STEM).
- To identify the STEM disciplines in which women (both academic and scientific staff and students) are less represented to conceive more targeted actions.
- To increase the participation of women in the decision-making bodies in which they are under-represented.

In order to achieve these long-term impacts, the **GEP aims specifically at:**

- |                                  |   |
|----------------------------------|---|
| <i>Gender equality bodies</i>    | a. Institutionalizing the gender+ policy at STEM faculty level.   |
| <i>Gender-disaggregated data</i> | b. Collecting gender disaggregated data <i>within</i> STEM disciplines regarding the gender composition of the academic, scientific and student bodies. |
| <i>Decision-making</i>           | c. Promoting a gender-balanced composition of advisory bodies at the institutional level.   |

## **Actions**

In order to institutionalize the gender+ policy at STEM faculty level, a **gender+ commission** will be established at each STEM faculty (**measure 5**). Both the mission, the activities to be carried out by the commission and the meetings' frequency will be defined together with the members of the commission. The commissions will be gradually involved in the implementation and monitoring of the current GEP actions to ensure the sustainability of the gender+ policy initiated by CALIPER after the finalization of the project.

In order to collect gender disaggregated data within STEM disciplines regarding the gender composition of the academic, scientific and student bodies, **gender indicators** will be first defined and then collected (**measure 6**). The creation of these indicators includes the identification of data already collected, the operational definition of the indicators and the collection procedure, the collection and the internal dissemination of the indicators. As already explained above, the collection of these indicators will allow and support several important tasks for the promotion of gender equality, including the identification of priority areas for intervention, the design of more targeted measures and the monitoring of both GEP actions and gender



equality at the STEM faculties.

One measure will be implemented within the sub-domain of leadership and decision-making. **Measure 7 consists on a proposal for a gender-balanced participation in Advisory Boards** to promote a gender-balanced composition. The measure includes the discussion and definition of a norm and procedure that is realistic and easy to implement for the four bodies and the submission of the proposal to the corresponding authority for its eventual approval and implementation.

N.	Measures/actions	Objective	Timeframe of implementation
5	Gender+ commission in STEM faculties	To institutionalize gender+ policy at STEM faculty level	October - December 2021 (establishment)
6	Gender indicators within different STEM disciplines	To collect gender disaggregated data within STEM disciplines regarding the gender composition of the academic, scientific and student bodies	February 2022 – March 2023
7	Proposal for a gender-balanced participation in Advisory Boards	To promote a gender-balanced composition of advisory bodies at the institutional level	October 2021 – May 2022

Table 5. Summary of governance actions.

## Measure 5: Gender+ commission in STEM faculties

### Gender+ commission in each STEM faculty *Sources*<sup>40</sup>:

Ely, R. J., & Meyerson, D. E. (2000). Theories of Gender in Organizations: A New Approach to Organizational Analysis and Change. *Research in Organizational Behavior*, 22, 103–151. [https://doi.org/10.1016/s0191-3085\(00\)22004-2](https://doi.org/10.1016/s0191-3085(00)22004-2)

The Gender Balance Committee of the Genomic Regulation Centre (CRG), a Spanish biomedical research institute of excellence, was established in 2013: [https://eige.europa.eu/sites/default/files/crg\\_hr\\_strategy\\_action\\_plan\\_2013-1015\\_short.pdf](https://eige.europa.eu/sites/default/files/crg_hr_strategy_action_plan_2013-1015_short.pdf)

In the frame of the PLOTINA project, four partners (Özyeğin Üniversitesi, Mondragon Unibertsitatea, ISEG, University of Warwick) created Gender Equality structures (Gender equality Unit, Gender task force, Gender Equality, Diversity and Inclusion Commission) with the aim of leading and supporting gender equality actions across the university as well as ensuring the institutionalization and sustainability of gender equality policies and practices: <https://www.plotina.eu/creation-gender-equality-office-action-ozu/#1571055341720-dfa9392f-7645>

**Target audience:**

**STEM faculties**

**Timeframe:**

October – December 2021

<sup>40</sup> Here you should report what you have included in the log-frame in the section “theoretical assumptions and available evidence”.

### Goals & Objectives

- Short-term: to establish two gender+ commissions (one per faculty).
- Medium-term: to gradually involve each commission in the implementation of the GEP at faculty level.
- Long-term: to institutionalize the gender+ policy at STEM faculty level.

### Activities

- Constitution of a gender+ commission in each STEM faculty (Fac. of science and Brussels School of Engineering) (September-December 2021):
  - ✓ Definition of the mission.
  - ✓ Presentation to the STEM faculties and search for volunteers.
  - ✓ Definition of activities (holding of meetings, participation and/or organization of actions promoting gender equality and diversity at faculty level, monitoring of gender and diversity actions at faculty level).

### Available Resources

- 4-8 members of each STEM faculty (volunteers from the academic, scientific and administrative staff).
- CALIPER team support (1 researcher + 1 gender and diversity officer).

### Targets & Indicators

- Short-term:
  - ✓ Number of gender+ commissions established: 2 (1 per faculty).
- Medium-term (\*these targets are suggested by the CALIPER team but will be discussed with the future members of the commission\*):
  - ✓ Number of meetings per year: > 4
  - ✓ Number of CALIPER GEP actions in which the commission is involved (as participants/observers): > 10.
  - ✓ Collection and monitoring of gender indicators at faculty level: once a year.
  - ✓ Elaboration of brief internal report including 1) gender indicators at faculty level, 2) gender+ actions carried out at faculty level and 3) other activities carried out by the commission (e.g. meetings): 1 annual report.
- Long-term:
  - ✓ Existence of the 2 gender+ commissions 2 years after the end of the CALIPER project<sup>41</sup>: yes/no.
  - ✓ Number of recurrent/structural<sup>42</sup> CALIPER GEP actions in place 2 years after the end of the CALIPER project: > 75%
- Intersectionality indicator(s):

<sup>41</sup> The project finishes in December 2023.

<sup>42</sup> Single-occurrence actions (for instance, the 'WIN event') are not initially included in the indicator, unless they become recurrent.



- ✓ Number of actions in which diversity and/or the interaction of gender with other axes of discrimination is taking into account: > 6

### Facilitating & Hindering Contextual Factors

A gender commission exists already in other ULB faculties (e.g. Faculty of psychological and educational sciences).

## Measure 6: Gender indicators within different STEM disciplines

### Gender indicators within different STEM disciplines

#### Sources:

Doss, C. (2014). Collecting Sex Disaggregated Data to Improve Development Policies. *Journal of African Economies*, 23(suppl 1), i62–i86. <https://doi.org/10.1093/jae/ejt023>

Three partners of the PLOTINA project (Universita Di Bologna, Mondragon Unibertsitatea, Kemijski Inštitut) started gathering gender disaggregated data regularly, quantitative and qualitative and analysing these data in a dedicated Report so as to monitor gender and diversity in the organization: <https://www.plotina.eu/gathering-gender-data-quantitative-qualitative-nic/>

#### Target audience:

STEM faculties

#### Timeframe:

February 22 – March 2023

### Goals & Objectives

- Short-term: to collect gender disaggregated data within STEM disciplines regarding the gender composition of the academic, scientific and student bodies.
- Medium-term: to identify the STEM disciplines in which women are less represented and to raise awareness of persistent gender inequalities.
- Long-term: to monitor progress on gender equality within the STEM faculties.

### Activities

- Identification of the data that are already collected by different faculty and university departments or services (e.g. STEP) regarding the gender composition within each STEM faculty of the academic and scientific staff and students (January – April 2022).
- Based on the previous information, operational definition of the gender indicators at each faculty (including the level of collection – e.g. department, service, enrolment in bachelor's or master's programs, etc.) (January – April 2022).
- Definition of a procedure to collect the indicators (person/body in charge of the collection, collection frequency) (January – April 2022).
- Data collection (timeframe: depending on the procedure previously defined).
- Inclusion of the collected gender indicators in a report for internal purposes (timeframe: depending on the procedure previously defined).
- Internal dissemination of gender indicators (timeframe: depending on the procedure previously defined).





**Available Resources**

- Some data exist already but they are either not systematically collected or not communicated/disseminated.
- The gender+ commission established at each faculty could be responsible for their collection and internal dissemination.
- CALIPER team support (1 researcher + 1 gender and diversity officer).

**Targets & Indicators**

- Short-term:
  - ✓ Gender indicators defined: yes/no.
  - ✓ One procedure to collect the indicators (specific data to be used, from which source, at what specific time of the year) defined: yes/no.
  - ✓ First collection of indicators: yes/no.
- Medium-term:
  - ✓ Internal dissemination of indicators:
    - Drafting of one brief internal report (frequency to be determined by the gender+ commission): yes/no.
    - Presentation of gender indicators in faculty council (frequency to be determined by the gender+ commission): yes/no
- Long-term:
  - ✓ Indicators updated (frequency to be determined by gender+ commission): yes/no.
  - ✓ Evolution of indicators over time included in internal report: yes/no.
- Intersectionality indicator(s): none (at this stage, only gender indicators will be collected).

**Facilitating & Hindering Contextual Factors**

ULB already collects and publishes gender-disaggregated data in the annual Gender Report, but this is usually done at university or faculty level, not at the discipline level.



## Measure 7: Proposal for a gender-balanced participation in Advisory Boards

### *Gender-balanced participation in Advisory Boards*

### *Sources:*

Handley, J. (1994), "Women, Decision Making and Academia: An Unholy Alliance", *Women in Management Review*, Vol. 9 No. 3, pp. 11-16.

Voorspoels, J., & Bleijenbergh, I. (2019). Implementing gender quotas in academia: a practice lens. *Equality, Diversity and Inclusion: An International Journal*, 38(4), 447–461. <https://doi.org/10.1108/edi-12-2017-0281>

In 2014, Ghent University (Belgium) changed its procedures for the election of its highest decision-making body, the Board of Governors by requesting a 40/60 % gender-balanced representation of its members: [https://eige.europa.eu/sites/default/files/panel2\\_tinebrouckaert\\_text-presentation.pdf](https://eige.europa.eu/sites/default/files/panel2_tinebrouckaert_text-presentation.pdf)

### *Target audience:*

**Academic staff (members of Advisory Boards)**

### *Timeframe:*

October 2021 – May 2022

### *Goals & Objectives*

- Short-term: to submit a proposal to the corresponding decision-making body regarding the gender-balanced composition of advisory bodies.
- Medium-term: to promote a gender-balanced composition of advisory bodies at the institutional level.
- Long-term: to maintain a gender-balanced participation in the Advisory Boards.

### *Activities*

- Identification of the decision-making body that regulates the composition of each advisory board (October 2021).
- Discussion with key stakeholders and definition of the norm to be proposed and debated (November 2021 – January 2022).
- Submission of the proposal to the corresponding decision-making body (February 2022).
- Discussion of proposal with the correspondent decision-making body (February – May 2022).
- If the proposal is approved, implementation of norm.

### *Available Resources*

- Vice-rector for gender and equality policies.
- Support of the CALIPER team.

### *Targets & Indicators*

- Short-term:
  - ✓ Proposal defined: yes/no.



- ✓ Proposal submitted to the corresponding decision-making body: yes/no.
- ✓ Proposal debated with the corresponding decision-making body: yes/no.
- Medium-term (if proposal approved):
  - ✓ The norm is applied: yes/no.
  - ✓ The composition of the advisory bodies is gender-balanced (according to the norm): yes/no.
- Long-term:
  - ✓ Respect of the measure 2 years after the end of the CALIPER project: yes/no.
- Intersectionality indicator(s): none (this measure concerns only gender).

#### ***Facilitating & Hindering Contextual Factors***

The norm of at least 1/3 of members of each gender is already in place at ULB in other commissions (e.g. recruitment and selection commissions) and it is overall accepted and respected. The Vice-Rector in charge of the gender and diversity policy strongly supports this measure.



## 5 Research

### **Current situation and general objective**

During the 2018-2019 academic year, the ULB Archives and Libraries Service encoded master and doctoral theses including gender as a topic or as a mainstreamed perspective. In total, 189 dissertations and 9 theses were identified (Rapport genre, 2018-2019). All of these studies were carried out within the framework of master's and doctoral degrees in the social and human sciences.

Currently, ULB does not have a database containing research projects which main topic is gender and/or which integrate the gender dimension. An estimate of these publications was made<sup>43</sup> by searching for the keywords "gender," "sex," "male/female," "man/woman," and "LGBT" (in English and French) in the title of publications in the ULB DI-fusion digital institutional repository in the years 2017, 2018, and 2019 (table 6).

	2017	2018	2019
SHS, Health	122	143	54
STEM	1	1	0

Table 6. Number of projects on gender or including a gender dimension.

Although not completely accurate, the results of the estimate allow us to reach some conclusions:

- The vast majority of publications with gender as their main topic belong to the fields of social and human sciences and health sciences.
- The keywords "gender" and "masculinity/femininity" are used more in the titles of publications in the social and human sciences, while the keyword "sex" is used more in the health sciences, indicating the different perspective adopted in each disciplinary domain as "gender" is typically used to refer to social roles and relations and "sex" is employed to refer to the sexed body.
- **Sex/gender perspectives are generally absent in publications in STEM fields, except in life sciences.** Publications on sex were identified, referring to the sex of animals and plants in biology, zoology, etc. However, only two articles<sup>44</sup> can be considered to take a gender perspective in STEM fields in non-life sciences fields.

The integration of the sex/gender perspective in STEM research is however important for several reasons. First, it takes into account the fact that every human body is sexed and every person is gendered, since gender is a social relation that structures every society. Second, the consideration of sex and gender variability in research brings added value in terms of excellence, rigor, reproducibility, creativity and business opportunities. Third, it promotes a better understanding of men's and women's needs, behaviours and attitudes leading to goods and services better suited to the needs of citizens, thereby enhancing the societal relevance of research and innovation. Finally, in terms of research funding, the European Commission is increasingly encouraging researchers to integrate the sex/gender perspective in their projects. For research funding calls under Horizon Europe work programme, the integration of the gender dimension into R&I content will be mandatory unless the topic description explicitly excludes it.

<sup>43</sup> The estimate was carried out during the 1st phase of the CALIPER project (see Deliverable D1.2. Internal gender equality assessments results).

<sup>44</sup> "Effect of total lung capacity, gender and height on CT airway measurements par Hackx, Maxime ;Francotte, Dorothee ;Garcia, Tiago Severo;Van Muylem, Alain ;Walsdorff, Michel ;Evenois, Pierre-Alain, *Référence British journal of radiology*, 90, 1076, 20160898, 2017" et "Reflections on Moral Challenges Posed by a Therapeutic Childlike Sexbot par Behrendt, Marc, *Référence Lecture notes in computer science*, 10715 LNAI, page (96-113), 2018".



The adoption of the sex/gender perspective does not imply its inclusion by default in all and every research project because, obviously, it is irrelevant in some fields (e.g. theoretical mathematics). But it does imply a consideration of its relevance in each concrete study. This perspective is particularly important in studies in which the human body and/or human attitudes, practices and behaviours are concerned. Often, the lack of inclusion of this perspective in studies in which it is relevant leads to generalize research results to a too often assumed “universal” population, while only a partial perspective has actually been taken into account (usually, that of men<sup>45</sup>). In this regard, it is also important to consider that men and women are not two homogenous social categories. Therefore, the interaction of gender with other axes (origin, age, etc.) needs also to be addressed.

Following the above, a first general objective or long-term impact that the GEP would like to achieve within the area of research is **to increase the number of STEM studies including a sex/gender+ dimension.**

Another point of attention that has been raised at the STEM faculty level is the **frequent all-male composition of STEM thesis juries**. No official indicator exists at this respect yet, but according to the interviews, there is a tendency to have only men. This can be explained in part by the overall low proportion of female STEM professors, especially in some disciplines, but also by a tendency to invite only men, even as external experts. The participation in PhD juries is an opportunity to network, to be visible as an expert in the field and to participate in the scientific community. Thus, a second general objective or long-term impact that the GEP would like to achieve within the area of research is **to increase the proportion of women taking part of PhD juries in the STEM faculties.**

### ***Underlying problems and strategies to solve them***

Concerning research contents, one of the core values of ULB is the freedom to do research. Consequently, there is no internal funding for specific research programs and no research priorities set by the University not to influence researchers on the choice of research topics and approaches. Moreover, the University does not have any influence on external funding. Therefore, the only strategy that the University can implement to achieve that general objective is to “convince” researchers to integrate, when it is relevant, the sex/gender dimension in research. According to the interviews carried out with STEM scholars<sup>46</sup>, there is both a lack of awareness of the relevance of the sex/gender dimension in STEM research and a lack of knowledge on how to include it in their studies. This may be in part explained by a disciplinary divide between the scientific and technical understanding of the world and the human, cultural and social one, when in reality they are intertwined.

Regarding women’s participation in PhD juries, the low proportion of female professors in STEM faculties, particularly in some disciplines, can be an obstacle to achieve gender-balanced juries. However, in some cases, the problem lies in unconscious biases that lead to not thinking about contacting and inviting women. Therefore, it is essential to raise the awareness on the issue.

#### *Gender in research content*

- a. Providing researchers with a clear and simple tool to include the sex/gender dimension in (STEM) research
- b. Raising STEM researchers’ and students awareness of possible sex/gender (and other) biases and the added value of the sex/gender+ dimension in STEM research

<sup>45</sup> See, for instance, Leavy, S. (2018).

<sup>46</sup> See deliverable D1.2.



*Women's participation in PhD juries* c. Raising awareness on the low presence of women in STEM PhD juries

Therefore, in order to achieve the general objectives, the GEP adopts the following **strategies**:

To meet these goals, a guideline on the inclusion of the sex/gender dimension in (STEM) research will be disseminated by the University (measure 9) and an awareness-raising exhibition will be organized (measure 10).

### **Actions**

Following the increasing interest of research actors and actresses (funding agencies, research performing institutions and researchers themselves) on the inclusion of the sex/gender dimension in research content, a number of good quality guidelines have been already published. Thus it would not be useful to produce another one. However, researchers may be discouraged by this body of guidelines, especially if they are not particularly sensitive (yet) to the sex/gender perspective in research. Therefore, one guideline on the inclusion of the sex/gender dimension in (STEM) research will be first selected and then disseminated by the University as **recommended guideline (measure 9)** to provide researchers with a clear, simple and user-friendly tool to include the sex/gender dimension in research. Given that the integration of this dimension in research is pertinent across all kinds of disciplines, the selected guideline will not focus exclusively on the STEM fields, but this particular focus will undoubtedly be addressed as well. In this way, the whole University will benefit from the tool. The dissemination of the guideline in the University's communicational channels, encouraging researchers' to use it, will also show its support to the measure.

Different existent guides will be first identified and then examined following a set of predefined criteria. The guide will be selected according to its comprehensiveness (different stages of research and different disciplines), clarity and inclusion of empirical examples, case studies and good practices. The selection will also be discussed with relevant key stakeholders, such as the research department. Regarding dissemination, the main different target audiences will be identified and as well as the most appropriate channel and message for each target. The guideline can also be shared in the University's and STEM faculties' website. If it is considered necessary, a French translation could also be contemplated<sup>47</sup>. This action could be carried out together with the *Comité Femmes et Sciences*<sup>48</sup> (TBC), especially what regards the selection of a particularly useful guideline to be used as referent in the different RPOs and RFOs that are part of the committee. The collaboration still needs to be further defined.

The availability and dissemination of a simple and useful tool is not enough to ensure its use, especially if there is an initial lack of awareness about how the sex/gender dimension might be relevant in research. Such lack of awareness is pervasive only in STEM but, as described above, it is particularly absent in those fields

<sup>47</sup> The guidelines identified so far are written in English. Although this may not be a problem for STEM bachelor and master's students, it could be so for students in the social and human sciences.

<sup>48</sup> The Women and Science Committee, hosted by ARES (the Academy for Research and Higher Education - federation of French-speaking higher education institutions in Belgium) formulates opinions and recommendations on gender equality issues in the academic and scientific fields; ensures the exchange of information and good practices concerning gender equality in academic careers and scientific research; facilitates the implementation of the gender equality provisions of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers and participates in the definition of the positions of the Wallonia-Brussels Federation within the Standing Working Group on Gender in Research and Innovation (SWG GRI). It is composed of 2 representatives per institution or service that sits on it: the 6 universities, the F.R.S-FNRS, the ARES, the General Directorate of Higher Education, Lifelong Learning and Scientific Research and the Directorate of Equal Opportunities of the Ministry of the Walloon-Brussels Federation, and the representative of the competent minister. The gender contact persons of the universities and of the F.R.S-FNRS are also members.



and, in this regard, the general objective of the GEP is to increase the number of STEM studies including a sex/gender+ dimension. Therefore, an **exhibition** about the sex/gender+ dimension in STEM research will be organized (**measure 10**) for awareness-raising purposes. The exhibition will show the added-value of integrating sex and gender in a range of concrete STEM studies.

An exhibition will be organized to raise STEM researchers' awareness of possible sex/gender+ (and other) biases and the added value of the sex/gender dimension in STEM research. The materials of the GEECCO project<sup>49</sup> exhibition will be used. This EU project also aimed at promoting gender equality in STEM disciplines and developed some exhibition materials (posters) to incorporate the gender dimension in the content of research and innovation. The exhibition will be integrated in STEM researchers' and students' everyday settings (e.g. university's corridors, labs, etc.) as much as possible and inspiring animations of the exhibition will be planned. An inauguration of the exhibition will also be organized in which the use of the selected guideline (see measure 9) will be encouraged. This action could also be carried out together with the *Comité Femmes et Sciences*<sup>50</sup> and the City of Brussels (responsible of non-university higher education in Brussels – *hautes écoles*), as both expressed an interest in the measure. The collaboration still needs to be further defined, but collaboration may imply the organization of a common itinerary exhibition to be set up in all the participant institutions (other RPOs and higher education institutions and one RFO).

Awareness about the low presence of women in STEM PhD juries can be raised by establishing a gender target. Targets are aspirational goals which the faculty might set itself but does not mandate to achieve and they are discussed and decided together with the faculty members. It is important to clarify that it is not a mandatory quota, but a recommendation that expresses the desire and engagement of the STEM faculties to improve the composition of PhD juries to make them as gender-balanced as possible. For this reason, it is more pertinent to establish a target, not a quota. Moreover, external scholars must also be part of PhD juries. Therefore, targets can encourage PhD commissions to identify and invite external female scholars. Thus **measure 8 will establish a gender target** to increase the proportion of women that are part of STEM PhD juries (one target per faculty). A WG will be established to define a gender target and the procedure to monitor it. The suggested target will be discussed within each STEM faculty. The agreed target will then be included in a specific provision in the general doctoral regulations of each STEM faculty for official recognition, visibility and durability purposes. An indicator will be collected for internal monitoring.

N.	Measures/actions	Objective (short-term)	Timeframe of implementation
8	Gender target in STEM PhD juries	To define and set a gender target at each STEM faculty to promote gender balance in the composition of STEM PhD juries	October 2021 – February 2023
9	Dissemination of guideline on the inclusion of the sex/gender dimension in (STEM) research	To select and disseminate a clear, simple and user-friendly guideline to include the sex/gender dimension in research	February 2022 – April 2023
10	Exhibition 'Sex/gender+ in STEM research'	To set up an exhibition on the sex/gender+ dimension in STEM research	May 2022 – May 2023

<sup>49</sup> Gender Equality in Engineering through Communication and Commitment

<sup>50</sup> See footnote 25.



Table 7. Summary of research actions.

## Measure 8: Gender target in STEM PhD juries

<b>Gender target in STEM PhD juries</b>	<b>Sources:</b> Howe-Walsh, L., & Turnbull, S. (2014). Barriers to women leaders in academia: tales from science and technology. <i>Studies in Higher Education</i> , 41(3), 415–428.
<b>Target audience:</b> STEM academic body (especially those directly involved in the selection of members for PhD juries)	<b>Timeframe:</b> October 2021 – February 2023

### Goals & Objectives

- Short-term: to define and set a gender target at each STEM faculty to promote gender balance in the composition of STEM PhD juries.
- Medium-term: to increase the proportion of women participating in STEM PhD juries.
- Long-term: to maintain a gender-balanced participation in STEM PhD juries.

### Activities

- To establish a working group at each STEM faculty (October – November 2021) in order to define:
  - The desired, but realistic, gender target for the composition of PhD juries taking into account the current proportion of women in those fields (December 2021 – January 2022).
  - A procedure for the easy collection of this gender indicator for internal monitoring purposes (December 2021 – January 2022).
- To discuss the proposed gender target within each STEM faculty (February – April 2022).
- To introduce this procedure as a specific provision in the general doctoral regulations (BSE) or to modify the existent one (Fac. of sciences) recommending gender-balanced PhD juries according to the target previously set (May 2022).
- To monitor progress in the years following the implementation.
- To reevaluate the target after 4 years of implementation.

### Available Resources

- Deans of the STEM faculties.
- (Eventually) support of the gender+ commission.
- Support of the CALIPER team.

### Targets & Indicators

- Short-term:
  - ✓ Definition of gender target: 1 target per faculty.





- ✓ Introduction of target in the specific provision of the doctoral regulations: 1 specific provision per faculty.
- Medium-term:
  - ✓ Achievement of target at each faculty after 2 years of implementation: yes/no.
- Long-term:
  - ✓ Achievement of target at each faculty after 4 years of implementation: yes/no.
- Intersectionality indicator(s): none (this measure is applied only to gender at this stage).

#### **Facilitating & Hindering Contextual Factors**

A specific gender proportion in several commissions is already established at ULB, but it has not been done yet within PhD juries. The general problem in the STEM faculties is the overall low proportion of women, especially in some disciplines, and thus the difficulty for them to participate in all commissions and decision-making bodies. However, PhD juries are formed also by external members. Therefore, participation in juries can be shared between internal and external female academics.

## **Measure 9: Dissemination of guideline on the inclusion of the sex/gender dimension in (STEM) research**

### ***Dissemination of guideline on the inclusion of the sex/gender dimension in (STEM) research***

#### **Sources:**

Leavy, S. (2018). Gender bias in artificial intelligence. *Proceedings of the 1st International Workshop on Gender Equality in Software Engineering*. Published. <https://doi.org/10.1145/3195570.3195580>

Tannenbaum, C., Ellis, R. P., Eyssel, F., Zou, J., & Schiebinger, L. (2019). Sex and gender analysis improves science and engineering. *Nature*, 575(7781), 137–146. <https://doi.org/10.1038/s41586-019-1657-6>

Ritz, S. A., Antle, D. M., Côté, J., Deroy, K., Fraleigh, N., Messing, K., Parent, L., St-Pierre, J., Vaillancourt, C., & Mergler, D. (2013). First steps for integrating sex and gender considerations into basic experimental biomedical research. *The FASEB Journal*, 28(1), 4–13. <https://doi.org/10.1096/fj.13-233395>

European Commission (2011) *Toolkit. Gender in EU-funded research*. Luxembourg: Publications Office of the European Union

Mihajlović Trbovc, J. and Hofman, A. (2015), *Toolkit for Integrating Gender-Sensitive Approach into Research and Teaching*. GARCIA working papers (6).

The peer-reviewed Gendered Innovations project: 1) develops practical methods of sex, gender, and intersectional analysis for scientists and engineers; 2) provides case studies as concrete illustrations of how sex, gender and intersectional analysis leads to innovation: <http://genderedinnovations.stanford.edu/index.html>

#### **Target audience:**

***STEM researchers (PhD students, post-doc researchers & professors) and master's students***

#### **Timeframe:**

February 2022 – April 2023



### Goals & Objectives

- Short-term: to select and disseminate a clear, simple and user-friendly guideline to include the sex/gender dimension in research.
- Medium-term: to provide researchers with a clear and simple tool to include the sex/gender dimension in research and to encourage (STEM) researchers to use it.
- Long-term: to increase the number of STEM studies including a sex/gender+ dimension.

### Activities

- Establishment of a working group.
- Identification of existent guidelines on the matter.
- Definition of selection criteria according to comprehensiveness (different stages of research and different disciplines), clarity and inclusion of empirical examples, case studies and good practices
- Based on the selected criteria, review of existing guidelines and selection of the most appropriate one.
- If needed, translation of guideline into French.
- Identification of target audiences, appropriate channels and message.
- Dissemination of guideline.

### Available Resources

- 1 researcher from the CALIPER team.
- CALIPER budget (if translation needed).
- *Comité Femmes et Sciences* (TBC).
- *Comité Femmes et Sciences's* budget for gender contact persons (if translation needed) (TBC).

### Targets & Indicators

- Short-term:
  - ✓ Existent guidelines identified: yes/no.
  - ✓ Selection criteria defined: yes/no.
  - ✓ Guideline selected: yes/no
- Medium-term:
  - ✓ Guideline published in institutional website(s): yes/no.
  - ✓ Guideline disseminated in institutional social media(s)/email: yes/no.
- Long-term:
  - ✓ Increase in the number of STEM publications including a sex/gender dimension included in the institutional repository (2023-2026): > 50%
- Intersectionality indicator(s):
  - ✓ A reflection on the intersection of sex/gender with other social axes is included in the selected guideline: yes/no.



### Facilitating & Hindering Contextual Factors

The EC new framework programme Horizon Europe, by setting the gender dimension in research as an award criterion in European calls, is clearly a facilitating factor. The selection and dissemination of the guideline in collaboration with the *Comité Femmes et Sciences* is also an strength, providing legitimacy, expertise on the topic and networks for dissemination.

## Measure 10: Exhibition ‘Sex/gender+ in STEM research’

### Exhibition ‘Sex/gender in STEM research’

#### Sources:

GEECCO project. Exhibition ‘Integrating gender dimensions in the content of research and innovation’, [http://www.geecco-project.eu/resources\\_results/exhibition/](http://www.geecco-project.eu/resources_results/exhibition/)

#### Target audience:

*STEM researchers (PhD students, post-doc researchers & professors)*

#### Timeframe:

May 2022 – May 2023

### Goals & Objectives

- Short-term: to set up an exhibition on the sex/gender+ dimension in STEM research.
- Medium-term: to raise STEM researchers’ and students’ awareness of possible sex/gender+ (and other) biases and the added value of the sex/gender dimension in STEM research.
- Long-term: to increase the number of STEM studies including a sex/gender+ dimension.

### Activities

- Establishment of a working group (with internal and eventually also external actors and actresses) for the organization of the exhibition.
- Definition of exhibition’s contents, locations and calendar.
- Organisation of exhibition’s inauguration, including a top management’s speech and the presentation of the selected guideline.
- Set up of exhibition at ULB’s STEM faculties (and, eventually, also in the other participant institutions - TBC).

### Available Resources

- 1 researcher from the CALIPER team.
- *Comité Femmes et Sciences’* and City of Brussels’ support (TBC).
- The EU project GEECCO’s exhibition is available for download in English, French and Dutch free of charge.
- Budget CALIPER for impression of posters.
- ULB’s (and eventually partners’) venues.

### Targets & Indicators

- Short-term:
  - ✓ Set up of exhibition: yes/no.
  - ✓ Presentation of guideline in exhibition: yes/no.



This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement no 873134.

- Medium-term:
  - ✓ Total number of visitors/viewers: 100 at each faculty (according to the estimate of the number of people using and/or passing by the exhibition's venues).
- Long-term:
  - ✓ Increase in the number of STEM publications including a sex/gender+ dimension included in the institutional repository (2022-2026): > 50 %
- Intersectionality indicator(s):
  - ✓ A reflection on the intersection of sex/gender with other social axes is included in the exhibition: yes/no.

#### *Facilitating & Hindering Contextual Factors*

See previous measure.



## 6 Teaching

### ***Current situation and general objective***

According to the analysis carried out<sup>51</sup>, about 20 courses on gender currently exist at ULB in the social and human sciences. Numerous seminars, workshops and conferences on gender have also been organized at the University over the past years<sup>52</sup>. These activities were (co-)organized by STRIGES, the gender and sexuality interdisciplinary research structure of the ULB's *Maison des sciences humaines*, a University structure that hosts and supports interdisciplinary research in the social and human sciences.

No gender courses and only one seminar<sup>53</sup> have been identified in the STEM disciplines. At the present time, it is difficult to know the extent to which the gender dimension is included in STEM teaching. However, we can assume that **the sex/gender perspective is generally not present in STEM teaching**, at least in terms of **teaching contents**. Considering that research results provide university teachers with teaching material and that, as described in section 6, the sex/gender perspective is generally absent in STEM publications (life sciences aside), we could draw the conclusion that it is also absent or very scarce in STEM teaching.

The reasons why the sex/gender dimension in *teaching contents* is important join many of the reasons why it is important in research. It helps students understand that every human body is sexed and every person is gendered, since gender is a social relation that structures every society. It brings added value to teaching content in terms of excellence, rigor, and creativity. Since current students are future researchers and professionals, the promotion of students' understanding of men's and women's needs, behaviors and attitudes will lead to goods and services better suited to the needs of citizens, thereby enhancing the societal relevance of research and innovation. Moreover, the integration of the sex/gender perspective in teaching is also important in *teaching practices* and promotes the avoidance of gender biases in the interaction of teachers with students and between students.

Following the above, the general objective or long-term impact that the GEP would like to achieve within the area of teaching is **to promote the integration of a gender perspective into STEM education (content and teaching practices)**.

### ***Underlying problems and strategies to solve them***

A 2-hour training on the inclusion of the gender perspective in teaching (both in teaching contents and teaching pedagogy) is offered once a year by ULB's Educational Support Center (CAP). However, very few teachers (only 11 women and 5 men in total) have participated over the past three years analyzed (2016-2018). According to the interviews with the training's organizers, there is a generalized lack of time among university's teachers coupled with an overall lack of awareness on gender inequalities, which leads them not to see their participation in the training as a priority. In this sense, before taking action at the level of teachers, it is at the level of curricula and their objectives that action should be taken. Ideally, it should be the study program's purposes established by the curricula that guide the choice of content and activities taught to students.

As long as the expectations for "gender competences" required at the end of the curriculum are not made formal and visible, there is little chance of initiating widespread change. Although a change in the curriculum does not in itself guarantee a change in practices and content, without updating these curriculum competency frameworks (*référentiels de compétences*), teachers' training and awareness is not based on any

<sup>51</sup> See deliverable D1.2.

<sup>52</sup> 30 seminars, workshops and conferences in 2016-2017, 30 in 2017-2018 and 42 in 2018-2019.

<sup>53</sup> Seminar organized in 2021 by a PhD student from the BPS. The seminar's topic was the "missing data": data that are not considered in research because the sex/gender perspective is not taken into account.



institutional framework. It is thus a starting point and a tool for implementing changes within a curriculum. It is also a unifying element that constitutes the framework for educational action. Each teacher should comply with it, but also contribute to its regulation with all the teaching actors and actresses. The following step would then be to translate the curriculum competency frameworks into study programs.

The reform of the curriculum competency frameworks is a measure that requires time. Meanwhile, it is important to provide teachers with tools for gender-sensitive teaching for those who are already motivated to do so.

Therefore, in order to achieve the general objective, the GEP adopts the following strategies:

- Gender in teaching
- a. Providing teachers with tools for gender-sensitive teaching
  - b. Establishing an institutional framework in the STEM faculties to promote and support change for gender-sensitive and inclusive teaching

## Actions

To meet these goals, a guideline on gender-sensitive teaching will be produced and disseminated (measure 11) and a consultation to explicitly integrate the sex/gender+ and diversity perspective into STEM curriculum competency frameworks will be carried out (measure 12).

The elaboration of a gender-sensitive teaching guideline is already a few years old project of the Educational Support Center. A first version of the guideline has already been drafted by the center and commented by several gender experts of the University. However, it has not been updated and finalized yet. **Measure 11 will thus entail the finalization and dissemination of the guideline.** The production of this guideline, to be disseminated both internally and externally, will help those proactive teachers who are sensitized to gender biases and inequalities in teaching contents and practices to integrate the gender perspective in their teaching contents and practices. The finalization of the guide will entail the integration of the comments and remarks of the gender experts and the final review. The dissemination will contemplate the identification of specific target audiences, the channels for dissemination and the dissemination itself. STEM teachers will be particularly targeted.

The explicit integration of the gender+ dimension into STEM curriculum competency frameworks and its specific formulation requires the agreement of several internal stakeholders. Following a meeting with the Vice-rector for education, she expressed her agreement to initiate the consultation process with the corresponding stakeholders. For this reason, **measure 12 includes the consultation** for an eventual explicit integration of a **sex/gender+ perspective into STEM curriculum competency frameworks**. A consultation with relevant stakeholders will be carried out in order to assess the feasibility of explicitly integrating a sex/gender+ and diversity perspective into STEM curriculum competency frameworks and, if feasible, to define the specific formulation to be integrated.

N.	Measures/actions	Objective (short term)	Timeframe of implementation
11	Guide on gender-sensitive teaching	To finalize and disseminate a guide on gender-sensitive teaching	July 2021- January 2023
12	Consultation for an explicit integration of a sex/gender+ and diversity perspective into STEM curriculum competency	To assess the feasibility and define the specific formulation to explicitly integrate a sex/gender+ and diversity perspective into STEM	September 2021 – June 2023



	frameworks	curriculum competency frameworks	
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Table 8. Summary of teaching actions.

## Measure 11: Guide on gender-sensitive teaching

### *Guide on gender-sensitive teaching* Sources:

Dehler, Jessica, et Gilbert, Anne-Françoise (2010). *Pour un enseignement supérieur sensible au genre : Outil d'auto-évaluation et auto formation*. Equal + (enseignement – genre – qualité). Université de Fribourg, Suisse.  
<https://elearning.unifr.ch/equal/fr/pour-un-enseignement-superieur-sensible-au-genre-2>.

Leggon, C. B. (2010). Diversifying Science and Engineering Faculties: Intersections of Race, Ethnicity, and Gender. *American Behavioral Scientist*, 53(7), 1013–1028. <https://doi.org/10.1177/0002764209356236>

Sabbe, E., & Aelterman, A. (2007). Gender in teaching: a literature review. *Teachers and Teaching*, 13(5), 521–538.  
<https://doi.org/10.1080/13540600701561729>

The Mondragon University provided the staff with Guides and Workshops on integration of equality and diversity in curriculum design, learning activities and/or program of study, as a teaching and learning support:  
<https://www.plotina.eu/guides-integration-equality-diversity-in-curriculum/#1571055341720-dfa9392f-7645>

### *Target audience:*

*University teachers (all disciplines)*

### *Timeframe:*

*July 2021- January 2023*

### *Goals & Objectives*

- Short-term: to finalize and disseminate a guide on gender-sensitive teaching.
- Medium-term: to provide teachers with tools to integrate gender into teaching.
- Long-term: to promote the integration of a gender perspective into STEM education (content and teaching practices)

### *Activities*

- To finalize the 1st version of the guide on gender-sensitive teaching (July-September 2021).
- To identify specific target audiences and choose dissemination channels accordingly (October 2021 – January 2022).
- To disseminate the guide (February – March 2022).

### *Available Resources*

- 1 educational advisor and the director of the Educational Support Center.
- 1 researcher from the CALIPER team.
- CALIPER budget for eventual printing (not initially foreseen).
- University and STEM faculties' websites and/or social media for dissemination.

### *Targets & Indicators*

- Short-term:



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 873134.

- ✓ Production of guideline: yes/no.
- ✓ Publication of guideline in institutional website(s): yes/no.
- ✓ Dissemination of guideline: yes/no.
- Medium-term:
  - ✓ Guide presented in the respective STEM Faculty councils: yes/no.
- Long-term:
  - ✓ Number of STEM courses in which the gender dimension has been explicitly integrated in syllabus: 25%.
- Intersectionality indicator(s): none. The guideline focus exclusively on gender. The intersectional perspective may be contemplated in the updated version of the guideline in the future.

### *Facilitating & Hindering Contextual Factors*

The integration of the gender perspective into STEM curriculum competency frameworks (see measure 12) could encourage STEM teachers to use the guideline to integrate the gender dimension in (STEM) teaching.

## **Measure 12: Consultation for an explicit integration of a sex/gender+ and diversity perspective into STEM curriculum competency frameworks**

### **Consultation for an explicit integration of a sex/gender+ and diversity perspective into STEM curriculum competency frameworks**

#### *Sources:*

Based on regional legislation and from the academic year 2021/22 onwards, all Catalan universities have to include gender dimension in teaching. The Polytechnical University of Catalonia (UPC), partner in the H2020-funded project GEECCO, has launched a pilot programme on including gender dimension in teaching (projecte gènere with the docència) in December 2018: <https://igualtat.upc.edu/ca/projectes-clau/projecte-genere-i-docencia>

#### *Target audience:*

#### *Timeframe:*

### **Stakeholders involved in the definition of STEM curriculum competency frameworks**

*September 2021 – June 2023*

### *Goals & Objectives*

- Short-term: to assess the feasibility and define the specific formulation to explicitly integrate a sex/gender+ and diversity perspective into STEM curriculum competency frameworks.
- Medium-term: to establish an institutional framework in the STEM faculties to promote and support change for gender-sensitive and inclusive teaching.
- Long-term: to promote the integration of a gender perspective into STEM education (content and teaching practices)

### *Activities*

- Identification of key stakeholders.
- Organization of meetings with stakeholders to discuss about the feasibility and the specific



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formulation for the explicit integration of a sex/gender+ and diversity perspective into STEM curriculum competency frameworks.

- (If agreement achieved) Definition of the formulation to be included in STEM curriculum competency frameworks and inclusion.

#### *Available Resources*

- Vice-rector for education to lead the discussions.

#### *Targets & Indicators*

- Short-term:
  - ✓ Relevant stakeholders identified and consulted: yes/no.
  - ✓ (If agreement achieved) Definition of the formulation to be included in STEM curriculum competency frameworks: yes/no.
- Medium-term:
  - ✓ STEM curriculum frameworks updated: yes/no.
- Long-term:
  - ✓ Number of STEM programs in which the gender+ dimension has been explicitly integrated in syllabus: 15%.
- Intersectionality indicator(s):
  - ✓ Consideration of the diversity dimension in the consultation process: yes/no.

#### *Facilitating & Hindering Contextual Factors*

The top management supports this measure.



## 7 Student services

### Current situation and general objective

According to the latest data analysed (2018-2019), overall, there are more female students than male students enrolled in undergraduate studies at ULB (figure 13). However this gender proportion varies by disciplinary field (human and social sciences, health, STEM). Female students make up 59% of the student body in the humanities and social sciences and 58% in the health disciplines. However, they are only 36% in STEM studies. When considering the different STEM orientations (figure 14), the gender proportion of students enrolled in agricultural sciences and bioengineering is balanced (students are 48% women and 52% men), but the proportion of female students is low in sciences (30%) and in engineering and technology sciences (21%). However, as it was the case for the academic body<sup>54</sup>, the gender proportion of students enrolled in the Faculty of sciences may differ between the eight departments, but the available data are not disaggregated at that level yet. Thus, *measure 6* includes a new gender indicator for the students too.

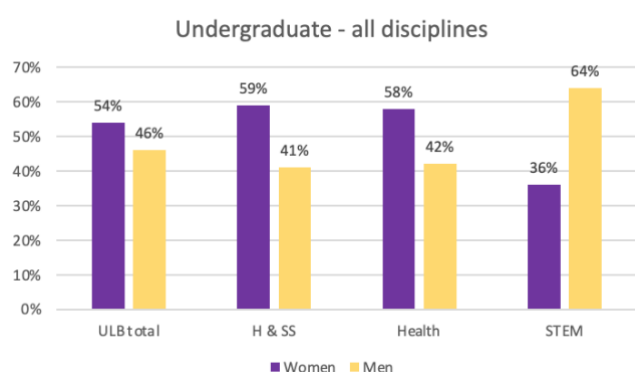


Figure 13. Gender proportion of undergraduate students enrolled in all disciplines (2018-2019)

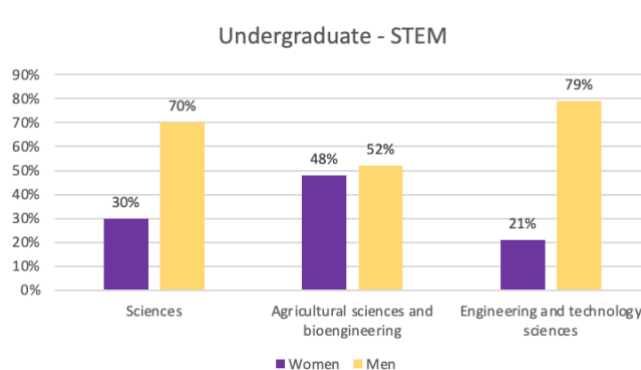


Figure 14. Gender proportion of undergraduate students enrolled in STEM fields (2018-2019)

In graduate studies, based on the same set of data (2018-2019), the proportion of women enrolled at ULB increases in almost all fields (figure 15). The proportion of female students is 66% in humanities and social sciences, 62% in health disciplines and 42% in STEM. When considering the different STEM orientations (figure 16), the proportion of women increases in sciences. However, it decreases slightly in agricultural sciences and bioengineering (44%) and remains the same in engineering and technology sciences, where women are still under-represented (21%).

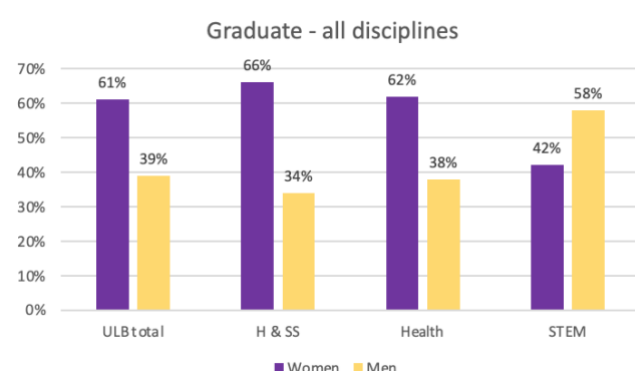


Figure 15. Gender proportion of graduate students enrolled in all disciplines (2018-2019)

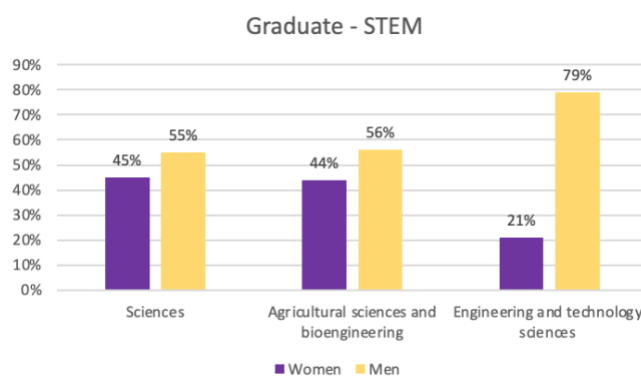


Figure 16. Gender proportion of graduate students enrolled in STEM fields (2018-2019)

<sup>54</sup> See section 4 Human Resources.



Thus, the general objective or long-term impact that the GEP would like to achieve within the area of students and student services is **to increase the proportion of female students enrolled in STEM studies, particularly in the disciplines in which they are under-represented.**

### ***Underlying problems and strategies to solve them***

Based on the above, the main problem lies in the transition between secondary education and university. It is at the undergraduate level that the proportion of women is particularly low in the STEM fields. Then, the percentage of women enrolled increases between undergraduate and graduate STEM studies, with the exception of engineering and technology sciences where it remains equal. For this reason, it seems especially important **to intervene at the secondary education level.**

According to the interviews and focus groups carried out with internal and external stakeholders<sup>55</sup>, there are significant gaps in overall high school science education. It is often too abstract, theoretical and disconnected from everyday applications and understandings of the present world. It seems to be also far from the interests of today's youth (e.g. modern technology's uses, environmental concerns, etc.). This leads to an overall low proportion of students, both female and male students, enrolling in STEM studies. According to the last ULB's gender report<sup>56</sup>, in 2019-2020 there were 18.229 students enrolled in the human and social sciences, 7.034 in health studies and only 6.196 in STEM. As described above, women are particularly under-represented in STEM fields.

In a recent study concerning the determinants of the attractiveness of scientific and technical studies and occupations among young people<sup>57</sup>, it was found that gender was one of the main explanatory factors, young women being generally less interested in these fields than young men. This finding is consistent with the literature on the topic and, although the study was carried out in the Wallonia region, similar results would probably be found in the Brussels region<sup>58</sup>. Researchers' explanation of these results is twofold. The first explanation concerns social roles. STEM professions are associated with stereotypes that define them as solitary occupations, focused on facts, data and objects, carried out in a context where it is necessary to be dominant, assertive and competitive. Women, due to their gender socialization, are inclined to take on social roles known as "communality", oriented towards the group, connection to others, collaboration, solidarity, service to the community. On the basis of these two elements, the lack of attraction of women to STEM professions would result from the incompatibility between their socialization and the stereotypes that weigh on these professions.

The second explanation involves the concept of "brightness" developed by Bian et al<sup>59</sup>. Most of us would share the belief that one has to be particularly brilliant to do some skilled STEM occupations (notably those of engineer, mathematician, physicist and computer scientist). It has been shown that, from a young age, girls have been taught that brilliance is essentially a male characteristic. The combination of the two beliefs may explain the underrepresentation of women in skilled STEM occupations. According to the study, the influence of these factors appears early (as early as 12-13 years old) and is confirmed thereafter. It is thus therefore equally important **to challenge both STEM stereotypes and gender stereotypes in secondary education**<sup>60</sup>.

<sup>55</sup> See deliverables D1.2 and D2.2.

<sup>56</sup> Rapport Genre 2020.

<sup>57</sup> Bouchat, P., Nils F., Colon, P.L. et De Sacco, P. (2020) *Les déterminants de l'attrait pour les études et les métiers scientifiques et techniques chez les 12-25 ans*. Rapport de recherche UCLouvain-FOREM.

<sup>58</sup> ULB has its main campuses in Brussels but also one campus in Charleroi (Wallonia region).

<sup>59</sup> Bian, L., Leslie, S.-J., & Cimpian, A. (2017). Gender stereotypes about intellectual ability emerge early and influence children's interests. *Science*, 355 (6323), 389–391.

<sup>60</sup> In Belgium, education for students from 12 to 18 years old.



Moreover, the interaction of gender with other social axis, especially the socio-economic status, needs to be taken into account<sup>61</sup>. Indeed, the aforementioned study also shows that parents' level of education influence interest in scientific and technical fields of study as college students who choose high-skill STEM occupations are those whose parents have the highest levels of education. Therefore, the adoption of the gender+ perspective is particularly important to attract more students to STEM.

In order to do this, the GEP focuses on three main actors and actresses of secondary education: science teachers, science educators and students themselves. Teachers can play a key role in inspiring students' and arousing their interest towards science and technology disciplines. It is thus essential that they be well trained so that they can transfer a passion for science to students free of gender biases and stereotypes. Equally important is the role of science educators doing science outreach, since they complement the work initiated by science teachers. Students are without question fundamental actors and actresses in whom the final decision to study science lies. Students need to experience science and its applications by themselves, to see its connections to their everyday life and interests. In addition, female students also need to realize that they are completely able to pursue and succeed in science and technology studies. They also need positive STEM role models that inspire them.

Therefore, in order to achieve the general objective regarding students, the GEP adopts the following strategies:

- |                               |   |
|-------------------------------|---|
| Students and student services | <ul style="list-style-type: none"> <li>c. To convene a positive sense to STEM disciplines and professions in science secondary education and science outreach.</li> <li>d. To prevent gender stereotypes and biases in science secondary education and science outreach.</li> <li>e. To inspire girls to continue and pursue STEM studies and careers.</li> </ul> |
|-------------------------------|---|

## **Actions**

To meet these goals, three actions will be carried out within the domain of students and student services: a consultation process for a new science and technology training for future secondary school teachers (measure 13), gender technical support to mainstream the gender+ perspective in ULB science outreach activities (measure 14) and a ULB-g4g WIN event (measure 15). The first two aim at improving science secondary education and science outreach for all students within the ULB's framework for action, whereas the third one targets specifically young girls to correct the current gender imbalance in STEM studies enrolment.

**Measure 13** targets the ULB **training for upper secondary school science teachers**<sup>62</sup> (*Agrégation de l'Enseignement Secondaire Supérieur* - AESS). In Belgium, after completing the master's degree, a specific degree to teach at this level can be obtained. The AESS is obtained after a 30-credit course specifically aimed at the pedagogical training of future teachers in upper higher secondary education. Each university and college offers programs to obtain the AESS. The Vice-rector of education and the deans of the two STEM faculties share the view that the present ULB's AESS could be improved by situating the understanding of the world's complexity as an entry point for science education and by raising the awareness of future teachers on potential unconscious gender biases in their teaching practices. This could be done by de-compartmentalizing the different STEM disciplines in the program (without losing disciplinary specificities) because they are

<sup>61</sup> See, for instance, Saw, G., Chang, CN. and Chan, HY (2018), Cross-Sectional and Longitudinal Disparities in STEM Career Aspirations at the Intersection of Gender, Race/Ethnicity, and Socioeconomic Status. *Educational Researcher*, 47 (8), pp. 525-531.

<sup>62</sup> Last three years of secondary education.



interrelated in the real world and by integrating the gender+ perspective in the training. However, given the number of actors and actresses implicated in the re-design of this training program, a **consultation process** needs to be carried out first. This measure thus aims at exploring if and how a new science and technology training for future secondary school teachers could be designed.

**Measure 14** targets ULB science outreach services. Inforsciences is the department of the Faculty of Sciences which is in charge of providing prospective students with relevant information about studies and careers in science. Inforsciences is also in charge of science outreach, with a focus on schools. Inforsciences is currently performing a survey, funded by Innoviris (Brussels-Capital Region institute for research and innovation), to understand the perception of science and technology and interests of secondary school students in the capital. Gender will be one of the axis of analysis of the collected data. Following the analysis of the data, a symposium will be organised in October 2021 to present these results and reflect on the current practices of science outreach in general and of Inforsciences in particular. The long-term objective is to build on these results in order to re-evaluate the missions of the Department and propose a new strategy of science outreach and information, which are in line with the youth's interests.

Inforsciences strives to generate enthusiasm for Science and STEM among the youth, and in particular among young women in the STEM disciplines where they are underrepresented. As such, the strategy of the Department will have to integrate the gender+ dimension. However, interviews carried out with some members of the Department, tend to suggest that there is a lack of expertise to take this dimension into account. The action will thus include **a technical support in order to evaluate the results of the POST survey from a gender perspective and make concrete proposals** based on these results. Further actions may include technical support to include gender dimension in some selected activities of Inforsciences, depending on the feasibility which is yet to be evaluated.

Finally, **measure 15 entails the organization of a joint ULB-g4g WIN event**. Greenlight for girls (g4g)<sup>63</sup> is a Brussels-based NGO that has more than 10 years of experience in promoting science and technology among young girls worldwide. The event consists on a day<sup>64</sup> spent at ULB premises where girls (12-15 years old) will have the opportunity to discover the STEM through 4 hands-on workshops (lab experiments and other participatory activities), thereby demonstrating future STEM possibilities and role models to girls. The event also includes the welcome speeches from ULB authorities, g4g and several role models. This action involves also a "pre-event" and a "post-event" with scientific activities in the g4g virtual laboratory open to all.

N.	Measures/actions	Objective	Timeframe of implementation
13	Consultation for a new ULB science and technology qualification program to teach at secondary schools	To examine the possibility of designing a new interdisciplinary science and technology qualification program to teach at upper secondary level for science teachers	October 2021 – June 2023
14	Gender technical support to mainstream the gender+ perspective in ULB science outreach activities	To provide ULB science outreach services with gender technical assistance in order to extract meaningful gender-related data from the POST survey	July 2021 – June 2023

<sup>63</sup> <http://www.greenlightforgirls.org/>

<sup>64</sup> Usually a Saturday.



15	Joint ULB-g4g WIN event	To demonstrate future STEM possibilities and role models to girls	Between October 2021 and April 2022
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Table 9. Summary of students and students services actions.

## Measure 13: Consultation for a new ULB science and technology qualification program to teach at secondary schools<sup>65</sup>

### *New ULB science and technology Sources: qualification program to teach at secondary schools*

Cess-Newsome, J. (1999). Secondary Teachers' Knowledge and Beliefs about Subject Matter and their Impact on Instruction. *Science & Technology Education Library*, 51–94. [https://doi.org/10.1007/0-306-47217-1\\_3](https://doi.org/10.1007/0-306-47217-1_3)

Moss-Racusin, C. A., Sanzari, C., Caluori, N., & Rabasco, H. (2018). Gender Bias Produces Gender Gaps in STEM Engagement. *Sex Roles*, 79(11–12), 651–670. <https://doi.org/10.1007/s11199-018-0902-z>

Bouchat, P., Nils F., Colon, P.L. et De Sacco, P. (2020) *Les déterminants de l'attrait pour les études et les métiers scientifiques et techniques chez les 12-25 ans*. Rapport de recherche UCLouvain-FOREM.

### *Target audience:*

*Future secondary school science teachers*

### *Timeframe:*

October 2021 – June 2023

### *Goals & Objectives*

- Short-term: to examine the possibility of designing a new interdisciplinary science and technology qualification program to teach at upper secondary level for science teachers.
- Medium-term: to eventually design and implement a new interdisciplinary science and technology qualification program to teach at upper secondary level for science teachers.
- Long-term impact: to increase the proportion of female students enrolled in STEM studies, particularly in the disciplines in which they are under-represented.

### *Activities*

- Identification of key stakeholders to involve in the consultation process (October-November 2021).
- Establishment of a working group (December 2021).
- Discussion of the feasibility of the project and procedure (January-May 2022).
- Reach of conclusion about the feasibility and procedure (June 2022).

### *Available Resources*

- Vice-rector of education.
- STEM faculties' deans.

### *Targets & Indicators*

- Short-term:

<sup>65</sup> *Agrégation de l'Enseignement Secondaire Supérieur (AESS).*



- ✓ Stakeholders identified and working group set: yes/no.
- ✓ Conclusion reached on the feasibility of the project: yes/no.
- Medium-term (if project is determined feasible):
  - ✓ ULB's new qualification program designed: yes/no.
  - ✓ ULB's new qualification program implemented: yes/no.
- Long-term (if project is determined feasible):
  - ✓ Proportion of female students enrolled in STEM studies at ULB: 2-5% increase.
- Intersectionality indicator(s):
  - ✓ Inclusion of diversity aspects other than gender in the content design of the qualification program: yes/no.

### Facilitating & Hindering Contextual Factors

There is general awareness about the need to improve the current training of secondary schools science teachers, anchoring science education in today's social reality, hence the interest of interdisciplinarity. However, there may be a legitimate concern of losing disciplinary specificity. Therefore, the right balance between interdisciplinarity and disciplinarity must be found. At the same time, many different actors and actresses need to be implicated in the design, which may render the process complicated. A facilitating factor is the support of the Vice-rector of education and the deans of the STEM faculties.

## Measure 14: Gender technical support to mainstream the gender+ perspective in ULB science outreach activities

### *Gender+ mainstreaming in ULB science outreach* Sources:

SEEM, S. R., & JOHNSON, E. (1998). Gender Bias Among Counseling Trainees: A Study of Case Conceptualization. *Counselor Education and Supervision*, 37(4), 257–268.

FARIDUDDIN, S., & BUKHARI, S. (2011). Establishing a Gender Sensitive Career Counseling Service to Help Women Make Better Career Choices. Towards Gender Parity in Pakistan (TGP) Project. [https://www.researchgate.net/publication/330778561\\_Establishing\\_a\\_Gender\\_Sensitive\\_Career\\_Counseling\\_Service\\_to\\_Help\\_Women\\_Make\\_Better\\_Career\\_Choices](https://www.researchgate.net/publication/330778561_Establishing_a_Gender_Sensitive_Career_Counseling_Service_to_Help_Women_Make_Better_Career_Choices)

Bian, L., Leslie, S.-J., & Cimpian, A. (2017). Gender stereotypes about intellectual ability emerge early and influence children's interests. *Science*, 355 (6323), 389–391.

### *Target audience:*

*ULB services of science outreach*

### *Timeframe:*

*July 2021 – June 2023*

### Goals & Objectives

- Short-term: to provide ULB science outreach services with gender technical assistance in order to extract meaningful gender-related data from the POST survey.
- Medium-term: to provide Infosciences with gender technical assistance to integrate the gender+ perspective in science outreach activities.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 873134.

- Long-term: to convene a positive sense to STEM disciplines and professions and to prevent gender stereotypes and biases in science outreach.

#### Activities

- Gender technical assistance for the discussion of surveys' results (July-October 2021).
- Gender technical assistance for the identification of gender-related gaps in science outreach activities (October 2021 – February 2022).
- Gender technical assistance for the integration of the gender+ perspective in science outreach activities (March – June 2022).

#### Available Resources

- 1 gender researcher from the CALIPER team.

#### Targets & Indicators

- Short-term:
  - ✓ Presentation and discussion of the main conclusions of the survey: 1 symposium
  - ✓ Number of attendees to the symposium: > 25
  - ✓ Gender+ mainstreaming strategy drafted: 1 public document with the strategy
- Medium-term:
  - ✓ Number of science outreach activities in which the gender+ mainstreaming strategy has been implemented.
- Long-term:
  - ✓ Number of science outreach activities in which the gender+ mainstreaming strategy has been implemented.
- Intersectionality indicator(s):
  - ✓ The gender+ technical support includes the interaction of gender with other social axis: yes/no.

#### Facilitating & Hindering Contextual Factors

A facilitating factor is InforScience's positive openness to questioning oneself and to include the gender+ perspectives in its activities.

## Measure 15: Joint ULB-g4g WIN event

### ULB-g4g WIN event

### Sources:

O'Brien, L. T., Hitti, A., Shaffer, E., Camp, A. R. V., Henry, D., & Gilbert, P. N. (2017). Improving Girls' Sense of Fit in Science: Increasing the Impact of Role Models. *Social Psychological and Personality Science*, 8(3), 301–309.  
<https://doi.org/10.1177/1948550616671997>

Bian, L., Leslie, S.-J., & Cimpian, A. (2017). Gender stereotypes about intellectual ability emerge early and influence children's interests. *Science*, 355 (6323), 389–391.

Veldman J., Zhu G., van Laar C., Meeussen L., Verschueren K., Zanella A., Lhuillery-Weber M., Lucin J., Rancourt M. (2015 - 2018) The impact Project to gain more insight into girls' interest in STEM fields. KULeuven-g4g research Research report.





<https://ppw.kuleuven.be/cscp/research/greenlight-for-girls-en>

Programs and initiatives that promote female role models for attracting girls to STEM studies and careers:

- [Greenlight for girls](#) is an international established non-profit organization. Their purpose is to encourage girls to consider STEM related careers. They organize event to demonstrate all the future possibilities, STEM role models and show the girls how fun those field can be:
- The NASA Office of STEM Engagement organizes a day per year called [Girls in STEM](#). During this day, girls from middle school meet women working in STEM fields at NASA Glenn and STEM activities are organized. The event takes place at NASA Glenn's facilities.
- [STEMettes](#) runs intersectional programs, impactful events and inspirational content platforms. They organize events to give the opportunity to girls (from 7 to 18) to meet women that work in STEM fields.

### **Target audience:**

**Girls between 12 and 15 years old**

### **Timeframe:**

*Between October 2021 and April 2022*

### **Goals & Objectives**

- Short-term: to demonstrate future STEM possibilities and role models to girls.
- Medium-term: to inspire girls to continue and pursue STEM studies and careers.
- Long-term: to increase the proportion of female students enrolled in STEM studies, particularly in the disciplines in which they are under-represented.

### **Activities**

- A pre-event: a virtual g4g Lab to all children with a call out to come up with a creative solution to a STEM challenge.
- A full g4g day event at ULB where 100-150 girls go through 4 workshops to learn hands-on skills in STEM, gain a sense of confidence and belonging in STEM, meet local STEM role models and are encouraged to take up long-term STEM careers.
- A post-event: ongoing access to the lab.
- The gender dimension in research and innovation will be integrated in the workshops.

### **Available Resources**

- ULB's CALIPER budget for food and labcoats.
- ULB venues.
- 1 gender researcher from the CALIPER team (event's leadership and main contact person at ULB).
- g4g staff (organization of event).
- g4g's network of volunteers and sponsors.
- City of Brussels' network of secondary schools.

### **Targets & Indicators**

- ✓ Number of girls joining the event: Estimated at 100-150 joining on-site
- ✓ Number of girls and boys joining the g4g Lab: Estimated at 100-200 girls and boys (French and English learning)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 873134.

- ✓ Number of men and women role models engaged (speakers/volunteers): Estimated around 50
- ✓ Minimum number of women role models: Estimated around 80%
- ✓ Number of schools participating: Minimum of 10 diverse schools
- ✓ Number of indirect participants measured by communication reach or survey answers (those who benefit from the knowledge or resources without actually attending our event live): Estimated at 1500+
- ✓ Satisfaction level of experience: Estimated at 80% (based on survey results)
- ✓ Number of workshops run on-site: Estimated at 8-15 workshops, depending on final number of attendees
- ✓ Number of external stakeholders involved: Estimated at 10+ as this includes all the different companies, collaborations, etc.
- ✓ Overall STEM topics discussed: Estimated at 10+ STEM themes that we use
- Medium-term:
  - ✓ Number of girls willing to continue and pursue STEM studies and careers: We aim for more than 90% of girls to be more encouraged to pursue STEM subjects (follow up surveys done regularly throughout the period)
- Long-term:
  - ✓ Proportion of female students enrolled in STEM studies at ULB: 2-5% increase.
- Intersectionality indicator(s):
  - ✓ Diversity of attendees: girls coming from different types of schools, situated in different socioeconomic areas. We aim to engage at least 20% of girls coming from less advantaged areas.
  - ✓ Diversity of role models: speakers, volunteers and workshop animators represent diversity (origins, languages, etc.).

#### ***Facilitating & Hindering Contextual Factors***

greenlight for girls (g4g) is a well-established NGO based in Brussels with 10 years of experience in promoting science among young girls all over the world. The collaboration between ULB and g4g is a great opportunity to support each other in this common mission in the short- and long-term. A potential hindering factor is the widespread lack of understanding of girl-focused events, perceived by some people as 'discriminatory against boys'. To anticipate any possible criticism and to ensure wide acceptance of the event, particular caution will be paid to the communicational aspects.



## 8 Institutional communication

### ***Current situation and general objective***

As it was described above<sup>66</sup>, **STEM studies and professions are still associated with skills and roles that are traditionally linked to men and masculinity**, reason why many young girls may feel they do not belong to this field and consequently turn towards other types of studies. It is thus essential to contribute to modify these stereotypes. At present, universities' websites and social media are an important entry point to studies for prospective students.

According to the analysis carried out on the websites of the two STEM faculties, big efforts have been already made in order to represent as many (young) women as (young) men in the pictures and images. The images used also show ethnic diversity. Inclusive language has started to be used, but the **equal representation of women and men in written language has not been achieved yet**. Although in some occasions names have been feminised, the masculine form remains dominant. It is however important that girls and women be included in written texts since, as many studies have already shown<sup>67</sup>, although "generic" terms ("*étudiant*", "*professeur*", "*chercheur*")<sup>68</sup> may be intended to refer to both women and men, they are often interpreted literally and thus function to exclude women which, in turn, has often an impact on women's sense of belonging and self-image.

In view of the above and in line with the general objective regarding students<sup>69</sup>, the general objective or long-term impact that the GEP would like to achieve within the area of communication is **to build a more inclusive image of STEM studies in the external communication of the STEM faculties to encourage girls to pursue them**.

### ***Underlying problems and strategies to solve them***

A more inclusive image of STEM studies in the external communication of STEM faculties can be achieved in several ways. On the one hand, this can be done by using inclusive communication in websites. ULB has already a guideline on inclusive communication available to all staff member on the University's intranet. The guideline offers the key notions of inclusive communication and different ways to implement it. However, according to the interviews with the communication officers of the STEM faculties<sup>70</sup>, there is still the need to raise awareness about the importance of inclusive communication among the staff who manages the external websites, as well as to receive practical training on how to implement it in a very concrete and easy way. Indeed, inclusive communication in French is often associated with the use of the midpoint (·) to add the feminine form to the masculine one<sup>71</sup>, which is often criticized on the ground that it hinders readability. But inclusive communication goes beyond that, there being many other ways to write in an inclusive manner.

<sup>66</sup> See section 8. Students and student services.

<sup>67</sup> See, for instance, Stout, J.G. & Dasgupta, N. (2011), When He Doesn't Mean You: Gender-Exclusive Language as Ostracism, *Personality and Social Psychology Bulletin*, 37 (6), pp. 757-769; Kricheli-Katz, T. & Regev, T. (2021), The effect of language on performance: do gendered languages fail women in maths? *Science Learning* 6 (9); Sczesn, S., Formanowic, M. & Moser, F. (2016) Can Gender-Fair Language Reduce Gender Stereotyping and Discrimination?, *Frontiers in Psychology*, 7 (25).

<sup>68</sup> In French, names and pronouns are gendered. "Étudiant", "professeur", "chercheur" are the masculine forms for student, professor and researcher.

<sup>69</sup> See point 8 Students and student services.

<sup>70</sup> See Deliverable D1.2.

<sup>71</sup> This specific form can sometimes make reading difficult, especially if it is systematically used throughout a whole text.



On the other hand, a more inclusive image of STEM studies can also be achieved by explicitly communicating about the gender+ equality work and efforts of the STEM faculties, as the University already does<sup>72</sup>. On a symbolic level, this type of communication can show the STEM faculties' commitment for gender equality. On a practical level, it can help to disseminate the concrete actions and measures included in the GEP.

Therefore, in order to achieve the general objective regarding communication, the GEP adopts the following strategies:

- |   |   |
|---|---|
| Communication<br>(focus on external<br>communication) | <ul style="list-style-type: none"> <li>a. Equipping STEM webpages administrators with a range of tools to implement inclusive communication</li> <li>b. Using inclusive communication in STEM faculties websites</li> <li>c. Making visible the gender+ policy in the STEM faculties</li> </ul> |
|---|---|

## Actions

To meet these goals, three actions will be carried out within the domain of communication: a hands-on training on inclusive communication for STEM webpages administrators (measure 16), the review and update of the communication of the current STEM websites (measure 17) and a dedicated webpage for the gender+ measures of STEM faculties.

**Measure 16 will consist of a 2-hour hands-on training on inclusive communication.** ULB's inclusive communication guideline was developed by the University's central communication department with the help of the gender and diversity manager. This type of communication is widely used by the department and the staff has a lot of practical knowledge about how to communicate inclusively. Based on the guideline and the department's practical experience, the hands-on training on inclusive communication will allow STEM webpages administrators (including the communication officers) to discuss about their difficulties, obstacles and doubts concerning the use of inclusive communication in webpages and to exchange with members of the central communication department. The training will be organized and animated by the gender and diversity officer, with the support of the HR department and the central communication department.

Following the hands-on training, **measure 17 aims at applying inclusive communication in STEM faculties' websites.** To do this, the current communication of STEM websites will be reviewed and updated as much as possible. This is however, an on-going work, since new contents can always be added to the websites, hence the interest in training webpages' administrators.

**Measure 18 is the creation of a dedicated webpage for the gender+ measures of STEM faculties.** The page will include the GEP and will disseminate the specific actions. It will be created by the communication officers of the STEM faculties, who will be in charge of updating it. The CALIPER team and the STEM gender commissions will communicate them the actions to be included over time.

N.	Measures/actions	Objective	Timeframe of implementation
16	Hands-on training on inclusive communication for STEM webpages administrators	To equip webpages administrators with a range of tools to implement inclusive communication	October 2021 – January 2023

<sup>72</sup> <https://www.ulb.be/fr/diversites/egalite-des-genres>



17	Review and update of the communication of current STEM websites	To use inclusive communication in STEM faculties websites	February 2022-June 2022
18	Dedicated webpage for the gender+ measures of STEM faculties	To make visible the gender+ policy at the STEM faculties	October – December 2021

## Measure 16: Hands-on training on inclusive communication for STEM webpages administrators

### *Hands-on training on inclusive communication for STEM webpages administrators Sources:*

The University of Modena and Reggio Emilia elaborated Guidelines and Protocols on Gender Sensitive Language use and set up trainings to staff members to build internal knowledge and awareness on inclusive language  
[https://edizionicafoscari.unive.it/media/pdf/books/978-88-6969-335-9/978-88-6969-335-9\\_36Fp1Fr.pdf](https://edizionicafoscari.unive.it/media/pdf/books/978-88-6969-335-9/978-88-6969-335-9_36Fp1Fr.pdf)

The Affirmative Action Plan for the Advancement of Women and Equal Opportunities of the University of Vienna states that all institutions and members of staff (academic and non-academic) are bound to use discrimination-free and gender-inclusive language in all communications directed at members of the University or at the public.  
<https://personalwesen.univie.ac.at/en/gender-equality-diversity/overview/gender-sensitive-language/>

### *Target audience:*

*STEM webpages administrators*

### *Timeframe:*

*October 2021 – January 2023*

### *Goals & Objectives*

- Short-term: to equip webpages administrators with a range of tools to implement inclusive communication.
- Medium-term: to make the external communication of STEM faculties more inclusive.
- Long-term: to build a more inclusive image of STEM studies in the external communication of the STEM faculties to encourage girls to pursue them.

### *Activities*

- Dissemination of ULB guidelines on inclusive communication (October-November 2021).
- Organization of a hands-on workshop to provide with empirical examples and to solve doubts on how to implement inclusive communication (December 2021 – January 2022).

### *Available Resources*

- 1 gender and diversity officer from the CALIPER team (organization and animation).
- 1 gender researcher from the CALIPER team (organization support).
- HR department (support).
- Central communication department (support and practical expertise).



- The external relations department has a lot of experience in implementing inclusive communication.

### Targets & Indicators

- Short-term:
  - ✓ Number of STEM webpages administrators trained: 8-10
- Medium-term:
  - ✓ Number of STEM webpages reviewed: < 50%
- Long-term:
  - ✓ Proportion of female students enrolled in STEM studies at ULB: 2-5% increase
- Intersectionality indicator(s):
  - ✓ Diversity other than gender is included in the training, especially regarding visual aspects: yes/no.

### Facilitating & Hindering Contextual Factors

The University has already a guideline on inclusive communication and departments in which the guideline is systematically implemented. This action will benefit from this knowledge and practical expertise.

## Measure 17: Review and update of the communication of current STEM websites

### *Review and update of the communication of Sources: current STEM websites*

Chatard, Armand, Guimond, Serge, et Martinot, Delphine (2005). Impact de la féminisation lexicale des professions sur l'auto-efficacité des élèves : une remise en cause de l'universalisme masculin ? *L'année psychologique*, 105 (2), 249-272. [http://www.persee.fr/doc/psy\\_0003-5033\\_2005\\_num\\_105\\_2\\_29694](http://www.persee.fr/doc/psy_0003-5033_2005_num_105_2_29694).

Stahlberg, D., Braun, F., Irmen, L., & Sczesny, S. (2007). Representation of the sexes in language. In K. Fiedler (Ed.), *Social communication. A volume in the series Frontiers of Social Psychology* (163-187). New York: Psychology Press.

Viennot, E. (2018). *Le langage inclusif : pourquoi, comment*. Donnemarie-Dontilly : Editions iXe.

### *Target audience:*

**External communication**

### *Timeframe:*

*February - June 2022*

### Goals & Objectives

- Short-term: to use inclusive communication in STEM faculties websites.
- Medium-term: to make the external communication of STEM faculties more inclusive.
- Long-term: to build a more inclusive image of STEM studies in the external communication of the STEM faculties to encourage girls to pursue them.

### Activities and Available Resources

- To review main STEM webpages and to identify 'inclusion gaps' in current external communication (February-March 2022).



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 873134.

- To modify the communication to make it more inclusive (April-June 2022).

#### Available Resources

- 2 communication officers from STEM faculties.
- CALIPER budget for 2 student jobs.

#### Targets & Indicators

- Short-term:
  - ✓ Number of main STEM webpages reviewed and modified: < 50%
- Medium-term:
  - ✓ Number of secondary STEM webpages reviewed and modified: < 50%
- Long-term:
  - ✓ Proportion of female students enrolled in STEM studies at ULB: 2-5% increase
- Intersectionality indicator(s):
  - ✓ Diversity other than gender is included in the analysis and modification of webpages, especially regarding visual aspects: yes/no.

#### Facilitating & Hindering Contextual Factors

See measure 20.

## Measure 18: Dedicated webpage for the gender+ measures of STEM faculties

### *Dedicated webpage for the gender+ measures of STEM faculties* Sources:

« La responsabilité sociale des universités en France : un concept en émergence ? », *Éducation et socialisation* [En ligne], 31 | 2012. <https://doi.org/10.4000/edso.812>

Grosser, K., & Moon, J. (2005). The role of corporate social responsibility in gender mainstreaming. *International Feminist Journal of Politics*, 7(4), 532-554. <https://doi.org/10.1080/14616740500284524>

### *Target audience:*

*External communication*

### *Timeframe:*

*October-December 2021*

#### Goals & Objectives

- Short-term: to create a dedicated webpage to gender and diversity measures in STEM faculties websites.
- Medium-term: to disseminate ULB's and STEM faculties' gender and diversity measures.
- Long-term: to contribute to ULB's and STEM faculties' positioning as organizations engaged in gender+ equality work.

#### Activities

- Creation of a dedicated webpage for gender+ measures in STEM faculties websites (October-



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 873134.

December 2021).

- Regular feeding of website with gender+ permanent measures and one-time initiatives (December 2021 onwards).

#### **Available Resources**

- 2 communication officers of STEM faculties (creation and update of webpage).
- CALIPER team and STEM gender commissions (communication of actions to be disseminated).

#### **Targets & Indicators**

- Short-term:
  - ✓ Creation of a dedicated webpage to gender+ measures in STEM faculties websites: yes/no.
- Medium-term:
  - ✓ Regular dissemination of ULB's and STEM faculties' gender+ measures: webpage updated at least every two months.
- Long-term:
  - ✓ Number of webpage visits per year: 500
- Intersectionality indicator(s): see previous indicators (diversity already included).

#### **Facilitating & Hindering Contextual Factors**

The creation of a dedicated webpage is supported by the STEM faculty's management and the communication officers.





## 9 Sexual harassment

### ***Current situation and general objective***

Numerous actions and measures have been designed and implemented at ULB over the last years regarding sexism and sexual harassment. In March 2017 the conference « *Université libre de harcèlement ?* » ("University free from harassment?") initiated a process of reflection within the University. This led to a project to fight against sexism and sexual harassment at the university, in collaboration with the Université de Genève. The project aimed at:

- Raising awareness of sexual harassment through a poster campaign on campus
- Removing barriers to reporting and seeking help for victims
- Improving support and assistance to victims and witnesses
- Strengthening the normative and disciplinary framework
- Conducting a survey about the prevalence of sexism and harassment at ULB

In November 2017, the ULB disciplinary regulations for students, academic and scientific staff were modified. They now include an explicit prohibition of discrimination on any ground, as well as of intimidation, violence, threats, or harassment. On the same month, on the occasion of the conference "*Au-delà du décolleté : l'ULB contre le sexisme et le harcèlement à l'université*" ("Beyond Cleavage: ULB against sexism and harassment at university"), the poster campaign was officially launched. Numerous awareness-raising posters were displayed throughout the campus for several months.

A network of contact persons was created at faculty level at the beginning of the 2017-2018 academic year. These focal points (from the administrative, students, academic and scientific staff) refer students, victims and witnesses of sexism and sexual harassment to the appropriate people to follow up on each situation. Although members of the scientific and academic bodies and administrative staff can also call upon the focal points, trusted persons are also trained to deal with these issues.

A website including all the information regarding sexual harassment was also launched in 2017. It includes information about legal definitions of sexual harassment and sexism, how to deal with sexual harassment, who to turn to in case of sexual harassment, how to start a procedure, the consequences of sexual harassment, a link to the student collective FRESH and a page with resources, videos and contact details of other actors outside the University.

In 2019, the student group FRESH - Fight Racism Exclusion Sexism and Harassment<sup>73</sup> was created to fight sexual and sexist harassment in the ULB student party scene. The goal of this collective is to work with ULB students on issues of harassment, consent, gender and sexuality. As harassment can also be linked to discrimination grounds other than gender, FRESH also aims to fight against racism, homophobia and exclusion. The collective focuses on prevention through awareness-raising tools. If necessary, the collective and its volunteers are available to relay to partner associations. A general objective of FRESH is to develop empowerment among ULB students and together to make the student party environment safer.

Regarding counselling services, ULB staff can turn to the network of contact persons, the network of trusted persons and the prevention advisors<sup>74</sup>. Students can turn to the network of contact persons and *Aimer à*

<sup>73</sup> <https://www.facebook.com/FRESHULB/>

<sup>74</sup> According to Belgian labour legislation, a prevention consultant assists the employer in the application of the measures contained in the law on well-being. They also have an advisory function towards the employer and the employees. The tasks of the prevention consultant are diversified and subdivided into several disciplines: ergonomics, work hygiene, occupational medicine and psychosocial aspects.



l'ULB<sup>75</sup>, the family planning centre established on the ULB site. Since September 2020, a new specific unit, the guidance and support centre for students at risk of harassment CASH-e<sup>76</sup>, is the main point of contact for students.

A survey to assess the prevalence of sexism and harassment at ULB was conducted in 2018. A total of 1649 people responded (academic body, scientific body, students and administrative staff). The results show that nearly half of the female respondents (47.6%) and around one tenth of male respondents (13.7%) had experienced sexual harassment, which includes behaviours such as being undressed with the eyes, comments on physical appearance and sexist jokes.

One aspect that needs to be emphasized is that despite the number of initiatives and services that exist to combat sexism and harassment, many members of the University were not aware of them. According to the survey (figure 16), essential services such as the prevention advisors, trusted persons and the internal network of contact persons were not very well known (only 19 and 4 people respectively stated that they knew it). This was however an open question. It is thus possible that only the most visible measures came to respondents' minds. In this sense, it is interesting that the poster campaign was the most cited measure.

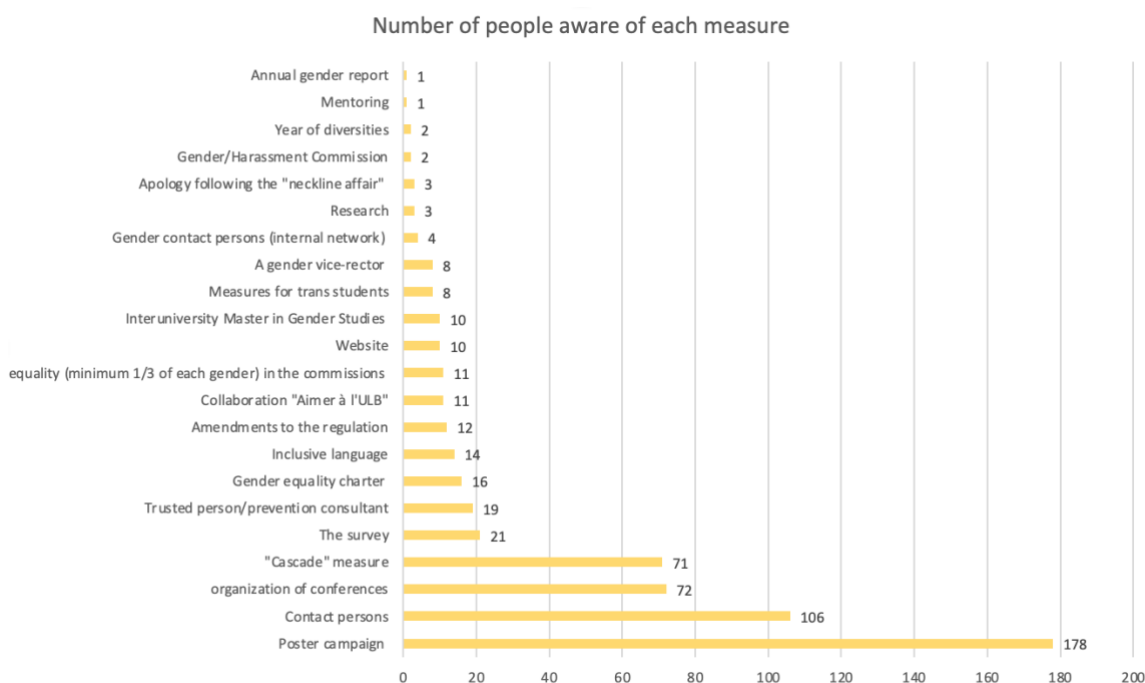


Figure 17. Number of times each measure was mentioned by respondents

This finding is consistent with the results of the CALIPER internal assessment<sup>77</sup>. The information about ULB services and protocols to deal with cases of sexism and harassment is available on the website but, according to the interviews and focus groups carried out in the STEM faculties, **the large amount of information** makes it somehow difficult to know who to contact and/or how to proceed in the case of discrimination or harassment. It was also underlined that the role of the faculty authorities (dean, vice-deans) and departments/services leaders is essential to prevent and effectively deal with these cases. However, they are not specifically trained for this very delicate mission.

<sup>75</sup> <https://www.aimeralulb.be/>

<sup>76</sup> <https://www.ulb.be/fr/aides-services-et-accompagnement/accompagnement-et-soutien-dans-les-risques-de-harcelement-cash-e>

<sup>77</sup> See Deliverable D1.2.



In view of the above, the general objective or long-term impact that the GEP would like to achieve within this area is **to contribute to the prevention and better management of discrimination and harassment cases in STEM faculties.**

### ***Underlying problems and strategies to solve them***

Based on the specific problems described above, the GEP adopts the following strategies to achieve the general objective:

Sexism and sexual harassment

- a. Improving STEM faculty authorities and departments/services leaders' skills and knowledge to prevent and effectively deal with cases of discrimination and harassment.
- b. Improving the access of STEM faculties' members to available protocols and services to prevent and handle cases of discrimination and harassment.

### ***Actions***

Two actions will be carried out in this domain: the advertising of training on discrimination and harassment targeting STEM faculty authorities and departments/services leaders (measure 19) and a permanent poster campaign (measure 20).

ULB's Diversity Plan (2019-2021) already includes the design and implementation of staff **training in non-discrimination and diversity management, including, naturally, sexism and harassment**<sup>78</sup>. This training is currently being planned by the HR department and the gender and diversity officer and it will be soon integrated in the HR's official staff training catalogue. A collaboration with UNIA (the federal public institution for equal opportunities and fundamental rights) and the Institute for the equality of women and men (the federal public institution for gender equality) to design training contents is being examined. The focus will be on preventing discrimination and harassment based on gender and other grounds, as well as on presenting ULB's services and protocols to deal with it. Benefiting from this initiative already foreseen in the University's Diversity Plan and to complement it, the CALIPER GEP will focus on **advertising and promoting this training (measure 19)** among STEM faculty authorities and departments/services leaders, targeting especially the transition moment when STEM staff takes on a new role of responsibility, usually between June and August. The training will be announced through each STEM faculty council and the webpage dedicated to gender+ measures, making special emphasis on the benefits of the training for new leaders. At ULB, no training is mandatory. Therefore, specific efforts need to be made to encourage the staff to attend it.

The second action **(measure 20) consists of the design and display of a permanent poster campaign** to inform in a very concrete and simplified way about available ULB services and protocols to deal with potential cases of sexism and harassment. Permanent posters for physical safety are already displayed in STEM faculties. In this sense, this action aims at informing about the procedure to follow in case of discrimination and harassment, while at the same time it emphasizes that a faculty free of those behaviours is as important an element of well-being as physical safety measures. The content of the posters will be designed together with ULB services for the prevention of discrimination and harassment (especially the prevention service, CASH-e and the gender and equality officer) and with STEM faculties' members. The STEM gender commissions can be involved in the design of the posters.

N.	Measures/actions	Objective	Timeframe of
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<sup>78</sup> Measure 6 of ULB's Diversity Plan.



			implementation
19	Advertising of training on discrimination and harassment targeting STEM faculty authorities and departments/services leaders	To encourage STEM faculty authorities and departments/services leaders' to follow the training on discrimination and harassment	From the availability of the training onwards (especially once a year from May to July – transition period)
20	Permanent poster campaign	To inform in a very concrete and simplified way about available ULB services and protocols to deal with potential cases of sexism and harassment	September 2022 – February 2023

### Measure 19: Advertising of training on discrimination and harassment targeting STEM faculty authorities and departments/services leaders

#### *Advertising of training on discrimination and harassment targeting STEM faculty authorities and departments/services leaders*

#### *Sources:*

Buckner, G. E., Hindman, H. D., Huelsman, T. J., & Bergman, J. Z. (2014). Managing Workplace Sexual Harassment: The Role of Manager Training. *Employee Responsibilities and Rights Journal*, 26(4), 257–278. <https://doi.org/10.1007/s10672-014-9248-z>

Bell, M. P., Quick, J. C., & Cycyota, C. S. (2002). Assessment and Prevention of Sexual Harassment of Employees: An Applied Guide to Creating Healthy Organizations. *International Journal of Selection and Assessment*, 10(1 & 2), 160–167. <https://doi.org/10.1111/1468-2389.00203>

Formation anti-discrimination auprès des employé-es - Direction de l'Égalité des Chances FWB en collaboration avec UNIA et l'IEFH : <http://www.egalite.cfwb.be/index.php?id=12465>

#### *Target audience:*

*STEM staff in leadership positions*

#### *Timeframe:*

*From the availability of the training onwards (especially once a year from May to July – transition period)*

#### *Goals & Objectives*

- Short-term: to encourage STEM faculty authorities and departments/services leaders' to follow the training on discrimination and harassment.
- Medium-term: to improve STEM faculty authorities and departments/services leaders' skills and knowledge to prevent and effectively deal with cases of discrimination and harassment.
- Long-term: to contribute to the prevention and better management of discrimination and harassment cases in STEM faculties.

#### *Activities*

- Presentation and advertisement of the training in STEM faculty councils.
- Dissemination of the training in STEM dedicated pages for gender+ measures.



**Available Resources**

- HR department and gender and diversity officer (description of training contents for advertisement).
- STEM deans (advertisement in faculty councils).
- STEM communication officers (inclusion of training in webpage).

**Targets & Indicators**

- Short-term:
  - ✓ Presentation of training in academic council: yes/no.
  - ✓ Dissemination of training in dedicated page: yes/no.
- Medium-term:
  - ✓ Number of STEM leaders trained: < 10
- Long-term:
  - ✓ Satisfaction regarding the prevention and handling of discrimination and harassment cases (based on interviews with key services): 75%
- Intersectionality indicator(s):
  - ✓ Training advertisement makes emphasis on the importance of preventing both gender and other grounds of discrimination/harassment: yes/no.

**Facilitating & Hindering Contextual Factors**

The inclusion of a specific training on discrimination and harassment in the ULB staff training catalogue is already foreseen in the Diversity Plan. Thus, it has already been approved by the University. This CALIPER GEP action will complement the measure with a specific focus on STEM faculties.

**Measure 20: Permanent poster campaign****Permanent poster campaign****Sources:**

The Universitat Autònoma de Barcelona has launched a campaign called “Keep your hand to yourself” (2016). The goal of this campaign was to raise awareness among the university community and to prevent sexism:

<https://www.uab.cat/web/newsroom/news-detail/the-8220-no-siguis-paparra-8221-campaign-encourages-a-sexism-free-fm-1345668003610.html?noticiaid=1345714147951>

Vanderbilt University has launched a poster campaign with the aim of reducing sexual assault and providing easy access to support services:

<https://news.vanderbilt.edu/2014/01/14/sexual-assault-poster-website/>

National sexual violence resource center’s Guide on how to create a campaign:

[https://www.nsvrc.org/sites/default/files/2016-01/saam\\_2016\\_how-to-create-a-campaign.pdf](https://www.nsvrc.org/sites/default/files/2016-01/saam_2016_how-to-create-a-campaign.pdf)

**Target audience:**

**STEM faculties’ staff and students**

**Timeframe:**

**September 2022 – February 2023**

**Goals & Objectives**

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement no 873134.

- Short-term: to inform in a very concrete and simplified way about available ULB services and protocols to deal with potential cases of sexism and harassment
- Medium-term: to improve STEM faculties members' access to available protocols and services.
- Long-term: to contribute to the prevention and better management of discrimination and harassment cases in STEM faculties.

### Activities

- Establishment of a working group to design the posters (September 2022).
- Design of posters, including key messages, description of ULB protocols and services, and poster style (October 2022 – January 2023).
- Printing of posters (February 2023).
- Display of posters (February 2023).

### Available Resources

- 1 gender researcher-CALIPER team (action leadership).
- 1 gender and diversity officer-CALIPER team (action leadership).
- Different key stakeholders will be invited for a consultative role: STEM communication officers, prevention consultants, CASH-e, STEM faculty members.
- CALIPER budget for printing and, if needed, for poster design.

### Targets & Indicators

- Short-term:
  - ✓ Establishment of a working group: yes/no.
  - ✓ Design and printing of posters: yes/no.
  - ✓ Display of permanent posters in the two STEM faculties: > 50 posters at each faculty.
- Medium-term:
  - ✓ Increase in the number of consultations made by STEM staff and students to the dedicated services (based on interviews with services): < 20%
- Long-term:
  - ✓ Satisfaction regarding the prevention and handling of discrimination and harassment cases (based on interviews with key services): 75%
- Intersectionality indicator(s):
  - ✓ Use of inclusive communication and explicit mention to all grounds of discrimination in the posters' design: yes/no.

### Facilitating & Hindering Contextual Factors

Permanent posters are already displayed in STEM faculties for physical security measures. Moreover, there is an increased awareness of discrimination and harassment among the university community, especially students.



## 10 Summary of collaborative actions

The following table presents a summary of potential collaborative actions. At this stage, the collaboration with g4g has been already established (roles, functions, activities and budget have been defined), whereas the collaboration with other external stakeholders is still being explored.

<i>n.</i>	<i>Collaborative action</i>	<i>Area</i>	<i>Interest expressed</i>	<i>Collaboration confirmed</i>	<i>Timeframe</i>
9	<i>Dissemination of guideline on the inclusion of the sex/gender dimension in (STEM) research</i>	<i>Research</i>	<ul style="list-style-type: none"> <li><i>Women &amp; Sciences Committee (6 French-speaking universities + RFO)</i></li> </ul>	<i>TBC</i>	<i>February – June 2022</i>
10	<i>Exhibition 'Sex/gender+ in STEM research'</i>	<i>Research</i>	<ul style="list-style-type: none"> <li><i>Women &amp; Sciences Committee (6 French-speaking universities + RFO) (TBC)</i></li> <li><i>City of Brussels</i></li> </ul>	<i>TBC</i>	<i>May 2022 – May 2023</i>
14	<i>Gender technical support to mainstream the gender+ perspective in ULB science outreach activities</i>	<i>Students</i>	<ul style="list-style-type: none"> <li><i>equal.brussels</i></li> <li><i>VIVAQUA</i></li> </ul>	<i>TBC</i>	<i>July 2021 – June 2022</i>
15	<i>Joint ULB-g4g WIN event</i>	<i>Students</i>	<ul style="list-style-type: none"> <li><i>g4g</i></li> <li><i>equal.brussels (TBC)</i></li> <li><i>City of Brussels (secondary schools)</i></li> <li><i>VIVAQUA</i></li> <li><i>University of Namur</i></li> </ul>	<i>Yes</i>	<i>Between December 2021 and January 2022</i>
19	<i>Advertising of training on discrimination and harassment targeting STEM faculty authorities and departments/services leaders</i>	<i>Sexism and harassment</i>	<ul style="list-style-type: none"> <li><i>UNIA</i></li> <li><i>Institut pour l'égalité des femmes et des hommes - IEFH</i></li> </ul>	<i>TBC</i>	<i>From the availability of the training onwards (especially once a year from May to July – transition period)</i>
20	<i>Permanent poster campaign</i>	<i>Sexism and harassment</i>	<ul style="list-style-type: none"> <li><i>City of Brussels</i></li> </ul>	<i>TBC</i>	<i>September 2022 – February 2023</i>



# 11 Gantt chart

		2021						2022						2023											
Domain	Measure	July	August	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
HR	1 Toolkit to attract more female candidates to STEM positions																								
	2 Study feasibility of affirmative actions																								
	3 Correction standard for career breaks																								
	4 Extension of post-doctoral contracts																								
Governance	5 Gender+ commission in STEM faculties																								
	6 Gender indicators											X													
Research	7 Proposal: Gender-balanced Advisory Boards																								
	8 Dissemination of guideline on sex/gender in research											D	D												
	9 Exhibition 'Sex/gender+ in STEM research'																					X	X	X	
Teaching	10 Gender target in STEM PhD juries																								
	11 Guide on gender-sensitive teaching									D	D														
Students	12 Gender+ perspective into STEM curriculum competency frameworks																								
	13 Consultation for a New ULB science and technology qualification program																								
	14 Gender+ mainstreaming in ULB science outreach																								
Communication	15 FemTech-g4g event							X																	
	16 Hands-on training on inclusive communication							X	X																
	17 Inclusive websites and social media																								
Sexism & harassment	18 Dedicated webpage to gender and diversity measures																								
	19 Training on discrimination and harassment																								
	20 Permanent poster campaign																					D			
LEGEND		Implementation phase 1												Implementation phase 2											
	Preparation																								
	X = one-time implementation																								
	D = dissemination																								