

# Women, research and universities: excellence without gender bias

July 2012



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The paper has benefited from extensive discussions in and comments from the LERU Gender Working Group. We also thank the LERU Research Policy Committee, the Rectors, LERU Communities and individuals who have provided valuable input for the paper.

# Women, research and universities: excellence without gender bias

## Executive summary

A powerful and internationally competitive research base is essential to ensure Europe's vitality; it in turn is dependent on Europe's capacity to attract and retain highly skilled and creative researchers. LERU (2010) has previously shown how universities and others can create and enhance attractive employment conditions, career perspectives and support for researchers- men and women. The present paper focuses on women in academia because more women than men drop out of research careers, resulting in an underrepresentation of women in leading positions, a loss of talent for society and a lack of diversity in the workplace, each of which presents a potential threat to the search for excellence in research.

While progress has been, and is being, made, in reducing gender inequality, change may come about slowly and is subject to significant variation according to country, research field and other factors. In examining the factors involved in gender inequality we highlight four well-known and -evidenced challenges regarding women in research. First of all, academia in Europe is still losing a considerable amount of its female research capacity. From the PhD (45% females) onwards, women drop out at successive turns and for various reasons, albeit with discipline-/country-specific exceptions. Only 13% of heads of higher education institutions in Europe are women.

Secondly, women progressing in an academic career may face (un)conscious bias against their qualifications as excellent researchers. Often relatively small or less obvious in individual cases of selection or promotion, at a group level or in the course of a career, the effects of bias become more significant. In other words, many mole hills together may become a large mountain.

Thirdly, there are financial considerations such as gender pay gaps, which manifest themselves in academe as they do in other labour sectors. It is important to note that on the whole women tend to receive less funding through research grants.

Fourthly, a different type of challenge is the lack of an appropriate gender dimension in research design, implementation and organisation. It can result in serious flaws with potentially harmful effects, e.g. in medical research, thus limiting scientific excellence, creativity and benefits to society.

Since there is abundant evidence to document these challenges, this position paper does not dwell on them extensively. Instead we aim to stimulate change: LERU universities commit themselves to undertake action, we examine what LERU and other universities can do to produce structural change and we share the experience of what LERU universities are doing to attract and support women in research careers.

Specifically, the LERU universities have decided to undertake a commitment:

- to promote gender diversity among their academic staff with strong leadership, in conformity with institutional, national and other regulatory frameworks and in partnership with the LERU universities.
- to develop or continue to implement Gender Equality Strategies and/or Action Plans, to share them and to jointly monitor their development and implementation.
- to engage with EU policy makers, funders and other actors to promote the cause of gender equality at universities.

Having analysed the specific challenges that women face in the course of their academic careers, we identify four priority areas in which universities can usefully undertake gender actions.

### **A first priority for action is in the area of leadership, vision and strategy. We argue that:**

1. A strong commitment from the university's leadership should underpin all gender-related actions.
2. This commitment should be operationalised by a Gender Strategy (or Action Plan), which is often set within the wider realm of equality and diversity policy.
3. Universities should set up dedicated processes and structures to coordinate the Strategy or Plan and manage gender activities.
4. A commitment to gender should be backed up with the necessary funding. Funding considerations should aim at structural change, enable longer-term planning and consider attractiveness for researchers at all career stages.

### **A second action area covers the types of measures universities can take to achieve structural change:**

5. Universities need to select the right mix of measures in accordance with their institutional and regulatory

situations and target these at certain career phases as needed.

6. Measures can be adopted as (usually) gender-specific career development measures and (usually) gender-neutral work-life balance measures.
7. Measures should be aimed at achieving structural change.

**A third imperative is for universities to consider how to implement and ensure effective uptake of measures taking into consideration that:**

8. Successful implementation requires transparency, accountability and monitoring of gender equality at universities.

**A final action area aims to address the lack of a gender dimension in research. We recommend that:**

9. Universities should actively promote and support a gender dimension in research, taking into account the specificities of particular research fields.

Universities need to be able to decide which mix of policy decisions, measures and processes best fulfills their needs in view of the institutions' overall strategies and national or other gender and diversity agendas. Since these vary widely across Europe, it is impossible to have identical goals or measures across all universities, even within such a similar group as LERU universities. One-size-fits-all solutions are in most cases inappropriate and unlikely to be successful. The appendix of this paper contains a wealth of examples of and references to LERU universities' policies and initiatives, which we share as a source of good practice and inspiration for universities and other interested parties.

Since universities' actions are in many cases regulated or influenced by governments and research funders, it is clear that our recommendations have implications for other actors and are in some cases dependent on their actions. Our recommendations to universities, funders, governments and publishers can be summarised as follows:

**Universities should:**

- Commit at the top and throughout the institution to gender equality.
- Develop or implement a Gender Strategy and/or Action Plan with the support of all divisions and levels within the university. It can be embedded in a broader Equality Strategy and should be managed professionally, possibly through a dedicated structure such as a Gender Equality Office.

- Aim to ensure sufficient funding for all gender equality activity. Funding structures should enable long-term planning of gender equality activity to achieve structural change.
- Select the right mix of gender-specific career development measures and gender-neutral work-life balance measures.
- Pay attention to transparency, accountability and monitoring to ensure successful implementation and improvement where needed.
- Promote and support a gender dimension in research, taking into account the specificities of particular research fields.

**Funders of research should:**

- Develop their own gender strategies or action plans.
- Consult regularly with universities on gender-related funding issues.
- Ensure selection boards are gender-sensitive.
- Promote or demand a gender dimension in research projects.
- Monitor the results of funding gender actions.
- Provide longer funding periods that make research careers more attractive.

**Governments should:**

- Consult regularly with universities about how to best attract and retain women in research careers.
- Avoid overly prescriptive or regulatory approaches, working instead with positive incentives.
- Collect, disseminate and learn from national and international good practice.
- Establish effective mechanisms for collecting gender-disaggregated statistics.
- Develop or maintain monitoring of gender policies, which requires gender-sensitive statistics on resource assignation, distribution of time and space, access to information, and other areas.
- Establish specific measures to evaluate and monitor actions aimed at achieving effective parity and equality in universities.

**Academic publishers should:**

- Ensure that an appropriate gender dimension in research is embedded in their science policies.

## Introduction - what and why of this paper

1. There has been a growing recognition that research acts as a powerful engine for developed countries' economic progress and innovative dynamism, that research universities in particular fulfil a crucial role in building or maintaining a country's research base and that the researchers trained and employed by these universities are a vital asset to modern societies. It follows that for research universities themselves attracting highly talented people from all over the world to train and work with them has become of utmost importance (LERU, 2010). However, academia in Europe is underutilising a significant part of its intellectual prowess and research capacity, namely that of women. LERU wishes to contribute the views of some of Europe's leading research universities on women in research careers. Our views are based on the understanding that there are both good economic as well as value-based arguments to underpin universities' gender actions, i.e. society cannot afford such a loss of talent and gender equality is an aspect of diversity and social justice. Importantly, we want to make the case that gender equality enhances the quality of and contributes to excellence in research.
2. In the paper we first take stock of the most important and well-documented evidence of gender inequalities and bias hindering women's research careers and of problems with the gender dimension in research itself. We then briefly consider the European research policy context on gender equality before turning our attention to four areas in which we suggest that university actions are crucial to eliminate gender inequalities and to advance women's careers in academia. We illustrate our proposals with examples of good practice from LERU universities. We also make a commitment as LERU universities to promote the cause of gender equality within our institutions, by working together within the network and by engaging as a network with other organisations, and we encourage other universities to consider our recommendations. Since the proposals we put forward are not an exclusive domain of competence for universities, we formulate recommendations for other stakeholders as well, including research funders and governments.

## Women in research careers and in science - what we already know

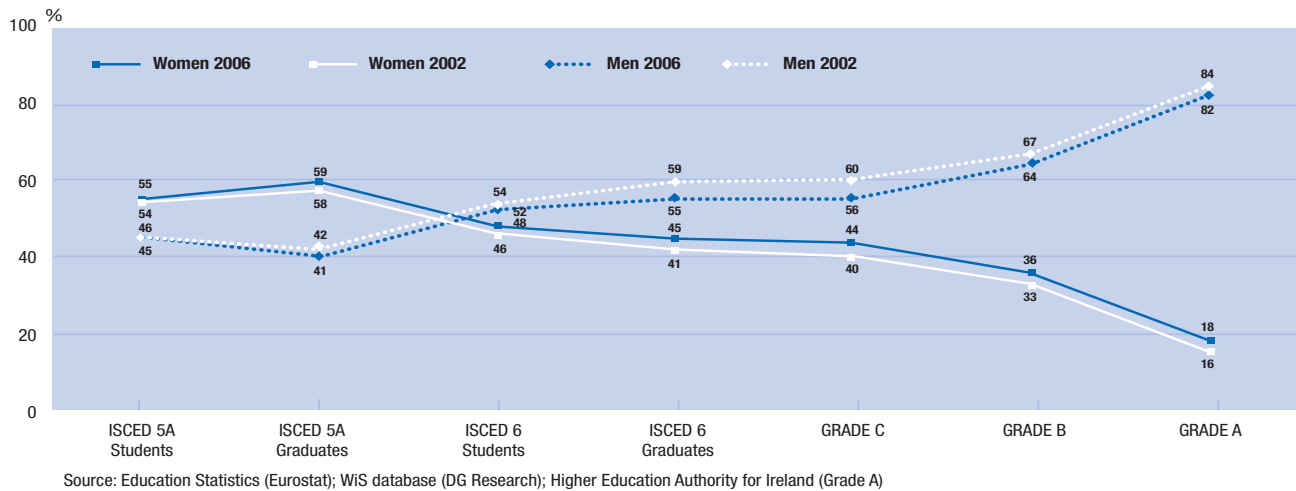
3. There is no dearth of studies giving evidence about gender inequalities and gender bias both in terms of women's careers in research and in terms of gender issues in the design and execution of research itself. Below we give a brief description of some of the most important elements of evidence-based gender inequality relevant to our paper. To be clear, progress has been, and is being, made. However, while inequality is being reduced, change is on average slow, patchy and subject to significant variation according to country, research field and other factors. Moreover, to measure or evidence change properly can be a complex and frustrating task. Nevertheless, the wealth of examples about new policies and changing practices at the LERU universities given at the end of this paper are testimony to the positive and substantial efforts being made.

### Fact 1: The pipeline does leak.

**From the PhD onwards women drop out at various turns and for various reasons.**

4. Academia in Europe is still losing a considerable amount of its female intellectual capacity. Whereas the ratio between men and women is relatively balanced up to the doctorate<sup>1</sup>, there is a significant decrease afterwards. According to the 2009 She Figures (EC, 2009a, p.72) women obtain 45% of PhD degrees, are in 44% of grade C positions, in 36% of grade B positions and in 18% of grade A positions, as illustrated in the graph below<sup>2</sup>. In addition, women represent only 13% of heads of institutions in the higher education sector. For all grade A academics at EU-27 level, women account for 23% among 35 to 44 year olds, 21% among 45 to 54 year olds, and 18% among those aged over 55 (EC, 2009a, p.73). The "leaky pipeline" thus begins in earnest after the PhD is completed and continues to play a role at every phase of a woman's career in research, albeit with slightly different causes and with particular characteristics along the way. This situation represents a large and unacceptable loss of human research capacity which needs targeted action to correct.

<sup>1</sup> Before the doctoral phase, there are on average more women than men in BA and MA education, creating a "scissors effect" as illustrated in the graph.  
<sup>2</sup> With some variation among the European countries (cf. *She figures 2009 - Statistics and Indicators on Gender Equality in Science*, pp. 133-141), grade A academics are full professors, grade B academics are associate professors and senior researchers, grade C academics are assistant professors and post-docs.



**Definition of grades:**

A: The single highest grade/post at which research is normally conducted.

B: Researchers working in positions not as senior as top position (A) but more senior than newly qualified PhD holders.

C: The first grade/post into which a newly qualified PhD graduate would normally be recruited.

ISCED 5A: Tertiary programmes to provide sufficient qualifications to enter into advanced research programmes & professions with high skills requirements.

ISCED 6: Tertiary programmes which lead to an advanced research qualification (PhD).

- There are important country- and research-field-specific variations. It may be the case, for example, that in the STEM disciplines (science, technology, engineering and mathematics) the pipeline (after the PhD) is relatively less leaky but the main problem is situated at the entrance point, which is a problem of convincing girls to undertake these studies and embark on a research career. In the humanities and social sciences on the other hand, it may be the case that the challenge is not so much one of attraction but of retention, so that this particular pipeline is relatively more leaky<sup>3</sup>.
- Clearly there is room for improvement. Given the excellent grades and high graduation rates of women students before and at the university, it is a huge waste not to use women's capabilities subsequently and in a sustained fashion all the way up to the top positions.

**Fact 2: Many mole hills become one mountain.**

**Bias against women exists at many levels of their academic careers.**

- Women on their way to the top in academia face biases

against their qualifications as excellent researchers and scholars. Since most of these biases are relatively small, they are often not obvious in individual cases of selection or promotion. At an aggregated level and at a group level, however, they become easily apparent. In other words, many mole hills together become a large mountain.

- Although there is evidence that male and female researchers do equally well under comparable circumstances and given equivalent resources, there are differences caused by the type of institution, teaching load (which is traditionally higher for women than for men), funding, and research assistance (Ceci and Williams, 2010). All these factors have an impact on research productivity and are thereby decisive for career prospects.
- Many studies have been carried out into women's less-well represented position in science top leadership (NRC, 2010; EC, 2009c). A major factor is the definition of 'capable' in searches for academic leaders: the less transparent the definition is, the more likely men are chosen over women. Research shows that the lower the percentage of women on selection committees is and the less transparent the criteria for selection, the less likely women are to be appointed (EC, 2009c; Zinovyeva and Bagues, 2010).

<sup>3</sup> In fields where female students are seriously overrepresented, universities may need to reflect on how to attract and retain more male students/researchers.

10. The large body of available experimental and observational research in this area shows that women are on average considered less capable science leaders than men. Therefore, they need to perform better to be judged equally qualified to men. Additionally, research has shown that qualitative assessment can be heavily gender biased. For example, recommendation letter writers tend to use stronger language of praise when describing men, rather than women (Sandström and Hällsten, 2008). A recent MIT report (2011, p.14) also points to bias against women appearing during search and hiring procedures stating that for women “the proportion [of a letter] devoted to intellectual brilliance compared to temperament is much less than for men”. The report goes on to say “it is essential to describe clearly the need to eliminate bias, while at the same time emphasising that the same high standards of excellence apply to the hiring and promotion of men and women” (MIT, 2011, p.15).
11. Evidence suggests that academic assessment systems have traditionally ignored factors particularly affecting women. For instance, men tend to produce more publications and assessment protocols tend to value quantity over quality (EC, 2004; Trix and Psenka, 2003; Wenneras and Wold, 1997). On the other hand, the recently revamped system evaluating UK research, now called REF, explicitly allows for discounts in the number of publications relative to the time available, to cover circumstances such as career breaks, maternity and disability<sup>4</sup>.
12. Recent empirical research based on professorial appointments shows that many mechanisms prevalent in recruitment and appointment practices of professors are disadvantageous to the careers of academic women (Van den Brink, 2011; Van den Brink and Benschop, 2011). Those mechanisms include “gate keeping”<sup>5</sup>, academic networks that are predominantly male and the way in which scientific excellence is defined. The work by Van den Brink et al. challenges the view that the assessment of academic excellence and meritocracy are gender neutral and shows that gender bias exists in many types or phases of an academic career.

### Fact 3: Money talks.

**Gender pay gaps manifest themselves in academe as they do in other labour sectors and women receive less funding through research grants.**

13. The EU gender pay gap figures for public and private enterprise reveal slow progress in the EU-27, from a 17% pay gap in the group of 15 to 34 year olds, 28% among 35 to 44 year olds, to 38% among 45 to 54 year olds and a 37% pay gap in the group of 55 to 64 year olds (EC, 2009a, p.72). Even though the pay gap is becoming smaller at a faster speed for the younger generation, it still demonstrably exists, although all European countries have adopted laws for equal treatment and introduced monitoring of the implementation of these laws at institutions. There is no reason to assume that gender pay gaps at universities differ significantly from the prevalent comparable labour market. A report on gender pay gaps in Sweden, for example, reveals an unadjusted overall pay gap of 14.3% and 10.7% for state-run areas (which include higher education)<sup>6</sup>.
14. In the European Research Council (ERC) frontier research funding programme women have so far received 26% of all grants in the starting grants competitions (2-12 years post-PhD), and 12% in the advanced grants (no “academic age” requirement) competitions covering a total of over 1,700 grantees in the first six calls. It is important to point out that these figures do not fully match the percentages of female applicants, which amount to 30% and 14%, respectively for the starting and advanced grants (EC, 2011c, p. 33), i.e. more women’s than men’s applications are unsuccessful. We welcome the ERC’s intention to encourage “more top female researchers to apply for ERC grants” (ibidem) as a necessary step. According to the EC’s FP7 2008 monitoring report, 35.4% of Marie Curie fellows were women and 20.7% of principal investigators in FP7 projects were women (EC, 2009b). For a national comparison, the Swiss funding council FNS for example awards between 30 and 40% of grants (depending on the type) to women, in Germany women receive on average 20.6% of grants (with a 21% applicant rate) from the DFG, with

<sup>4</sup> The REF or Research Excellence Framework is the successor to the Research Assessment Exercise (RAE). See <http://www.ref.ac.uk/>

<sup>5</sup> A gatekeeper is a person who controls access to research opportunities and makes important decisions, for example in relation to research funding or recruitment and promotion. Women tend to be underrepresented as gatekeepers in research (EC, 2011d).

<sup>6</sup> Adjusted for age and other variables there is a 5.8% pay gap for state-run areas. Figures retrieved from [http://www.mi.se/pdfs/pdfs\\_2011/rapp\\_lone-skilln\\_2010.pdf](http://www.mi.se/pdfs/pdfs_2011/rapp_lone-skilln_2010.pdf)

a range from 12.2 to 36.1% depending on the type of grant. Although the gap between women's application and success rates varies depending on the type of grant, research field and other factors, it is clear that in many cases there is room for improvement in both.

#### Fact 4: There is a proven need for a gender dimension in research.

**An appropriate gender dimension in research design, implementation and organisation promotes creativity and excellence.**

15. Besides the three issues evidenced above, we also need to consider the way in which research itself is designed and carried out. Western science is not as neutral with respect to gender as it often appears to be. Many studies have shown that gender inequalities have influenced the outcomes of research on a large scale, particularly (but not only) in life sciences, which still often neglect women in research design (Institute of Medicine, 2010; Klinge, 2010; Wajcman, 2007; Bühler and Schraudner, 2006; Faulkner, 2006; Schiebinger, 1993; Harding, 1991)<sup>7</sup>. As a corollary, medical treatments for women are less evidence-based than for men (genSET, 2010; Buitendijk et al., 2010). 79% of animal studies published in the *Journal of Pain* over the past ten years included males only, with a mere 8% of studies on females only, and another 4% explicitly designed to test for sex differences (the rest did not specify) (EC, 2011d). A similar problem exists in AIDS research, where the majority of randomised clinical trials are being carried out on men, even though AIDS increasingly is a disease that affects women.
16. Editors of some peer-reviewed journals in the life sciences require analysis of sex and gender effects when selecting papers for publication (Heidari, 2012). The US *Journal of the National Cancer Institute* does it as a matter of "commitment to sound, scientific research": "where appropriate, clinical and epidemiological studies should be analysed to see if there is an effect of sex or any of the major ethnic groups". The *Lancet* (2011) recently encouraged researchers to take gender and

ethnicity into account, making the point that "what women can do for medicine is one thing; what medicine can do for women is also important".

17. Next to research design, there is also the matter of research implementation, for which all the available evidence suggests that gender diverse teams function better in any field of science and scholarship. Clearly, the lack of an appropriate gender dimension in research limits scientific creativity, excellence and benefits to society. Gendered innovations aim to make research more responsive to the needs of the whole of society<sup>8</sup>. They aim to create gender excellence in research through building inclusive scholarly communities in which men and women contribute equally at all levels of decision making, policy and defining and carrying out research (Schiebinger and Schraudner, 2011).

#### The EU research policy context

18. At the EU level the gender and women in research agenda has received recent attention because of its inclusion in the Commission's Communication on the "Innovation Union" (EC, 2010a), which describes one of the EU's initiatives to deliver the Europe 2020 Strategy for growth and jobs (the successor to the Lisbon Strategy)<sup>9</sup>. Of the 34 commitments laid out in the initiative, the first one states that "by the end of 2011, Member States should have strategies in place to train enough researchers to meet their national R&D targets and to promote attractive employment conditions in public research institutions. Gender and dual career considerations should be fully taken into account in these strategies". Member States were asked to submit their strategies to the Commission, with the latter taking stock of them and then suggesting specific actions. The EC is expected to announce concrete research careers and gender proposals in 2012 in the context of its efforts to deliver a more successful European Research Area (ERA)<sup>10</sup>.
19. Through the Framework Programmes for research (FP) the EU supports actions in pursuit of cultural and

<sup>7</sup> Part of the problem is that preclinical research uses primarily male animals.

<sup>8</sup> See <http://genderedinnovations.stanford.edu/what-is-gendered-innovations.html>

<sup>9</sup> More information on the Innovation Union is available at [http://ec.europa.eu/research/innovation-union/index\\_en.cfm](http://ec.europa.eu/research/innovation-union/index_en.cfm).

<sup>10</sup> More information on ERA is given at [http://ec.europa.eu/research/era/index\\_en.htm](http://ec.europa.eu/research/era/index_en.htm).



structural change in the way gender and diversity are managed in universities and research organisations. According to an EC report (2010b) the FPs have had varying success at making inroads for women in science. As the Commission is currently developing its next funding programme (called Horizon 2020, due to start in 2014), LERU is pleased to see that in the first proposals the EC is planning to include specific and cross-cutting gender actions aimed at removing barriers preventing women from pursuing successful scientific careers, at rectifying imbalances between women and men and at integrating a gender dimension in research and innovation programming, content and evaluation (EC, 2011a, 2011b).

20. Other EU-level reports, analyses and recommendations on women in science have been produced. For example, the EU-funded genSET project<sup>11</sup> has released a report (genSET, 2010) which includes a set of 13 recommendations focused on knowledge making, on human capital, on practices and processes and on regulation and compliance. Many of these recommendations are in line with LERU's views and recommendations formulated in this paper. Also ESF (2009) has produced recommendations on gender. The ERC Scientific Council adopted a Gender Equality Plan in December 2010 (EC, 2010c).

## Women and research careers: what universities can do to bring about change

21. In this section, we discuss four priority areas in which universities can most usefully take gender action. In the text we refer to good practice examples from LERU universities, all of which are listed in the appendix, and we formulate recommendations in each area. The four action areas fall under the headings of 1) commitment at the top, 2) fit-for-purpose HR management and implementation measures, 3) conditions to ensure successful implementation, and 4) the gender dimension in science.
22. It should be noted that one-size-fits-all solutions are inappropriate and unlikely to be successful. Universities need to be able to decide which mix of policy decisions, measures and processes best fulfills their needs in view of the institutions' overall strategies and national or other gender and diversity agendas. Since these vary widely across Europe, it is impossible to have identical goals or measures across all universities, even within such a similar group as LERU universities. The crucial element is that universities commit to a gender action plan, identify the most appropriate ways in which to accomplish the goals set out in the plan and devise effective processes that enable long-term planning (including budgetary planning), implementation and monitoring.
23. Since universities' actions are in many cases regulated or influenced by governments and research funders, it

### LERU universities' commitment

- The Rectors of LERU universities have committed themselves to promote gender diversity of their academic staff with strong leadership, in conformity with institutional, national and other regulatory frameworks and in partnership with the LERU universities.
- The LERU universities are willing to develop or continue to implement Gender Equality Strategies, to share them and to jointly monitor their development and implementation. Such monitoring may take the form of a regular comparison, benchmarking and mutual learning exercise among the LERU universities, looking for example at the effectiveness of the measures that universities take to implement the Strategies and the adequacy of the processes that are followed.
- LERU as a network is committed to engage with EU policy makers, funders and other actors to promote the cause of gender equality at universities.

11 See <http://www.genderinscience.org/>.

is clear that our recommendations have implications for other actors and are in some cases dependent on their actions. Therefore we also make recommendations to other stakeholders at the end of the paper.

## University action area 1

### Leadership

24. Progress on gender equality at universities is critically dependent on visible commitment from the top. It is crucial that the ultimate responsibility for achieving change is steadfastly shouldered by the university's highest leadership and that those responsible for implementing policy throughout the university have direct access to and leverage with the university rector and/or vice-rector with a specific responsibility for gender/equality.

### A Gender Strategy

25. Most, if not all, LERU universities, have a gender equality policy, which is often part of a broader equality and diversity policy. It is important that the university leadership commits to operationalising its gender equality policy, for instance by developing a Gender Strategy (or Action Plan) in line with institutional practice. Sections I and II of the appendix contain more information on and links to LERU universities' institutional commitment and Gender Strategies. A Gender Strategy should be developed with key stakeholders, widely communicated, and embedded in operational practice. It may be mandated, recommended or endorsed by national or other authorities. A university's Gender Strategy should include:

- measurable or quantifiable goals to be reached within specific time limits and leading to improvements along the entire career spectrum, not only in leading positions,
- a clear plan for their implementation, and
- a transparent monitoring system.

26. It is important that Gender Strategies be co-designed, decided and monitored by the units responsible for their implementation, e.g. divisions, faculties and departments. Such units have a decisive role to play in making structure and development plans successful, covering for example recruitment of professorships.

27. In evaluating Gender Strategies and their implementation, universities should pay special attention to the relation between equality measures and the level of research quality, to be measured for instance by high-profile publications and research grants. The results of this evaluation must have consequences for future strategic planning, including the possibility of targeted research.

28. All university panels, committees and boards, as well as research teams, should be gender diverse<sup>12</sup>.

29. Awareness, understanding and appreciation of gender mainstreaming should be present and well-integrated across all levels of the university, for example through training opportunities or by other means.

### Institutional structure

30. The responsibility for gender equality can be organised in different ways within the university depending on its structure and needs. One option, adopted by

## University action area 1

- A strong commitment from the university's leadership should underpin all gender-related actions.
- This commitment should be operationalised by a Gender Strategy (or Action Plan), which is often set within the wider realm of equality and diversity policy.
- Universities should set up dedicated processes and structures to coordinate the Strategy and manage gender activities.
- A commitment to gender should be backed up with the necessary funding. Funding considerations should aim at structural change, enable longer-term planning and consider attractiveness for researchers at all career stages.

<sup>12</sup> 30-40% female representation is often mentioned as a tipping point for change, although it is impossible to make this a rule applying in all cases.

most LERU universities, is to set up a dedicated structure, such as a Gender Equality (or Equal Opportunity) Office, which can support the university leadership, heads of divisions, research team leaders, and women with professional advice and management. A few universities do not have a specific gender/diversity office but rather embed equality within all university management structures, attributing specialist responsibility to some areas, e.g. HR or student policy, and general responsibility to all managers at all levels. At those LERU universities which have well-established Equality Officers and Offices, functions have usually grown from the level of assisting individual staff members in matters of work-life balance and discrimination at the work place to encompass also the structural levels of gender mainstreaming and Gender Equality Strategies. Universities are increasingly treating gender as a dimension of diversity and both are usually assigned to the functions of Equal Opportunity Office(r)s. It is important that Equal Opportunity Office(r)s are directly involved in the implementation and monitoring of Equal Opportunity Strategies, whereas the university leadership takes the responsibility for their conception and evaluation. Links to Gender Equality Offices at LERU universities are given in section III of the appendix.

31. LERU recommends that universities carefully examine their internal structures and processes for implementing Gender Strategies, ensuring that Equal Opportunity Offices, for example, are appropriately resourced for the long term, adequately staffed and have a high enough institutional profile to fulfil the roles assigned to them. It is also imperative to reserve resources for incentives in the realm of gender equality, to be awarded by university commissions with participation of Equal Opportunity Officer(s).

### Funding

32. The acquisition of research funding is a central aspect of a research career. In early-career stages, the small number of permanent positions at universities often means that external research funding determines whether an academic career can be further pursued or not, until the researcher obtains a permanent position. In general, acquired funding is also regarded as an indicator of someone's scientific reputation and value in the scientific community, which may be particularly important in appointment and promotion procedures.
33. There is not enough funding available to the university sector as a whole to maintain and promote the required numbers of researchers. There are critical bottlenecks in available support for mid-career research positions in particular, and the systemic nature of the funding challenge for university research careers is evident at the national and European levels. Periods of uncertainty between projects, on/off teaching contracts and other measures that amount to "financial gymnastics" for the individual researcher are a fact of academic life for a decade or more after obtaining the doctoral title in many national systems (LERU, 2010). This is where the need for an equality-oriented examination of the structures governing research and other academic funding on the European level comes in. Specifically, better career prospects for the mid-career stage following the PhD are needed.
34. It is essential to generate more research applications from female researchers, especially at the stage of post-doc or equivalent positions. One option is for universities to make available flexible funding for a short period of time in order to stimulate (early-stage) female researchers to apply for grants. Such funding can be open specifically to female applicants as long as women continue to be underrepresented amongst applicants for external funding. If this is not an option, because of legislation or institutional governance, universities might focus on coaching and support programmes and on ensuring a sufficient involvement of women in selection committees.
35. It should be kept in mind that in making funding decisions universities are driven by their wish to provide attractive careers for researchers in the face of global competition for talent from within and outside of academia. This should take into account different needs at different stages of research careers.
36. To sum up, universities should strive to make available funding to sustain their commitment to gender equality and the development of gender equality actions with a long horizon.
37. A few funding aspects are highlighted in section IV of the appendix and many good practice examples in the other sections are linked to the issue of funding.

## University action area 2

38. There are two types of measures which are of crucial importance to help women embark on and successfully negotiate the maze of an academic career: 1) (usually) gender-specific career development measures, and 2) (usually) gender-neutral measures to achieve good work-life balance conditions that benefit all researchers/all staff. Each of these are briefly discussed below; in sections V and VI of the appendix more details and links to webpages illustrating current practice at LERU universities are given.

### Gender-specific career development measures

39. In terms of supporting measures for female researchers, there are various types of effective measures. One example are funding programmes to award stipends for so-called ‘protected time’ freeing grantees from certain responsibilities and allowing them to focus on research in order to achieve a specific scholarly goal (e.g. a high impact publication or a competitive research grant).

40. Mentoring and training programmes can be offered in various formats to suit the needs of particular cohorts or individuals.

41. In addition, it may be useful in certain cases to allow gender mainstreaming as a secondary criterion, which would be considered if by the primary criterion of quality the percentage of female grantees were significantly below the percentage of female applicants. In such cases a renewed discussion of the criteria for quality can help raise or reinforce awareness about possible bias. This type of awareness with committees and with young female researchers can by itself be effective in eliminating unconscious bias and in changing attitudes without resorting to targets or quotas and without compromising excellence.

42. At the middle stages of their careers women scholars often publish less than their male colleagues due to maternity leave for instance. In order to assess scholarly achievements appropriately, publication quantity should be weighed against quality. Universities can decide, for example, to consider only a subset of best publications in evaluations. Ideally, assessment procedures should be gender-neutral, but this is not always practicable. For example, for leading positions other characteristics of CVs (e.g. career breaks and international experience) are evaluated as well, some of which (most prominently career breaks) cannot be judged properly without reference to gender.

43. Universities may offer incentives such as support grants to prepare applications for research funding; this can be particularly helpful for prestigious grants such as the ERC and similar national funding agencies. In addition, there should be (if possible, discipline-specific) administrative help to assist with the preparation of projects and project management on a gender-neutral basis, but beneficial to those female researchers who have less experience in these matters.

### Gender-neutral work-life balance measures

44. A second category of measures are gender-neutral measures to achieve good work-life balance conditions that benefit all researchers/all staff, such as provisions for flexible working hours while children are small, dual-career options, supporting measures during maternity or parental leaves, child-care options, and infrastructural and financial measures to support researchers with children who plan an international research trip. In addition to child care, elder care is often a consideration for mid-career researchers.

45. Dual career programmes, which offer or help find jobs for partners of scholars either at the university or through connections with business or industry, can be

## University action area 2

- Universities need to select the right mix of measures in accordance with their institutional and regulatory situations and target these at certain career phases as needed.
- Measures can be adopted as (usually) gender-specific career development measures and (usually) gender-neutral work-life balance measures.
- Measures should be aimed at achieving structural change.

helpful towards a better work-life balance. It is crucial that such measures are well designed, well implemented and well monitored so that they bring actual benefit to women scholars.

46. Working conditions are favourable to work-life balance if meetings and extracurricular obligations outside of regular working hours are kept to a minimum and the option of flexible working hours and working spaces is offered under fully transparent conditions.
47. Career breaks hamper researchers most on their way to top positions. It is therefore important to undertake clear planning during and beyond important career breaks such as maternity/parental leave and to involve the home institution as an active partner in this planning. In addition, it proves helpful to offer flexible funding for assistance to the researcher on return from maternity/parental leave and thus ensure that the research is continued.
48. Sufficient child care provisions are essential for combining career and family obligations. Next to regular child care provisions, flexible hours should be introduced as needed. Also flexible ad-hoc care (e.g. when the usual care-taker is ill) can be of great help, as well as special assistance offered to visiting scholars in order to help adjust their children to the host culture.
49. International mobility and visibility are decisive criteria for higher university positions. It is important that infrastructural and financial measures be put in place to financially support researchers who plan an international research trip or conference and require child-minding assistance or financial help for children travelling.
50. It should be stressed that child/elder care and assistance for family-related breaks are gender-neutral measures intended to improve work-life balance for both men and women. Gender-neutral family policies that benefit all academic staff can encourage men and women to share

caring responsibilities. Responding to changing societal circumstances, universities can play their part by actively involving staff in questions of work-life balance and family-friendly working conditions, which will in turn have a positive effect on gender equality.

51. The exact mix of career development and work-life balance measures will depend on the institution's Gender Strategy and/or Action Plan and on its regulatory framework. Moreover, it should be noted that different measures are useful at different stages of a researcher's career. Some of the measures above are particularly important in the early career phases (e.g. stages 1 and 2 in the LERU framework for research careers in LERU (2010)), while at more advanced career stages, the institutional organisation becomes increasingly relevant. For example, the few women holding prominent positions often spend a disproportionate amount of time participating in committees and panels. If such involvement constrains their research and/or teaching too much, there should be support mechanisms to avoid disadvantaging them against male colleagues<sup>13</sup>.
52. In the MIT report (2011) mentioned above the School of Engineering recommends a system of "yearly monitoring of teaching, committees and service of all faculty" (p.26) in order to avoid overburdening women. Clearly, there should be a reasonable gender balance in terms of research, teaching and service duties that make up most academics' job responsibilities.

### University action area 3

53. Transparency, accountability and monitoring are framework conditions to ensure successful implementation of gender equality policies and strategies. Good practice from LERU universities is provided in sections I, VII and VIII of the appendix.

### University action area 3

- Successful implementation requires transparency, accountability and monitoring of gender equality at universities.

<sup>13</sup> This is number nine of the 13 recommendations made by genSET (cf. [http://www.genderinscience.org/downloads/genSET\\_Leaflet\\_with\\_recommendations.pdf](http://www.genderinscience.org/downloads/genSET_Leaflet_with_recommendations.pdf))

## Transparency

- 54.** To successfully implement Gender Strategies, it is very important for universities to strive for full transparency. Measures taken and processes followed should be clearly and openly defined, described and communicated. This includes, for instance, open and gender-transparent procedures for recruiting researchers, gender transparency in appointing members of boards, panels and committees across all layers of the university and gender transparency about the division of resources within the university.
- 55.** University positions and other resources should be advertised well in advance and all relevant criteria should be mentioned at the outset. It must be clear by which criteria decisions will be made and criteria should be decided independently of individual candidates. As stated above, evaluation criteria for filling positions should be designed with a stronger focus on quality and innovative potential than on quantity. Although we would wish to maintain that there is a level of creativity and excellence which does not depend on gender, there are many secondary indicators of quality which are gender-specific and should be assessed as such. In addition, special effort is needed to find sufficient numbers of qualified female candidates who should be personally encouraged to apply for positions or explicitly nominated for academic prizes.

## Accountability

- 56.** As stated in the section above, responsibility for gender action at universities starts at the top, but should also be distributed throughout the organisation's multiple layers and structures. It is imperative that those who are responsible at a certain level have both the power and the accountability to ensure that actions reach the desired objectives. Gender equality offices can help to ensure that appropriate levels of accountability are built in. For example, gender equality officers can be present in board, committee and panel meetings where gender aspects are relevant to make sure that gender-related processes are followed.

## Monitoring

- 57.** Monitoring has been shown to be an effective measure to ensure successful implementation of gender equality policies and strategies. Universities should have gender-specific statistics about the division of all resources and the developments should be monitored and acted upon. It is important to disaggregate gender ratio figures by research fields and to investigate and address the causes of such imbalances. Gender-specific pay-gaps (where they exist) should be monitored, the causes investigated and acted upon if there are inequalities, with consequences for future policies, the responsibility for which lies with university management.

## University action area 4

- 58.** Researchers participating in the evaluation of research, whether it takes place within the university or externally, for instance in their capacity as reviewers on research funding boards or as editors for journals and other publications, should be aware of the need for a gender dimension in certain research fields.
- 59.** It is essential to take into consideration the specificities of different research fields in this regard. Gender-responsive science is important in a wide range of research areas, from law, to social sciences, history or even geography. In life sciences it is of utmost importance because of direct consequences of research for medical treatment (cf. paragraph 15).
- 60.** Universities can help by raising awareness among all the researchers they employ by various means, from publications to workshops and so on. Awareness raising and communication play an important part in helping to ensure an appropriate gender dimension in research and innovation. Some good practice is given in sections IX and X of the appendix.
- 61.** LERU recommends that gendered-sensitive research should be an integral part of universities' Gender Strategies.

## University action area 4: a gender dimension in research

- Universities should actively promote and support a gender dimension in science, taking into account the specificities of particular research fields.

## What other stakeholders can do to bring about change

62. Not only universities, but other stakeholders as well should make a firm commitment to gender action.

### Research funders

63. Research funders can develop their own gender action plans stipulating goals, implementation schemes and monitoring actions. Since most of Europe's researchers are trained at and employed by universities, research funders should regularly consult with universities about how to best attract and retain women in research careers. The existing gender and work-life-balance financial measures offered to grantees by research funders should be monitored concerning their accessibility and effectiveness and if needed revised.
64. In particular, it is crucial that funders' selection boards are gender-sensitive in their composition and trained to eliminate possible hidden or unconscious gender bias.
65. Moreover, research funders can promote or demand a gender dimension as a criterion for funding. This can happen by ensuring gendered research is part of the research design if applicable in the life, social sciences and the humanities, or by promoting or demanding appropriate gender action plans as part of the implementation strategy for projects, all of which should respond to particular needs or be appropriate for the circumstances<sup>14</sup>. Gendered research should be encouraged in all funding programmes without jeopardising any criteria for excellence.
66. Finally, funding schemes should be sustainable, providing longer funding periods, thus adding a degree of planning and stability to benefit both the individual researcher and the university that employs her (or him).
67. Finally, it needs to be kept in mind that research field- or discipline-related issues play a role as well. Women are relatively overrepresented in the less generously

funded social sciences and humanities (SSH) areas and underrepresented in the physical and life sciences and engineering fields, which tend to have more grant opportunities and larger grants. These factors aggravate funding challenges for women researchers<sup>15</sup>.

68. LERU welcomes the European Commission's commitment to include specific and cross-cutting actions in the new EU funding programme Horizon 2020 aimed at removing barriers preventing women from pursuing successful scientific careers, at rectifying imbalances between women and men and at integrating a gender dimension in research and innovation programming, content and evaluation (EC, 2011a, 2011b). It is very important to LERU universities that both the application and success rates of women in fields where women are underrepresented are increased in H2020, that gendered statistics are collected and communicated in H2020 and that the impact of H2020 gender actions is monitored. LERU is ready to discuss with the Commission how the suggestions above can be taken up in H2020.

### Governments and policy makers

69. Governments at the national or regional level usually determine overall research and gender policies and may employ university staff as civil servants. In developing or implementing gender policies they should regularly consult with universities about how to best attract and retain women in research careers.
70. In defining the general policy framework, governments should respect the autonomy of universities, avoid taking overly prescriptive and regulatory approaches and work as much as possible with positive incentives that are aimed at supporting excellent people and producing high quality research. Governments can collect, disseminate and learn from examples of good practice, nationally and especially internationally.
71. LERU welcomes the inclusion of gender in the EU's

<sup>14</sup> In the UK, for example, the Chief Medical Officer, Professor Dame Sally C Davies, announced her intention in 2011 that all medical schools wishing to apply for NIHR Biomedical Research Centres and Units funding should have achieved an Athena Swan for women in science Silver Award. See <http://www.ecu.ac.uk/news/chief-medical-officer-links-gender-equality-to-future-funding> and <http://www.athenaswan.org.uk>. See also the Royal Society of Edinburgh report *Tapping all our talents*, [http://www.rse.org.uk/cms/files/advice-papers/inquiry/women\\_in\\_stem/tapping\\_talents.pdf](http://www.rse.org.uk/cms/files/advice-papers/inquiry/women_in_stem/tapping_talents.pdf)

<sup>15</sup> For example, in the ERC 2011 Starting Grant competition, SSH represented 18.6% of selected proposals (vs 35.2% life sciences, 46.2% physical sciences and engineering) and the success rate is lower (9.3% in SSH vs 11.73% in LS and 13.13% in PE. The figures are similar in the 2011 Advanced

plans to achieve a true European Research Area (ERA) and has thus responded positively in the LERU response to the Commission's consultation on the future of ERA (LERU, 2011). Adamant to do our part in making tangible progress on ERA, LERU is committed to reach an agreement with EU policy makers on a number of deliverables in the area of attractive research careers for women and men.

### Academic publishers

72. Publishers of academic journals, books, etc. should take care to adopt gender-responsive science policies when considering the publication of research results.
73. Publishers of academic journals, books, etc. should ensure a more gender-balanced composition of editorial boards and reviewers. These (gender) diverse teams should lead to more diverse ideas and thus increase scientific excellence. It should be kept in mind that adopting policies which promote a gender dimension in research is possible without jeopardising the criteria of excellence.

### Conclusion

74. Universities play an important role in the transformation of societies as they contribute to social, economic, cultural and political change. Gender is a self-evident aspect of societal diversity and is as such a major source of creativity, exploration, discovery and innovation acting as an important factor in quality. From a larger societal perspective, a balanced gender representation contributes to excellence in research, positively influences research outcomes and impact, and promotes the acceptance of scientific insights, thereby reaffirming the credibility of universities and strengthening their societal role.
75. Universities are home to the majority of aspiring and practising researchers and as such play a crucial role in ensuring that research careers are attractive to women and men. Taking into account what we already know about persistent gender inequalities and gender bias impacting negatively on women's careers in research (paragraphs 3-17), universities have a distinct responsibility to make sure that they attract female students and scholars into their communities and that they can offer choices and support that will help women remain in an academic research career. Universities that are successful in achieving a gender-

balanced work force will be well placed to face the challenges of the 21<sup>st</sup> century. Those that aren't successful risk losing scientific prowess as well as societal acceptance.

76. In this paper we have proposed four areas for action which we believe are crucial for universities to consider in order to eliminate gender inequalities and to advance women's careers in academia (paragraphs 21-63). These action areas call for:
- A strong commitment from the university leadership to gender equality and well-funded, long-horizon operationalisation;
  - Implementation of a gender/diversity strategy through a strategic choice of gender-specific career development measures and gender-neutral work-life balance measures aimed at structural change;
  - A commitment to transparency, accountability and monitoring of gender equality in search of continual improvement;
  - The promotion of a gender dimension in research across the university.

We make a collective commitment as LERU universities to promote the cause of gender equality within our institutions, by working together within the network and by engaging as a network with other organisations, and we encourage other universities to consider our recommendations. We have illustrated our arguments with examples of good practice showing what LERU universities are already doing to affect change (in appendix).

77. Responsibility to gender equality cannot be borne by universities and research institutions alone. Research funders in the public and private domain, local and EU governments and policy-making bodies each share an important part of the responsibility as they define frameworks and regulations. They must work actively, individually and collectively, to ensure that Europe continues to attract, train and retain talented women (and men) into research.



## Summary of recommendations

### Universities should:

- Commit at the top and throughout the institution to gender equality.
- Develop or implement a Gender Strategy (or actions on gender within a broader Equality Strategy) with the support of all divisions and levels within the university and managed professionally, for instance, through a dedicated structure such as a Gender Equality Office.
- Aim to ensure sufficient funding for all gender equality activity. Funding structures should enable long-term planning of gender equality activity to achieve structural change.
- Select the right mix of gender-specific career development measures and gender-neutral work-life balance measures.
- Pay attention to transparency, accountability and monitoring to ensure successful implementation and improvement where needed.
- Promote and support a gender dimension in research, taking into account the specificities of particular research fields.

### Funders of research should:

- Develop their own gender strategies or action plans.
- Consult regularly with universities on gender-related funding issues.
- Ensure selection boards are gender-sensitive.
- Promote or demand a gender dimension in research projects.
- Monitor the results of funding gender actions.
- Provide longer funding periods that make research careers more attractive.

### Governments should:

- Consult regularly with universities about how to best attract and retain women in research careers.
- Avoid overly prescriptive or regulatory approaches, working instead with positive incentives.
- Collect, disseminate and learn from national and international good practice.
- Establish effective mechanisms for collecting gender-disaggregated statistics.
- Develop or maintain monitoring of gender policies, which requires gender-sensitive statistics on resource assignation, distribution of time and space, access to information, and other areas.
- Establish specific measures to evaluate and monitor actions aimed at achieving effective parity and equality in universities.

### Academic publishers should:

- Ensure that an appropriate gender dimension in research is embedded in their science policies.

## Appendix: New policies and changing practices at LERU universities

### I. Leadership commitment, institutional policy/organisation and accountability

Most to all LERU universities have a gender equality policy, equality commissions or officers who report directly to the highest leadership. See for example:

Gender equality policy:

Lund University - [http://www3.lu.se/pers/Jamstalldhet/policy\\_gender-equality\\_equal-treatment\\_diversity.pdf](http://www3.lu.se/pers/Jamstalldhet/policy_gender-equality_equal-treatment_diversity.pdf)

Oxford University - <http://www.admin.ox.ac.uk/eop/gender/policy/>

Charter 'Talent to the Top' at the Universiteit Leiden:

<http://medewerkers.leidenuniv.nl/p-en-o/diversiteit/talent-naar-de-top.html>

Gender equality champion and gender equality group at the University of Cambridge:

<http://www.admin.cam.ac.uk/offices/hr/equality/cambridge/champions/>

<http://www.admin.cam.ac.uk/offices/hr/equality/cambridge/gender/>

Gender equality champions on senior management and the governing body at University College London:

<http://www.ucl.ac.uk/hr/equalities/corporate/champions.php>

Committees and review groups at Imperial College - <http://www3.imperial.ac.uk/hr/equality/committees>

The University of Oxford has a Pro-Vice Chancellor (Personnel and Equality) reporting directly to the Vice Chancellor, and has recently established a high level 'Equality and Diversity Panel' to advise and support its decision-making bodies. The University of Edinburgh has a Vice-Principal Equality and Diversity reporting directly to the Principal on gender equality matters, and has included the promotion of equality in its Strategic Plan 2008-12. A Strategic Theme of "Promoting Equality, Diversity, Sustainability and Social Responsibility" directs its approach to achieving its strategic goals and there are specific targets relating to gender equality.

In 2008 the Rectorate of the Albert-Ludwigs-Universität Freiburg declared equal opportunity and diversity as central strategic tasks for the university. This resulted in (1) a new governance structure that integrates all relevant strategic and operational actors and units, (2) internal and external strategic and data benchmarking, (3) the optimisation and diversification of work conditions and support services in order to increase competitiveness, (4) the establishment of transparent, structured, and formalised procedures. These measures are based on the "Research-Oriented Equal Opportunity Standards" of the German Research Foundation (DFG). The 2011 progress report concerning their implementation can be found at: <http://www.gleichstellung.uni-freiburg.de/dokumente/dfg-progress-report-2011-en.pdf>

The Université de Genève has included the principle of equality both in its "Strategic Plan Vision for 2020" as in its "Objectives Convention". A rule of preference is also included in the university's HR regulations. There is a grievance procedure for employees with who feel this rule has been violated. This right, which has existed for many years, underlies the work of the Delegation for Equality. The Delegation is composed of five professors and chaired by a vice-rector, who follow each nomination procedure at professorial level to assure equality is respected. A report is made based on the procedure and sent to the Rectorate. The Equality Office is responsible for organising the functioning of the Delegation. The Equality Commission is brought to the level of the faculties by the equality commission for the faculties.

At the KU Leuven a Vice-Rector Diversity is appointed to administer diversity policy throughout the university, together with the staff members of the Diversity Office. A Diversity Board, with representatives from the Executive Board, the faculties, central services, members of the Diversity Office and experts, is also appointed to debate and decide on diversity issues, including gender. Diversity Teams are implemented in all faculties and central services. Diversity is one of the main priorities of the KU Leuven. <http://www.kuleuven.be/diversiteit/beleid/index.html>

At the Université de Strasbourg the Equality-Diversity Office (la mission Egalités-Diversité) is directly linked with the university's first vice president. The mission interacts with the governing board, the board of trustees, the university's services and the university's faculties to analyse given gender issues and to introduce gender action plans for teaching and research staff, as well as administrative and technical staff. In addition to the mission's interactions with the university leadership and board of trustees, university staff can directly submit a case of gender inequality to the Equality-Diversity Office, which can lead to a change in the university's regulations decided by the board of trustees. <http://www.unistra.fr/index.php?id=2971>

At the Université Paris-Sud gender- and diversity-equality issues are discussed and dealt with by the Technical Committee. It is composed of University staff representatives, members of administration offices, and it is chaired by the President of the University. [http://www.u-psud.fr/fr/l\\_universite/organisation\\_generale/comites-et-commissions/ct.html](http://www.u-psud.fr/fr/l_universite/organisation_generale/comites-et-commissions/ct.html)

Often the central equality commission has (sub)commissions in all faculties. This is the case, for example, at the Universitat de Barcelona, where the faculty commissions are composed of teaching and research staff, administrative staff and students, who are appointed by the governing boards of each faculty. The commission chairs are, in turn, members of the university's equality commission chaired by the person responsible for the equality office which identifies, for example, the key equality policies and objectives to be implemented. The function of the faculty commissions is to apply certain aspects of the equality plan and assess its effective implementation in their respective centres. Since the establishment of these commissions, the number of initiatives and the dissemination of activities have multiplied raising awareness on gender issues in the whole university community. <http://www.ub.edu/genere/>

Gender equality officers can be present in all meetings of boards, committees and panels where gender aspects are relevant to make sure that gender-related processes are followed. At LMU München, for example, the participation of a women's representative in appointment negotiations is determined by Bavarian law (Bayerisches Hochschulpersonalgesetz, Art. 18, source: [http://by.juris.de/byhss/HSchulPersG\\_BY\\_Art18.htm](http://by.juris.de/byhss/HSchulPersG_BY_Art18.htm)). At many LERU universities (Heidelberg, LMU, etc.) the university women's representative has voting power in the university executive board concerning decisions on gender equality.

The Universität Zürich has a Code of Conduct Gender Policy, which contains the official gender policy of the university board. The Code commits the Universität Zürich to the balanced representation of both genders in all functions and committees at the university. Coupled with the Code is an annual monitoring report (see below "Monitoring"), containing gender statistics on all personnel categories and degrees awarded. Moreover, the university Board instigates a biannual evaluation of the Code's implementation. [http://www.uzh.ch/about/basics/genderpolicy\\_en.html](http://www.uzh.ch/about/basics/genderpolicy_en.html)

The UK LERU universities are members of the Athena SWAN Charter for women in Science, Engineering and Technology (SET). This scheme recognises universities and departments with Gold, Silver and Bronze awards for developing and implementing good policies. See for example:  
<http://www.admin.cam.ac.uk/offices/hr/equality/wiseti/swan/>  
<http://www.ed.ac.uk/schools-departments/equality-diversity/innovation-development/athena-swain>  
<http://www3.imperial.ac.uk/equality/staffnetworksandcommittees/academicopportunitiescommittee/athenaswan>  
[http://www.ucl.ac.uk/hr/equalities/gender/athena\\_swain.php](http://www.ucl.ac.uk/hr/equalities/gender/athena_swain.php)  
<http://www.admin.ox.ac.uk/eop/gender/athenaswan/>

The University of Oxford, for example, has set up web pages dedicated to the Athena initiative and all its science and medical sciences departments have made a strategic commitment to achieving an Athena Silver award.

L'Università degli Studi di Milano has crash courses on equal opportunities and gender stereotypes in science for top management (targeting the Faculty of Agriculture and Faculty of Medicine).

LMU München has implemented a workshop series on issues concerning gender mainstreaming and diversity management. The first event on "women in science" was attended by the university governing board, deans and LMU

scientists. Future events will focus on other aspects of equality in order to raise awareness among the university's members.

Since 2008 the Universitat de Barcelona has included in its Els Juliols summer courses a special edition on Women's Summer University (UED), which provides training in gender-related studies. These courses, jointly organised by the City Council of Cornellà Llobregat, are open to both students and the general public.

At the Universität Heidelberg a gender element is applied to all topics in the training programmes which are open to all staff. Gender is an independent topic as well as part of trainings with regard to rhetoric or financial responsibility.

## II. Gender Strategies

Many LERU universities have or are developing Gender Strategies or Plans. Sometimes they are embedded in diversity strategies (e.g. Cambridge, Edinburgh). In some universities faculties develop their own plans for eliminating gender bias which are binding and signed by the Deans. See, for example:

- Universitat de Barcelona - [http://www.ub.edu/genere/docs/pla\\_igualtat\\_en.pdf](http://www.ub.edu/genere/docs/pla_igualtat_en.pdf)
- University of Cambridge - <http://www.admin.cam.ac.uk/offices/hr/equality/cambridge/scheme/>
- University of Edinburgh - <http://www.ed.ac.uk/schools-departments/equality-diversity/about/strategy-action-plan>
- Albert-Ludwigs-Universität Freiburg - <http://www.gleichstellung.uni-freiburg.de/dokumente/equal-opportunity-plan.pdf> An encompassing Equal Opportunity Plan was adopted in 2009, with goals and measures to be fulfilled by 2014 at the central university as well as the faculty level. The Plan was complemented and substantiated in 2011 by the new Code of Practice for Professional Appointments, which systematically includes gender equality aspects and incentives in appointment processes: [http://www.gleichstellung.uni-freiburg.de/dokumente/berufungsleit-faden\\_en](http://www.gleichstellung.uni-freiburg.de/dokumente/berufungsleit-faden_en)
- Université de Genève - <https://plone2.unige.ch/plan-strategique/Vision%202020%20UNIGE.pdf>
- Universität Heidelberg - <http://www.uni-heidelberg.de/gleichstellungsbeauftragte/aktivitaeten/gleichstellungskonzept.html>
- Helsingin yliopisto - [http://www.helsinki.fi/henkos/tasa-arvo/TaSu\\_EN.htm](http://www.helsinki.fi/henkos/tasa-arvo/TaSu_EN.htm)
- University of Oxford - <http://www.admin.ox.ac.uk/eop/gender/scheme/>

The Université de Strasbourg organises staff training on gender and stereotype issues in order to familiarise teaching and research staff, as well as administrative and technical staff with the university gender action plan.

The Gender Equality Action Observatory on Careers from a Gender Perspective at the Università degli Studi di Milano was included as "gold practice" in the Guidelines for Gender Equality Programmes in Science resulting from the Project PRAGES - Practising Gender Equality in Science (2008-2009).

## III. Gender Equality (Diversity) Offices - role, organisation, management issues

Many (but not all) LERU universities have chosen to set up a Gender Equality (or Equal Opportunity) Office, which can support the university leadership, heads of divisions, research team leaders, and women with professional advice and management. See for example:

- Universitat de Barcelona: <http://www.ub.edu/genere/index.html>
- University of Cambridge: <http://www.admin.cam.ac.uk/offices/hr/equality/>
- AL Universität Freiburg: <http://www.gender.uni-freiburg.de/> and <http://www.gleichstellung.uni-freiburg.de/dokumente/equal-opportunity-plan.pdf>
- Université de Genève: <https://www.unige.ch/plan-strategique/index.html>
- Universität Heidelberg: <http://www.uni-heidelberg.de/gleichstellungsbeauftragte/index.html>
- Universiteit Leiden: <http://medewerkers.leidenuniv.nl/p-en-o/diversiteit/talent-naar-de-top.html>
- KU Leuven: <http://www.kuleuven.be/diversiteit/>
- Imperial College London: <http://www3.imperial.ac.uk/hr/equality> and <http://www3.imperial.ac.uk/hr/equality/academicwomen>
- University College London: <http://www.ucl.ac.uk/hr/equalities/gender/index.php>
- University of Oxford: <http://www.admin.ox.ac.uk/eop/contactus/>
- Université de Strasbourg: <http://www.unistra.fr/index.php?id=2971>
- Universität Zürich: [http://www.gleichstellung.uzh.ch/index\\_en.html](http://www.gleichstellung.uzh.ch/index_en.html)

#### IV. Funding

At the Université de Genève a ‘Scholarship of Excellence’ programme was set up to value excellence among female researchers. In its fourth edition in 2012, three scholarships are usually awarded every year giving outstanding women researchers the opportunity to be financially independent for three years. This time allows them to build up strong scientific CVs and to be ready to apply for a position as assistant professor for example.

The Universität Heidelberg implemented an AID FUND to provide one-off funding for research and qualification ventures threatened by individual emergency or hardship. With this fund the University has created a gender-equity-back-up offering quick support to bridge financial gaps in order to complete research or qualification projects.

To increase the proportion of women in higher positions and the importance they can have as role models, SEK 1 million has been earmarked at Lunds universitet for a visiting chair in the name of Hedda Andersson. Funding is linked to the chair for activities and human resources. In addition, a maximum of SEK 3,5 million has been earmarked for co-financing of visiting professors of the underrepresented gender on the basis of applications from the faculties. The co-financing is for up to a maximum of SEK 500 000.

L'Università degli Studi di Milano has been awarded an EU-funded FP7 project called STAGES - Structural Transformations to Achieve Gender Equality in Science. Starting in 2012 five research institutes and universities from Italy, Germany, Denmark, Romania and the Netherlands will each implement a self-tailored action plan including activities such as awareness raising initiatives in high level institutional bodies; training modules on gender equality for internal decision makers; mentoring programmes for young women scientists; actions to enhance the visibility of women scientists; updated management and research assessment standards; course content development; leadership development; work-life balance measures; gender quotas in committees; promotion and retention policies. More information at: [http://www.2020-horizon.com/Structural-Transformation-to-Achieve-Gender-Equality-in-Science-\(STAGES\)-s26598.html](http://www.2020-horizon.com/Structural-Transformation-to-Achieve-Gender-Equality-in-Science-(STAGES)-s26598.html)

In the “Excellence Initiative” funding competition of the German Federal Government, the applying universities had to demonstrate their efforts for gender equality and present coherent plans to support female scientists as a so far under-represented group. Concepts had to be developed for all three funding lines - Graduate Schools, Excellence Clusters and Institutional Strategies - and were used as evaluation criteria. More information on the Excellence Initiative:

<http://www.wissenschaftsrat.de/1/fields-of-activity/excellence-initiative/?PH>

## V. Career development measures

>> **Appointments and career tracks:** At the Universiteit van Amsterdam, the Faculty of Science started a special recruitment programme called the MacGillavry Fellowship for talented female scientists in 2010: every three years five women are selected and offered personal tenure tracks.

The composition of academic staff recruitment committees is closely examined. At the Université de Strasbourg and Université Paris-Sud, for example, the percentage of women sitting on the jury should tend to reach parity, or at least, should not be lower than the local and national percentage recorded for the discipline. Juries consisting of 100% or 90% of one sex are not allowed. The board of trustees assisted by the equality office is responsible to ensure compliance.

Many LERU universities are re-designing academic career tracks to provide their researchers with more integrated and coherent career paths. In some cases, recognised career pathways are being developed for specialists and research managers as an alternative to the classic academic track of independent research leadership roles (see LERU (2010)).

Some countries have influential and well-developed national schemes. For example, the German Professorinnen-Programm (Female Professors Programme) has been administered by the federal and state governments since 2008. In order to sustainably increase the percentage of women in top academic positions, the programme provides initial funding for first-time appointments of female scientists to (regular) professorships. Decisive for the selection is the positive evaluation of a coherent gender equality concept by the applicant universities. Further information (in German): <http://www.bmbf.de/en/furtherance/12321.php>

The Universität Heidelberg offers a Concierge Service which is specifically designed to meet the needs of academics’ everyday life. It was introduced to simplify the daily routine of scientists, visiting researchers, and staff. The Concierge Service saves time by economically delegating time-consuming obligations, such as household duties, which are often hard to combine with professional ones.

>> **Time for research:** Several LERU universities have measures in place to give young female scholars so-called ‘protected time’ in order to complete a research project. For example:

The Universität Heidelberg has a protected time programme available on a competitive basis for female post-docs in order to enable them to reach the next stage in their career, prepare a project etc. The so-called “Olympia Morata Programme” offers half a position for two years with the possibility of extension for another year. So far, 72% of the participants got an external professorship (internal professorships are ruled out by the legal regulations) and all the remaining ones have a permanent position. This programme is accompanied by a Mentoring and Training Programme.

At the Universität Zürich the protected time programme is available on a competitive basis to post-docs for up to six months. Originally introduced for women postdocs by the Office for Gender Equality, the measure has been integrated into the general strategy for the promotion and support for young researchers. The protected time funding is used to finance a replacement at the grantee’s institute. The grantee’s university salary continues unchanged during the protected time. <http://www.mentoring.uzh.ch/projekte/protected-time.html> [http://www.researchers.uzh.ch/promotion/forschungskredit/postdoc\\_en.html](http://www.researchers.uzh.ch/promotion/forschungskredit/postdoc_en.html)

A sabbatical leave without teaching commitments is possible for research active academics returning from maternity, adoption, extended career or long term sickness leave. This leave enables staff to more quickly re-establish their research activity. For example, at UCL it is one term, at the Université de Strasbourg it can be six months or a year (following national regulation).

- >> **Time for service:** Lunds Universitet, for example, is developing a model aiming to reimburse women who take on duties on committees, boards or funding bodies to manage the gender balance in these groups. The reimbursement is meant to be used to bring in extra staff in the research group so that a woman's career is not hampered by too many obligations in administrative or decision making bodies.
- >> **Grant awarding:** Gender as a secondary consideration for grants has been used at the Universität Heidelberg since 2008. Interestingly, the first, entirely quality-based evaluation has on all occasions so far yielded a gender-fair output and no adjustment was needed. Probably, the fact of gender mainstreaming as a possible criterion was sufficient to produce a change of attitude.

Early-stage researchers (e.g. post-docs) at l'Università degli Studi di Milano can get help with applying for and managing European grants (Faculty of Agriculture).

- >> **Coaching and mentoring programmes for women:** Many LERU universities have such programmes, among them:

The Humanities Faculty of Humanities at the Universiteit van Amsterdam runs a successful coaching programme for female scientists. The programme focused on career development, on personal views and attitudes, on how to combine work and family demands etc.

The University of Cambridge has a scheme partnering female lecturers and others applying for promotion with senior academics who provide assistance with guidance, insight and advice.  
<http://www.admin.cam.ac.uk/offices/hr/equality/wiseti/mentoring/>

The Universität Heidelberg has a training programme for female scholars towards leading careers in academia called "Towards a Professorship". It offers training modules in management, research-project preparation and leadership etc. to be chosen depending on the individual interests and needs of the trainees.

KU Leuven offers "A Career in Academia" training to stimulate and guide young researchers, especially women, in their academic career. Post-doc researchers can, after completing the training course, participate in a mentor-mentee project at the KU Leuven.

The University of Oxford has introduced a high profile mentoring programme 'Ad Feminam' for mentoring women into senior leadership positions in the University. The mentors are both male and female and are all senior members of staff.

The Springboard Women's Development Programme at the Imperial College London is an award winning international programme (more than 200,000 participants in 26 countries) which allows women to identify the clear, practical and realistic steps they want to take, and allows them to develop the skills and self-confidence to take those steps. During the programme participants review topics such as qualities, strengths, networking, goals, assertiveness, dealing with pressure and managing image and visibility.  
<http://www3.imperial.ac.uk/staffdevelopment/postdocs1/workshops/springboard>.

A similar springboard programme exists at the Universities of Cambridge and Oxford:  
Cambridge: <http://www.admin.cam.ac.uk/offices/hr/cppd/researchers/>

Oxford now provides a generic programme; a programme targeted at Dphils and early career researchers in STEM; and a programme for undergraduates. <http://www.admin.cam.ac.uk/offices/hr/cppd/researchers/> <http://www.learning.ox.ac.uk/support/women/programmes/>

<http://www.mpls.ox.ac.uk/skills/courses/springboard>

<http://www.careers.ox.ac.uk/about-us/whats-on/learning-and-development-programmes/springboard-programme—for-female-undergraduates/>

The mentoring programme at LMU München offers career support to excellent young female scientists on their way to a professorship. Experienced female professors of all faculties provide strategic, scientific and personal advice and serve as role models. At the same time, the mentees profit from networking and peer mentoring within the group, and can take advantage of seminars on career-related topics as well as scholarships for child care and travel costs to conferences. <http://www.frauenbeauftragte.uni-muenchen.de/mentoring/index.html>

Universiteit Utrecht has a mentoring and coaching programme in which female scholars in a starting position are invited to address issues related to their way up in academia. Male professors are their individual mentors to support their search for making the best effort (mostly there is debate about: “doing things right or doing the right things”). But these mentors learn even more than their mentees: hurdles that ambitious women have to take. And an external coach empowers these female scholars afterwards.

Universität Zürich provides a complementary set of mentoring programs, ranging from the well-known one-to-one set-up to group-mentoring formats. In addition, a special programme has been developed for women post-docs in order to equip them for the appointment procedure and to prepare them for what lies ahead. <http://www.mentoring.uzh.ch/projekte/post-doc-programm.html> (in German)

## VI. Work-life balance measures

### >> Maternity/paternity leave:

Eligible employees at the University of Cambridge can apply for up to 52 weeks of paid and unpaid maternity leave. <http://www.admin.cam.ac.uk/offices/hr/policy/maternity/policy.html>

Within the programme “Clearing Service Academia and Family” the Universität Heidelberg offers assistance to staff going on maternity/parental leave which includes an advisory session together with the head of the department or institute where the researcher is employed; the career plan beyond the maternity/parental leave is agreed upon by the researcher and the department/institute. In addition, flexible funding can be offered if the research plan shows necessity of continued practical work, e.g. in a laboratory.

In some doctoral and post-doc tracks at the KU Leuven it is possible for women who gave birth to extend their funding until the end of the academic year. This “bridging” measure introduced by the Flemish government via the Fund for Scientific Research (FWO) gives women the opportunity after returning from a maternity leave to stay on at the university until the next application deadline for new funding. In this manner gaps in the academic career can be avoided. Academic staff on maternity leave receives financial support from the KU Leuven on top of their allowance to match normal wages.

The University of Oxford has one of the most generous maternity schemes in higher education. Female academics are eligible for 26 weeks’ leave on full pay, followed by 13 weeks on statutory maternity pay and 13 weeks unpaid leave - a year in total.

<http://www.admin.ox.ac.uk/eop/parentsandcarersinformation/informationforparents/#d.en.68869>

At LMU München the department of a pregnant post-doc researcher can apply for funds to bridge the time until the beginning of her maternity leave. That can support and relieve scientists who, for safety reasons, cannot continue working at their labs even before the legal timeout.

At the Université de Strasbourg a national measure is complemented to ensure an equal reduction of teaching duties



for the pregnant teacher (50% for a first or second child, 80% for a third or more child), whatever faculty the mother works for, and whatever period of the year the birth takes place. The paternity leave offers to the willing father a reduction of teaching duties (6% for a single child birth, 10% for twins) in the birth year.

>> **Child care provisions:** These are regularly offered at LERU universities. For example, the Family Service for Employees at LMU München, in cooperation with the company “pme Familienservice,” helps parents find day-care services or supervision for children. The university pays consultancy and agency fees; employees only have to carry the cost of the child care. Additionally, LMU offers flexible ad-hoc support if parents need child care in unforeseen situations. The costs for this service are covered by LMU. [http://www.uni-muenchen.de/einrichtungen/zuv/uebersicht/sue/excellent/lmu\\_pme/index.html](http://www.uni-muenchen.de/einrichtungen/zuv/uebersicht/sue/excellent/lmu_pme/index.html)

The Kinderhaus at the Universität Heidelberg comprises a number of creches and daycare facilities offering university staff a variety of care places for children, flexible opening hours (ten in total) and year-round opening, geared to typical work routines at the university. In addition to this Heidelberg offers a flexible back-up service for child care, including provisions for a so-called childrens’ hotel, which can be booked on a daily basis.

The University of Oxford has one of the most generous and comprehensive approaches to childcare provision in the UK higher education sector. The University offers 444 full-time equivalent discounted childcare places for eligible members of staff (and students) at 12 nurseries located in and around Oxford. <http://www.admin.ox.ac.uk/eop/parentsandcarersinformation/universitynurseries/#d.en.68886>

At the Université Paris-Sud, the Science Faculty in Orsay offers a day-care service for employee’s children during school holidays and on Wednesdays (school day-off in France).

The Foundation for Childcare in the Zurich University Area is a joint undertaking of the Universität Zürich and the ETH Federal Institute of Technology Zurich. It has been providing child-care facilities for staff and students of the two institutions since 2002 and thus makes a central contribution to work-life balance. [http://www.kihz.ethz.ch/index\\_EN](http://www.kihz.ethz.ch/index_EN)

>> **Dual career programmes:** Many LERU universities have such programmes. At LMU München, for example, the Dual Career Service assists partners of newly appointed LMU professors from Germany and abroad as well as partners of junior academics from abroad by opening up professional perspectives in Munich. As an additional service, it offers information on private matters such as house hunting and childcare. [http://www.en.uni-muenchen.de/scholars/services/dual\\_career/index.html](http://www.en.uni-muenchen.de/scholars/services/dual_career/index.html)

## VII. Transparency

**Pay gap:** The University of Cambridge has conducted regular Equal Pay Reviews since 2008 and these are now conducted every two years. In 2010 the University also identified a number of Key Performance Indicators to highlight key themes in equal pay at the University of Cambridge; these are also now included within reviews. <http://www.admin.cam.ac.uk/offices/hr/reward/pay/equal.html>

The University of Edinburgh openly publishes its Equal Pay Audits and undertakes a specific report on professorial staff as part of the annual process of reviewing professorial salaries: <http://www.ed.ac.uk/schools-departments/equality-diversity/monitoring-statistics/equal-pay-reports>.

The president of LMU München informs the university women’s representative once a year about the average financial situation of newly appointed male and female professors at LMU, thereby striving for transparency and trying to eliminate the gender pay gap.

## VIII. Monitoring

LERU universities generally monitor gender statistics and trends and report on them regularly. For example:

The University of Cambridge assesses data annually to develop its equality and diversity profiling; this includes assessing representation on gender grounds. The annual data reports are available at <http://www.admin.cam.ac.uk/offices/hr/equality/reports/>

The University of Edinburgh has an Equality and Diversity Monitoring Research Committee (EDMARC), which provides annual monitoring reports on staff and students. Its latest report providing analyses of student and staff data by the key equality dimensions of gender, age, disability and ethnicity can be found at <http://www.ed.ac.uk/schools-departments/equality-diversity/monitoring-statistics/edmarc>.

Aside from regular Progress Reports on the implementation of DFG Research-Oriented Equal Opportunity Standards (see above under I. of this Appendix), the AL-Universität Freiburg successfully passed a voluntary external Quality Audit in the area of gender and diversity in 2012. This QA was performed by the Evaluationsagentur Baden-Württemberg (evalag) and headed by Prof. Weiler (Stanford University).

The Universiteit Leiden provides annual monitoring reports on gender in equality of staff, separately for each faculty and for the university as a whole. The university Board makes agreements with faculties on progress of gender equality at the top. The annual reports help to monitor these agreements.

The University of Oxford monitors gender statistics and trends annually and reports on those trends to its central committees. <http://www.admin.ox.ac.uk/eop/publicsectorequalityduty/>

The Equality/Diversity Office at the Université de Strasbourg each year collects the female/male distribution of staff and the results are published in the university's internal magazine. Giving to all university actors data about the female to male ratio in their faculty or unit increases collective awareness, in particular concerning bottlenecks for career development. [http://www.unistra.fr/fileadmin/upload/unistra/universite/savoirs/SAVOIR\\_S\\_\\_14\\_web.pdf](http://www.unistra.fr/fileadmin/upload/unistra/universite/savoirs/SAVOIR_S__14_web.pdf)

The Universität Zürich publishes an annual gender equality monitoring report, which provides information for reflection on the implementation of the Code of Conduct Gender Policy (see "Leadership commitment and institutional policy/organisation"). Information is provided separately for each faculty and for the Universität Zürich as a whole. <http://www.gleichstellung.uzh.ch/themen/monitoring.html> (in German only)

## IX. Gender in science

The Université de Strasbourg encourages staff to participate in a national census, registering research teams that include the gender dimension in their research. This census is mastered by the CNRS. <http://www.cnrs.fr/mpdf/spip.php?article179>

The UK LERU universities' efforts are to a large extent driven by the Athena SWAN scheme (see section I of this appendix).

## X. Awareness raising, communication, networking and visibility

At the University of Cambridge, WiSETI has since 1999 promoted and supported women from undergraduate level to professor, in the Science (including Clinical Sciences), Technology, Engineering and Mathematics (STEM) subject areas. The project aims to redress an underrepresentation of women in employment and career progression in these disciplines at the University. Its activities include activities seminars for early career female researchers, PhDs and

post-docs, lectures, a CV mentoring scheme for women wishing to apply for promotion, and supporting good practice in science through Athena SWAN. <http://www.admin.cam.ac.uk/offices/hr/equality/wiseti/>

The University of Cambridge also supports a new Women's Network, which has grown from the previous Women's Forum. These networks have organised significant consultation and engagement opportunities, many with the backing of the University's Vice Chancellor. Information on some of these activities can be found at <http://www.admin.cam.ac.uk/offices/hr/equality/networks/women/#introduction>

The University of Edinburgh holds an annual International Women's Day lecture to celebrate inspirational women. <http://www.ed.ac.uk/schools-departments/equality-diversity/innovation-development/international-womens-day>

The equality office of the Université de Genève organises numerous conferences open to university students, employees but also to the public, for example, the awareness campaign in 2012, which was called "Excellentes, vous avez dit excellentes?"

At the Universität Heidelberg the discussion forum *Kompetenzzuwachs durch Chancengleichheit* (enhancing gender equity) focuses on the content of contemporary reports on gender studies, recommendations and position papers from experts and academic associations. Participating members are the managing directors of academic institutions, personnel officers and members of research projects, staff members and other interested parties.

The KU Leuven has a multidisciplinary platform, the Leuven University Centre for Interdisciplinary Research on Diversity and Equality (LUCIDE). Key members of this platform as well as the mission and goals of Lucide are listed on the website <http://www.kuleuven.be/lucide/about-lucide>.

L'Università degli Studi di Milano is planning an international event called "Week of Women and Science" in cooperation with EXPO 2015 to be held in Milan in 2015, in connection with STAGES - Structural Transformations to Achieve Gender Equality in Science - European Project FP7.

The Universität Zürich (Faculty of Science) organises the yearly Dorothy Crowfoot Hodgkin Symposium, which aims to highlight excellent women scientists. <http://www.oci.uzh.ch/static/diversa/dch/2011/>

All faculties at the Universität Zürich have published folders presenting women professors in words and depicting them in their working environments. This project enhances the women professors' visibility and takes account of their function as role models. <http://www.gleichstellungskommission.uzh.ch/professorinnenportraits.html>

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## About LERU

LERU was founded in 2002 as an association of research-intensive universities sharing the values of high-quality teaching in an environment of internationally competitive research. The League is committed to: education through an awareness of the frontiers of human understanding; the creation of new knowledge through basic research, which is the ultimate source of innovation in society; the promotion of research across a broad front, which creates a unique capacity to reconfigure activities in response to new opportunities and problems. The purpose of the League is to advocate these values, to influence policy in Europe and to develop best practice through mutual exchange of experience.

## LERU publications

LERU publishes its views on research and higher education in several types of publications, including position papers, advice papers, briefing papers and notes.

Position papers make high-level policy statements on a wide range of research and higher education issues. Looking across the horizon, they provide sharp and thought-provoking analyses on matters that are of interest not only to universities, but also to policy makers, governments, businesses and to society at large.

LERU publications are freely available in print and online at [www.leru.org](http://www.leru.org).



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