



Structural Transformation to Achieve Gender Equality in Science

Guidelines



Edited by

Marina Cacace, Doina Balahur, Inge Bleijenbergh, Daniela Falcinelli, Michaela Friedrich, Evanthia Kalpazidou Schmidt

Authors

ASDO - Assemblée delle Donne per lo Sviluppo e la Lotta all'Esclusione Sociale (Italy)

- Marina Cacace
- Giovanna Declich

Università degli Studi di Milano (Italy)

- Dr. Daniela Falcinelli
- Dr. Elena Del Giorgio

Fraunhofer-Gesellschaft (Germany)

- Michaela Friedrich
- Daniel Friz
- Anne Spitzley
- Jürgen Wilke

Aarhus Universitet (Denmark)

- Dr. Evanthia Kalpazidou Schmidt
- Dr. Ebbe Krogh Graversen
- Dr. Mathias Wullum Nielsen

Universitatea Alexandru Ioan Cuza (Romania)

- Prof. Dr. Doina Balahur
- Prof. Dr. Liliana Mitoşeriu
- Prof. Dr. Luminiţa Bejenaru
- Prof. Dr. Iuliana Breabăn
- Prof. Dr. Maria Cojocaru
- Prof. Dr. Paul Dobrescu
- Prof. Dr. Contiu Şoitu
- Prof. Dr. Snejana Sulima
- Prof. Dr. Romeo Asiminei
- Dr. Diana Arhire
- Dr. Cristina Elena Ciomaga
- Dr. Nadejda Horchidan
- Dr. Irina Popovici

- Dr. Lorena Tarlion
- Dr. Magdalena Vicovan
- Maria Petronela Munteanu,
PhD student
- George Pascaru, PhD student
- George Ichim, PhD student
- Rareş Miron, PhD student
- Nicoleta Karacsony,
PhD student
- Sonia Giorgiu
- Elena Radu Felice

Radboud Universiteit (The Netherlands)

- Dr. Inge Bleijenbergh
- Joke Leenders, PhD student

The project leading to these results has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under the Grant Agreement n° 289051 and from IGRUE - Inspectorate General for Financial Relations with the European Union, Ministry for Economy and Finance - Italy.

Legal notice

The views expressed in this publication are the sole responsibility of the authors and do not necessarily reflect the views of the European Union. The Union is not liable for any use that may be made of the information contained therein.

Graphic Designer Micaela Leonardi mikileon@alfanet.it
Printed in November, 2015

Structural Transformation
to Achieve
Gender Equality
in Science
Guidelines

Contents

Foreword	i
Introduction	v
Part One - Main features and experiences of the Action Plans	1
1. University of Milan, Italy	3
2. Fraunhofer-Gesellschaft, Germany	7
3. Aarhus University, Denmark	11
4. Alexandru Ioan Cuza University, Romania	15
5. Radboud University, The Netherlands	20
Part Two - Recommendations	25
Summary Table	27
I. Collecting data and monitoring gender equality	29
II. Engaging leadership	35
III. Policy-making and institutionalisation	42
IV. Networking and empowering women to take action	46
V. Integrating gender in education and research	49
VI. Communication and visibility	51
Notes	55
Annex I - The five action plans	59

Foreword

The history of women in culture and science has been a history of marginalization until the mid 1900s, especially in industrialized countries. For centuries the number of women having access to education has been very low. Until the early 20th century, indeed, and notwithstanding the progress made in the access to school education due to the State mass school curricula, high levels of inequality (at the political and educational levels) have remained in the collective consciousness and the main cultural codes. Such inequality, which was implicit in the sexual dimorphism based on forms of biological determinism, was aimed at justifying the alleged intellectual inferiority of women and the fragility of their nature.

Many of them used to stand out in the artistic and humanistic sectors as painters, writers and poetesses, but more rarely as scientists. Indeed, the people who own artistic or literary aptitudes can distinguish themselves also without having a specific preparation. Whereas sciences, and in particular the so-called “hard sciences” such as mathematics or physics, require a sound basic preparation without which it is almost impossible to make progress and highlight the talent. Notwithstanding the difficulties encountered, the women scientists having significantly contributed to the development of science are not few. History reminds us about the names of famous women scientists ranging from Marie Curie, who was awarded the Nobel Prize for Physics in 1903 and for Chemistry in 1911, to Rita Levi Montalcini, who received the Nobel Prize for Medicine in 1986, through the Iranian Professor Maryam Mirzakhani, who became the first woman honoured with the Fields Medal, the most prestigious award in mathematics, and Samantha Cristoforetti, holding the records for longest single space flight by a woman. However, the impression that women scientists like them represent the exception rather than the rule remains unchanged. The underrepresentation of women in scientific careers was and still is today a problem which should be faced strongly. In fact, it not only limits the European research and development potential, but also represents a drag on the economy of the single Member States.

On the damages caused by sexism also the International Monetary Fund has recently been clear: in over 40 countries, also rich and advanced, much potential wealth is wasted due to discrimination against women.

Women graduate more and with better results than men, but female employment rates in Europe remain low. Hiring women, overcoming the use of precarious contracts and the unavoidable choice between work and family are concrete and positive parts of a common commitment, of a choice for the future of our countries and the trust in change.

Still today an increase in the number of women and girls enrolling in scientific faculties more successfully than their male counterpart is recorded, although the obstacles and forms of discrimination against them, both vertical and horizontal, remain in all stages of career, from their entry into the labour market to the difficult access to top positions. People have been talking about the so-called glass ceiling for years. Studies and conferences address the topic, but the participation of women in science and technology,

both in decision-making and top positions of scientific research institutions continues to be very low.

At all levels of their career women come out from the organizational system more frequently than men. Therefore, the problem is not only represented by a more difficult career. Once they enter employment they face multiple risks of leak due to the lack of adequate initial support able to highlight their abilities, the difficulties in reconciling work and family life when they decide to have a baby, the shortage of acknowledgements and career opportunities, as well as because of exclusion and isolation dynamics in the workplace leading women, more often than men, to disinvest in their job and career.

What should we do to try to reverse this trend?

On the one hand, the European Institutions will need to further emphasize the topic of gender in science and research, starting from the new European strategy for equality between women and men and to continue the great work carried out until now through the Horizon 2020 Programme including an important section on the topic, which could certainly be extended especially in relation to funding.

On the other hand, Member States will have to try to develop and implement new integrated policies aimed at promoting women's participation in science and avoiding the current waste of female talents, by carrying out targeted actions for the support to the structural change of scientific organizations, the promotion of work-life balance for women and men as a quality element of scientific institutions, and the recognition of the importance of education from the early childhood to eliminate gender stereotypes and attract and retain young talents in scientific careers. The STAGES – SStructural change to Achieve Gender Equality in Science – Project and its Guidelines, that were produced on the basis of the results achieved through the implementation of the project, are a good instrument to start such change of course, particularly in scientific institutions and universities and represent a source of inspiration for all of us.

In this regard, let me thank all the partner organizations that made possible the drafting and publication of the present guidelines, namely the University of Milan, the Fraunhofer-Gesellschaft, the Aarhus University, the Alexandru Ioan Cuza University of Iasi, the Radboud University of Nijmegen and ASDO.

Furthermore, allow me to thank the international experts who have monitored the scientific quality of the products during the entire lifespan of the project, namely Letty A. de Weger, Inge Henningsen, Alice Hogan, Adrian Iftene, Maria Rimini Döring, Chiara Tonelli, and Judy Wajcman.

Change is possible and the way ahead is long. But I want to believe in a future free from gender stereotypes. A future in which girls from all over Europe and the world can even start to dream to become an astronaut.

Hon. Giovanna Martelli
Gender Equality Adviser to the Italian Prime Minister

The image features a dark grey background with a pattern of overlapping, semi-transparent circles in various shades of grey and white. In the upper-left quadrant, there is a solid black square containing the word "Introduction" in a white, bold, sans-serif font.

Introduction

Gender inequality in science is a **persistent problem** in Europe and elsewhere. Data and statistics constantly show that advancements in the sector are uneven and slow. Currently, women represent 30% of researchers, while 60% of all graduates are women. Only 20% of top-level academic positions are held by women (European Commission, 2013). Moreover, only 36% of European research institutions adopted a Gender Equality Plan (European Commission, 2015).

In this framework, in 2010, the European Commission launched a “**structural change**” strategy to systematically address gender inequality in science through formal gender-oriented action plans within research organisations, so as to introduce permanent solutions and long-term arrangements.

These Guidelines are one of the results of this broader effort. In fact, they have been drawn out of the experience of five action plans developed under the **European project “Structural transformation to achieve gender equality in science – STAGES”**, funded by the European Commission under the 7th Framework Programme¹ and co-funded by the Italian Government.

The overall purpose of STAGES, which lies behind its general design and approach, is to launch strategies for structural change in research organisations to address the many and interconnected layers of the problem of gender inequality in science from an **integrated perspective**.

First of all, the project involved concretely applying different self-tailored Action Plans geared towards introducing **gender-aware management at all levels** in four universities and one applied research institute (see below).

In addition, STAGES also involved the continuous **monitoring, evaluation and cross-cutting analysis** of the process activated in each institution in order to draw some conclusions, both to support implementation and to feed these **final Guidelines**. ASDO was in charge of these tasks, in direct connection with the project coordinator and in cooperation with the partners responsible of the Action Plans at their own organisations, who in turn conducted research and evaluation at the Action Plan level.

The **STAGES Consortium** consists of seven partners, listed in the table below. Their major roles in the project are highlighted, referring to the work-packages they have been leading.

Consortium members	Role	Country
Dipartimento per le Pari Opportunità della Presidenza del Consiglio dei Ministri	Coordinator Communication	Italy
ASDO	Technical Assistance Evaluation, Guidelines	Italy
Università degli Studi di Milano	Action Plan no. 1	Italy
Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V.	Action Plan no. 2	Germany
Aarhus Universitet	Action Plan no. 3	Denmark
Universitatea Alexandru Ioan Cuza, Iași	Action Plan no. 4	Romania
Radboud Universiteit, Nijmegen	Action Plan no. 5	Netherlands

The General Approach of the Project

The STAGES project was designed on the basis of three general approaches, which informed the way the Action Plans were built and the kind of measures which were included.

The first approach involves **integrating different strategies** comprehensively aimed at inducing structural change processes, i.e.:

- making research institutions an **enabling environment** for women's progress and working lives (including support to work-life balance and early-career phases);
- promoting the **sex and gender dimensions** in the image of science, in science education and in the very process of research and innovation;
- promoting women in different kinds of scientific **leadership positions**.

The second approach concerns **negotiating with internal stakeholders**, each time addressing the most relevant (different leaderships, administrative staff, researchers, students, the public at large). The actions considered were aimed at **negotiating change at four levels**:

- the **interpretive level** (i.e., raising awareness of gender arrangements within the organisation and of the relevance of the issue, so as to negotiate a common understanding of the problems to be addressed);
- the **symbolic level** (i.e., redressing the masculine symbolism of science, so as to support women scientists' visibility and remove stereotyped images of women scientists and science itself);
- the **institutional level** (i.e., negotiating change in the "rules of the game", so as to modify the overt or hidden structures of women's discrimination);
- the **operational level** (i.e., negotiating to translate good will, declarations or decisions into actual actions in a reasonable time).

The third approach focuses on the **dynamics of change** and it entails the design of inclusive implementation teams and the identification of actual or potential "transformational players" within and outside the organisation to act as catalysts for change. From this perspective, the teams would engage a growing number of relevant stakeholders and to build alliances with other active groups so to take advantage of their supportive attitudes.

Features and targets of the Guidelines

Guidelines for implementation

After more than fifteen years since the first European Commission's policy efforts on the gender-and-science issue (not to speak of North American experiences), many guidelines, recommendations and policy documents now exist about how to promote gender equality in scientific institutions, addressing different aspects of the problem and targeting policy-makers at different levels. These tools (see for instance: European Commission, 2012; genSET, 2010; National Academy of Science, 2006; LERU, 2012; PRAGES, 2009; Royal Society of Edinburgh, 2012), which include the contributions of European and international experts and scholars, present principles and lines of action that can potentially be applied in any organisational context and represent the indispensable knowledge base and starting point for any effort oriented to gender equality in scientific institutions.

At the same time, a growing body of empirical knowledge is being accumulated deriving from the direct practice of programmes which, like STAGES, have been launched in many universities and research institutes across Europe (see for instance: Genova, De Micheli, Zucco, Grasso and Magri, 2014).

The STAGES Guidelines aim to contribute to this process of deriving new insights about the actual implementation process of gender equality-oriented projects in scientific institutions. For this reason this document does not have the ambition of presenting a new original set of principles and recommendations on the necessary components of a gender equality programme, but focuses on the know-how which was gained in the implementation of the STAGES Action Plans. Therefore, the focus is on implementation strategies, through the presentation of the different solutions envisaged by the partners to achieve their objectives.

As a consequence, the Guidelines presented here, practice-based as they are, can be somewhat unsystematic, in that they only contain elements which emerged from the implementation of the five Action Plans, with no claim to be exhaustive. On the other hand, they have the advantage of looking in depth at implementation issues based on experience in five different organisational settings, so that the reader is more likely to find resonance with the situation at her/his institution with its particular implementation challenges and dynamics.

A specific target

The STAGES Guidelines are aimed at people working in a scientific organisation who, be it in the framework of a funded project or independently, are willing to launch a programme for gender equality.

They can be leaders at different levels of the organisation or they can just be part of it. As it clearly emerges from the STAGES experience, they will have to build in any case a strong set of alliances, both with leaders and with researchers and staff, before starting to design and implement the programme, as no top-down or bottom-up effort alone is sufficient to trigger the complex change process which is needed to make a significant impact.

This does not mean of course that these Guidelines are not relevant to decision-makers outside universities and research institutions. They can in fact be inspirational for policies both at national and at European level.

The structure of the text

The **First Part** contains basic **information about the five Action Plans** and the institutions where they were implemented, particularly relevant in the framework of practice-based, contextual Guidelines.

In the **Second Part**, the **recommendations** (20) are presented in **six broad fields of action**. These have been identified and discussed by the partners, with the contribution of the project's International Board of Scientific Advisors, as essential elements of a structural change process. Most recommendations are broken down into specific **lines of action** (41), and all are exemplified by a selection of the **relevant practices** tested by the partners (100 overall).

The **six fields of action** are the following:

- Collecting data and monitoring gender equality
- Engaging leaderships
- Policy-making and institutionalisation
- Networking and empowering women to take action
- Integrating gender in education and research
- Communication and visibility.

Some cross-cutting insights

Here below, some key issues emerging throughout the Guidelines are briefly discussed, as a support for reading through the wealth of materials presented.

Context-sensitive implementation and mutual learning

A first consideration concerns the strong contextual character of the implementation process. It repeatedly emerged from observation that similar actions have taken on different meanings and produced even very different results in the five Action Plans based on contextual factors, the most important being the **general organisational setup** (organisational structure, culture and values, leadership style); the existence and type of **internal actors involved in gender equality**; and the cognitive and cultural **attitudes of the main stakeholders to gender equality** issues. As a consequence, **different strategies and specific tools and methodologies** were applied to the same actions across the Plans, tailored to the local environment and based on local negotiation strategies. Mutual learning meetings highlighted these differences. A session held on networks showed, for instance, the very different purposes served by women researchers' networks in the various Plans, and their varied understandings. This suggests how useless it would be to just replicate the set of measures which proved effective in a given context without properly reinterpreting and adapting them. **Exchange among partners supports the reflexive attitude needed** in this regard.

“What do you mean by gender equality?”

All the Action Plans had to **constantly negotiate the meaning of gender equality** in relation to the different actions they promoted and the different stakeholders involved. Very often, indeed, the first thing to negotiate was the very understanding of the words used and, therefore, the real objective of the Action Plan. If the word “discrimination” was generally ruled out, as it evokes the victimisation of women researchers while pointing to the existence of intentional behaviour against them, it was the whole “gender equality” thing that created more or less occasional discomfort among specific groups of stakeholders or in the organisation at large. In these cases, besides increasing awareness-raising efforts, the teams engaged in **highlighting the many different grounds for supporting the Action Plan**, by framing gender equality actions as addressing emergent priorities and widely recognised challenges for the organisation (attracting talents and research funds, scientific competitiveness, internationalisation). Stressing “diversity” over “equality” also proved beneficial in some contexts, without losing sight of the specific and cross-cutting relevance of gender diversity.

Fixing it all

The five Action Plans chose to include, in different proportions, measures directly addressing **women researchers**, measures oriented at changing their **institutions**, and measures questioning the neutrality of **scientific disciplines**. While traditionally these three types of measures are presented as opposed to one another, in a sort of evolutionary continuum, the experience of the STAGES project suggests that **in reality they tend to overlap** and that some appropriate perspectives and tools can help to address the three levels jointly, thus magnifying the impact of the actions. It is important, above all, to avoid the deficit-model perspective (as if women needed more teaching than men), and instead adopt a structural change perspective. In this way, even **actions directly addressing individual women can take on a structural character** in that they can produce modifications affecting the entire organisation, in cultural, but also in organisational and normative terms.

Building on existing resources

In action design phase, the teams not only conducted an appraisal of the problems they had to address but also worked to identify the **resources available within and outside the organisation**. These resources, understood in the broad sense, include data collection procedures, existing policies and services, internal groups or structures, communication tools, as well as supportive attitudes among the leaders, or the existence of external institutions pursuing objectives in line with those of the Action Plan. Preliminary mapping was, therefore, frequently conducted for different resources, aiming at **reducing expenses and effort**, as well as **fostering an increased integration** of the actions within the organisation, **gaining greater visibility and support, involving additional stakeholders**.

From the top-down, from the bottom-up, and from the outside

Actions that could **bridge top-down and bottom-up approaches** were of great impact. This happened, for instance, when structured occasions were provided for the leadership to be in direct contact with the researchers and their networks to discuss issues of common interest. It also happened when peer-to-peer activities were given an institutional context to support and connect them to the organisation. **Cooperation with external stakeholders**, such as national or local authorities, also proved decisive in some cases, particularly when there were initial difficulties in making contact with the internal leadership, because external support and recognition raised project visibility and status internally.

The timing of change

Even though the participating organisations were very different in many respects, **recurring patterns** emerged in the time that was necessary for the Action Plans to develop. The **initial phase** was, of course, the most challenging and time-consuming, also because the teams were still in a running-in phase and internal cooperation was yet to fully develop. It can be said, albeit with some generalisation, that it took no less than a year to get the Plans on the right track, with a cohesive and structured team and significant internal visibility. After that, “**cruising speed**” was reached: things were easier and all the teams started to cooperate with a growing number of stakeholders, while activities developed as planned. In various cases, an **acceleration process** occurred halfway: things speeded up and the teams met less resistances, enjoyed more and more visibility, received requests to cooperate with the institution on a more structural basis. It is however impossible to understand what the permanent results of just four years of implementation will actually be. International experience shows that longer times are needed for deep and lasting change. The relevance of sustainability planning (see below) cannot be overemphasised in this regard.

Continuously evolving plans

Action Plans were designed before the starting date of the project, while an executive and more detailed planning was made in the first period of implementation and repeated at the beginning of each year. What clearly emerged is that the **Action Plans constantly needed adaptation and redesign** to keep the project relevant to emerging contextual situations, needs and priorities of the organisations. In some cases, **redesign was key to the success of the Action Plan**, since the team succeeded with time and experience in grasping the real triggers for change and arranged actions and resources accordingly. This points to the need to not go overboard with an overtly detailed and structured *ex-ante* design. What is more important is, rather, to **keep the plan open to new needs and opportunities**.

The dynamic planning of sustainability

Dynamic planning is also necessary when it comes to providing for the future sustainability of the actions initiated under a funded programme. What the STAGES experience shows is that **the quest for sustainability starts from the very beginning**, through the arrangements which are setup for implementation, which are then progressively scrutinised to get to viable solutions for securing their continuity. Several actions became sustainable from the start, while several attempts were needed in other cases to finally get to a solution which sometimes implied the need to redefine, modify, merge or otherwise transform the concerned actions. In some cases, **transition phases** are needed, where the teams still continue to cooperate in the delivery of the action by gradually reducing their efforts as new institutional actors take over.

Marina Cacace
ASDO

The background of the page is a dark grey color with a pattern of overlapping, semi-transparent circles in various shades of grey and white, creating a bokeh effect. A solid black square is positioned in the upper left quadrant.

Part One

MAIN FEATURES AND EXPERIENCES OF THE ACTION PLANS

1. UNIVERSITY OF MILAN, ITALY

Dr. Daniela Falcinelli & Dr. Elena Del Giorgio



The organisational context

The Università degli Studi di Milano (UMIL) is a public teaching and research university marked by a wide variety in terms of disciplinary offer. With 8 faculties, 32 departments and 64,000 students, it is one of the largest universities in Italy and a leading institute in Italy and Europe for scientific productivity. The university is also the only Italian member of the LERU, League of European Research Universities, and an active member of the LERU Working Group on gender. In 1995 the UMIL Interdepartmental Centre “Women and Gender Differences” was created as one of the very first centres in Italy on gender equality and gender studies.

The Centre has developed a significant and consolidated experience in the field of “Women and Science” especially through the participation, in 2006, in the *Universidonna* Project funded by the European Social Fund and, subsequently, to three important FP7 European Projects: PRAGES - Practicing Gender Equality in Science (2008-2009); WHIST - Women’s Careers Hitting the target: Gender Management in Scientific and Technological Research (2009-2011); and, currently, STAGES (www.stages.unimi.it). The experience gained in collecting, analysing and benchmarking programmes oriented at gender equality in research institutions (PRAGES), in starting implementing change by applying guidelines (WHIST), in developing and implementing a proper tailored Action Plan (STAGES) and, more generally, in constantly working together with other European research institutions, has made the Centre a point of reference in this field.

Emerging issues and the design process

In the process of drafting a tailored action plan and imagining useful and viable actions to be applied within the institution, the UMIL team proceeded, first, to carefully take stock of previous initiatives in order to locate those areas and/or levels where further/different interventions appeared meaningful. The team also took into account some contextual opportunities and constraints related to the structure of Italian

research and, especially, to the legislation regulating the functioning of Italian universities. Despite some operational boundaries linked to the general Reform of Italian universities (L. 240/2010), the STAGES team was able to identify several possible realms and levels where tailored actions, which had yet to be introduced or systematically applied, could be implemented in order to stimulate structural, long-lasting change. In particular, besides including actions addressing the entire university, in the Action Plan it was decided to target mainly two faculties – the Faculty of Agricultural and Food Science and the Faculty of Medicine – which exhibited some characteristics that made them ideal settings for intervention. The Faculty of Agricultural and Food Sciences showed interesting patterns in terms of horizontal segregation with some departments where women numbered half the full and associate professors, and others having no female full professor. Since 2007, moreover, the faculty was affiliated to the Centre “Women and gender Differences” and participated in its activities. This characteristic allowed the team to envisage the possibility of operating in an environment where negotiation had already proved constructive.

The Faculty of Medicine is the biggest and, historically, the first UMIL faculty. It has a very complex and articulated internal organisation with large numbers of women². Vertical segregation, however, represented a persistent and crucial problem. At the time when the Action Plan was drafted, 67% of the post-doctoral students and almost half of the researchers were women vs. less of 15% of women who were full professors. Data on access to funding, moreover, showed that women had more or less the same chance as men to obtain European funding but that they tended to apply less than their male colleagues. These results matched those highlighted in the *SheFigures* report of 2012, especially with regard to the specific field of Agricultural Sciences (*SheFigures*, 2012, pp. 126-129). In a period marked by progressive cuts in public internal funding, however, external funds grant those resources that are necessary in order to carry on research and be competitive on the international scale. Besides their internal characteristics, the choice to target the Faculties of Agricultural and Food Sciences and Medicine also related to the unique opportunity to link activities to the Milan EXPO 2015,

having the broad theme of sustainable development and the slogan *Feeding the Planet, Energy for Life*.

The Action Plan that was drafted following this process of analysis and stocktaking had the twofold aim of promoting gender equality in career paths and “gendering” the contents and the methods of scientific research at the same time. Actions focused on both careers and “genderisation” of research were thus implemented in the two targeted faculties with some actions addressing the entire university.

General approach to implementation

The general idea behind the STAGES Action Plan at UMIL is triggering and sustaining structural change by progressively sensitising and mobilising different actors through *tailored, multi-level* and *inter-related interventions*. The type and timing of implementation, in this vein, have been carefully planned so that the output of an action could serve to foster the implementation of other actions. This “symphonic approach” to implementation has allowed the team to single out different strategies at different times and in diverse realms.

During the first year, for instance, whilst also starting activating an action targeting students – the Course “Equal Opportunities and Scientific Careers” – which was then replicated for the 4 years of the project, a **top-down strategy** was preferred. The organisation of the STAGES Launch Conference and of two Crash Courses on the Impact of Gender Stereotypes in Science targeting the top management of the entire university and, in particular, of the Faculties of Medicine and of Agricultural and Food Sciences, indeed, contributed to increasing project visibility, sensitising and involving the top management in the project’s activities and creating a favourable environment for the implementation of subsequent actions. In this phase, particular attention was devoted to the type of **communication** for the contents of the project, the aim being to convey STAGES objectives and activities in a clear and resonant manner. In this regard, the constant presentation of data and literature, the link between gender equality and the promotion of excellence and talents, the invitation of prominent scholars in the field during courses and public events, were all discursive and organisational devices used to promote the Project and, at the same time, to prevent and/or overcome possible resistances

to initiatives fostering gender equality in science.

Starting from the second year, further dynamics were activated. In planning two important actions addressing early careers researchers and PhD students and post-doctoral students (the School of European Projects Drafting and Management and the School for International Publishing), the team used both a **bottom-up strategy** and what could be termed an **inclusive strategy**. As to the first, at the Faculty of Agricultural and Food Sciences, a Network of Female Researchers was created. One aim of the Network was to foster the participation of members in the planning for the Schools so that the contents and logistics of such actions could be effectively tailored to their actual needs. A “reversal practice” was thus used, as the contents and aims were singled out by women and on the basis of women’s preferences, while the Schools were also open to men. In defining the programme for the Schools, moreover, the team contacted and cooperated with different UMIL Offices and, in the case of certain classes involving keynote speakers from European institutions, jointly organised them with the Research Office as open events addressing the entire university. This inclusive strategy allowed the team to increase project visibility, to activate collaborations with UMIL units and, at the same time, to involve a wider spectrum of beneficiaries.

Besides top-down and bottom-up strategies, a “**lateral**” strategy based on the activation of important partnerships outside UMIL was also pursued. Once the implementation of most actions had been started and the Project had gained growing legitimation, some initiatives, for instance in the field of gender medicine, were organised together with relevant actors, such as the Health Department of Lombardia Region. The positive collaboration experience with the Region eventually led to a more stable partnership and the organisation of further events in the framework of EXPO and at the Regional level. The lateral strategy, used also with other partners such as Women for EXPO, has had a consolidating effect on the visibility and relevance of the Project, whilst also contributing to an increase in the projects’ dissemination capacities.

Main results

The implementation of the STAGES Action Plan at UMIL has proven successful in many ways and has led to significant results in different areas of intervention.

First, the above mentioned interrelated, simultaneous and multi-level implementation of different actions has significantly **raised attention on the general topic of gender equality in science**. The constant presentation of data regarding universities and research institutes at the European, Italian and local level has strongly contributed to the spread of awareness among the top management as well as professors, researchers and students of the very existence of a problem and of its negative impact on the entire organisation and on society in general.

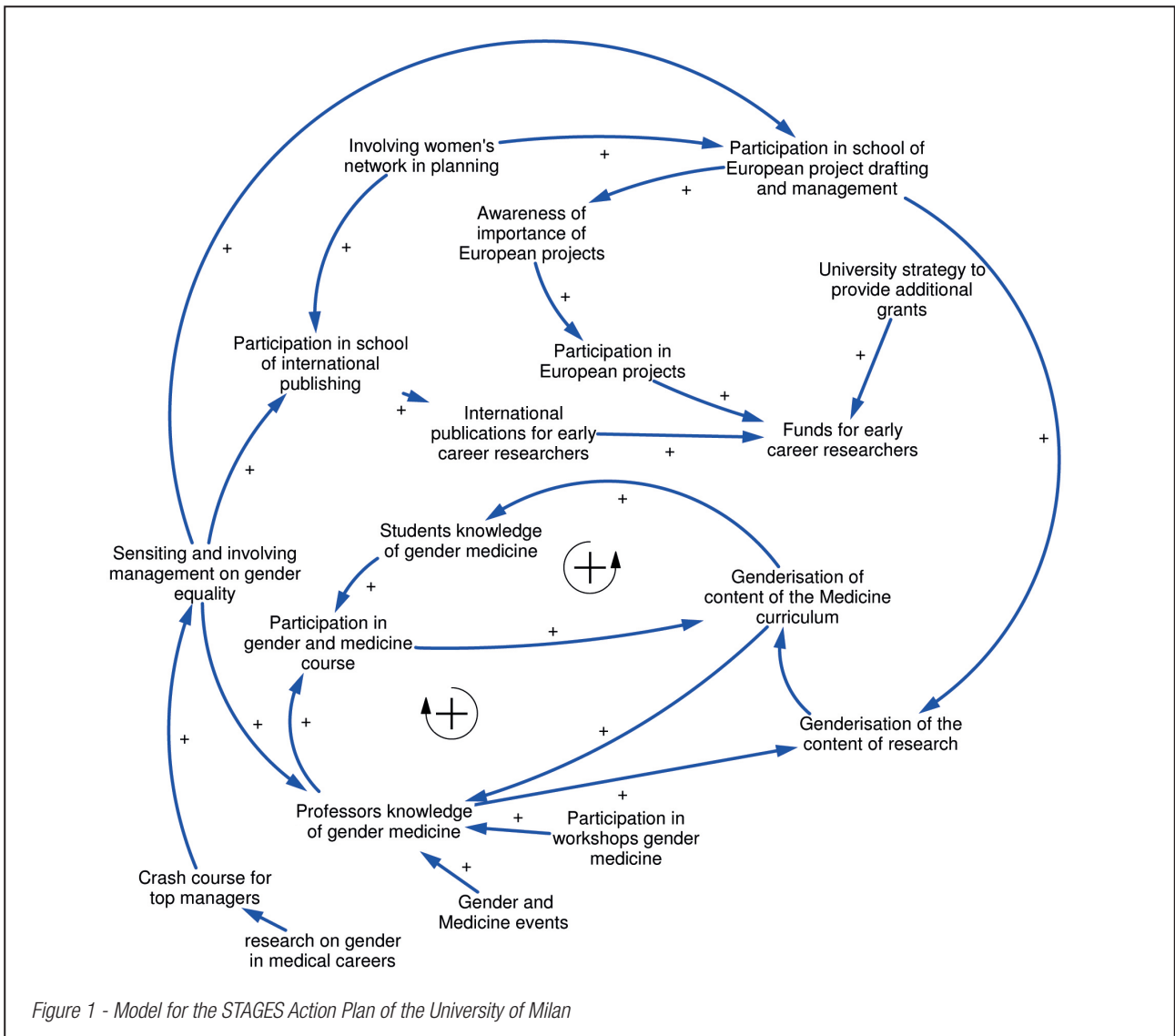
These changes have coupled with the progressive involvement of a growing number of actors in the activities of the project leading, in the case of actions such as the courses on Gender Medicine for students in the Faculty of Medicine, to stable collaborations also in the sustainability phase. Precisely **in the field of gender medicine many significant results have been achieved**. The courses for students, which were not included in the original Action Plan, were added as of the second year through a pilot course at the Policlinico Hospital Unit, hosting a Single Cycle Degree in Medicine. Given the interest raised, the course has then been replicated at the Policlinico Hospital and in two further Hospital Units hosting a Single Cycle Degree, the San Paolo and the Sacco Hospitals. The number of students attending the courses constantly increased during the third and fourth year of the project, whilst, at the same, a growing number of professors and researchers involved as teachers in the courses have included a gender medicine perspective in their own courses. Many of them have shown interest in the topic and participated to other initiatives organised in the framework of STAGES, such as the Workshops on Gender Medicine.

The STAGES Project has shown a capacity for innovation not only in the field of gender medicine, but also with regard to research and interventions on women's careers. The Action Plan, indeed, included a research on career paths in the medical profession from a gender perspective. The four-year study that was carried out in five Hospitals, both public and private, allowed the team to gather data in a relatively unexplored field of research and to shed light into the specific and less visible mechanisms leading to unequal career outcomes between men and women doctors in academia and health organisations. The results of the research have raised interest among stakeholders to the extent that additional Crash Courses to the top

management of single Hospital Units have been planned during the Sustainability Phase. As to the field of **internationalisation of research and access to European funding**, the activities of the project have synergistically accompanied a more general turn at UMIL, whose governance has recently activated several internal strategies to sustain applications to European funding and improve the organisation as host institution. The growing awareness of the importance of gender equality in science and of the gender perspective in the contents and methods of scientific research is significantly leading the organisation to take into account these dimensions, too, in developing such strategies.

In this regard, the creation, in January 2015, of the new **Centre for Coordinated Research GENDERS – Gender & Equality in Research and Science** can also, to a great extent, be considered an important result of the implementation of the STAGES Action Plan as well as a key element for sustaining actions after the end of the implementation phase. The Centre was created on the occasion of the renewal of the Interdepartmental Centres at UMIL linked to the general reorganisation process activated in 2011 following the Reform of Italian universities (L. 240/2010). The new Centre GENDERS, as compared to the previous Centre for Women and Gender Differences, has a more explicit focus on gender in science and is marked by the official inclusion of departments of the faculties targeted by the STAGES project, the Faculty of Medicine and the Faculty of Agricultural and Food Sciences. This new organisational arrangement has several advantages. It allows the team to provide constant cooperation with the departments already officially involved in the sustainability phase. It will provide the possibility of including further UMIL departments of the STEM area in the Centre. Outside the university, the new profile will provide more tailored and effective communication on topics related to gender and science. Finally, the Centre could become a point of reference in the more general field of RRI – Responsible Research & Innovation.

The model below, developed in cooperation with the team from the Radboud University by applying the Group Model Building technique (see Part 1, Section 5), helps to summarise both the implementation strategies that were used and the main results achieved.



To conclude, the STAGES Action Plan at UMIL, on the one hand, has triggered important and innovative transformations by highlighting “gendered” dynamics in career paths, sensitising the top management, mobilising early career researchers and promoting the genderisation of curricula and of scientific research. On the other hand, STAGES has accompanied and supported institutional changes that over the years are creating an increasingly favourable environment for structural change. During the first STAGES year, for instance, important institutional changes regarding the composition of the UMIL governance have occurred. Following the 2011 Reform of Italian universities, in the new Statute regulating the composition of the main UMIL governance bodies, a quota measure has been included. According to the new provision, among the 8 appointed members of the Board of Directors each gender must be represented by at least 3 members. For

the first time in UMIL history, moreover, two out of the four Delegated Prorectors are female (the Prorector for Research and the Prorector for Internationalisation). During the sustainability phase (2015-2019) the team will thus work to consolidate, broaden and disseminate the results obtained so far as well as to monitor emerging areas of intervention.

2. FRAUNHOFER-GESELLSCHAFT, GERMANY

Michaela Friedrich, Daniel Friz, Anne Spitzley & Jürgen Wilke



The organisational context

Fraunhofer is Europe's largest application-oriented research organisation. Research of practical utility lies at the heart of all activities pursued by the Fraunhofer-Gesellschaft. Founded in 1949, the research organisation undertakes applied research that drives economic development and serves the wider benefit of society. Its services are solicited by customers and contractual partners in industry, the service sector and public administration. At present, the Fraunhofer-Gesellschaft maintains 67 institutes and research units. The majority of the more than 23,000 staff are qualified scientists and engineers, who work with an annual research budget of 2 billion euros.

One centre of the Fraunhofer-Gesellschaft is located in Stuttgart. The centre consists of five institutes. One of them is the Fraunhofer-Institut für Arbeitswirtschaft und Organisation IAO. The STAGES project team is working at Fraunhofer IAO.

The Fraunhofer IAO was founded in 1981. More than 10,200 m² of offices, laboratories and technical installations are available to carry out contracted research. The activities of the Fraunhofer IAO focus on investigation of current topics in the field of technology management. Research projects are conducted in close collaboration with small and medium-sized companies and industrial corporations under direct contract. Through its close cooperation with the Institute for Human Factors and Technology Management (IAT) of the University of Stuttgart, Fraunhofer IAO unites basic university research with applied science and business practice. Both Institutes employ a staff of over 400. Amongst them are mainly engineers, computer specialists, economists and social scientists.

When recruiting talented young scientists, the Fraunhofer-Gesellschaft is also driven by its commitment to take on more women and to support their career development. In 2014, the proportion of female researchers without leadership responsibility increased and reached 21.8 percent³. In 2012, the share of female researches was under 21 percent⁴.

The organisation already put together and launched a whole draft of measures in this regard in 2012, and these were augmented by the "Fraunhofer TALENTA" support programme, which got underway in 2013. The latter is a centrally coordinated programme whose purpose is to achieve a significant increase in the proportion of female scientists and female managers at Fraunhofer. Initially set to run until 2017 (and with support measures continuing until 2019), the programme provides additional funding for the institutes to finance personnel growth and win over female scientists. TALENTA targets a number of different stages in the careers and development of the women concerned, thus doing justice to the underlying idea of fostering them in particular phases of their lives⁵.

Emerging issues and the design process

Early in 2003, the Fraunhofer Gesellschaft stated its support for the application of the principles of "gender mainstreaming" and equal opportunities standards and committed itself to increasing the involvement of women in the domain of science and their access to executive positions. In accordance with its decentralised structure, which consists of around 60 separate institutes, Equal Opportunities officers (BfC) have been established at each of the institutes, who cooperate with an Equal Opportunities commissioner (GB) and the central Human Resources Development Department.

But there was no systematic overview and assessment of the activities in the various Fraunhofer institutes and no systematic exchange about good or successful initiatives. This is why an internal market for gender diversity in science and innovation was to be built within the STAGES project. Given the decentralised structure, it was important to establish good relations to the BfCs in the institutes and the Equal Opportunities commissioner (GB) who coordinates all the BfCs. But to be able to initiate activities on a higher level, cooperation with the central Human Resources Development Department was necessary.

General approach to implementation

The first idea to get in contact with the BfCs and to motivate them to establish deeper relations with each other was to organise a monthly BfC group meeting for the BfCs located at the different institutes in Stuttgart. This concept should then later be transferred to other locations. But in the meanwhile, the BfCs organised themselves into “regional groups”: BfCs from several locations (for example in the south-west of Germany, or in the north) founded groups. As the distances between their single locations were still too far to meet once a month, they just met about twice a year.

The project team searched for another way to support exchange among the BfCs and, together with the Equal Opportunities commissioner (GB), devised the idea of the BfC Report (see Main results below). Another instrument to inform the institutes about successful activities in other institutes is the Toolbox (see Main results below). As these two instruments do not involve personal contact but only indirect contact via texts (like the examples in the online Toolbox or the BfC Report), an exchange workshop for BfC was organised. In this workshop they had the opportunity to meet face to face in a small group and to talk about their experiences on a concrete topic (in the first workshop, the topic was the implementation of different child care facilities). This workshop was important to strengthen personal contact among BfCs.

Main results

One of the main results of the Fraunhofer Action Plan is the development of the Toolbox. The Toolbox is a collection of good practice examples. All examples are described in a short text and are structured in the same way:

- Name of the example;
- Aims of the example;
- Description of the example;
- Procedure of implementation;
- Formal requirements;
- Success factors and obstacles.

The examples are illustrated by photos if available. The examples are categorised in six categories:

- Gender-aware organisational culture;
- Work-life balance;

- Career support for women;
- Recruiting young talent;
- Gender-aware research;
- Visibility of women in science.

In order to collect the good examples, a form with the above-mentioned structure was sent several times to the Equal Opportunity officers (BfCs) in the institutes. All the examples are published on the Fraunhofer STAGES website⁶ in a member’s area, the Toolbox. This area is visible for registered persons. Apart from Fraunhofer staff, anyone from other research organisations or companies who are interested can also register. So far, the toolbox contains 46 examples.

Another main result and highlight of the Fraunhofer Action Plan is the development of the “BfC Report”⁷. The Report became a sustainable instrument. It contains data and information about the share of women in different wage groups and leadership levels and about the use of different measures for equal opportunities. With this Report, the institutes can compare their situation with other institutes and monitor developments in their own institute over the years.

The topics in the Report are the following:

- Details of the Fraunhofer institute;
- Participation of women at the institute;
- Information on the position and work environment at the Institute relating to the BfC;
- Highlights at the institute in the field of equal opportunities;
- Support programs, career development programs, support of young talents;
- Measures for work-life balance at the institute;
- Other measures for supporting females employees;
- The BfC’s opinion considering the equal opportunities at their institute;
- Further support for the BfC;
- Praise and criticism of the process of the report.

The data collection for first BfC Report (pilot) was collected in 2013. The data was collected via an online questionnaire which was filled in by the BfC’s. The questionnaire was developed by the Fraunhofer STAGES team and the central BfC. In the end, each BfC had their own data. In addition, the Fraunhofer STAGES team created a general report by analysing the data from all institutes. The results were presented at the annual BfC meeting in November 2013.

For the second and third report, the process was slightly adapted. Now, a part of the data is delivered by the headquarters. This reduces the effort for the BfC's. The central BfC is very keen on continuing the reports. As she gets a budget, she can charge a small team of Fraunhofer researchers to do the general analysis and to produce the general report.

Conclusion

To summarise the results and the dynamic developments in the project in order to reach the aim of implementing more diversity ideas and concepts in the different institutes, the STAGES project team developed, in cooperation with the project partner from the Radboud university in Nijmegen, a model with the Group Model Building technique (see Part 1, Section 5). Some comments and explanations about the model are provided below.

The BfC Report and the gender diversity Toolbox are crucial instruments for supporting the implementation of diversity ideas and concepts.

The yearly collection of the data for the BfC Report has had a positive effect on the good relations between the Equal Opportunities commissioner (GB) and the team, and vice versa.

Both the good relations and the data collection for the Report lead to the fact that the project team is invited every year to the annual BfC meeting to assist at the presentation of the Report.

The Report by itself and the presence at the annual meeting can improve the BfC's awareness of the gender diversity Toolbox because the toolbox is also presented by the team at the annual meeting, and there are questions about the use of the Toolbox in the BfC report.

The awareness of the gender diversity Toolbox leads to the motivation to use it, which means submitting good practice examples or learning from the examples from others. Because of their practice examples in the toolbox, some BfCs were invited to an exchange workshop and asked to present there this practice example. Other interested BfCs attended the workshop because they were interested in some examples they found in the toolbox.

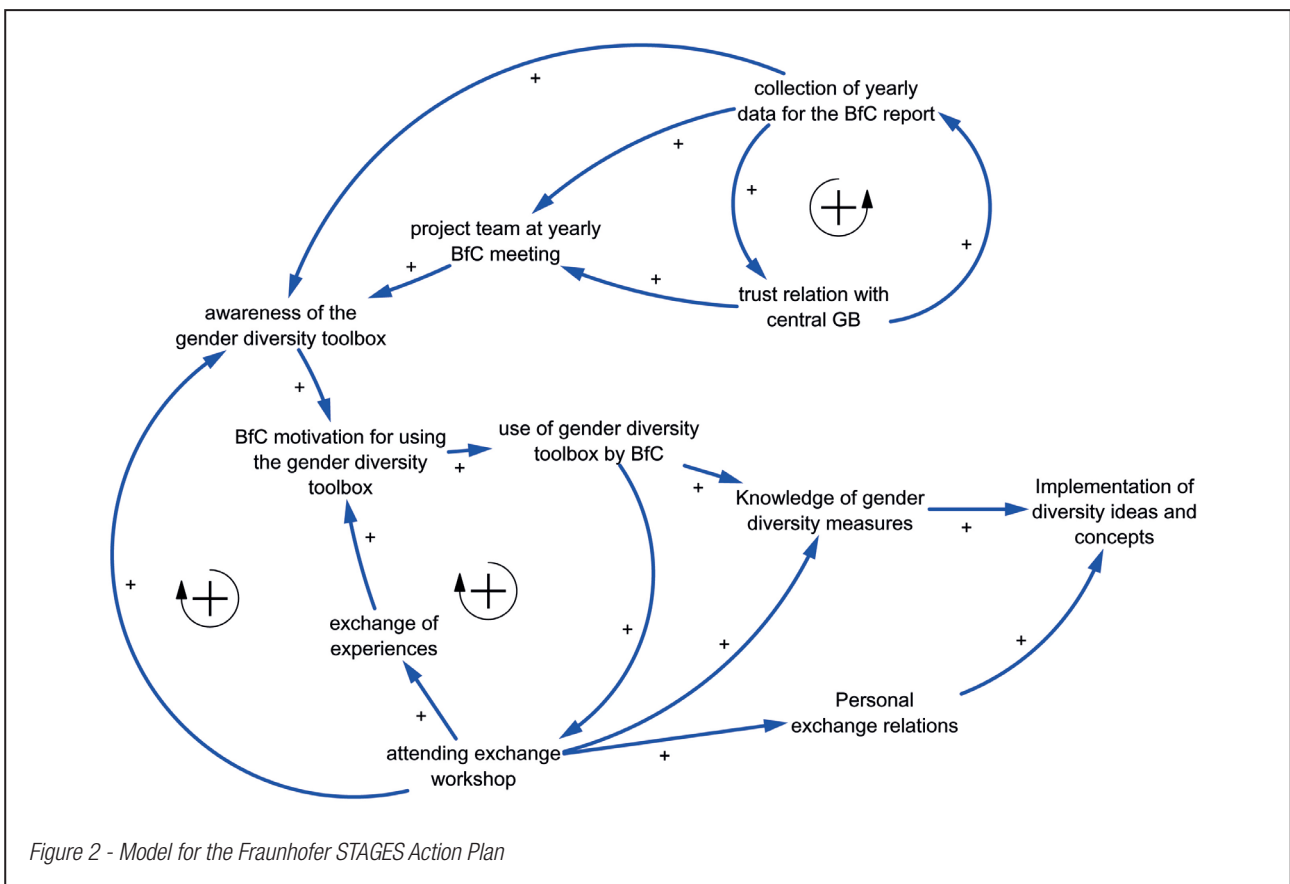


Figure 2 - Model for the Fraunhofer STAGES Action Plan

Through the exchange workshop, the BfC started to exchange their experiences with some gender measures, and therefore were again motivated to use the Toolbox by submitting their experiences as good practice examples or by searching for other experiences. Again, the exchange workshop raised the awareness of the Toolbox for those who had not yet used or only rarely used the Toolbox. Additionally, the exchange workshop strengthened the personal exchange relations between some BfCs. They found out that they have similar interests and can support each other. This is an important step on the way to implementing diversity ideas and concepts.

In general, the workshops, but also the use of the Toolbox foster the knowledge of gender diversity measures which is also crucial for the implementation of diversity ideas and concepts.

The model shows clearly the impact of the Toolbox and the BfC Report and how they strengthen different activities, which, finally, are important for more implementation of new concepts.

3. AARHUS UNIVERSITY, DENMARK

Dr. Evanthia Kalpazidou Schmidt, Dr. Ebbe Krogh Graversen & Dr. Mathias Wullum Nielsen



The organisational context

Denmark has for long been characterised by low levels of public and political attentiveness to the structural and cultural aspects of the persistent gender inequalities in academia, and universities and policy-making bodies have, despite some progress, primarily relied on gender equality (GE) policy measures aimed at fixing the women rather than the institutions.

At Aarhus University (AU)⁸, as at other universities in Denmark, the leaky pipeline has for a long time not been considered as a structural and cultural problem but rather as a deliberate decision of opting out, despite the fact that gender inequality has been a persistent problem at all levels among the scientific personnel as well as the leadership. Since, the late 2000s, Aarhus University has undergone a far-reaching transformation process restructuring its entire organisation⁹, which has been considered by the STAGES team as an excellent opportunity to put the issue of GE on the agenda and make it one of the key elements of structural change.

Previous to the implementation of the STAGES project, women comprised merely 14.2% of the full professors (table 1). In an attempt to address this issue, AU appointed a Task Force for GE in 2008 to draw up a new policy and action plan. A number of activities were initiated to meet targets but due to the effort-intensive and time-consuming restructuring process, the implementation has been slow. A more systemic action plan was needed to achieve comprehensive results and long-term effects, i.e. structural and cultural transformations. Following a few years with modest activity, a permanent Diversity Committee¹⁰ was appointed in 2012 to develop a new GE policy, and recently the Committee for Research and External Cooperation, consisting of the rector and the vice deans, has also been actively involved in this task with the aim to further speed up the implementation process and achieve more permanent results.

Table 1 - Distribution of female researchers 2012-2015

	2012	2013	2014	2015
Ph.D. student	49.7%	51.1%	50.8%	52.4%
Post-doc ¹¹	42.4%	42.7%	41.5%	40.4%
Associate Professor	31.5%	31.4%	32.9%	34.4%
Professor	14.2%	15.2%	16.9%	17.5%

Emerging issues and the design process

The STAGES action plan at AU involved a set of integrated activities, *targeting the entire university and all faculties*, geared at achieving sustainable results. University-wide initiatives were implemented during 2012-2015 in key strategic areas – i.e. to create more **women-friendly environments**, promote **gender-aware science** and **women's leadership of science** with specifically tailored GE actions (see annex). The action plan takes as a reference point the GE policy of the original Task Force, including the suggestions of a network of female researchers, and involving from the very beginning the leadership, the human resources and the communication department at the university in an effort to mobilise all the relevant stakeholders in the implementation process.

Approach to implementation – a dynamic model for engaging in structural changes

In view of the STAGES team's initial difficulties (due to the restructuring) in gaining greater attention to the GE issue and committing the leadership and research staff to structural changes, the strategy adopted was threefold, i.e. a *top-down* approach, a *bottom-up* approach, while *cross-cutting* activities were initiated concurrently. The three approaches feed into each other, in a dynamic process reinforcing their impact and producing constitutive effects. As a result of the strategy, actions were re-designed during the process to include emerging GE aspects relevant to the project.

The primary aim of the *top-down*, evidence-based approach has been to raise awareness of GE challenges among external stakeholders at the national level, in a Danish context where the universalistic idea of gender-neutral meritocracy is robust. Such stakeholders include the political system, key national agencies, other policy makers and experts as well as the public in general. This strategy, which involved an intensive presence of the STAGES team in national and local media, the organisation of workshops and seminars, and extensive participation in different GE arrangements, proved very effective, entailing “snowball effects” influencing the state of affairs at both the national level and at AU. This *first* segment of the top-down approach aimed at a wider mobilisation of all the national stakeholders, through an effective awareness-raising campaign placing GE high on the public and policy agenda, thus increasing the external pressure on AU to adopt a more proactive structural transformation strategy. The *second* segment of the top-down approach involved the intensified efforts of the team internally, i.e. to commit the stakeholders at AU, in particular the university leadership, to engage in sustainable structural gender change. This objective required an active involvement of leadership at all levels, supporting and advising the HR Department, the Diversity Committee and the Committee for Research and External Cooperation to ensure long-lasting and sustainable structural change efforts.

The objective of the *bottom-up* approach has been to reach out, mobilise and support female researchers, in particular through the organisation of empowerment initiatives for younger female researchers. Efforts, targeting both external and internal stakeholders, were obviously adapted to the features of the organisation, comprising the establishment of a GE resource centre, raising awareness, supporting and advising informal female networks and mentoring programmes, training young researchers, etc.

Simultaneously, a *cross-cutting* strategy was endorsed, based on a dynamic and integrated process bringing together the top-down and bottom-up approaches and mutually reinforcing them to become more effective. Central in the process has been the adaptation of a “small steps” pursuit, successively achieving legitimacy and visibility (locally and nationally), linking GE to “accepted” issues and expanding the “justice” argument, framing GE issues in terms of innovation, internationalisation and competitiveness. Another

key instrument has been to challenge the concept of excellence and the idea of the “gender blind” university, pointing out the limits to meritocracy.

In conclusion, the overall aim of the *evidence-based* STAGES strategy has been to increase the internal and external pressure on AU, thus prompting a more systematised and structurally oriented GE policy. The most recent developments illustrate the dynamic nature of AU’s GE policy process, which has proven to be highly contingent on the prioritisation and pace of decision-making at the leadership level, in a highly hierarchical organisation. The strategy’s objective of increasing the external pressure by rendering the university publicly accountable for the local GE challenges, in other words, represents an innovative attempt to influence and form the final decision-making in an otherwise closed top-down policy process. The figure below illustrates the dynamic model for engaging the AU organisation in GE structural transformation employed by the STAGES team.

Main sustainable results

The STAGES project team has played a crucial role in engaging the entire organisation of AU in structural change processes, formulating strategies and building effective actions, mobilising change-oriented agencies (such as female networks) and acquiring *internal and external visibility* that have supported implementations. In 2013, the team decided that the best possible strategy for committing the leadership and the organisation to a more structurally oriented approach was to develop a *policy paper* explicitly specifying the prevailing challenges to the advancement of women academics, and how to address them, making the management externally accountable for the persisting gender inequalities.

The objective was to influence and form the university’s development of a new long-term GE policy, committing the de-centralised levels to take concrete actions creating clear structures of responsibility, thus securing continuous commitment and sustainable results. The timing of the policy paper, which was sent to the university leadership, the Diversity Committee, the Committee for Research and External Cooperation and the National Task Force on “More Women in Research” was strategically most advantageous.

A Dynamic Model for Engaging Scientific Organisations in Gender Equality Structural Transformation

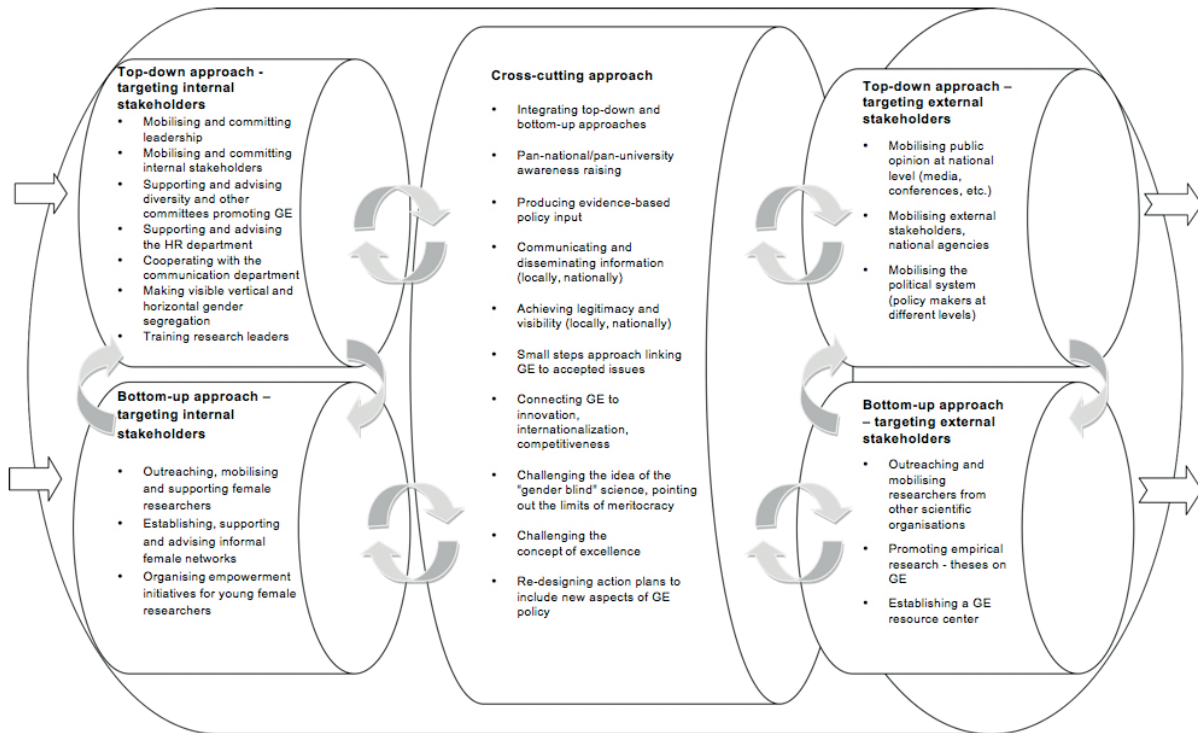


Figure 3 - Model for the STAGES Action Plan of the Aarhus University

Based on Kalpazidou Schmidt, 2015

The collaboration between the AU bodies and the STAGES team resulted in a GE action plan comprising a number of ambitious initiatives addressing structural barriers and specifying organisational structures of responsibility for each action task. The new strategic plan, which is based on the STAGES policy paper and credits the team as being one of its main contributors, comprises the following actions for structural change:

- Committing the four faculties to develop de-centralised GE action plans and initiate systematic annual reports following up on the activities taken at centralised and de-centralised levels;
- Formulating research vacancies appealing to both male and female applicants;
- Assessing the actual time for research (i.e. focusing on actual productivity relative to available time, rather than aggregate measures of past performance, accounting for maternity leave periods);
- Developing broader assessment criteria and emphasising the importance of focusing on future potential rather than past performance in recruitment guidelines;
- Creating more transparent and clearly defined qualification criteria to avoid pre-selection of candidates for research positions;
- Establishing career planning/counselling for young(er) researchers and allocating a supervisor for all postdocs/assistant professors to ensure integration in the local research environments;
- Increased focus on the gender balance among receivers of AU's local research grants;
- Creating more attractive and gender inclusive work environments via continuing professional development of all leaders in the organisation, and including gender diversity management as an integrated part of the university's education of managers, research leaders and PhD coordinators;
- Obtaining a more equal gender balance in decision-making bodies;
- Achieving equal representation in assessment and appointment committees;
- Establishing de-centralised diversity committees (at faculty and department level);
- Establishing an annual Gender Equality Price;
- Establishing a financial support programme to cover additional expenses (i.e. family expenses) related to

research stays abroad;

- Creating more flexible requirements concerning international mobility as a qualification criteria;
- Ensuring ongoing monitoring and communication of key targets and statistics;
- Evaluating developments at faculty and university level;
- Evaluating the implementation and impact of the new Gender Equality Action Plan.

As a result of the threefold approach adopted by the STAGES team, the outcomes obtained have reached beyond AU, and have impacted *nation-wide* and most likely *international developments*. Based on the work carried out within the frame of the STAGES project at Aarhus University, Mathias W. Nielsen very recently published an article in Nature¹² on the limits of meritocracy and of making academic job advertisement fair to all as too many university posts are given to men without proper competition. In addition, as mentioned, the team has made a particular effort to revitalise GE in science as a pertinent topic in the Danish public debate, by continuously writing newspaper, journal and science-webzine articles, and participating in interviews published in nation-wide newspapers, webzines and broadcasted national media. This effort has been highly rewarding, and the STAGES team is now acknowledged as one of the main experts in structural change, both locally and nationally. The team has also impacted national *policy* developments, in particular as to the recommendation report of the National Task Force on “More Women in Research”, published in May 2015, which credits the STAGES policy paper as one of its main sources of inspiration¹³.

4. ALEXANDRU IOAN CUZA UNIVERSITY, ROMANIA

Prof. Dr. Doina Balahur



The organisational context

The “Alexandru Ioan Cuza” University of Iași (UAIC) is the oldest higher education institution in Romania. Founded in 1860, UAIC has a recognised tradition of excellence and innovation in education and research. Nowadays, with 25,000 students and 1,900 academics, researchers and administrative staff, the university enjoys high prestige at national and international level and cooperates with 286 universities worldwide, being a member of some of the most important university networks and associations: European University Association, Coimbra Group, Utrecht Network, International Association of Universities, Network of Francophone Universities.

The Project STAGES is consonant with the UAIC's objective to develop international cooperation with other universities in domains of common interest as, in this case, promoting gender equality in science through structural transformations within organisations. It is also noteworthy that during the STAGES implementation, on March 2014, UAIC received from the European Commission the distinction/logo *Human Resources Excellence in Research*, for which are foreseen, among other requested conditions, principles and criteria of Gender Equality (like gender balance in staff composition, recruitment, promotion and representation in leaderships).

The Action Plan and the Strategy “Fixing the transformative and formative praxis”

The UAIC's self-tailored Action Plan (AP) *targeted 9 out of 15 faculties* (Biology, Chemistry, Physics, Geography & Geology, Mathematics, Computer science, Economics, Social sciences and Letters), but its outcomes extended to the whole university. It was designed, from its inception, to develop a *participatory strategy*, so as to integrate different categories of stakeholders/beneficiaries: academics, researchers, managers as well as PhD, MA and BA students. More than 40 actions (many with 3-4 annual editions), carried out by 130 organisers and contributors, were

attended by over 1,500 beneficiaries. The AP foresaw also partnerships and cooperation with the national agencies responsible for higher education evaluation and research funding and the Ministry of Education and Research, thus ensuring the possibility to generate a positive impact at national level. To present these actions, 12 reports (over 800 pages) were delivered at DG Research and Innovation.

The Strategy guiding the implementation was mainly based *on our own research and direct experience of gender equality in our university*, which highlighted that *performing real organisational change presupposes creating new structures and initiating new practices as well as a permanent reflection on this process*. With reference to the project's objectives, we synthesised our practical experience and reflection on practice *in a new model of structural changes to achieve gender equality in science*, called **FIXING THE TRANSFORMATIVE AND FORMATIVE PRAXIS**. The FTFP is a complex, multi-layered model of participatory strategy based on a systemic approach focusing on:

- **ACTION**: transformative gender practices involving the whole organisation as a community of practice;
- **RESEARCH**: gender knowledge produced by Participatory Action Research and learning through reflective practice;
- **COMMUNICATION**: performative communication praxis that challenges reproductive gender practices;
- **INNOVATION**: creating new organisational structures and practices (*Transformative Praxis*) and, through this process, developing competences for knowing and acting to promote gender equality in science (*Formative Praxis*).

Briefly, the basic assumption of this orientation is a two-fold process: involving the whole academic and research community in the transformative practices and, in this way, by mutual learning and organisational learning, developing a proactive attitude towards gender equality in science¹⁴.

According to our strategy, the actions were differentiated by objectives and concerned areas:

- 1 *Actions for setting up new organisational structures able to promote GES on the institutional agenda*
- 2 *Action research for gender analysis, data collecting, and monitoring gender dynamics*
- 3 *Actions for gender awareness-rising and increasing visibility of women researchers*
- 4 *Action programmes for improving women's representation on boards*
- 5 *Actions connecting GES to the UAIC's institutional strategies and programmes*
- 6 *Actions for fostering gender approaches in research and education*
- 7 *Actions for international networking with professional communities engaged in promoting GES*
- 8 *Actions for sustainability/development of the UAIC's GES programmes*

It is worth mentioning that this new model is built on the “cooperation paradigm”, which presupposes stakeholder agreement of the on common targets and collaborative relations between the change agents, thus replacing the “conflict paradigm” which is prevalent in the old models for GE programmes¹⁵. Based on the “cooperation paradigm” for structural change in organisations we pursued to actively engage in the transformative and formative praxis both representatives of the management and organisational units such as: HR Department, Doctoral schools, Projects Management, research and academic departments. We also developed partnerships with national authorities responsible for research and education (MEN, ARACIS, UEFISCDI) for activities carried out at national level and for extending and multiplying the UAIC's experience and good practices to other Romanian universities. Externally, collaborative relations were built with European institutions and gender experts from ERC, LERU, CNRS France, EIGE, EPWS, Yellow Window, TUWien, ITC-ILO, Gender Summit, who contributed to our actions.

Main significant results: new institutional structures and new organisational practices

Considering the results with respect to the project's purpose of *making organisational changes to*

achieve gender equality in science, the real relevant transformations initiated and produced at UAIC consist in: 1) *setting up new institutional structures*; and 2) *initiating new organisational practices*. The *new institutional structures* represent the main *transformational agencies* created and sustained for promoting gender equality actions that gradually became patterns for *new organisational practices*. Their effects resulted in increasing gender awareness, introducing gender challenges on the institutional agenda, advancing gender equality programmes, which progressively determined structural change in the organisation.

The NEW INSTITUTIONAL STRUCTURES and their functions are:

- ***The UAIC's Centre for Gender Equality in Science***, the first centre for coordinating research, monitoring and documentation on gender equal opportunities in academia and research set up in a Romanian university, similar to the existent *Gender Equality Centres* from prestigious universities worldwide. After its institutionalisation through the decision of the Rectors' Board and the UAIC's Senate, and its inclusion in the official organisation chart (2013), the Centre was charged to elaborate GE programmes according to the European policies, national laws and the provisions of the UAIC's Charter on the university's mission, objectives and responsibilities as well as to give periodic reports on dynamics of GES (<http://stages.csmcd.ro/index.php/organizationalstructure>);
- ***The UAIC Network of Women in Academia and Research***, the first institutionalised association including women and men academics and researchers who are interested in promoting organisational development in order to implement practices and programmes for improving GE at UAIC (<http://stages.csmcd.ro/index.php/networkobjectives>). The Network organised more than 60 activities and events within the STAGES framework and, by arousing interest and attractiveness, continuously enlarged its composition (counting now 92 members, both women and men, senior and young researchers, managers and staff from different faculties). Consequently, it has gradually become a principal change agent for fostering GES programmes (<http://stages.csmcd.ro/index.php/networkactivities#news1349420400>);
- ***The UAIC Research Group on Gender Studies***, a multidisciplinary research team, composed of researchers with gender expertise from previous national and international projects as well as young

researchers, tasked to conduct studies and evaluation on GES in Romanian institutions, particularly at UAIC (<http://stages.csmcd.ro/index.php/researchobjectives>). By adopting the methodology of participative action research, the group also aimed to involve the beneficiaries in collecting data, framing issues and interpreting the results, thus being oriented by *the formative role of gender research*;

- **The UAIC-STAGES Communication Team**, including specialists in communication sciences geared towards elaborating and implementing a multimedia communication strategy to increase the public visibility of the scientific performances of women researchers and to publicise and disseminate gender equality actions promoted at UAIC. (<http://stages.csmcd.ro/index.php/communication>).

As a special communication tool the team built a dedicated website (www.stages.csmcd.com) targeted both internally – for the UAIC’s Network members – and externally – for any interested reader from Romania and abroad. The website presents over 160 activities achieved during the project, in 250 informative articles (news, interviews, documents) and 1,000 photos and videos, and got a large audience with over 14,800 visitors.

The NEW ORGANISATIONAL PRACTICES, specified through concrete achievements, include:

- **Practices of gender analysis and data collecting.** These practices are constituted in the process of deepening knowledge and investigation on structural gender inequalities at UAIC. They emerged from *research-based actions* as: *Documenting and evaluating both qualitatively and quantitatively equal opportunities*; *Developing gender-disaggregated statistics and gender-sensitive indicators*, and other longitudinal studies. By extending perspectives, research referred at the national level, by mapping gender equality in research policies and programmes (as in the *National evaluation study on women’s participation in funded research*), and integrated, as well, a European perspective, by studying *Development of national standards for GE in funded research based on a comparative analysis between RO and EU countries*. These gender analysis practices, representing a novelty at UAIC, were carried out by the Research Group on Gender studies, and their results were largely disseminated within workshops, trainings, courses, and publications.
- **Practices of monitoring GE dynamics, evaluation of**

activities and programmes, and periodic reporting.

Such practices also emerged from *research-based actions* (such as *Creating a systematic Gender Equal Opportunities Database in accordance with the EC indicators*; *Drafting guidelines for policies*; *Documenting the provisions on GE in the UAIC’s Charter*), but their finality was to monitor the dynamics of gender equality and to evaluate GES activities and programmes. In this process, permanent evaluation and self-evaluation, based on the appreciative inquiry methodology, were conceived as intrinsic dimensions of the structural changes strategy. The GE monitoring practices were also completed with *the practice of regular reporting to the management boards*. After its institutionalisation (2013), *the new UAIC Centre* was officially charged to monitor, evaluate and give periodic reports on gender equal opportunities.

- **Practices of gender problematisation by introducing gender issues and challenges on the institutional agenda.** By organising public events as workshops, trainings, courses or conferences on gender topics, such *problematising-based practices* promoted GES as a relevant theme on the institutional agenda, thus entailing the increase of gender awareness, enlarging participation of the stakeholders and mobilising them as change agents. Consequently, we organised: *Annual thematic workshops of the UAIC’s Network of Women on GE strategies*; *Periodic training modules for university’s employees and managers*; *Special sections on Gendered Innovation and Research within International and national scientific events hosted at UAIC*; *International conferences on Gender Equality Management* (<http://stages.csmcd.ro/index.php/trainingprograms>).
- **Practices to increase women’s visibility, voice and recognition.** Being aware that public communication is essential for increasing visibility and to stimulate acknowledgement of outstanding women researchers, several *communication-based practices* with large participation and enthusiastic feedback from beneficiaries were initiated and organised: *The annual public event “Women Researchers Day” to celebrate women in science (3 editions, 2013-2015)*; *The annual Excellence Awards for women researchers (3 editions, 2013-2015)*; *Producing and presenting the Documentary films “UAIC Profiles of Women in Science” (3 editions, 2013-2015)*; *Organising the Documentary Exhibition “UAIC – A Place of Women in Science”*. These actions were attended by 500 beneficiaries, the exhibition had around 1,500 visitors, and the 3 films posted

also on YouTube got over 1,600 views. Other forms of public communication for increasing women's visibility and recognition were: *Creating an open source database/compendium of women researchers*; *Promoting interviews in mass media and on the UAIC-STAGES' website*; *Sustaining PR campaigns on the role and responsibilities of women in science* (<http://stages.csmcd.ro/index.php/media>).

- **Practices of building cooperative relations and positive attitude by involving the UAIC's management in gender equality activities.** Based on "the cooperation paradigm" as a pillar of our strategy for structural change by transformative and formative praxis, the team was permanently striving to ensure the support of the top and middle managers, through direct engagement in gender equality actions. In turn, the openness of the UAIC's management for this project was manifested from the beginning. Creating cooperative relations and positive attitudes by involving the managers in our activities stimulated their interest and support for promoting Gender Equality Management policies and programmes. These *building cooperation practices* included: *Organising periodic meetings with the UAIC's Rectors to present the activities and results of the UAIC-STAGES project and to consider their direct commitment in different actions*; *Including top UAIC representatives (the Rector and two Vice-Rectors) in the Advisory Board*; *Involving women and men in leadership positions (Deans, Department heads, Senate members) as contributors to the Network's activities*; *Organising special dialogues on GES between managers and European gender experts invited to UAIC*.
- **Practices of connecting gender equality to the UAIC's institutional strategies and programmes.** Such practices resulted from initiating institutional debates on the beneficial correlations between scientific excellence, gender equality and responsible research by fostering topics such as *Excellence without gender bias*, *HR Excellence in Research and Gender Equality Programme*, *Gender Equality and Innovation Management in Academia* or *Responsible Research and Innovation: Gender in Entrepreneurial University*. Other actions supported the university's quest for internationalisation and competitiveness by providing specific resources made available within the project, like *Documenting European policies and programmes on GES*; *Comparing gender statistics in academia and research in EU, RO and*

UAIC; Analysing research funding systems in EU in order to develop national standards for GES. Engaging the team in *supporting the UAIC's process of European certification "HR Excellence in Research"* by highlighting the relevance of principles concerning GES was also an example for such practices, as well as *Providing gender consultancy on European GE Policies for the Human Resources, Projects Management, and International Relations Departments*.

- **Practices for improving organisational practices related to the gender balanced representation in research and academic leadership.** Given the transformative character of this project, some actions directly focused on undertaking critical analysis, followed by appropriate constructive proposals, in order to improve the existing practices, especially when they are connected with gender structural disparities. Such actions were: *Negotiating proposals of new transparent rules and procedures for appointing/electing members of the high-level boards and commissions*; *Proposals for introducing provisions encouraging women's participation in grants application*; *Proposals for extending provision of grants to be allocated for women professional development*. A concrete form of gender representation was applied by *Establishing a Senate position for the representative of the UAIC Network of Women*. To improve leadership practices concerning gender balanced representation it is important that *the networking activities initiated by the UAIC Network*, and continued through *other networks of women created by its inspirational model*, are further sustained.
- **Practices supporting the UAIC's programme for work-life balance and childcare services.** Such practices attested also the reformist character assumed by the project. In this case, starting with the services provided by the UAIC's existing childcare programme (based on the "Junior" Kindergarten and primary school for children of UAIC employees and students), some improvements were proposed and influenced by actions like: *Prospecting organisational opportunities to support families by developing existing services*; *Disseminating information on childcare and other services delivered to staff*; *Setting up a partnership agreement with different childcare institutions in the city to extend services for university staff*.
- **Practices for encouraging young women researchers and cultivating women mentorship.** Actions supporting the establishment of such practices were: *Organising annual early-career researchers'*

days to reinforce the motivation and strengthen researchers' confidence (<http://stages.csmcd.ro/index.php/earlycareer>); Providing information and advice on professional development for young researchers; Involving the members of the Network in trainings and open courses for early career researchers for sharing their successful experience and offering role models; Acknowledging the tradition of women's mentorship at UAIC and cultivating these formative relations by publicising influential examples (<http://stages.csmcd.ro/index.php/womenmentorship>).

- **Practices of integrating gender in the content and methods of research and education.** Considering this important direction for promoting GES, new practices were introduced at UAIC: *Implementing a cross-disciplinary teaching module on gender and science in PhD/MA programmes; Introducing the theme Gender Equality in Science in the PhD studies; Organising scientific events on Gendered Science with applications in Medical Chemistry, in Geography & Environment science, and in Economics; Supporting specialisation in GES by providing grants/documentary internships for young researchers; Promoting publications on relevant GES themes.*
- **Practices for developing connections with international Women Researchers Networks and sustaining the UAIC's participation at European conferences and projects on gender in research and education.** Actions for international networking with European Associations of Women in Science and gender experts' communities, as well as with other universities' Centres for Gender Equality were considered an important component of our strategy. There are several examples of connections already established between the UAIC Centre and the UAIC Network of Women and prestigious international institutions, associations and networks like ERC, EIGE, LERU, CNRS France, EPWS, Gender Summit, aiming to integrate our approaches on GES in the European context.
- **Practices of developing cooperation and partnership in order to extend and multiply the UAIC's experience and good practices to other institutions in Romania.** Such practices constitute both a form of broad dissemination of our project achievements at national level and a form of preparation for future projects and joint activities with other partners. As such, we developed actions *in collaboration with ARACIS, UEFISCDI, MEN and universities to extend and multiply the UAIC's innovative experience.* It is

worth mentioning, in this context, *the presentation of the UAIC-STAGES activities and results as an example of "Success story" in the documents of the National Conference of Research and Innovation, held in Bucharest in October 2013, in the presence of the European Commissioner for Research and Innovation, who launched the EU Framework Programme "Horizon 2020" in Romania (http://stages.csmcd.ro/index.php/timeline_page5).*

The creation and institutionalisation of such organisational structures as the UAIC Centre for Gender Equality in Science and the UAIC Network of Women in Academia and Research, the large participation in the new organisational practices, which gained an impressive public renown (such as the annual events Women Researchers Day, Women Excellence Awards, the documentary films "UAIC Profiles of Women in Science", the Exhibition "UAIC - A Place for Women in Science"), the experience earned in organising trainings, courses, workshops and conferences on GES, as well as the appreciation of the practices adding a gender equality dimension to university policies and strategies are, altogether, sound premises for ensuring the sustainability and development of the action-programmes initiated by the UAIC-STAGES project.

5. RADBOUD UNIVERSITEIT, THE NETHERLANDS

Dr. Inge Bleijenbergh & Joke Leenders, PhD student



The organisational context

Radboud University (RU) in Nijmegen, the Netherlands, is a student oriented research university with fourteen research institutes. The university has more than 2,900 FTE academic staff members and 19,000 students in 2015. With 22% female full professors in 2015, Radboud University has the largest share of female full professors of all Dutch universities, although this is still a low proportion from an international comparative perspective. The university has a tradition of equality policies from the 1980s, participated in the European EQUAL project in 2000 and signed the national Charter “Talent to the Top” – a voluntary agreement to set gender targets and support them with policies – in 2008. The university supports both financially and administratively a Network for Female Full Professors (NVH) since 2001, and launched a pilot mentoring programme for female academic staff in postdoc and assistant professor positions in 2010. Finally, RU has an Institute for Gender Studies, which supports the development and integration of gender research in the research and teaching curriculum. In addition to the STAGES project, Radboud University participates in two other FP7 European projects (GARCIA – Gendering the Academy and Research: Combating Career Instability and Asymmetries (2014-2017) and EGERA – Effective Gender Equality in Research and the Academia (2014-2018), of which EGERA directly builds upon the knowledge and tools regarding gender awareness training for managers developed during the STAGES project.

The tailor-made Action Plan for the STAGES project at RU is directed at two research institutes, namely the Donders Institute for Brain, Cognition and Behaviour (DI) and the Institute for Management Research (IMR). Herewith we selected two research institutes with very different characteristics and contexts. The DI is a highly acknowledged research institute with only 10% female full professors in 2011. In 2011, the DI had been evaluated by an external research visitation committee as having a dominant masculine culture, not supportive for both research results and the female faculty. The IMR is situated in a School of Management with a strong teaching reputation, and had 22.2% female full

professors in 2011 (see Table below for figures about women at different academic staff levels at the moment of drafting the action plan). The IMR has a large gender and diversity research group, consisting of 25 researchers in the field of gender and power in politics and management. Research at both institutes had to be re-evaluated in 2013, and the leadership was very open to participate in our research project which aimed at structural transformation towards gender equality.

Table 2 - Female academic staff at Radboud University and the two research institutes (2011)

	PhD	Postdoc	Assistant Professor	Associate Professor	Full Professor	Target Figure for Female Full Professor in 2016
Radboud University	56.5%		41.5%	27.5%	18.6%	22%
Donders Institute	60%	45.7%	26.7% ¹⁶	26.7% ¹⁷	10.4%	18%
Institute for Management Research	52.4%		41.2%	17.6%	22.2%	30%

Emerging issues and the design process

The design of the Action Plan was adapted to the specific context of the organisation. In the design of the list of actions at RU, a combination was made of interventions that fall within the strategic areas of creating women-friendly environments (mentoring programme, women’s network and work life policies), gender aware science (gendering the content of master and PhD courses, gender awareness training of the leadership) and women’s leadership in science (scrutinising gender target figures, improving visibility of women scientists and gender research). In terms of theory on gender equality interventions, these actions fall within different strategies, combining “fixing the women” (mentoring, women’s network), “providing equal opportunities” (work-family policies) and “transforming the organisation” (Ely and Meyerson, 2000) (gendering content of education, gender awareness of the leadership, internal communication). The full list of actions at RU can be found in the annex. At the time of the design of the STAGES project, in

2010, it was unclear if the pilot mentoring programme for female academic staff would be continued and part of the actions was to support its continuation. When the STAGES project was granted, the university board had decided to continue the mentoring project and allocated budget to it. The Action Plan was then adapted to systematically evaluate the mentoring programme and support its improvement. During the STAGES project period, the project team found that PhD students and postdocs at the DI were in need of a mentoring programme as well, while they were not eligible for the RU mentoring program. The STAGES project team therefore also supported a bottom-up extension of the programme at the DI.

The design of the Action Plan was also adapted to the specific expertise available in the project team, which was research methods oriented. The tool for gender awareness training was based on the Group Model Building method that had been developed within the Research Methods Department of the project team coordinator, and successful application to support gender equality interventions within other Dutch universities. The Research Methods Department also became the target for integrating a gender dimension in their education curriculum. Applying participatory modelling in gender research was integrated in the European Master or System Dynamics the department was already responsible for.

General approach to implementation

The general approach towards implementing the Action Plan was threefold. First, the team invested in building and using informal networks to build a critical mass of empowered female scientists, which is a **bottom-up approach**. Second, the team invested in building sustainable relations with the leadership of the university and both institutes, by critically supporting and scrutinising existing equality policies, like the mentoring programme and the gender target figures. This supported a **top-down approach** towards gender equality. Third, the team invested in gender awareness training of the management of the two research institutes to support organisational stakeholders to become problem owners of gender inequality. We call this a **participatory approach**. We describe the self-reinforcing feedback-processes related to these three approaches in the text below and illustrate them in the model below.

The **bottom-up approach** of building and using informal networks, for example, was used to develop a women's network for junior female academic staff. In 2012, STAGES project team members cooperated with female colleagues from their informal networks to institutionalise the Halkes Women Faculty Network, for female academic staff from PhD students to Associate Professors. This network complemented the existing university's Network of Female Full professors (NVH). The positions of chair, treasurer and secretary of the Halkes Women Faculty Network were initially all taken by PhD students. Since the Halkes Women Faculty Network visibly represented the younger generation, this increased the legitimacy of the network and increased support of the NVH for this new initiative. The Halkes Women Faculty Network became very active during the STAGES project period. Till September 2015, it organised a series of ten successful meetings (both lunch meetings and lectures) and a conference and became institutionally supported by the university (budget of 5,000 euros per year). Moreover, the Halkes Women Faculty Network became recognised as a conversation partner in setting university equality policies. Together with the NVH, it has a critical mass that supports the development of gender equality policies. In return, the university board provides financial and administrative resources to support the networks, which further increases the strength of the women's networks.

The project team also built sustainable relationships with stakeholders like the leadership of the research institutes, the university and the diversity officer, by critically scrutinising existing policies, like the mentoring programme, work-life policies, internal communication on recruitment and gender target figures. Supporting top-down policies, the project team evaluated three rounds of the mentoring programme during the STAGES project period, using semi-structured interviews with mentors, focus groups with mentees and a survey to assess the quality of the programme and the learning outcomes of both mentors and mentees. The project team scrutinised the opportunities of the mentoring programme to support structural transformation in the organisation, by not only asking mentees but also mentors what they learned about (gender equality in) their organisation. Moreover, during the STAGES project period, the team gave frequent recommendations for improvement of the programme. The RU's work-life policies consist of paid maternity leave, partly paid parental leave, childcare

facilities, the opportunity to work part-time and to work flexible hours and places. The STAGES project team evaluated the use of these work-life policies by performing focus groups with twenty-one scientists at the two research institutes, to examine their use of the policies and the opportunities these policies provide to transform the masculine culture of the organisation. Recommendations were discussed with the university leadership. Third, the project team critically evaluated gender stereotypes in internal communication (both in internal newsletters and in recruitment and selection) at the level of the two research institutes, giving recommendations to the leadership of the institutes to improve this communication, for example regarding the visibility of women scientists in this communication or regarding avoiding gender stereotypes. Finally, gender target figures were regularly discussed with the leadership of the research institutes and the university board in the context of strategic plans at the institutional and university level.

Finally, the **participatory approach** was performed by actively involving the leadership of the two research institutes (DI and IMR) in the design of the Action Plan (IMR leadership, diversity officer), in selecting

participants for the gender awareness training (DI and IMR leadership) and in the analysis of gender inequality in their research institutes in order for them to become problem owners (DI and IMR leadership). The method of Group Model Building that was applied during the gender awareness training, invites the stakeholders to discuss and understand the dynamic structure underneath gender inequality in their institutes and to identify leverages for change. Moreover, the team was available for supporting the implementation of the recommendations that were made during the gender awareness training sessions, so actively participating in the use of the results. To illustrate, at the DI, three project team members became part of the gender steering group that was responsible for implementing the measures aimed at gender equality. At IMR, after the training, the project team members were informally consulted on a regular basis by the faculty board, for example on the new strategic plan and for screening job advertisements on gender bias. This positively supported the development and implementation of gender equality policies, both at the level of research institutes and the university. If the project team became involved in implementing them, this further increased sustainable relations with stakeholders.

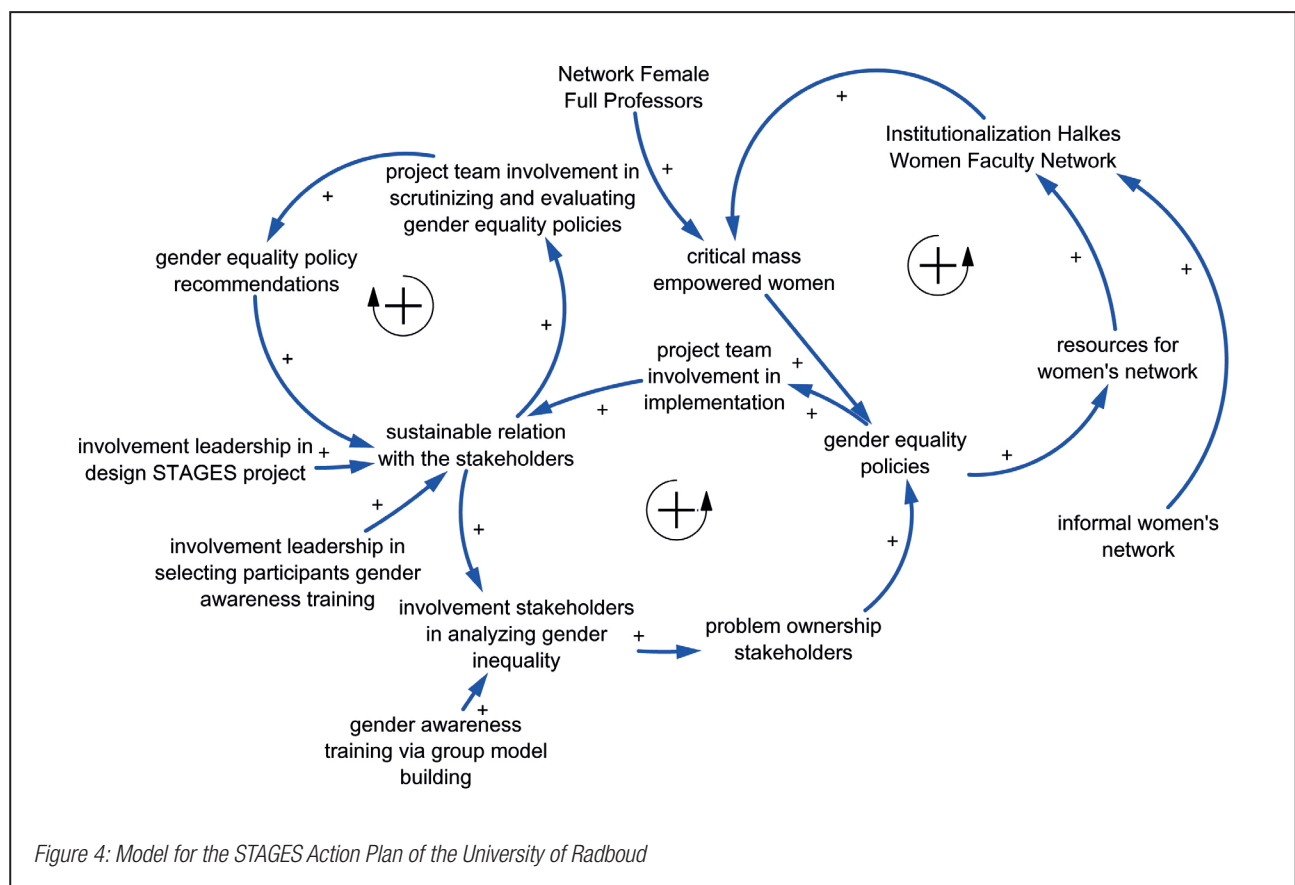


Figure 4: Model for the STAGES Action Plan of the University of Radboud

Main results

We present the main results of the STAGES project at RU in the order of the different actions in the detailed action plan (see annex).

The top-down mentoring programme has been extended from 25 female mentees in 2011 (academic and support staff) to 35 female mentees (academic staff) per year in 2015, reaching 63 female scientists during the STAGES project period. Moreover, its content has been continuously improved. A bottom-up initiative to mentor PhD students and postdocs has been developed at the DI.

Work-Life balance has become an issue in the strategic plan of the university for the period 2015-2020. The STAGES project team has provided input based on the focus groups with male and female scientists on this issue during the development of this strategic plan.

The Halkes Women Faculty Network has been institutionalised, increasing support for early-stage career development for young female scientists via lunch meetings, lectures and conferences. It has become recognised as a formal conversation partner of the university board regarding diversity policies. The network has good contacts with the network of full professors (NVH) and the diversity officer at the HR Department of the university.

Internal communication on recruitment and career progress in the two research institutes, both in internal newsletters and in job advertisement texts, has been scrutinised for gender stereotypes and the leadership has been given recommendations to prevent them.

The leadership of both research institutes has actively participated in three sessions of gender awareness training during the project period. The dean of IMR and the former director of DI have become advocates of gender equality within their research institutes and at the university level. The university board has announced that gender awareness training will be included in the current academic leadership training for future university leadership and the project team coordinator is involved in implementing it.

A bi-annual PhD course on Research Methods from a Gender Perspective has been developed and

implemented and will be part of the regular course programme of the Institute for Gender Studies. A gender dimension has also been integrated in the European Master of System Dynamics.

The gender target figures that were set within the STAGES project helped to increase the number of female full professors in the two research institutes addressed. The proportion of female full professors at IMR increased from 22% in 2011 to 28% in 2014. At the Donders Institute women in positions equal to full professor (PI) increased from 10% in 2011 to 17% in 2014.

References

Ely, R. J. & Meyerson, D. E. (2000). Advancing gender equity in organizations: The challenge and importance of maintaining a gender narrative. *Organization*, 7(4), 589-608.

Part Two

RECOMMENDATIONS



Summary Table

I. Collecting data and monitoring gender equality

1. MAPPING AVAILABLE INFORMATION

Collect existing data and information, take advantage of on-going surveys and reprocess the results of past ones

- 1.1. Identifying the right channels and strategies to access institutional data
- 1.2. Including gender-relevant indicators and specific questions in surveys already scheduled within the organisation
- 1.3. Re-analysing from a gender perspective data already collected in previous internal surveys

2. PRODUCING NEW INFORMATION

Identify new indicators and analytical tools to monitor gender equality

- 2.1. Carrying out research deepening inequality dynamics to produce tailored analytical categories
- 2.2. Reviewing the criteria used to analyse career-related data within the organisation

3. BUILDING ACTION ON INFORMATION

Put the collected data and the new knowledge at the basis of the Action Plan to several purposes: awareness-raising, action design, negotiation

- 3.1. Presenting the collected data to the concerned internal stakeholders
- 3.2. Presenting the collected data to wider audiences
- 3.3. Using the collected data to design or re-design actions
- 3.4. Using the results of data collection and research to negotiate with the leadership

4. ASSESSING EXISTING POLICIES

Identify and analyse policies for gender equality already in place in the organisation

- 4.1. Mapping already existing provisions for gender equality in the organisation
- 4.2. Assessing policy results

5. MAKING DATA COLLECTION AND POLICY ASSESSMENT PERMANENT

Establish sustainable data collection procedures and tools to monitor evolution, and regularly assess the policies in place

- 5.1. Creating a sustainable internal body in charge with data collection, monitoring and evaluation
- 5.2. Creating sustainable tools to monitor gender equality and assess policy outcomes
- 5.3. Establishing sustainable procedures and cooperation with internal units to ensure regular data collection

II. Engaging leaderships

6. CONNECTING GENDER EQUALITY TO INSTITUTIONAL STRATEGIES

Frame gender equality actions to address emergent priorities and widely recognised challenges of the organisation

- 6.1. Supporting the quest for competitiveness, scientific impact and research funds
- 6.2. Supporting the quest for talent through the gender and diversity approaches
- 6.3. Promoting science-society relationships through the gender approach

7. SUPPORTING INTERNAL INITIATIVES

Use the activities and resources of the Action Plan to support internal initiatives, thus reinforcing its impact

- 7.1. Establishing mutually beneficial relations with relevant internal structures
- 7.2. Redesigning and adapting the Action Plan to support internal policies and initiatives
- 7.3. Acting as an internal centre of expertise on gender equality that leaders can use

8. MAPPING THE LEADERSHIP

Identify the leaders to involve more directly in the Action Plan

- 8.1. Identifying relevant internal leaders and their attitudes towards gender equality
- 8.2. Selecting leaders from different levels and sectors to include in the Advisory Boards

9. USING ACTIVE AND PARTICIPATORY METHODS TO INVOLVE LEADERS

Promoting leaders' active involvement in the Action Plan to increase motivation

- 9.1. Involving leaders in action design and implementation
- 9.2. Promoting leaders' involvement with bottom-up groups and experiences

10. GAINING INTERNAL LEGITIMACY THROUGH EXTERNAL SUPPORT

Involve motivated external institutions and experts to provide advice and support to the Action Plan and to act as testimonials for the wider relevance of the equality issue

- 10.1. Building relations and partnerships with external institutions and groups
- 10.2. Involving external experts

III. Policy-making and institutionalisation

11. CREATING NEW INTERNAL BODIES

Set up new internal bodies and get them institutionalised and funded, to ensure continuity for selected parts of the Action Plan

12. CONTRIBUTING TO POLICY-MAKING

Pursue sustainability by promoting change in internal strategies and regulations

12.1. Promoting change in the strategic documents of the organisation

12.2. Promoting change in specific gender-relevant provisions and procedures

13. INSTITUTIONALISING ACTIONS AND PROGRAMMES

Insert gender equality actions and programmes in the regular functioning of the organisation

13.1. Institutionalising actions and programmes under the prevalent responsibility of the organisation

13.2. Institutionalising actions and programmes with the continuing support of the team of the original Action Plan

13.3. Modifying and adapting the original actions to increase the chances of getting them institutionalised

IV. Networking and empowering women to take action

14. ESTABLISHING OR SUPPORTING NETWORKS FOR GENDER EQUALITY

Involve researchers and staff in the change process through networks

14.1. Promoting and facilitating new networks

14.2. Supporting other networks

15. INTEGRATING TOP-DOWN AND BOTTOM-UP APPROACHES

Involve networks in planning, empowerment and negotiation activities

15.1. Involving networks in action design and implementation

15.2. Supporting and connecting internal actors

V. Integrating gender in education and research

16. GENDERING NEW AND ONGOING COURSES AND RESEARCH

Promote new courses and research integrating gendered methods of analysis, and include sex and gender variables within existing ones

16.1. Promoting new courses and specialisations at different levels

16.2. Integrating gender analysis tools and variables in existing courses and research methods

17. DISSEMINATING GENDER-AWARE SCIENCE

Organising internal and external events on the integration of the gender perspective in research

VI. Communication and visibility

18. DEVISING A DIVERSIFIED COMMUNICATION PLAN

Identify and use different media, coordinating efforts and taking advantage of existing opportunities and partnerships

18.1. Defining a communication plan

18.2. Promoting information campaigns on the Action Plan through newspapers and other mass media

18.3. Extensively adopting internet-based communication tools

18.4. Adopting face-to-face interactions to reach the target audience directly

19. SHAPING ATTRACTIVE MESSAGES

Develop messages on the Action Plan which take into account the general cultural and political context and the specific public addressed

20. MAKING WOMEN'S CONTRIBUTION VISIBLE

Use different media and communication tools to increase women's visibility in science and technology

I. Collecting data and monitoring gender equality

Collecting gender-relevant information about the organisation (women's figures and internal policies) constitutes the starting point for any action plan aimed at promoting structural change processes. Data are necessary to portray the current gender balance and arrangements in the organisation, to identify problems and to devise tailored measures. Data are also crucial in making gender inequality visible, thus raising collective awareness and countering the widespread tendency to underplay or deny its existence. Finally, data provide the baseline for measuring advancements and setbacks and to assess gender policies and programmes.

In this section, a set of experience-based recommendations drawn from the STAGES Action Plans are presented, focusing on how to collect and make the best use of gendered data.

1. MAPPING AVAILABLE INFORMATION

Collect existing data and information, take advantage of on-going surveys and reprocess the results of past ones

Research organisations usually hold much relevant data and information concerning gender equality. However, the data can rarely be used immediately, because they are scattered among different archives, kept by units that are reluctant or have no time to make them available, not fully broken down by gender, or remain largely unprocessed or unexploited. As shown by the

examples provided below, overcoming these hindrances demands different strategies or even very practical measures, including the active involvement of administrative personnel in charge of data collection, the enhancement and integration of existing internal research tools or the second-tier analysis of available data.

1.1. Identifying the right channels and strategies to access institutional data

Formal requests for gender specific data are often delayed due to **work overloads in administrative departments**, which usually have to respond to many concurrent inquiries from different internal stakeholders. The team at the UNIVERSITY OF MILAN was able to get timely access to the needed data thanks to a set of factors: the organisation of a **meeting with people working in the Human Resources** Department to present the project; the **prioritisation of different requests**, so as to quickly obtain the most urgently needed data; the involvement of **prominent leaders** in the project board; the concurrent need of the university to fill in the annual forms prepared by the Gender Working Group of the League of European Research Universities (LERU), which the university belongs to. The latter turned out to be a good leverage to speed up things, based on the university's interest in **cooperation at the European level**.

1.2. Including gender-relevant indicators and specific questions in surveys already scheduled within the organisation

To avoid the counterproductive effect of overwhelming respondents with different surveys in a limited time-span, the team at the FRAUNHOFER-GESELLSCHAFT negotiated with the leadership to include additional questions and **gender-relevant indicators in an already scheduled internal survey**, considering the many overlaps in the requested information. This result benefited from the cooperation already in place between team members, the headquarters and other relevant internal bodies. Even though integrating questions into a different survey was quite time-consuming, it also yielded important advantages, such as benefiting from the direct support of the headquarters and obtaining very high response rates. Moreover, the successful outcome of this process allowed the team, which was included in the survey research group, to have direct access to a **broader set of data**.

1.3. Re-analysing from a gender perspective data already collected in previous internal surveys

The results of a **previous general employee** survey were re-processed by the team at the FRAUNHOFER-GESELLSCHAFT by breaking down the data by gender, allowing them to analyse the attitudes and problems most reported by female researchers. However, the break-down of already collected data is not always possible, due to the specific aim and design of the original survey. In this case, for example, the gender of respondents who were part of teams consisting of less than 6 people was not recorded,

since it would have made them recognisable by team leaders. Pros and cons of re-working internal material must, therefore, be assessed in advance.

At AARHUS UNIVERSITY, the team **re-analysed and re-categorised the results of previous research on human resources** from a gender perspective: a comprehensive “Psychological workplace assessment” conducted at university level, as well as the outcomes of a qualitative exit-interview study illuminating Aarhusian researchers’ reasons for leaving the university, carried out as part of a previous EC-funded project. These made it possible **to complement the results of surveys and data collection activities** related to STAGES.

2. PRODUCING NEW INFORMATION

Identify new indicators and analytical tools to monitor gender equality

Mechanisms producing and reproducing gender inequality are very subtle, context-sensitive, often hidden and difficult to detect. Existing data and current analytical tools are rarely sufficient to understand them and to monitor their evolution. As the STAGES Action Plans suggest, fresh research into inequality dynamics

is generally needed to deepen the analysis and develop more effective indicators. In some cases, research findings lead to critically review the ways in which data are gathered, categorised, processed and interpreted, thus making the most of existing internal monitoring procedures.

2.1. Carrying out research deepening inequality dynamics to produce tailored analytical categories

Research on women’s careers in the medical profession was carried out in five Hospitals, both public and private, under the STAGES Action Plan at the UNIVERSITY OF MILAN (Action 1.1.2.). It allowed to shed light into the specific and less visible mechanisms leading to unequal career outcomes between men and women doctors. In particular, **new evidence on the gender pay gap** was collected and analysed, intended as the differential income of men and women deriving from the different positions and roles they assume within the organisation following recurrent gender patterns. The results of the research highlight the need for the inclusion of this information in the **set of data to monitor gender equality**, through the repetition of the survey in a longitudinal perspective.

Practices of gender analysis, data collection and mapping of gender equality have been carried out at the ALEXANDRU IOAN CUZA UNIVERSITY in the process of deepening knowledge and investigation on gender structural inequalities at the university. They emerged from

research-based actions as: Documenting and evaluating both qualitatively and quantitatively equal opportunities (4.1.2.); Developing gender-disaggregated statistics and gender-sensitive indicators (4.1.3 and 4.1.4.) and other **longitudinal research studies** on structural inequalities. By extending the perspective, research also referred to the **national level** (for example, national policies and programmes for research funding: Carrying out a national evaluation study on women’s participation in funded research - 4.6.1. and 4.6.2.), and integrated a **European perspective** (Study on developing national standards for gender equal opportunities in funded research - based on a comparative analysis between Romania and EU countries - 4.1.12.). The results have been widely disseminated within the other activities (such as workshops, training, courses, publications etc.).

2.2. Reviewing the criteria used to analyse career-related data within the organisation

The STAGES team at the FRAUNHOFER-GESELLSCHAFT contributed to the re-discussion of the **categories used within the organisation to sort employees into different career levels**. A new system was set up. In addition to

salary levels, other indicators of personal power and influence were considered, such as being the leader of a business field. The need for **improved monitoring of gender equality** was mentioned by the Human Resources Department as one of the reasons behind the introduction of the new categories. Cooperation with the headquarters in a joint research programme, coupled with the results of the team's efforts in the collection and re-processing of gender specific data were among the factors leading to this outcome.

Annual reports on vertical and horizontal stratification by gender at the university were filed each year by the team at AARHUS UNIVERSITY as part of the Action Plan (3.1.1. and 3.4.2.). This provided the opportunity to include **missing research categories** (i.e., clinical associate and full professors) where the gap between women and men was significant but not currently identified and analysed. Thus, the situation could be better represented and gender differences meaningfully addressed within particular research fields.

3. BUILDING ACTION ON INFORMATION

Put the collected data and the new knowledge at the basis of the Action Plan to several purposes: awareness-raising, action design, negotiation

Far from being academic exercises, research and data collection considerably enhance implementation. Results are, in fact, effective tools, which can be used many times and in many ways to pursue different goals. In the STAGES Action Plans, information has been used, for example, to raise the awareness of specific internal stakeholders, urging them to change procedures; to

mobilise wider internal and external audiences on gender issues; to modify or refine the Action Plan; to provide a reliable basis for negotiating with the leaders. Considering its importance, the dissemination of the new information needs to be planned as an action in itself.

3.1. Presenting the collected data to the concerned internal stakeholders

The STAGES Action Plan at the UNIVERSITY OF MILAN included the organisation of Crash courses on equal opportunities and gender stereotypes in science targeting the top management (1.3.1.). The courses were implemented in Year 2. A follow-up session of the Courses was organised in Year 4 at the Policlinico Hospital to present the results of the **research** (1.1.2.) **on women in medical careers** (see # 2.1.). Additional presentations were scheduled, where **data specific to each hospital** were extrapolated, so to highlight specific dynamics and outcomes. Based on these experiences, wider presentations to the Equal Opportunities Committees (CUGs) of all the hospitals in the Lombardia Region are planned. It should be stressed that this positive result, in terms of dissemination, was achieved despite considerable leadership turnover in the hospitals concerned. Interest in the results that directly concerned their units was a key factor in motivating participation.

The information collected through action and research under the Action Plan at the ALEXANDRU IOAN CUZA UNIVERSITY has been at the basis of the development of **practices of gender problematisation** and of the

introduction of gender issues and challenges in the institutional agenda, in order to **increase organisational awareness** and **prepare participative action research and transformational agents**. Among these: the organisation of Annual Thematic Workshops of the UAIC's Network of Women Academics and Researchers to focus on knowledge transfer activities and internal evaluation of gender equality strategies (4.4.3.); the implementation of Periodic training modules for university's employees (4.1.8.) and managers (4.1.9.); the organisation of scientific events which pointed out the relevance of Gender Equality Management (such as the International Colloquium "Women in Scientific Research: Achievements and Challenges of the Gender Equality Management", 4.8.3/1, and the International Symposium "Career Development in Science in Romania: Issues and Challenges", 4.8.3/2).

The project team at the RADBOUD UNIVERSITY examined **gender bias in internal communication** (both job advertisements and internal newsletters) at the Donders Institute and the Nijmegen School of Management. **Results were discussed with the teams in charge of the internal magazines as well as with the management of the participating institutes**, which were very receptive to the information provided. The results showed that at both institutes, even though with specific patterns,

mainly “neutral” and “masculine” values were used to describe the ideal candidate for a position and to present the organisation. The analysis led to **recommendations** about the need to stress the whole set of characteristics needed for a position, including “feminine” ones, like team skills, and the social and relational aspects of the work, while emphasising working conditions that support work-life balance in the organisational profile, in addition to reputational aspects.

3.2. Presenting the collected data to wider audiences

Annual workshops where the data collected on gender equality were presented university-wide have been organised by the team at the AARHUS UNIVERSITY (3.4.1.). A key to the success of these initiatives was **raising awareness of gender imbalance showing internal data** while at the same time **connecting to emergent issues in the national debate** on scientific research. Research funding – where gender differences are striking – was, for instance, the subject of a very successful workshop in 2014, involving national-level stakeholders.

3.3. Using the collected data to design or re-design actions

At the UNIVERSITY OF MILAN, data collected while drafting the Action Plan were used to discuss different hypotheses for possible actions within the Group of Research. An analysis of the data about women and men presenting research projects for funding was, for instance, at the basis of the decision to launch a School for European Projects Drafting and Management (1.5.1.) and it guided its design and choice of main features. It emerged, in fact, that even though women who did present projects were as successful as men, they tended to think – more often than men – that winning a project was extremely difficult, so that they presented at a lower rate.

Training sessions have been organised by the team at the RADBOUD UNIVERSITY (5.4.2. and 5.7.1.) addressing leaders and involving the presentation of **women’s figures** in their own departments/faculties/institutes. The discussion following the presentation of the data was led by the team applying the **Group Model Building** method to model the causes and consequences of

the figures presented on the number of women (see Part I, section 5). This procedure made it possible for the leaders to participate in drawing a model of the situation at their own unit, supporting a **sense of ownership and responsibility** over both the analysis and the needed policies, tailored to their specific situation. As a consequence, a **new Action Plan and additional measures** were launched at both the involved institutes.

3.4. Using the results of data collection and research to negotiate with the leadership

As a result of three years of intensive research activities focusing on the cultural and structural obstacles keeping women from gaining the same academic status as their male colleagues at AARHUS UNIVERSITY, the team was able to formulate an **evidence-based policy paper** directed at the senior management group. The data, accounting for both vertical and horizontal stratification at faculty and department level and gender variation in scientific performance, combined gender-disaggregated recruitment statistics, interviews with department heads, gender-specific data analysis on a 2012 psychological workplace assessment, a web-survey on work-life-issues, as well as a bibliometric analysis of scientific performance. The timing of this effort was particularly fortunate and it amplified impact. In fact, the report contributed to the Human Resources Department and senior management’s work on a **new pan-university gender equality policy and action plan** valid from 2015, for which the availability of updated and comprehensive data was crucial.

To present the results of the monitoring of numbers of women within the university (5.6.1.), the team at RADBOUD organised **periodic meetings** with the rector and the vice-chair, which represented a good occasion to discuss the advantages and possible determination of **target figures** for women in full professor positions. The visibility of the Action Plan at university level and the involvement of representatives of other gender-oriented projects and internal networks played a role in facilitating the organisation of these meetings. The university recently introduced a target, in its new Strategic Plan, of no less than 25% of women, 25% of men and 25% of people from abroad in every academic career level by 2020.

4. ASSESSING EXISTING POLICIES

Identify and analyse policies for gender equality already in place in the organisation

Besides capturing gender inequality dynamics in the institution, data are needed to assess the performance of policies and regulations and their impact on gender issues. The first challenge is mapping already existing policies, since they may be almost unknown to many. Moreover, they may be poorly crafted, or their

application can be uncertain, informal or dependant on the leaders' attitudes. Under STAGES, many different strategies and tools have been adopted to this end: from the collection and dissemination of practices for gender equality to the implementation of web-surveys or qualitative research studies.

4.1. Mapping already existing provisions for gender equality in the organisation

Based on the non-centralised structure of the FRAUNHOFER-GESELLSCHAFT, a starting point of the Action Plan was the recognition that there was no systematic overview and assessment of the activities in the various Fraunhofer institutes and no systematic exchange of good or successful initiatives. A new **permanent online toolbox** collecting the measures implemented in the Fraunhofer institutes to support gender diversity was therefore set up, which currently contains 46 practices from 21 institutes. Many of the examples are additionally published on the organisation's Intranet and open to the present number of about 23,000 employees. All employees (including student assistants) of the Fraunhofer-Gesellschaft have also access to the examples via the Intranet pages on Diversity/Equal Opportunities, which are managed by the organisation's headquarters.

A three-step approach has been followed by the team at the ALEXANDRU IOAN CUZA UNIVERSITY. First, the provisions on Equal Opportunities in the **University Charter** and other institutional documents were mapped and disseminated, to strengthen their application and support the implementation of the Action Plan (4.1.11.). Second, a communicative action research was carried out to evaluate the current situation and to **investigate possible additional measures** to change the situation of women's underrepresentation in the scientific and managerial boards at the university and at national level. Proposals have been finally drafted and negotiated for **new transparent rules and procedures** for the appointment/election of members of high-level boards and commissions (4.7.1.).

4.2. Assessing policy results

A range of flexibility, career-development and work-life balance tools available at AARHUS UNIVERSITY have been analysed by the team, to assess their dissemination and use in a gender perspective. A comprehensive **web-survey** (to which a sample of more than 500 randomly selected researchers responded), as well as **in-depth studies** and **qualitative interviews** with all department heads have been conducted, to form a sound empirical basis for negotiating possible improvements with the leadership. Results have been discussed with the internal committees and departments in charge with diversity and equality issues, contributing to the process leading to the new Equality Plan of the university.

The assessment of current regulations and their impact on gender equality was extended in a **national perspective** by the team at the ALEXANDRU IOAN CUZA UNIVERSITY by documenting and investigating the national policies and programmes for **research funding**, as an issue having a prevalently national scope, going beyond the initiative of individual universities. Therefore, a National evaluation survey on women's participation in funded research was carried out (4.6.1.) and widely disseminated (4.6.2.). Cooperation with national authorities (Ministry of National Education and Research and National research funding unit – UEFISCDI) as well as national academic and research councils (ARACIS, CNADTCU, CNE) was a key factor in making this effort possible, facilitated by the team leader's membership of many of these bodies.

5. MAKING DATA COLLECTION AND POLICY ASSESSMENT PERMANENT

Establish sustainable data collection procedures and tools to monitor evolution, and regularly assess the policies in place

Data rapidly become obsolete and have to be updated. Making the data collection processes permanent is a priority for any action plan, so as to avoid losing control over gender inequality dynamics and development. As the STAGES experience shows, solutions may be different, with varying degrees of institutionalisation.

New internal bodies in charge of data collection, monitoring and evaluation can be established, as well as institutionally-recognised monitoring and research tools and procedures. Cooperation can also be developed to support the internal units in dealing with this critical aspect.

5.1. Creating a sustainable internal body in charge of data collection, monitoring and evaluation

A permanent result of the Action Plan at the ALEXANDRU IOAN CUZA UNIVERSITY was the institutionalisation of a **Centre for Gender Equality in Science**. (4.1.14). The Centre has been entrusted with the task of **monitoring and documenting gender equal opportunities** in academia and research and **periodically reporting on equal opportunities in the Senate and Rectors Board** (4.1.7). The institutional support provided rewards the efforts of the team, oriented – particularly in the first phases of the project, but then on a regular basis – at raising awareness of gender imbalances and their consequences at all levels at the university, making the issue visible and widely communicated.

5.2. Creating sustainable tools to monitor gender equality and assess policy outcomes

The team at the FRAUNHOFER-GESELLSCHAFT pursued a **standardisation process** for the **Annual Reports** of the Equal Opportunities officers who are in charge at every Fraunhofer institute. The data are entered by the officers in an online questionnaire, leading to a standardised report for every institute. The team produces an additional report with the data from all the institutes. Reports are directed at documenting the situation of women and making the current work on gender equality visible, recognising further requirements for action and promoting exchange among the officers. Cooperation with the Central Equal Opportunities officer has been of paramount importance in establishing the Annual Report. Indeed, the Action Plan was taken as the occasion to launch and establish this tool on a **permanent basis**, with the continuing support of the team, in a mutually beneficial exchange (see also # 13.2.).

5.3. Establishing sustainable procedures and cooperation with internal units to ensure regular data collection

The research conducted by the team at AARHUS to assess gender equality measures at the university, which also entailed comparison with other five Scandinavian universities, led to the acute awareness of the crucial importance of **establishing a clear structure of responsibility** for gender equality work. This should be established down to the departmental level, periodically assessing departmental commitment and results in terms of gender equality. Discussing this evidence with the university management resulted in the Human Resources Department being assigned the task of systematically **monitoring the new Equality Policy and Action Plan** of the university, and in particular its effects at department level.

Within the Action Plan at the ALEXANDRU IOAN CUZA UNIVERSITY, a preliminary **Gender Equality Database** was set up, based on internal statistics collected in accordance with the European Commission's indicators from the She Figures reports and the Gender Equality Index (produced by the European Institute for Gender Equality/EIGE). The collection of gender disaggregated data was carried out by the UAIC Centre for Gender Equality in Science in cooperation with the Human Resources Department, the Research Department and the Doctoral School. Based on this cooperation, the team also participated in the monitoring of the process to obtain the **European Certificate "HR Excellence in Research"**. In fact, gender equality is among the criteria considered in awarding the Certificate. The institutionalisation of the Centre played an important role in accrediting it as a credible interlocutor for the university management.

II. Engaging leaderships

The active engagement of leaders from different sectors and hierarchical levels is necessary if gender equality is to be acknowledged among the top organisational priorities. From the STAGES experience, three main action schemes stand out, combined with one another in different ways. One is to align the Action Plan to the emergent strategies and key policies of the institution, also by dynamically adapting it. Another is to involve individual leaders directly in the Action Plan as active players and not just as institutional counterparts, using participatory tools. This means understanding their expectations and attitudes towards gender equality and the possible role they could play. A third action scheme is to involve external institutions and experts so as to increase the visibility and raise the profile of the Action Plan within the organisation, facilitating leaders' engagement.

These action schemes have all been applied by the STAGES teams.

6. CONNECTING GENDER EQUALITY TO INSTITUTIONAL STRATEGIES

Frame gender equality actions to address emergent priorities and widely recognised challenges for the organisation

Integrated action plans are a unique opportunity to permanently hook gender issues to the very mission of research institutions. To this end, leaders should be made aware of the relevance of gender equality for the multiple demands research institutions are asked to meet (for example, competing for funds, attracting new talents,

dialoguing with society), and even more so in the present post-academic environment. An effective and convincing tool – used and disseminated by the Action Plans within STAGES – is the European Commission's Horizon 2020 Programme, which includes gender considerations as a quality criterion for assessing research projects.

6.1. Supporting the quest for competitiveness, scientific impact and research funds

Building on the university's **interest in accessing European research funds**, the team at the UNIVERSITY OF MILAN decided to launch a School of European Projects Drafting and Management for post-doctoral researchers and young researchers (Action 1.5.1.). The School proved successful for different reasons: the **topicality** of the issue; its direct link with **concrete funding occasions** at European level (the timing and the syllabus of the course were defined on the basis of the timing and features of the newly-launched Horizon 2020 programme); the mutually beneficial **cooperation with the Research Services Division and other UMIL's Offices dealing with research related issues** (patents, communication, etc.). The School was designed also with reference to the results of data collection about trends in participation in national and European research projects, particularly considering the training needs women and young researchers (see also # 3.3.).

The team at the ALEXANDRU IOAN CUZA UNIVERSITY addressed the notion of **scientific excellence** to highlight its gendered dimensions and implications. A relevant

internal debate was promoted on the **correlation between scientific excellence and gender equality in research**, through the organisation of public events and lectures on “Evaluation criteria of excellence without gender bias”. The contribution of the gender perspective to scientific excellence was also deepened through the organisation of a training session on the integration of gender in a project's life-cycle, delivered by European experts from the Yellow Window Society. The training, which was attended by a large audience, also included the analysis of concrete examples drawn from two specific research fields: nanosciences and biotechnology.

6.2. Supporting the quest for talent through the gender and diversity approaches

Close cooperation with internal units characterised the implementation of the Action Plan at FRAUNHOFER-GESELLSCHAFT, which enjoyed a significant endorsement from the leadership. The organisation's need to attract talented researchers to face **global competition** is one of the reasons which made it possible. The actions implemented under STAGES supported the Headquarters and the Equal Opportunity officers in

promoting the conditions for the attraction, retention and productivity of female human resources, while at the same time responding to the growing attention to gender equality at the national level. This implied, however, the need to manage the Action Plan as an integrated part of organisational strategies and priorities, which somewhat limited the team's autonomy.

Training modules on gender-related issues in Human Resources management have been delivered throughout the four years of implementation of the Action Plan at the ALEXANDRU IOAN CUZA UNIVERSITY, addressing both university employees and top and middle managers (4.1.8. and 4.1.9.). The focus of the training, provided by gender experts from the newly-established Network of Women in Academia and Research, as well as invited European specialists, was on transferring knowledge and good practices from more experienced universities, thus leading to a **qualification of the university staff** in gender and diversity management.

The Halkes Women Faculty Network, established under the Action Plan at the RADBOUD UNIVERSITY (5.3.1.), was increasingly involved in the **diversity approach** by actively addressing women coming from abroad and encouraging them to participate and take on responsibility roles. An event on expatriate researchers' experience was organised in this framework. This approach is particularly fine-tuned to the current goals of the university, oriented at supporting the internationalisation of staff and students, and it facilitated the granting of institutional support to the network.

6.3. Promoting science-society relationships through the gender approach

The focus on **gender medicine** strongly marks the Action Plan implemented at the UNIVERSITY OF MILAN, which included dedicated workshops and optional courses at the Faculty of Medicine. It also turned out particularly suitable to emphasise science-society relationships from a gender perspective, by highlighting topics such as the **social determinants of health and related gender differences**. In the framework of the Week of Women and Science, organised under the Action Plan during the Universal Milan EXPO (1.7.2.), issues such as inequalities in life expectancy (and healthy life expectancy), between and within countries were presented and discussed in an event addressing the wider public, raising awareness of the **potential social impacts** of taking gender variables into serious consideration within the medical science.

The link between the practice of gendered science and the perspective of **Responsible Research and Innovation** (RRI) has been highlighted – in the framework of the Action Plan at the ALEXANDRU IOAN CUZA UNIVERSITY. The lecture on “Gender and Context in Academia. From the ‘Ivory Tower’ to the Next Generation Entrepreneurial University” given by Marina Ranga (from H-STAR, Stanford University) is a good example of this line of activity.

7. SUPPORTING INTERNAL INITIATIVES

Use the activities and resources of the Action Plan to support internal initiatives, thus reinforcing its impact

Demonstrating the practical usefulness of the Action Plan is another way to facilitate the involvement of leaders. In fact, action plans can provide institutions with additional resources, opportunities and services for carrying out internal programmes or solving the problems they are engaged in. This means action plans that are flexible enough to be partially remoulded

according to the leaderships' emerging needs and expectations. STAGES offers many examples of trade-off between leaders and teams, where the action plans were instrumental in improving communication between internal units, for example, or providing expert advice, enhancing human resources management, gaining visibility and sustainability perspectives in return.

7.1. Establishing mutually beneficial relations with relevant internal structures

A “**cooperation paradigm**” was developed and applied at the ALEXANDRU IOAN CUZA UNIVERSITY by developing

practices for the creation of cooperative relations with the organisational structures which are involved in the dynamics of gender equality in research, such as the Human Resources Department, the university Doctoral Schools, Research Departments, Project Management Department, Media Communication, as well as faculties and academic departments. Under the paradigm,

cooperation was sustained also with the university top management (Rectors Board, Senate Board and Senate Commissions) in order to institutionalise the new organisational structures and practices set up within the framework of the project.

An interdisciplinary PhD course on gender and research methodologies for PhD students was set up and delivered, under the RADBOUD UNIVERSITY'S Action Plan (see # 13.2.), in **cooperation with the Gender Institute** at the university, an interdisciplinary institute for teaching and research on women, sexuality and gender. The cooperation with the Gender Institute was extremely beneficial to both parties, strengthening the institutional role of the Institute and providing the needed support and expertise to the team. Additional support was found from fellow researchers from both within and outside the university. The cooperative style in the design and management of the course also entailed some delay, due to the need to conform to additional and different procedures, but enriched the contents and quality and enhanced its **sustainability perspectives**.

7.2. Redesigning and adapting the Action Plan to support internal policies and initiatives

To align project and organisational objectives, the team at FRAUNHOFER-GESELLSCHAFT had to **partly redesign** some of the planned actions, while also taking up, at the request of the headquarters, **additional actions** which were not originally included in the Plan. The criticism that the organisation received for a publicly available study showing that it had a limited number of women, particularly in high-level positions, compared to other extra-university research organisations played a role in highlighting the importance of the project and promoting leadership involvement. The team could therefore enjoy considerable institutional support, entailing **visibility**, access to additional **resources** and **sustainability perspectives** for the continuation of the Action Plan after the end of the STAGES project. On the other hand, constraints, delays and a degree of diversion from original plans were also experienced, deriving from the need to constantly negotiate and follow longer internal procedures, typical of large organisations.

AARHUS UNIVERSITY'S original Action Plan has also undergone change, particularly to adequately account

for the **high attrition rates** among early-career women researchers. In fact, the issue was not covered by the university's gender equality initiatives for the period 2009-2014 and was **consequently put in the spotlight by the STAGES team**, which could in this way conveniently integrate its work with the efforts for equality made by the university.

7.3. Acting as an internal centre of expertise on gender equality that leaders can use

After the first years of implementation, all the teams have become, even if in different ways, **internal reference points**, in their respective organisations, for gender equality-related issues. It happened for instance to the FRAUNHOFER-GESELLSCHAFT team, also thanks to their readiness to take on additional roles related to research on gender equality within the organisation, at the request of the headquarters.

The team at AARHUS UNIVERSITY could also benefit from the good timing of the Action Plan, whose first results were ready just when the university was defining its **new Equality Policy** and needed updated data and relevant analyses. Suggestions from the team were always **evidence-based**, either through the direct experience of the project or through the international literature analysed as part of it.

The same has happened at RADBOUD UNIVERSITY, where the team could provide advice on internal strategies for Human Resources management, contributing to **new policy formulation** at the participating institutes and to the university's **new Strategic Plan**.

The team at ALEXANDRU IOAN CUZA UNIVERSITY has been systematically providing **consultancies on gender issues to internal structures**, such as the university's Human Resources Department, the Projects Management Department and the International Relations Department. Based on the results of the Action Plan, policies and programmes on Human Resources excellence have been pursued (see # 5.3.), and the participation in international projects has been supported through specific consultancies.

8. MAPPING THE LEADERSHIP

Identify the leaders to involve more directly in the Action Plan

As leaderships are not homogeneous, either as groups (belonging to different sectors, levels and specialisations), or individuals (in terms of leadership styles, for example, or values and professional experience), orientations and sensitiveness towards gender issues vary greatly. Hence the importance of selecting the leaders to be primarily involved in the Action Plan by interpreting their

attitudes, expectations and interests. This reduces the amount of time wasted over indifferent or even hostile leaders, and allows for the development of specific involvement strategies for those who are open and supportive, at least potentially. Under STAGES, new institutional spaces have been often created to involve leaders, through advisory boards or other kinds of participative structures.

8.1. Identifying relevant internal leaders and their attitudes towards gender equality

In the four years of implementation of the Action Plan, the team at the UNIVERSITY OF MILAN, as most of the others, had to face the recurring problem of **leadership turnover**, which often risked nullifying the efforts to get leaders involved. In the case of Milan, the problem was particularly acute in the initial phase of the Project when, following the 2010 Reform of Italian universities, the university underwent an internal process of re-organisation. The team faced the situation by systematically mapping the institutional counterparts of the project and **identifying the specific contribution**, which, based on their position and personal interest, each could provide.

At the very beginning of the project, because of the far-reaching and time-consuming university restructuring process, the team at the AARHUS UNIVERSITY adopted a **“small steps” approach**, trying to overcome the problem of establishing contact with the leadership. It entailed directly contacting faculty management (for actions relevant to their area of responsibility), or sub-top levels of the Human Resources Department, so to establish cooperation, offering support and gaining credibility. With time, it was possible to scale up to the central leadership, thanks to the Action Plan's increased visibility and connections, and the conclusion of the restructuring process.

8.2. Selecting leaders from different levels and sectors to include in the Advisory Boards

At the very beginning of the Project, the STAGES team at the UNIVERSITY OF MILAN decided to set up two STAGES boards within the two faculties most involved (Medicine and Agricultural and Food Sciences). The boards mostly played an advisory role, even though in some cases their members have taken on an operational role supporting implementation, favouring networking and contributing to the dissemination of results. The boards were created with the idea of **representing all the components of the organisation**, so to address different needs and take advantage of different resources and expertise. Researchers, Associate and Full Professors, both female and male, were represented in each board. Moreover, people concretely supporting the project or participating in the implementation of specific actions have also been included, so to progressively extend the number of people with an aware attitude and a sense of ownership vis-à-vis the Action Plan.

An **External monitoring board** has been set up at the FRAUNHOFER-GESELLSCHAFT, whose members professionally deal with issues connected to the Action Plan on a daily basis. In fact, they are the persons at the level of the headquarters who are responsible for Personal Affairs, Gender Diversity Management, and Equal Opportunities, amongst others.

9. USING ACTIVE AND PARTICIPATORY METHODS TO INVOLVE LEADERS

Facilitating leaders' active involvement in the Action Plan to support motivation

Beyond participating as members of the advisory board, leaders may be more directly involved in the implementation of the initiatives with various roles. In fact, as the experience of STAGES suggests, many show or develop an interest and even an emotional orientation towards gender issues, leading them

to engage personally with the Action Plan. This attitude can be actively fostered through appropriate participatory methods. Creating occasions for them to interact directly with researchers and staff members proved particularly effective, bridging the top-down and bottom-up dimensions of the Action Plan.

9.1. Involving leaders in action design and implementation

Leaders were frequently involved in the implementation of the Action Plan at the ALEXANDRU IOAN CUZA UNIVERSITY. Many played an **active role in different actions**, for instance by holding opening speeches, presentations and communications in project public events such as the International Colloquiums on Gender Equality Management, the newly-established Women's Researchers Day and Women's Excellence Awards, the inauguration of the UAIC Centre for Gender Equality in Science or the varnishing of the Documentary Exhibition on Women in Science (see # 20). Top managers had also dialogues on "Gender Equality Policies and Innovation Management in Academia" with the invited experts and Network members, while many were interviewed in the framework of the communication activities of the Action Plan.

The use of the Group Model Building methodology (see # 3.3.) proved extremely successful at RADBOUD UNIVERSITY to promote leaders' involvement in gender issues and urge them to **take action**. In fact, this technique combines an awareness-raising component about the features of gender-related problems in the specific units the leaders are responsible for, and an action-oriented, consensus-building component. The latter aims at supporting the participants in the formulation of tailored measures to address the identified problems, something that happened at both the institutes concerned.

9.2. Promoting leaders' involvement with bottom-up groups and experiences

The team at the RADBOUD UNIVERSITY organised **periodic meetings** of representatives of the newly-established Halkes Women's Network, mostly addressing young

women researchers, **with the Rector and Vice-Rector** of the university. These meetings, which also involved representatives of the university network of women full professors, touched on different issues, including: the participation of the university in national gender equality programmes; the opportuneness of gender targets for internal boards and commissions and different career levels; the initiatives organised by the two networks, with the aim of involving leaders and widen their outreach. The existence of a network of women full professors with a tradition of annual meetings with the leadership made it easier for the young researchers to get to meet the leaders, while **cooperation between the two networks strengthened their influence and weight**.

An active role was played by prominent professors, again in RADBOUD UNIVERSITY, in the interactive lunch meeting organised by the Halkes women's network: a "**Meet & Greet**" initiative with some of the most successful and well-known academics within the university. Eighteen researchers were given the opportunity to have one-on-one conversations in which they could ask all kinds of questions related to their academic career. Some junior faculty brought their CV and asked the senior academics what they felt might be their strengths and weaknesses. Participants were particularly happy about this event, because of the opportunity to have a chat about one's individual career.

10. GAINING INTERNAL LEGITIMACY THROUGH EXTERNAL SUPPORT

Involve motivated external institutions and experts to provide advice and support to the Action Plan and to act as testimonials for the wider relevance of the equality issue

Involving external institutions and experts may be helpful in increasing the internal visibility and legitimacy of the Action Plan, in turn facilitating leadership engagement. Different paths may be followed. In many cases, the STAGES teams performed an outward action, i.e. an action aimed at building an external network of

relations at local, national or international level, with a positive impact within the organisation. In other cases, an inward action was performed, i.e. an action aimed at attracting external experts and involving them in the Action Plan through events, for example, or conferences and training activities within the organisation.

10.1. Building relations and partnerships with external institutions and groups

Close cooperation was established by the team at the UNIVERSITY OF MILAN with the Health Department of Lombardia Region, centred around the **common interest and focus on gender medicine**. It entailed jointly organising public initiatives included in the original Action Plan (such as two *Workshops on gender medicine* - 1.4.1.), as well as additional ones. The cooperation brought many advantages: institutional support, greater visibility and outreach, additional resources. The **flexibility and adaptability** of the team was important: an action was brought forward and another added to maximise the benefits of cooperation. The **integration of the respective networks of relations** was also a key factor: the team, including members of the Medicine board, mainly focused on inviting international guests and advertising within the university, whereas the Lombardia Region team activated the regional network of experts and the possible targets of the initiative.

The **National Committee** of the FRAUNHOFER-GESELLSCHAFT included a qualified set of experts from all the most important non-university research institutes in Germany (sharing similar features and concerns), plus Federal Government institutions and the media. The team actively involved Committee members, with varied tasks, in the implementation of selected actions, well beyond the original function of the Committee in the dissemination and communication of the Action Plan at the National level. Partnerships are also emerging with the institutions some of the members represent, which is an important follow-up of the Action Plan, increasing the chances for sustainability of parts of it. The active involvement of the Committee also had a positive impact within Fraunhofer, facilitating the mobilisation and involvement of interested internal stakeholders.

The team at AARHUS UNIVERSITY increasingly participated in the **national debate on gender and science** during the lifespan of the project, giving inputs to the National Task Force on “More Women in Research”, which also reinforced the external pressure on the university to enhance its gender equality work. The effort made in disseminating the results of the Action Plan to the outside thus provided significant external visibility and recognition, which in turn created feedback within the organisation, raising the profile of the STAGES project. The timing of the project was particularly favourable in this regard, since it coincided with the increasing momentum behind the gender and science issue.

Cooperation and partnerships with National Authorities responsible for Research and Education (MEN, ARACIS, UEFISCDI, CNADTCU) were established at the ALEXANDRU IOAN CUZA UNIVERSITY. In some cases, these concerned activities which had a **national scope** (such as the National evaluation survey on women’s participation in funded research - 4.6.1., or the improvement of Romanian statistics on Gender Equality in Science included in the current national data report for SHE Figures 2015). In other cases, cooperation aimed at extending and **multiplying the university’s experience and good practices to the other universities** in Romania (as in the action aimed at the development of cooperation and partnership in order to extend and multiply the UAIC’s experience and good practices set up during the STAGES project to the other universities in Romania - 4.9.3.).

10.2. Involving external experts

A key strategic approach at the UNIVERSITY OF MILAN has been the pursuit of **multiple forms of internal legitimisation** for the aims and activities of the Action Plan. Depending on the kind of action promoted each time, or the target addressed, emphasis was placed

on the factors which seemed more apt to overcome sceptical attitudes (such as statistical figures and research results, or the new provisions on gender in the EU's Horizon 2020 calls). Inviting prestigious European and international experts in the crash courses addressing the university leadership (1.3.1.) served the specific purpose of enhancing the perception of the **global relevance of the issue of gender equality**, while making the name of the project become a mark of high European and international quality.

Pursuing the same aim of showing the direct relevance of gender-related issues, including but not limited to equality considerations, the team at the AARHUS UNIVERSITY adopted a strategy similar to that of the University of Milan. Only, instead of focusing on the European or international dimensions to legitimise the equality effort, the team purposely focused on the national dimension, inviting high-level **national experts and decision-makers** (such as the president of the National Research Council) to participate at university-level workshops (3.1.3.). The Danish national research context was therefore in focus, and topics were selected which were of relevance to the day-to-day activities of the research staff, as in the case of the national system of research funding, where gender differences are significant.

Both **internal and external experts** have been involved in the Action Plan at the ALEXANDRU IOAN CUZA UNIVERSITY, in particular in the **delivery of training modules** for the university's top and middle management (4.1.9.). Training sessions were provided by internal experts from the Network of Women in Academia and Research, established under the Action Plan, as well as by invited European specialists in gender equality in science. To this end, and since the beginning of the project, the team was committed to build relations and partnerships with European institutions and gender experts from many European bodies, networks and universities such as ERC, LERU, CNRS France, EIGE, EPWS, Gender Summit, Yellow Window, TUWien etc.

III. Policy-making and institutionalisation

By definition, for change to be structural it has to be irreversible. New policies and measures may evolve, but they cannot be simply erased or reversed because of a leadership turnover, for example, or a budget cut. Looking for sustainable arrangements making the actions a permanent feature of the organisation is therefore a priority. However, the plan cannot simply continue as it is. Only some actions are usually maintained, and they are often modified, adapted or merged with different measures, to fit into the institutional strategic framework. Moreover fully institutionalising the actions is not always possible: more complex arrangements involving other players may become necessary. Change can be made permanent also through the overall impact of the Action Plan, through its influence on the strategic orientations of the organisation. The cases presented from STAGES offer useful insights into the complexity of the issue.

11. CREATING NEW INTERNAL BODIES

Set up new internal bodies and get them institutionalised and funded, to ensure continuity for selected parts of the Action Plan

Establishing new internal bodies and having them sustained by the organisation is one of the most effective ways to keep on promoting change, long enough to let it take root in the organisation. In fact, a dedicated body is able to do research and carry out policy assessments, launch new actions and renew existing ones, negotiate with the leadership, mobilise stakeholders,

capitalise on its own experience and learn from others. Although difficult to implement, this strategy seems to be feasible under many circumstances. STAGES provides some examples of new bodies established by the Action Plans and now taken up by the organisation through different arrangements.

A new university centre for research on gender has been set up in 2015 at the UNIVERSITY OF MILAN. On the occasion of the renewal of the Interdepartmental Centre “Women and Gender Differences”, in charge for coordinating the implementation of the STAGES Action Plan, its name and profile were changed. The new Centre for Coordinated Research GENDERS - *Gender & Equality in Research and Science* was officially created having a more explicit focus on gender in science and marked by the official inclusion of departments of the faculties targeted by the STAGES project, the Faculty of Medicine and the Faculty of Agricultural and Food Sciences. The new Centre is taking up the role of assuring the implementation of the Sustainability Plan devised by the team and discussed within the STAGES boards. Continuing the work of STAGES is mentioned in the Statute among the main objectives of the new Centre.

Different **bodies** set up under STAGES were institutionalised at the ALEXANDRU IOAN CUZA UNIVERSITY. Among these: the Centre for Gender Equality in Science; the Network of Women in Academia and Research; the Research Group on Gender in Science. They will be in charge of the newly-established procedures and events. Among the new institutional **procedures**, the periodical reports on gender equality to the Rectors’ Board and the Academic Senate may be mentioned (see # 5.1.).

Among the institutionalised **events**, the most important are: Women Researchers’ Day (Action 4.9.1.); Women’s Excellence Awards (4.8.4.); Documentary Exhibition “UAIC: A Place for Women in Science” (4.4.2.). The team ascribes these results to the success of the “cooperation paradigm” applied throughout implementation, leading to the creation of mutually beneficial relations with both the leadership and the researchers involved. Efficient communication and dissemination strategies also contributed, leading to a greater visibility of the Plan.

At the RADBOUD UNIVERSITY, financial resources were secured from the university management for the **Halkes Women’s Network** (5.3.1.) to continue its awareness-raising and career-support actions. Moreover, the contribution of the team to internal policy-making was so appreciated that the leadership of one of the participating institutes decided to establish a **faculty-level gender equality committee**, including members of the STAGES team, so as to continue receiving advice on gender and diversity management issues after the end of the project.

12. CONTRIBUTING TO POLICY-MAKING

Pursue sustainability by promoting change in internal strategies and regulations

Affecting policy-making processes within the organisation is particularly impactful. This may occur at different levels. In some cases, for instance, only an indirect influence was exerted by the teams of the STAGES Action Plans on the general strategies of

the organisation, while in others their impact was specific and direct, resulting in the development of new provisions or even in contributing to the design of internal policy documents or equality plans.

12.1. Promoting change in the strategic documents of the organisation

Through the results of their **research and data collection** activities, and through the **advice constantly provided** to the leadership of their organisations, the teams at AARHUS, ALEXANDRU IOAN CUZA and RADBOUD universities had the occasion to contribute to the formulation of internal strategic documents (Equality or Strategic Plans) introducing provisions for gender equality in science. In all cases the timing was particularly favourable, since these documents had to be drafted when the Action Plans were established, visible and authoritative and had already produced relevant results.

12.2. Promoting change in specific gender-relevant provisions and procedures

Even though a final result has not yet been achieved, on the basis of the results of the research conducted within the Action Plan on **work-life balance and the evaluation of excellence** (3.5.2.), the team at AARHUS UNIVERSITY succeeded in putting on the agenda and committing the university administration to formalise the institutional requirement that **periods spent on leave** are taken into account in the evaluation process of candidates for different positions. A favourable environment at national level for introducing rules avoiding that care roles disproportionately penalise women was a factor that made negotiation viable on this issue. For instance, a rule has recently been set by the Danish Research Council adding up to two extra years when applying for grants which have an age-limit, so as to take into account maternity/paternity leave.

13. INSTITUTIONALISING ACTIONS AND PROGRAMMES

Insert gender equality actions and programmes in the regular functioning of the organisation

Having the actions initiated under the Action Plans institutionalised is undoubtedly a success. However, the transition process from the project team to the organisation is not always smooth or free of risks. New measures or policies may be managed by the organisation adopting a bureaucratic and routinised approach,

involving poorly trained personnel or reducing their scope and potential for change. This is the reason why it is important to carefully steer the transition phase and, to different extents, to keep on following the actions after institutionalisation, even when this entails the voluntary involvement of former team members.

13.1. Institutionalising actions and programmes under the prevalent responsibility of the organisation

The optional **Courses on gender medicine** (1.1.1./b) activated in different hospitals of the Faculty of Medicine of the UNIVERSITY OF MILAN are managed with increasing autonomy by the structures involved. This is

the result of the choice of tailoring the courses to the main specialisations of each hospital, so as to facilitate their progressive integration in their standard training offer. This also helped finding available teachers, interested in developing their specialisation by a more substantial inclusion of the gender dimension. In all events, a **transition phase** was envisaged by the team. During the transition, the team will still support and follow implementation, with a gradually decreasing

effort. The reasons behind this choice are twofold. On the one hand, obvious organisational considerations suggest continuity in action delivery. On the other, some time is needed to convey the original understanding and aims of the actions which guided their design and implementation.

A new **permanent web portal and resource centre on gender equality** was established at AARHUS UNIVERSITY, containing tools and resources relevant to many of the actions included in the Action Plan. To increase its effectiveness and outreach, while enhancing its sustainability perspectives, the web portal was not only devoted to the STAGES project. It was set up out of an agreement with the Communication Department of the university, which manages it. It includes both STAGES-related materials (provided by the team) and other resources on gender equality.

Thanks to the broad acknowledgment received by the Action Plan from the leadership at the ALEXANDRU IOAN CUZA UNIVERSITY, the **Sustainability Plan** drafted by the team and discussed with internal stakeholders was approved by the Boards of Rectors, resulting in the full institutionalisation of over 20 actions and programmes initiated by the UAIC-STAGES.

13.2. Institutionalising actions and programmes with the continuing support of the team of the original Action Plan

One of the most significant and impactful actions in the Action Plan at FRAUNHOFER-GESELLSCHAFT, the **standardised Equal Opportunities Officers Report** (see # 5.2.), containing information on the gender equality situation at each Fraunhofer institute, is going to be institutionalised and repeated each year. In fact, the central Equal Opportunities Officer of the organisation, with whom the team cooperated, intends to continue to invest part of her budget in its implementation, according to the format and procedures established under STAGES and with the participation of former team members.

A **Training module on gender diversity management** (3.1.4.) was included within an already existing mandatory training course addressing all research leaders at AARHUS UNIVERSITY. Despite the initial scepticism expressed by

some participants, the module was favourably received, and the team succeeded in having it confirmed, while maintaining a role in its delivery. However, the focus was shifted to diversity management rather than gender. Even if positive in itself, this could entail the risk of the gender perspective losing its specific and cross-cutting relevance. The continuing involvement of the team in the training guarantees that the two perspectives strengthen each other, without losing sight of the centrality of gender diversity.

Among the many actions institutionalised at the ALEXANDRU IOAN CUZA UNIVERSITY, a set of **practices oriented at encouraging young women researchers and promoting women's mentorship** will continue thanks to the intense involvement of former team members, both directly or under the aegis of the Network of Women in Academia and Research, established under the project. Among these, the organisation of Early-career researchers' days to reinforce the motivation and strengthen young researchers' confidence (4.3.3.), and the provision of information and advice on career and professional development for young women researchers (4.3.2.). Members of the Network have been involved in trainings and open courses for early-career researchers by sharing their professional experience and offering examples of role-models. Moreover, the tradition of women's mentorship at the university was identified and promoted through the presentation of significant cases of women professors leading research projects and their mentees – young women researchers from their teams.

As a way to build ownership about both the analysis and the measures needed as concerns gender equality, the Group Model Building technique (see also # 3.3. and # 9.1.) was so successful at RADBOUD UNIVERSITY that the Human Resources Department decided to integrate it in the **regular courses for academic leaders** they provide, with a continuing role for the project team.

RADBOUD UNIVERSITY also confirmed the PhD course on gender and research methodologies (see # 7.1.), launched in partnership with the Gender Institute, thanks also to the willingness of the STAGES team leader to continue to play a role in the teaching for the coming years.

13.3. Modifying and adapting the original actions to increase the chances of getting them institutionalised

Successful actions that cannot be institutionalised as they are, for a variety of reasons, can be modified and even merged to adapt to existing opportunities and needs of the organisation. Something of the kind could happen at the UNIVERSITY OF MILAN, where the most interesting components of the two Schools established under the STAGES project – the School of International Publishing and the School of European Projects Drafting and Management (1.2.1. and 1.5.1.) – could merge to **set up a shorter and lighter cross-cutting course** to be negotiated as a module supporting PhD students.

To improve the sustainability of the online Toolbox collecting the measures implemented in the FRAUNHOFER institutes to support gender diversity (see # 4.1.), the team is devising **business models addressing different targets of potentially interested stakeholders**. One hypothesis is to provide additional services related to the use of the Toolbox, such as seminars devoted to the different types of practices described.

IV. Networking and empowering women to take action

We refer here to networking as any kind of bottom-up mobilisation, even when it does not result in the establishment of formal networks. Its role is as important as the involvement of leadership, of which it is evidently a complementary aspect. In fact, no action can be effective if it does not succeed in mobilising a critical mass of people, both empowering women (and men) to take action for gender equality, and involving groups already active on the same or related issues. However, networking is not always easy, as it is a highly context-sensitive activity. For instance, in some institutions or national contexts promoting networks focused on gender (not to speak of women-only groups) is considered ideological or belittling for women, while in others more than one network do exist. Finding appropriate networking strategies is thus crucial.

The examples below could be helpful to start dealing with this delicate issue.

14. ESTABLISHING OR SUPPORTING NETWORKS FOR GENDER EQUALITY

Involve researchers and staff in the change process through networks

Networks can be powerful tools for change. Since they are informal, they are flexible as concerns objectives, activities and even membership, and they can rapidly react to change. Moreover, they can be developed or supported to pursue different objectives at the same time, such as to lobby for new gender-sensitive arrangements, to support the implementation of the Action Plan

or to promote new actions, to do research, to raise awareness, to promote long-term sustainability of the actions initiated under the Action Plan or to perform specific functions, such as supporting young women researchers in their careers. STAGES provides various examples in this regard.

14.1. Promoting and facilitating new networks

The Network of Women in Academia and Research (Action 4.1.1.) was established at the ALEXANDRU IOAN CUZA UNIVERSITY as a **transformational agent** for the promotion of gender equality in science with a strategic orientation towards diversity in its composition by gender, age, professional position, leadership position. The Network has more than 90 members and it cooperated in many actions in the framework of the Action Plan. Its development over the years benefited from the synergy with the Centre for Gender Equality in Science, established under the project, as well as with the working groups of the UAIC-STAGES team, such as the UAIC Research Group on Gender Equality in Science and the UAIC-STAGES Multimedia Communication Group.

The Halkes Women Faculty Network (5.3.1.) was set up and promoted under the Action Plan at the RADBOUD UNIVERSITY. It is a university-broad network, which – although it is open to the participation of men – primarily targets **young female scientists** (PhD students, post docs, assistant and associate professors) and their specific needs and expectations. In this way, it sets out to address an area previously uncovered by the existing network of women full professors. Among

its aims: facilitating **contact and mutual learning** among women; **professional and personal development** as to how to build an academic career; **empowerment** of women scientists of all levels; the enhancement of an **inclusive work environment**. The network organises periodic meetings devoted to address common obstacles using different formats: lunch meetings with thematic tables for discussion, keynote lectures from recognised national and international scholars, round table discussion meetings, etc.

In its facilitating role of the newly established Halkes Women Faculty Network, a particular effort was made by the team at the RADBOUD UNIVERSITY to manage the relatively high turnover of the Network's board members. In fact, partly due to the high **mobility rate** of researchers at the beginning of the academic career, partly to the **burnout problems typical of people involved in voluntary efforts**, especially in periods of work overload, it was often necessary to look for additional board members. Involving people from different faculties and schools and in different career positions in the board was pursued as a means to widen outreach and mobilising personal relations. The successful negotiation of a **permanent financial contribution from the university** was, in this respect, very important, providing continuity for this bottom-up effort and alleviating practical and organisational problems.

14.2. Supporting other networks

A network for the promotion of gender equality already existed at the FRAUNHOFER-GESELLSCHAFT, made up of Equal Opportunities officers elected at each institute. Through the actions implemented within the Action Plan, and particularly the Annual Report of Equal Opportunities officers and the online Gender Diversity Toolbox, the team worked to revitalise it by **strengthening the relations among the officers**. To this end, a series of thematic workshops was inaugurated under the Action Plan, involving Equal Opportunities officers in disseminating the practices implemented in their institutes and included in the Toolbox, addressing their

colleagues. These workshops also had the unplanned effect of mobilising the officers around their role and standing within the organisation, an effect which can potentially play a role in **renewing and strengthening equality structures**.

The team at the ALEXANDRU IOAN CUZA UNIVERSITY supported the **setting up and the activity of new networks** of women in scientific and academic professions – for example the Women in Information technology of Iași, WITChIS, initiated by members of the UAIC Network of Women in Academia and Research from the Faculty of Computer Science – and carried out initiatives in partnership with them.

15. INTEGRATING TOP-DOWN AND BOTTOM-UP APPROACHES

Involve networks in planning, empowerment and negotiation activities

One potential impact of networking is to bridge top-down and bottom-up approaches, creating a new space for dialogue and negotiation across the institution. This is the reason why networks can also be visibly involved in the design and implementation of the Action Plan or part of it. In fact, more than the project teams,

networks may be open to the contribution of everybody and may serve as a “neutral” platform for drawing stakeholders, staff and leaders into the Action Plan. This also allows actors already engaged with gender within the institution to connect with one another and to learn from their experiences.

15.1. Involving networks in action design and implementation

The Network of women researchers established at the UNIVERSITY OF MILAN was closely involved in the design of selected activities in the Action Plan. The strategy involved promoting **activities explicitly targeting women and designed according to a gender perspective**, but relevant (and open) to everybody. The interesting feature is that **this practice reverses the normal situation**, where it is women who generally have to adapt to programmes and services thought in a “neutral”, that is, male perspective. This was applied to the design of two courses: the School of International Publishing (1.2.1.) and the School of European Projects Drafting and Management (1.5.1.) for post-doctoral and early career researchers. Even though publishing and research funding are a need for all researchers, particularly the young, the design was based on the obstacles more frequently met by women researchers, as they emerged from network discussions.

The experience of the Halkes Women Faculty Network, established at the RADBOUD UNIVERSITY, was successful

in triggering additional initiatives of a participatory character, thus reinforcing efforts aimed at gender equality and widening the groups of people involved at the university. An example is the empowering initiative organised by PhD members of the Network, launching a **bottom-up mentoring programme addressing same-age colleagues**.

15.2. Supporting and connecting internal actors

The main objective of the Action Plan implemented at the FRAUNHOFER-GESELLSCHAFT was to support the exchange of gender equality-oriented measures and policies across the organisation and its many institutes. This implied continuous cooperation both with the headquarters and with the Equal Opportunities officers, which led to strengthening not only the officers' network, but also the relations between the officers and the headquarters. Efforts aimed at the dissemination of the practices in the online Gender Diversity Toolbox (see # 4.1.), moreover, prompted Equal Opportunities officers to **establish direct contact with the researchers in their institutes**

– something which didn't always represent current practice – to discuss with them most urgent issues to be addressed and the measures to be implemented.

The many relations and cooperation practices established by the team at AARHUS UNIVERSITY with different university structures had the effect of **reinforcing the links** between the administrative and managerial entities dealing with diversity and gender equality, enhancing cooperation and increasing effectiveness. Closer links were also facilitated by the recent restructuring of the university, which entailed responsibilities being more clearly distributed, and committees more anchored to management structures, which was, in turn, beneficial to cooperation with STAGES. The university-wide workshops organised annually by the team around gender-related issues also came to represent **an occasion for internal dialogue** between the leadership, the Diversity Committee, the Human Resources Department, the female researchers and their networks. Indeed, it should be stressed that different disciplinary networks were formed as a follow-up to these workshops, with varied aims and understandings of the women-in-science issue.

Besides inviting the management of the participating institutes to seminars and events organised by the Halkes Women Faculty Network and promoting meetings with the university leadership to discuss gender-related policies (see also # 9.2.), the team at RADBOUD UNIVERSITY actively created **links with different bottom-up initiatives** dealing with gender and diversity issues at the university, such as other EC-funded projects or the full professors women's network. The **care taken in finding common ground** and positive cooperation practices among different groups and generations, which may or may not share the same vision of women's issues, proved crucial, helping to create a positive synergy among the actors involved.

V. Integrating gender in education and research

Gender stereotypes do not only affect women scientists but science itself, in different ways. Gendered assumptions, in fact, strongly influence research priorities, design, methods and explanatory schemes. Beyond lowering the quality and reliability of research results, the neglect or inappropriate consideration of sex and gender variables also seem to symbolically deny the relevance of women as both scientists and research subjects. This in turn reinforces gender inequality, as women may be prevented from feeling a full sense of ownership of the science they largely contribute to shape.

The examples below provide some indications of the practices which can be helpful in countering these dynamics, by fully integrating sex and gender in education and research practices.

16. GENDERING NEW AND ONGOING COURSES AND RESEARCH

Promote new courses and research integrating gendered methods of analysis, and include sex and gender variables within existing ones

Introducing sex and gender considerations in teaching and research is not something new, since it has been tested in many research institutions in recent years. Yet, it is still largely perceived as something unusual, if not inappropriate, or, worse, as an ideological intrusion into the core of science. For this reason, it is important at this stage to move from tests and pilot projects to

the standard integration of sex and gender variables in research and teaching, wherever relevant. This is also the challenge of the STAGES Action Plans, which aimed at testing gender-aware courses and research, and then looked for the best way to consolidate them in their institutions.

16.1. Promoting new courses and specialisations at different levels

Within the Action Plan at the UNIVERSITY OF MILAN, the optional course “Sex and Gender in Medicine” (Action 1.1.1./b) was first taught in the academic year 2012/2013 at the Faculty of Medicine (Policlinico Hospital). It consisted of 5 lessons of 2 hours each, delivered by experts in the **fields of Cardiology, Immunology and Gynaecology**. The pilot course proved successful to the extent that for the year 2013/2014 the team was able to activate the course in three different hospital units hosting each a single-cycle degree programme (Policlinico, San Paolo, Sacco-Vialba). Students from the three degree courses have, thus, been granted the possibility of attending the course which in each hospital unit was taught by professors working and teaching inside the unit. The programmes of the courses differed slightly according to the specific competences which are present in each hospital. The courses have been confirmed for subsequent years (see # 13.1.).

The close cooperation with the Doctoral School of the Faculty of Philosophy and Social Political Sciences enabled the STAGES team at the ALEXANDRU IOAN CUZA UNIVERSITY to introduce incisively gendered contents

in PhD studies. In 2014, a **Cross-disciplinary teaching module for PhD candidates** on “Gender and science” was organised (4.5.1.). The 4-hour course presented the main disciplinary perspectives to approach the topics of sex/gender in science, while arguing for the necessity to integrate them in an interdisciplinary perspective. The course was attended by 19 PhD students in the fields of Sociology, Political Sciences and Communication Sciences. Moreover, as of 2013, the theme “**Gender Equality in Science**” has been proposed annually for **PhD studies** (4.5.2.), which has until now been a unique initiative in a Romanian university. Six students have been selected so far to prepare theses connected with this issue, supervised by the UAIC-STAGES team coordinator.

The RADBOUD UNIVERSITY project team set up an Interdisciplinary PhD course on gender and research methodologies (5.5.1.) in cooperation with the director of the Gender Institute (see # 7.1.). The **two full-day courses**, delivered twice within STAGES, will be replicated every other year even after project completion. It has involved so far around 30 PhD students who wish to increase their **awareness of the gender dimension in research methods** in (their) research projects. It goes without saying that the existence of a university institute devoted to gender studies, and the positive attitude of its

director played a decisive role in enabling this action, as well as the voluntary cooperation of colleagues from the Social Sciences Faculty.

16.2. Integrating gender analysis tools and variables in existing courses and research methods

Gender research was integrated in the European Master on System Dynamics at the RADBOUD UNIVERSITY via lectures, assignments and projects (5.5.2.). Each year, students performed **system dynamics gender analysis** for their master theses, did internships to support gender policy and research at the participating institutes

and other Dutch universities, and examined the dynamic processes beneath social change on gender inequality in the Multidisciplinary Research Group on Gender and Power in Politics (Nijmegen School of Management). Moreover, **Group Model Building on gender research** (see # 3.3.) was discussed with the whole master's student population. As a result, around 100 master's students are now able to apply system dynamics in gender research. Even though the team faced some scepticism about introducing gender variables into existing models, cooperation with other European universities and projects made it possible to secure the continuation of the courses while solutions for their institutionalisation are found.

17. DISSEMINATING GENDER-AWARE SCIENCE

Organising internal and external events on the integration of the gender perspective in research

Resistance to gendered science is mostly due to lack of information and knowledge about the importance of gender and sex in many disciplinary fields. Being used to considering them only in their political and social understanding, many researchers find it hard to actually recognise sex and gender as research variables relevant

to their own disciplines. It is not by chance that the STAGES teams strongly emphasised the technical and scientific dimension of gender-aware science, also promoting events and publications matching international scientific standards, thus implicitly inviting researchers to take it seriously.

Three Workshops on gender medicine (1.4.1.) were organised under the Action Plan at the UNIVERSITY OF MILAN, two of them in partnership with the Health Department of the Lombardia Region (see # 10.1.). The workshops aimed at promoting the diffusion of a greater **“gender sensitivity” in the clinical praxis** and of the gender perspective in medical research as well as at offering adequate tools for the diagnosis and treatment of specific pathologies. What was particularly helpful in this regard was the organisation of workshops strictly following the **technical standards** usually applied at the international level for this kind of initiative in terms of, e.g., awarding of credits, use of English as working language, highly-specialised technical contents, internationally recognised speakers. Thanks to this approach, attendance grew at each workshop, reaching more than 330 participants in the last one.

round table on gendered science at the 3rd edition of the French-Romanian Colloquium in Medicinal Chemistry, underlying the benefits of taking sex and gender into consideration in research; a workshop on the relevance of gender analysis in Geography and Environmental Science; a seminar on women in Economics at the Doctoral School in Economics; a workshop on women in Informatics at the Computer Sciences Faculty.

At the ALEXANDRU IOAN CUZA UNIVERSITY, on the initiative of the UAIC-STAGES team, dedicated **scientific events or special sections within larger conferences** organised at the university have been promoted, integrating the gender dimension. The following can be mentioned: a

VI. Communication and visibility

Communication is an essential part of the scientific process, closely dependant on the exchange of data and ideas. Yet, in the context of “post-academic science”, the role of communication even increased, as the number of players involved in science and technology (funding institutions, private companies, governmental agencies, local authorities, and, in many cases, the public at large). In this framework, unequal access to communication leads to increasingly negative effects, since it reinforces the unbalanced distribution of power and roles between women and men and amplifies the masculine image of science. Effectively communicating the Action Plan and making women in the institution visible are, then, of pivotal importance to counter these trends, which impair both women and science.

In this section, based on the STAGES experience, some practices are reported.

18. DEVISING A DIVERSIFIED COMMUNICATION PLAN

Identify and use different media, coordinating efforts and taking advantage of existing opportunities and partnerships

Communication requires a strategic approach, an approach which is always aware of what messages to communicate to which audiences and through which means. All the STAGES teams developed different strategies adapted to their organisations and action plans. Overall, what mainly emerges from their experiences is the need to follow an integrated

communication plan, coordinating different media, exploiting any possible opportunity and developing specific partnerships; the plan should also be able to include external stakeholders and their networks, since it is often through external communication that internal recognition has been fostered.

18.1. Defining a communication plan

At both the UNIVERSITY OF MILAN and the AARHUS UNIVERSITY, a preliminary **mapping** of communication resources was carried out at the beginning of the project, and updated at mid-term in view of the sustainability plan of the different actions. It considered three different types of resources, to be used according to the communication needs of the different actions or cross-cutting activities: **STAGES resources** (websites, newsletter, dissemination events); **university resources** (website, internal media, internal events and occasions); **external resources** (networks and associations, national and local media, partners' communication channels, public events). Among the latter, the occasion of the Universal Milan EXPO was exploited by the Italian team with the organisation of a “Week of women and science” in the framework of the Exposition (Action 1.7.2.), devoted to events aimed at raising awareness of the issue among the general public (see # 6.3.).

A coherent and diversified **communication strategy** was elaborated by the team at the ALEXANDRU IOAN CUZA UNIVERSITY as a principal component of the strategic model Fixing the transformative and formative praxis

(see Part I, section 4). It entailed the setting up of the UAIC Multi-Media Communication Group on Women in Science and systematic cooperation with the Media Communication Department in publicising all public events organised by the team on the university's official site and other internal communication channels. The intensive use of the UAIC-STAGES **website** for dissemination, the widespread presence on **local and national media**, the production of **documentary films**, and the many national and international **presentations** of the activities and results of the Action Plan are part of this communication strategy (see below).

18.2. Promoting information campaigns on the Action Plan through newspapers and other mass media

A particular effort was made by the team at AARHUS UNIVERSITY to launch a comprehensive promotion campaign at national, regional and local level, giving the team an ample coverage in the media. This effort was made both to disseminate project activities and to **support the revitalisation of gender equality as a pertinent issue in the public and political debate**, taking advantage

of its increasing topicality at national level. It entailed continuously writing newspaper features, journal and science-webzine articles, and participating in interviews published in nation-wide newspapers, on webzines and broadcasted national radio. Thanks to this effort, the STAGES team has been acknowledged as being one of the main experts in structural changes initiatives both at local and at national level. At university level, STAGES activities have been included in the yearly reporting of the university to the Ministry of Equality.

The STAGES project at the ALEXANDRU IOAN CUZA UNIVERSITY has been widely communicated through presentations in TV talk-shows, TV interviews, TV reports, mass-media and social media articles. Based on a productive partnership with TVR Iasi (The National Broadcasting Company, regional branch for Moldova), the actions carried out within the Action Plan have benefited from coverage on **major mass communication channels**. TVR Iași has a regional and national audience, as well as an international one (through TVR 3 international programme). Since 2012, 5 TV reports on public events organised at the UAIC, 2 talk-shows/round tables with professors from UAIC, 6 interviews and several info-news concerning UAIC activities on gender equality in science have been presented. The actions were also presented through more than 50 articles in mass-media and social media, and information was internationally disseminated on **prestigious European Networks websites** as European Platform of Women Scientists, GenPort, EWRD/ CNRS France.

Public communication has also been promoted at the ALEXANDRU IOAN CUZA UNIVERSITY through the production of documentary films. The documentary films within the series “UAIC Profiles of Women in Science” (4.8.2.) are integrated into a public relations campaign to promote the outstanding achievements of women scientists from the university, as role models for younger generations. The protagonists are internationally well-known senior women researchers (from Physics, Biology, Chemistry, Geography-Geology, Mathematics, Computer Science, Economics, Law and Letters) and their teams. The first documentary was produced in 2013 in cooperation with TVR Iași, and achieved significant public success. It can now be watched on the UAIC-STAGES website, You Tube, and also the website of the Faculty of Physics. The second and third documentary films were produced in 2014 and 2015 and they have also been posted on You Tube,

where there have so far been more than 1,600 views (updated to September 2015).

18.3. Extensively adopting internet-based communication tools

The online Gender Diversity Toolbox collecting the measures implemented in the different institutes of the FRAUNHOFER-GESELLSCHAFT to support gender diversity was linked to similar tools of other German research institutions and universities, so as to enhance visibility and dissemination. **Three Toolboxes are currently linked:** the STAGES-Fraunhofer Toolbox, the toolbox of the Deutsche Forschungsgemeinschaft (German Research Foundation), mostly addressing universities, and the Toolbox of the Centre of Excellence Women and Science, promoted by the GESIS (Leibniz Institute for the Social Sciences), mostly devoted to work-life balance issues.

The website of the STAGES project at the ALEXANDRU IOAN CUZA UNIVERSITY (4.1.13.) is conceived as an **informative medium for improved communication**, as well as for widespread dissemination both internally – for the members of UAIC Network of Women in Academics and Research – and externally – for project partners and any other interested readers, from Romania and abroad. At the same time, it provides a useful **support for the public visibility of the scientific results and professional careers of women in academia and research** involved in the project activities. So far, the website of UAIC-STAGES project contains over 270 informative articles (news, interviews, presentations, documents, etc.), over 1000 photos, and has had over 15,600 visitors (updated to September 2015).

18.4. Adopting face-to-face interactions to reach the target audience directly

Direct interaction with potentially interested students was a key factor in increasing the number of those who decided to enrol in the optional *Course on Equal Opportunities and Scientific Careers* (1.1.1./a) managed by the team at the Faculty of Agriculture of the UNIVERSITY OF MILAN every year during project implementation. In fact, the team publicised the course

during the classes held by supporting professors. This helped a lot, particularly because it clearly underlined the agreement of the hosting professors to the course, which was an encouragement to enrol. Moreover, the

circle of the participating professors widened over the years beyond the members of the STAGES board, which in turn widened outreach.

19. SHAPING ATTRACTIVE MESSAGES

Develop messages on the Action Plan which take into account the general cultural and political context and the specific public addressed

Making the messages attractive and tailored to the context and audiences is a basic rule of any communication strategy. However, gender equality is not a simple product to advertise. Rather, it is a complex system of meanings which crosscut many spheres of social life, including family, religion, policy, intimacy

and professional life. Thus, in this case, making the message attractive does not simply mean finding the right words or the right pictures, but negotiating with the key players what gender equality specifically means for the organisation and for science, addressing possible misunderstandings and preconceptions.

At the FRAUNHOFER-GESELLSCHAFT the explicit choice was made to focus internal and public events on issues strongly related to the national research context and the predominant framing of the women-in-science issues, while gradually integrating additional perspectives and themes. The National Conference on “Gender and Diversity Management in Research Organisations” organised under the Action Plan at the Fraunhofer-Gesellschaft (2.6.) was preceded by a long and structured process of **selection of emerging topics in the national debate**, carried out in cooperation with the German National Committee accompanying Action Plan implementation.

Similarly, the workshops organised annually at the AARHUS UNIVERSITY (3.4.1.) focused on topics which were selected to **make researchers feel closely involved on a personal level**, such as career planning, research funding, structural barriers for female researchers, assessment of existing equality policies (see also # 3.2.). The existence of gender inequality was not addressed as the main or only topic, but always discussed within broader frameworks.

20. MAKING WOMEN’S CONTRIBUTION VISIBLE

Use different media and communication tools to increase women’s visibility in science and technology

Increasing women’s visibility is a crucial objective. What is at stake is who actually represents science and technology in the public sphere and in the collective culture. The images of scientists and science have been intertwined with those of males and masculinity so far. Hence the need for communication strategies

acting at different levels (women’s recognition as scientists, information on female experts, networking among women scientists, etc.) to make women’s contribution fully visible. Some STAGES experiences may be inspirational in this regard.

The team at the ALEXANDRU IOAN CUZA UNIVERSITY made a remarkable effort to **increase women’s visibility, voice and recognition**. Many actions were devoted – directly or indirectly – to this aim. Among these: Creating an open-source database/compendium of women researchers at the UAIC (4.4.1.) to communicate women’s achievements; establishing the “Science and Technology Excellence Awards” for outstanding women in S&T (4.8.4. - 3 editions: 2013, 2014, 2015); Organising

the annual public event “Women Researchers Day” to celebrate women in science while creating opportunities for exchange and networking at the European and international level (4.9.1. - 3 editions: 2013, 2014, 2015); Producing a series of documentary films/videos “UAIC Profiles of Women in Science” (see # 18.2.) (4.8.2. - 3 editions: 2013, 2014, 2015); setting up the Documentary Exhibition “UAIC - A Place of Women in Science” (4.4.2.); presentations in TV talk-shows, TV interviews,

TV reports, articles in the mass media and social media (4.8.1.).

The STAGES team at the RADBOD UNIVERSITY cooperated with different groups at the university to make the most of different communication occasions to **support both the visibility of women researchers and the visibility of gender research** (5.8.1. and 5.8.2.).

The team actively participated in the organisation and dissemination of seminars and lectures given by internationally renowned women scholars and in the online “Hotspot on gender research”, promoted by the Nijmegen School of Management to increase the visibility and status of gender research within and outside the university.

Notes

Notes

Introduction

¹ The project responded to the topic: “Implementing structural change in research organisations/universities” (SiS.2011.2.1.1-1), actualising the shift in focus progressively introduced by the Commission from women scientists to research organisations and universities as the main targets of actions aimed at supporting gender diversity in science and technological innovation.

Part One

² The Faculty of Medicine offers education and training in biomedicine and healthcare. It is articulated around different teaching Units widespread in the city where research and clinical praxis are carried on. In particular, it offers four Single Cycle Degrees in medicine within four Hospital Units, several Degrees in different Health Professions and training in other Hospital Units. To the Faculty are enrolled around 3,300 students in medicine and almost 4,500 in health professions.

³ Cf. Fraunhofer annual report 2014.

⁴ Cf. Fraunhofer annual report 2012.

⁵ Cf. Fraunhofer annual report 2013.

⁶ www.stages-online.info

⁷ BfC is an acronym for „Beauftragte für Chancengleichheit“. This is the name for the equal opportunities officers in each institute.

Part Two

⁸ AU, founded in 1928, is an academically diverse and research-oriented institution that strives to be internationally competitive within the areas of research, education, talent development and knowledge exchange. With an enrolment of 44,500 students and 11,500 employees (4,000 researchers) and a turnover of 6,2 billion DKK, AU is the 2nd largest university in Denmark.

⁹ In 2010, AU changed its organisational structure from nine faculties to four main scientific areas: Arts, Science & Technology, Health, and Business & Social Sciences. As a consequence of this reorganisation, the number of departments was reduced from 55 to 26. Another comprehensive restructuring of the Danish universities took place some years earlier, in 2007-8, as a result of a merging of institutions in the public research system, thus reducing their numbers from 12 universities and 13 governmental research institutes to 8 universities and 4 research institutes. AU merged hence with other units and research institutes and has today campuses all over Denmark.

¹⁰ Consists of the director of administration, dep. director of HR, representatives of AU communication and the four faculties.

¹¹ The decrease in post-doc female representation is within Arts and Health and could be explained by the 2014 “dimensioning reform” aiming at adjusting for current demands in the workforce when admitting students for the different educational programmes.

Notes

¹² See <http://www.nature.com/news/make-academic-job-advertisements-fair-to-all-1.18401>

¹³ See <http://ufm.dk/publikationer/2015/filer/anbefalinger-fra-taskforcen-for-flere-kvinder-i-forskning.pdf>

¹⁴ For more info see our presentations at the Vilnius Conference, 2013 http://stages.csmcd.ro/resources/presentation_uaic_balahur_romania.pdf; Vienna Conference, 2014 -http://gender2014.conf.tuwien.ac.at/fileadmin/t/gender2014/Full_Papers/Balahur_UAIC_VIENNA_PAPER.pdf; Workshop STAGES, Brussels, 2014, <http://stages.csmcd.ro/index.php/brusselscommunication>

¹⁵ See Doina Balahur - Promoting “cooperation paradigm” for gendering the universities and science organisations. A built-in reflective practice model of real transformation to achieve gender equality in science, http://gender2014.conf.tuwien.ac.at/fileadmin/t/gender2014/Full_Papers/Balahur_UAIC_VIENNA_PAPER.pdf

¹⁶ At DI, the positions of Assistant and Associate professor are not separated and also include senior researchers, so this percentage counts for both categories together.

¹⁷ At DI, the positions of Assistant and Associate professor are not separated and also include senior researchers, so this percentage counts for both categories together.



Annex I

**THE FIVE
ACTION PLANS**

Action Plan # 1 - University of Milan

STRATEGIC AREA	OBJECTIVES	ACTIONS
Women-friendly environment	Actions promoting change in organisational culture and formal/informal behaviours	1.1.1./a Course on equal opportunities and scientific careers (organised by the Faculty of Agriculture but open to students from all Faculties)
		1.1.1./b Course "Sex and Gender in Medicine" (Faculty of Medicine)
		1.1.2. Research on S&T professional contexts (Faculty of Medicine)
		1.1.3. Network of young women researchers (Faculty of Agriculture and Faculty of Medicine)
	Actions supporting early-stage career-development	1.2.1. School of Strategies for improving publishing for doctoral students (Faculty of Agriculture and Faculty of Medicine)
Gender-aware science	Actions challenging gender stereotypes and consequent horizontal segregation	1.3.1. Crash courses on equal opportunities and gender stereotypes in science for top management (whole University; Faculty of Agriculture and Faculty of Medicine)
	Actions aimed at gendering S&T contents and methods	1.4.1. Workshops on "Gender Medicine" (Faculty of Medicine)
Women's leadership of science	Actions promoting women's leadership in the practice of research	1.5.1. School of project drafting and management of European projects for post-doctoral and young researchers (Faculty of Agriculture)
	Actions promoting women's leadership in the management of research	1.6.1. Annual reporting to the Academic Senate (whole University)
		1.6.2. Annual reporting to the Faculties (Faculty of Agriculture and Faculty of Medicine)
	Actions promoting women's leadership in scientific communication	1.7.1. Launch conference (whole University)
1.7.2. Week of Women and Science (whole University)		

Action Plan # 2 - Fraunhofer-Gesellschaft

STRATEGIC AREA	OBJECTIVES	ACTIONS
Internal exchange (test)	Test of the exchange procedure among a regional group of Fraunhofer institutes	2.1. Development and implementation of a structure for regular exchange of experiences among the regional Commissioners for Equal Opportunities (BfCs) at the local Fraunhofer institutes (Regional Group)
Knowledge production	Production of baseline information and final assessment of results	2.2. Initial and final surveys on the activities concerning gender equality at the Fraunhofer institutes
Internal exchange	Widening the internal market area of gender diversity concepts and solutions	2.3. Involvement of the other Fraunhofer institutes in the change process
		2.4. Definition of platforms for actions at the participating institutes
Internal communication and dissemination	Documentation and joint evaluation of old and new measures concerning gender equality at the different institutes, to further develop the concept of institutional gender equality	2.5. National meetings of participating Fraunhofer institutes
External communication and dissemination	Expand the exchange of concepts for the management of gender diversity beyond the organisational boundaries of Fraunhofer	2.6. National Conference on "Gender and Diversity Management in Research Organisations"
External exchange	Involve external institutes and actors in the exchange process	2.7. Exchange of experiences with non-Fraunhofer research institutes

Action Plan # 3 - Aarhus University

STRATEGIC AREA	OBJECTIVES	ACTIONS
Women-friendly environment	Actions promoting change in organisational culture and formal/informal behaviours	3.1.1. Documenting developments in gender equality
		3.1.2. Communicating strategies to promote the visibility of female role-models
		3.1.3. Organising 4 University-wide workshops
		3.1.4. Periodical training modules on gender diversity management
		3.1.5. Supporting a young researchers' network
	Actions promoting work-life balance	3.2.1. Establishing and managing home offices for staff
		3.2.2. Introducing flexible working hours
		3.2.3. Rules for time reimbursement for PhD coordinators/assistant professors/post-doc supervisors
		3.2.4. Organising and managing dinner services to bring home
	Actions supporting early-stage career-development	3.3.1. Mentoring programme for young female researchers
		3.3.2. Career advice and training for early-career women researchers
		3.3.3. Setting up mechanisms to support temporary staff
Gender-aware science	Actions challenging gender stereotypes and consequent horizontal segregation	3.4.1. Organising 4 Faculty-level initiatives on stereotypes
		3.4.2. Collection of data on horizontal segregation at Faculty level
Women's leadership of science	Actions promoting women's leadership in the practice of research	3.5.1. Establishing praxis for women's presence in evaluation committees
		3.5.2. Establishing new rules for the evaluation of productivity
		3.5.3. Disseminating information about available opportunities
	Actions promoting women's leadership in the management of research	3.6.1 Supervision of young female researchers on research management skills
		3.6.2. Direct support to access decision-making boards
	Actions promoting women's leadership in scientific communication	3.7.1. Communication of women's scientific excellence

Action Plan # 4 - Alexandru Ioan Cuza University

STRATEGIC AREA	OBJECTIVES	ACTIONS
Women-friendly environment	Actions promoting change in organisational culture and formal/informal behaviours	4.1.1. Setting up the UAIC's Network of Women Academics and Researchers
		4.1.2. Documenting and evaluating both qualitatively and quantitatively equal opportunities
		4.1.3. Developing gender-disaggregated statistics and gender-sensitive indicators
		4.1.4. Organising a Workshop for research results presentation
		4.1.5. Drafting and establishing guidelines and policies
		4.1.6. Establishing a Senate position for the representatives of the UAIC Network of Women Academics and Researchers
		4.1.7. Setting up periodic reporting practice on equal opportunities in the Senate/Rectors board
		4.1.8. Setting up periodic training modules for University's employees
		4.1.9. Setting up periodic training modules for University's managers
		4.1.10. Institutionalisation of the "UAIC's Network of Women Academics and Researchers"
		4.1.11. Documenting the integration of a special chapter (or special provisions) on Equal Opportunities of women and men in the UAIC Charter
		4.1.12. Study on developing national standards for gender equal opportunities in funded research (based on a comparative analysis between RO and EU countries, carried out in cooperation with ARACIS and CNCSIS)
		NEW ACTIONS
		4.1.13. Website building and permanently updating for the communication and dissemination of the UAIC-STAGES project activities
		4.1.14. Setting up the UAIC Centre for Gender Equality in Science
		4.1.15. Setting up the UAIC gender equal opportunities database (GEOD) in accordance with the EC indicators (in cooperation with UAIC Centre for GES)
		4.1.16. Preparing the UAIC Centre for Gender Equality in Science for continuing and developing the GES activities initiated by the UAIC-STAGES project (sustainability plan and responsibilities distribution)
		4.1.17. Special trainings for the UAIC Centre for Gender Equality in Science staff (international exchange of experience and transfer of knowledge/good practices) for continuing and developing the GES activities
	4.1.18. Final assessment of the UAIC-STAGES' team contributions in producing structural changes to achieve gender equality in science at the UAIC	
	Actions promoting work-life balance	4.2.1. Proposals for improving and developing existing childcare services for academics and researchers
		4.2.2. Disseminating information on childcare and other services delivered to staff
	Actions supporting early-stage career-development	4.3.1. Negotiating with the National Agency (CNCS) to extend provision of grants to be allocated for women professional development.
		4.3.2. Providing information and advice on career and professional development
4.3.3. Early career researchers day		

STRATEGIC AREA	OBJECTIVES	ACTIONS	
Gender-aware science	Actions challenging gender stereotypes and consequent horizontal segregation	4.4.1. Creating the Compendium of women researchers at UAIC	
		4.4.2. Setting up the special exhibition on Women and Science at UAIC's museum	
		4.4.3. Organising the Annual thematic workshop of UAIC's Network of Women Academics and Researchers	
	Actions aimed at gendering S&T contents and methods	4.5.1. Implementing a cross-disciplinary teaching module on gender and science	
		NEW ACTIONS	
		4.5.2. Introduction of the theme Gender Equality in science in PhD studies	
4.5.3. Organising a special section, round table or thematic workshop on Gendered Innovation and Research within the International and national scientific events hosted at the UAIC, in order to promote the approach of Gender in content and methods of science			
Women's leadership of science	Actions promoting women's leadership in the practice of research	4.6.1. Carrying out a national evaluation study on women's participation in the funded research	
		4.6.2. Publication and wide dissemination of the outcomes of the study	
		4.6.3. Negotiating the integration of the national guidelines for project applications with provision encouraging women's participation	
	Actions promoting women's leadership in the management of research	4.7.1. Negotiating proposals of new transparent rules and procedures for appointing/electing members of the high-level boards and commissions	
	Actions promoting women's leadership in scientific communication	4.8.1. Acknowledging the successful careers of female researchers in S&T – through permanent sections on women's achievements on the project's website and periodic media campaigns	
		4.8.2. Documentary films/videos on "Life and career of outstanding women scientists in Europe"	
		4.8.3. International Conference/Colloquium "Women and Scientific Research: Outcomes and Future Challenges"	
		4.8.4. Establishing the "Science and Technology Excellence Awards" for outstanding women in S&T	
	Actions promoting women's leadership in innovation processes and science-society relationships	NEW ACTIONS	
		4.9.1. Organising the annual public event "Women Researchers Day"	
		4.9.2. Writing and publishing a scientific book on Gender Equality in Science	
			4.9.3. Developing cooperation and partnership in order to extend and multiply the UAIC's experience and good practices set up during the STAGES project to the other universities in Romania (in collaboration with ARACIS, UEFISCDI, MEN and universities)

Action Plan # 5 - Radboud University

STRATEGIC AREA	OBJECTIVES	ACTIONS
Women-friendly environment	Actions promoting change in organisational culture and formal/informal behaviours	5.1.1. Evaluating the pilot mentoring programme
		5.1.2. Workshops for female scientists in the mentoring programme
		5.1.3. Extending the mentoring programme
	Actions promoting work-life balance	5.2.1. Internal research examining the use of work-life arrangements
Gender-aware science	Actions challenging gender stereotypes and consequent horizontal segregation	5.4.1. Screening and improving internal communication on recruitment and career progress
		5.4.2. Gender awareness training of deans and managers: increasing advising and supervising skills
	Actions aimed at gendering S&T contents and methods	5.5.1. Setting up and providing an interdisciplinary PhD course on gender and research methodologies
		5.5.2. Developing the use of computer-based modelling in gender analysis
Women's leadership of science	Actions promoting women's leadership in the practice of research	5.6.1. Implementing target figures for female full and associate professors
	Actions promoting women's leadership in the management of research	5.7.1. Gender awareness training of deans and managers: increasing knowledge on gender quotas
	Actions promoting women's leadership in scientific communication	5.8.1. Increasing the visibility of female scientists in internal communication
		5.8.2. Increasing the visibility of gender research in internal communication

STAGES Teams



Michele Palma (Team leader), Tiziana Zannini, Serenella Martini, Marino Di Nardo, Elena Falcomatà, Viviana Vizioli, Paola Distante.



Marina Cacace (Team leader), Giovanna Declich, Giovanni Caiati, Claudia Colonnello, Luciano d'Andrea, Andrea Declich, Maria Maddalena D'Urso, Federico Marta, Giovanna Murari, Francesca Pugliese, Giancarlo Quaranta.



UNIVERSITÀ
DEGLI STUDI
DI MILANO

PROJECT Team:

Dr. Daniela Falcinelli (Team leader), Prof. Luisa M. Leonini (Scientific Responsible 2014-2015), Prof. Claudia Sorlini (Scientific Responsible 2012-2014), Prof. Bianca Beccalli, Prof. Maria Domenica Cappellini, Prof. Antonio M. Chiesi, Dr. Elena Del Giorgio, Camilla Gaiaschi - PhD student, Prof. Marisa Porrini, Dr. Patrizia Presbitero.

Advisory Board at the Faculty of Medicine:

Prof. Antonio M. Carrassi, Prof. Irene Cetin, Prof. Anna Maria Di Giulio, Dr. Giovanna Fabio, Dr. Maria Gerosa, Prof. Flora Peyvandi.

Advisory Board at the Faculty of Agricultural and Food Sciences

Prof. Angela Bassoli, Prof. Lucia Cavalca, Prof. Paola Crepaldi, Dr. Arianna Facchi, Prof. Claudio Gandolfi, Dr. Manuela Rollini.



Michaela Friedrich (Team leader), Anne Spitzley, Jürgen Wilke.



AARHUS UNIVERSITET

Dr. Evanthia Kalpazidou Schmidt (Team leader), Dr. Ebbe Krogh Graversen, Dr. Mathias Wullum Nielsen.

We thank the members of the STAGES Advisory Board and National Committee, the members of the Diversity Committee, the members of the Committee for Research and External Relations, Deans and Vice-Deans, Department Heads, Human Resources Department, Communication Department, Women Networks, Networks for Gender Equality, Researchers and Administrative staff as well as staff at CFA for their contribution.



UNIVERSITATEA
„ALEXANDRU IOAN CUZA“
din IAȘI

Prof. Dr. Doina Balahur (Team leader), Prof. Dr. Liliana Mitoșeriu, Prof. Dr. Elena Bâcu, Prof. Dr. Alexandra Iordan, Prof. Dr. Odette Blumenfeld, Prof. Dr. Elisabeta Jaba, Prof. Dr. Maria Magdalena Zamfirache, Prof. Dr. Rodica Dimitriu, Prof. Dr. Adriana Prodan, Prof. Dr. Luminița Bejenaru, Prof. Dr. Iuliana Breabăn, Prof. Dr. Maria Cojocaru, Prof. Dr. Lenuța Alboaie, Prof. Dr. Corina Forăscu, Prof. Dr. Paul Dobrescu, Prof. Dr. Contiu Șoitu, Prof. Dr. Snejana Sulima, Prof. Dr. Nina Mihalache, Prof. Dr. Romeo Asiminei, Prof. Dr. Dumitru Stan, Dr. Diana Arhire, Dr. Christiane Balan, Dr. Cristina Ciomaga, Dr. Lavinia Curecheru, Dr. Mihaela Danu, Dr. Felicia Gheorghiu, Dr. Nadejda Horchidan, Dr. Vera Popescu, Dr. Irina Popovici, Dr. Lorena Tarlion, Dr. Magdalena Vicovan, Daniela Caltea, PhD student, Maria Petronela Munteanu, PhD student, George Pascaru, PhD student, George Ichim, PhD student, Rareș Miron, PhD student, Nicoleta Karacsony, PhD student, Stela Anca Radu, PhD student, Sonia Giorgiu, Elena Radu Felice.

Radboud University Nijmegen



Dr. Inge Bleijenbergh (Team leader), Joke Leenders, PhD student, Claudia Lüttke, PhD student, Anouk van der Heide, Jana Krutwig, Myrthe Princen.

We thank the members of the STAGES Advisory Board, members of the STAGES National Committee, staff and Board of the Donders Institute for Brain, Cognition and Behaviour, staff and Board of the Institute for Management Research, Halkes Women Faculty Network, Institute for Gender Studies, Human Resources Department and staff and Board of the Radboud University for their contribution and participation.

International Board of Scientific Advisors:

- Dr. LETTY A. DE WEGER, Department of Pulmonology, Leiden University Medical Center
- Associate Professor Emerita INGE HENNINGSEN, University of Copenhagen
- ALICE HOGAN, Higher Education Consultant, Inaugural NSF ADVANCE Program Director (retired)
- Associate Professor ADRIAN IFTENE, PhD, Faculty of Computer Science, “Alexandru Ioan Cuza” University, Iași, Romania
- Dr. MARIA RIMINI-DÖRING, Corporate Research – Robert Bosch GmbH
- Professor CHIARA TONELLI, Prorector for Research, University of Milan
- Professor JUDY WAJCMAN, London School of Economics

STAGES

Structural
Transformation
to Achieve
Gender Equality
in Science

Guidelines