



Female Empowerment in Science and Technology Academia

## **FESTA TOOLKIT WP3.2**

# **Towards Raising Organizational Awareness**



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Female Empowerment in  
Science and Technology Academia



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# INTRODUCTION

The toolkit you are holding in your hand has been developed as part of an implementation project under the EU 7<sup>th</sup> framework program named FESTA – Female Empowerment in Science and Technology Academia. FESTA has been conceived in response to a need for a systematic approach to ensure the incorporation of the potential of the entire work force in Science and Technology, including gender equality and diversity.

In its five year span 2012-2017, the project aims to see: 1) female researchers encouraged to stay and make a career in Academia; 2) the creation of organizational environments where the competence of all employees are valued and fostered; 3) well-functioning working environments that welcome a diverse group of employees at all levels.

With FESTA we look into the daily environment of researchers: formal and informal decision making processes, meeting cultures, PhD supervision, perceptions of excellence in hiring processes and in the work environment, and resistance to equality measures, fostering the full potential of the entire workforce. We find the working environment of researchers in the lower levels of their careers particularly interesting: It is at this level that socialization to the prevailing norms takes place, and it is here that possibilities for advancing to the ranks of highest scientific expertise to a large extent are determined (Bagilhole 2002; Morley 2006).

FESTA comprises five project tasks, four of which consist of two subtasks each: WP3 *Raising Awareness* (WP3.1 *Raising individual awareness*; WP3.2 *Raising organizational awareness*); WP4 *Gendering Decision-Making and Communication Processes* (WP4.1 *Formal decision-making and communication processes*; WP4.2 *Informal decision-making and communication processes*); WP5 *Hidden Assumptions in Definitions of Excellence* (WP5.1 *Monitoring excellence in hiring processes*; WP5.2 *Excellence in the daily working environment*); WP6 *Improvement of Interactional Patterns* (WP6.1 *Improving meetings culture*; WP6.2 *PhD supervision*); WP7 *Dealing with Resistance*.

This toolkit is part of the task WP3.2 Raising Organizational Awareness. The objectives of WP3.2 Raising Organizational Awareness are: to ensure that change is implemented in the partner institutions through raised awareness. The task is designed to find the best ways of using organizational statistics to promote women's careers, and the objective of the task is therefore to generate statistics which can serve as starting points for actions for different groups and different levels of an institution or as tools in gender equality work among the academic staff in different units. Four partners take part in the task: Uppsala University, Sweden (UU); University of Southern Denmark, Denmark (SDU); RWTH<sup>1</sup> Aachen University, Germany (RWTH); Fondazione Bruno Kessler, Italy (FBK).

Task WP3.2 comprises two main phases: 1) collecting and preparing statistics using existing organizational statistics, data and equality measures and supplementing these with gender sensitive

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<sup>1</sup> RWTH = Rheinisch-Westfälische Technische Hochschule (Rhenish-Westphalian-University of Technology)

data, 2) raising awareness in selected units and organizational contexts where the collated data serve as a starting point for dialogue, debate, reflection – and ultimately action.

We have chosen this approach, because we think that statistics are useful in underpinning arguments, qualifying discussions on gender and dealing with resistance. Moreover, statistics are useful for contributing to evidence based policy making and as starting points for reflection, awareness raising and for spurring action. This approach is in line with for instance the Athena Swan Award practice, where applicants for the different levels of awards must collect and process statistical data ([www.athenaswan.org.uk](http://www.athenaswan.org.uk)). Naturally, whether action is in fact taken also depends on other factors, such as organizational politics, commitment to gender diversity, and institutional leadership.

At the time of compiling this toolkit (February 2014), Task WP3.2 is two years into its life and is nearing the end of the first phase: collection of the first round of data and preparing presentation of statistical material. The second phase, dialogues with units and actors within the partnering organizations, is about to start. We are therefore at the crucial point in time where we have to turn figures and tables into platforms for raising questions and awareness – and thus prepare the ground for changes in action and behaviour.

It is important here to make clear, that we cannot at this stage provide any accounts of the outcomes of the activities of task WP3.2, for the simple reason that there are no outcomes of this nature yet.

Since FESTA is concerned first and foremost with practical implementation of gender sensitive practices, we have designed this project-output as a toolkit with the intention that it may serve as both practical documentation of how we have gone about our task and as a detailed source of inspiration for others who find themselves in a situation where the need for making changes in the organizational gender make-up is clear, but practical examples of how to do so are scarce. We have named the present work a toolkit to emphasize the practical nature of our task and approaches. However, we realize that it may best be understood as a detailed framework for understanding and working with objectives similar to those presented here.

The WP3.2 task team represents four different national and organizational contexts, as well as four different organizational levels, which determine where and how each of us may be able to effect and instantiate our initiatives. The examples of tools we offer here reflect these differences and the result is large variation in how we meet the same challenges. Our hope is that in this diversity in approaches you will be able to find something that can inspire your practice. We also hope that this will provide you with an appreciation of which considerations and challenges might be important to take into account in your particular context.

Our main focus is on how-to, based on how-we-did. The toolkit is therefore rich in detail and heavy with descriptions and presentations of the tools we have already developed and which we will use in the next phase of our task.

The toolkit consists of the following sections:

**Background: theoretical and methodological considerations** – in this section we will present our theoretical and methodological standpoint.

**Institutional context** – in order to provide a possibility for understanding our decisions, concerns and approaches at each of our four different organizations, an overview of our different organizational structure and the position within the organization of the FESTA project and team is provided. These specific contexts determine to a large extent what may be possible in creating lasting changes. This will be elaborated in detail in Appendix 1.

**Methodological manual** – this section comprises the main body of the toolkit. The methodological manual consists in turn of two parts: description of the tools we have developed and used for collecting and understanding our data and a description of the tools we have developed for turning figures into awareness.

Last, we have included three **Appendices** that serve mainly as reference and elaboration – here it is possible to find further details of the contexts and the tools presented in the methodological manual.



## THEORETICAL AND METHODOLOGICAL CONSIDERATIONS

FESTA is first and foremost an implementation project with a strong focus on practical applications of our approach and findings. Therefore the present document is a toolkit, to serve as practical inspiration on an everyday level for others who are grappling with how to collect and present organizational statistics as an opening to changing the ways of doing and understanding gender in organizations. In this section we will account for the theoretical and methodological framework for our choices and approaches.

The overarching framework of FESTA and the task of raising organizational awareness is and must be a gender perspective rooted in both a humanistic/social and a business perspective on why it is important to focus on gender in the STEM<sup>2</sup>-disciplines. Women are still not adequately or reasonably represented in STEM-disciplines, and this is a problem both in terms of ensuring equal opportunities and in terms of making use of the full potential of the work force – as well as in addressing the entire population in the solutions. So we see problems at three levels: 1) STEM seriously lack the presence of women, 2) women face specific problems in trying to make their way in the STEM-disciplines, and 3) women and the challenges they are facing in making their way in the STEM-disciplines, as well as in the reasons why they do not choose an academic career, point crucially to problems that science and its working environments foster (General references about this: Bagilhole 2002; Hasse 2008; Kjeldal et al 2005; Morley 2006; Wajcman 1991, 2000; Trauth 2012; Tripp-Knowles 1995 – specific references for each of the bullets listed, see below):

- Bias and subjectivity in appointments and funding (European Commission 2004; Husu 2001; Van den Brink & Benschop 2011, 2012;)
- Competition, networking and marginalization in the quest for excellence (Benschop & Brouns 2003; Brouns & Addis 2004; Lamont 2009; Lewis & Ross 2011; European Commission 2008; )
- Undemocratic decision-making processes (Husu 2001; Van den Brink & Benschop 2011, 2012; Parsons & Priola 2013;
- Inefficient communication patterns
- Powerful socialization processes (Carter, Blumenstein & Cook 2013; Kantola 2008)
- Unhealthy work environments.

FESTA believes that environments which empower women are environments which empower both people and new and diverse ideas, which in turn benefit the society as a whole. To this end, we believe that raising awareness of the actual and prevailing gender imbalance is a crucial step towards true diversity and gender equality in academia. There are different ways of achieving this awareness, and some of these differences in approach and strategic objective will be offered here.

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<sup>2</sup> Science, Technology, Engineering and Mathematics

Our analytical framework is based on the 3R method, developed in Sweden for gender mainstreaming purposes, which involves surveying and analyzing activities in terms of gender equality on the basis of Representation, Resources and Realia. The 3R method is a means of exploring the norms that govern work, the division of power between women and men, and the ways in which gender affects the nature and organization of the activity.

In order to ensure that the knowledge gained and structured according to a gender perspective can effectively be turned into praxis, we also base our approach in a wider implementation and innovation field of study, which includes emphasis on a collaborative and participatory process and methodology approach to change. In this we draw on innovation and change management theories and on participatory and collaborative large group methodologies where applicable, such as Open Space Technology (Owen 2008), Future Search Principles (Weisbord & Janoff 2007, 2010), Presencing (Scharmer 2009; Senge 2004), World Café (Brown & Isaacs 2005), and others (such as Ingerslev & Elmholdt 2012; Vestergaard 2012; Hornstrup et al 2005; Stacey 2001, 2012; Shaw 2001).

In the following sections we will briefly elaborate on our rationale for gendered change, our analytical framework for understanding gender im/balance in our organizations, and our wider implementation foundation in terms of innovation and change process theories and methodologies.

## RATIONALE FOR GENDERED CHANGE

Gender is *not* an inherent characteristic of individuals but is created and recreated in interaction. Gender in this view is not equated with sex. Moreover, gender in/equality is reproduced through the totality of patterns of social interaction and the meanings attributed to them. Such an interactive understanding of gender is proposed and elucidated in the *Doing Gender* perspective. This approach is useful, in that the main approach of the task of raising organizational awareness is centered around what it takes to effect deep and lasting change in the way organizations conceive and practice gender – and with them the people who constitute the organization (West & Zimmerman 1987).

What we aim for is no less than a radical reorganization – even if this reorganization is not in the form of an overall gender revolution but rather as incremental changes in parts of the organization, experimenting until desired effects are reached and thus working from the strategy of learning from experience (Ely and Meyerson 2000). According to Degele (2005) such a reorganization may be affected through combining, on the one hand, the approach of gender studies with respect to analyzing and understanding gender categories and relations with, on the other, a political strategy of institutionalizing gender justice, including monitoring and surveying and mainstreaming activities for

gender balance, and thus empowering women and providing enhanced creative options for everyone. This entails that gender balance and diversity become crucial criteria for the overall output of the organization. For science and technology this would include the development of new research questions and projects (Schiebinger & Klinge 2013).

We believe that working systematically towards gender equality, diversity and antidiscrimination has a positive effect on the working environment in general and on equal opportunities and outcomes. To this end we embrace both management, strategic, political and top-down initiatives, such as policies, measures, monitoring, strategies and mainstreaming activities aimed at structural changes, and more bottom-up, process-oriented initiatives that aim at effecting change at a cultural level (Lee & Faulkner 2010). However, each of us emphasize different approaches, with large variations in which of these parameters we weigh more – due to the status of national and organizational legislation and status of initiatives as well as our own positioning within our respective institutions.

The particularities of scientific and technological disciplines in academic and research institutions determine to a large extent that the full research potential for women – as well as for any individual or group that does not live up to a narrow, male-dominated and defined ideal – is not realized, no less fostered and nurtured (Morley 2006; Bagilhole 2002; O'Connor 2001; Liff & Cameron 1997; Kjeldal, Rindfleish & Sheridan 2005; Ely & Meyerson 2000; Kohlstedt & Fischer 2009). In order to bring about working conditions that are conducive to diversity and gender equality, we believe that it is important to shed light on behaviour that is present but invisible – and especially where such behaviour seems to form gendered patterns. Examples are tasks that seem to 'simply get done' but do so 'under the radar' and therefore receive no recognition, such as administrative tasks and many study-related activities. This contrasts with publishing and networking, which to a much larger extent are high-status activities, visible and career-enhancing. Other present but invisible behaviour includes activities and patterns of behaviour which ensure inclusion in or exclusion from various critical interactions and contexts such as long hours of presence at work and the opposite: early departure from work in order to tend to family life. Gendered patterns of family life, organizational culture in general, and academic culture in particular, thus critically influence who will advance in the organization and who will not.

In order to challenge and change the values and assumptions which give rise to specific gendered behaviours, changing gender culture involves, of necessity, challenging the behaviour and attitudes of men as well as women. This includes directly targeting the underlying and prevalent conception that equality is (solely) women's responsibility. In this we directly subscribe to the understanding that our task is not to fix the women but to fix the system (Morissey & Schmidt 2008).

## ANALYTICAL FRAMEWORK – THE 3R-METHOD

We believe that the 3R method is a robust and simple model for structuring our data and results. The method was developed in the late 1990s, by Gertrud Åström in cooperation with the Swedish Association of Local Authorities, for gender mainstreaming and has mainly been used to chart and analyze various municipal activities from a gender equality perspective (Lehn & Lykke Nielsen 2001). For our purposes, we have adapted the method to an academic context.

The method can be described by what the three R's stand for. The first R, representation, is a survey of the gender distribution in the various parts of the organization and at all levels, e.g., among leaders, staff and/or students. In this part of the method the question of how many women and how many men are represented must be asked. This includes indicators that show the organization's gender structure, such as indicators on leadership positions and recruitment. The second R, resources, is a quantitative mapping of how resources are allocated according to gender. It answers the question: How are the resources in the organization, for instance in the form of money, time and space, distributed between women and men? For example, indicators for parental leave, form of employment, salary and sick leave reflect the resource allocation between women and men. The third R, Realia, is qualitative where the focus is on culture/institutions or the norms governing the organization. Why are representation and resources distributed as they are? What are norms and conditions like for women and men in the organization? Are they different, and if so, how and why? The objective of the last part of the method is to provide an explanation of the gender equality problems that appeared during the first two steps. The method gives a structured answer to the question of who gets what, and on what terms.

Steps one and two consist of collecting and extracting statistics on indicators and serve as the starting point for discussions with leaders and/or staff on different levels and in different units about the third and last R. We are through the first two steps and all the work we have been doing with what we call dimensions (what we are trying to measure) and hypotheses (what we think/know the indicators will indicate and why) in this toolkit's methodological manual is a way of approaching the third step. A part of this work has been to supplement quantitative findings with qualitative measures, for example in the form of meetings with responsible staff. This has been done to qualify our findings since collecting quantitative data in steps one and two is not always sufficient to carry out a reliable analysis. Dialogue and collaboration with leaders and/or staff is necessary to identify and decipher the organization's cultural codes and get in-depth knowledge of the problems behind the numbers (E.g., exceptional circumstances in any given year, a small base where one single person can sway the figures disproportionately, sick leave for reasons other than gender equality, age distribution etc.). These explanations need to be scrutinized in themselves too, since they may have the effect of obscuring underlying gender patterns. In analyzing conditions it is also fundamental to pay attention to connections with the other FESTA tasks in order to obtain the most complete picture and insights on

specific areas. For example, excellence in the daily working environment can furnish us with relevant qualitative information on values prevailing at a department and the way they may support or enhance gender inequality.

## INSPIRATION FROM THE FIELDS OF IMPLEMENTATION AND INNOVATION

Implementation needs its own attention. Often strategies and plans include only top-managements' attention up till the point where the slow and arduous work of implementation actually begins and continues. And therefore the insistent questions arise: how to make plans that allow for the dynamics and discipline of implementation? How to make messy, complex reality concur with neat and orderly plans and strategies? How to adequately argue for, demonstrate and evaluate the dynamic nature of organizational change?

In WP3.2 we have been inspired by some of the literature and practices from innovation and change leadership. These practices center around making deep and radical change happen by including and engaging the people who are directly involved in the initiatives, by staying with and staying open to the situation that requires changes – even when such a situation is frustrating and in essence without an obvious solution (otherwise it would not require change). The very nature of the need for deep innovation is characterized by pain and uncertainty – if a way forward was obvious, this path would already be followed (Scharmer 2009; Stacey 2001,2012; Vestergaard 2012). Thus the navigation through deep innovation is – at least intermittently – characterized by not knowing, and with it an often overpowering sense of groping, as well by fear and frustration throughout the most bleak parts of the process. The better equipped and trained the people who undertake these kinds of journeys are and the better they are at inviting, facilitating and partaking in complex change processes involving large group involvement, and the more they are willing to take into account that things take time, the surer the path to new discoveries and the deeper and richer the resultant change. One important step towards fostering these abilities is to appreciate the importance of boundaries (vertical, horizontal, demographical, geographical, etc.) and to create room for boundary spanning activity. Thus, a solid foundation that allows for changes to take place includes attention to and diligent management of boundaries, a fostering of common ground and discovery of new territories (Ingerslev & Elmholt 2012; Ernst & Chrobot-Mason 2010).

A large body of work on participatory processes describes ways of enabling such boundary spanning activities both in the long and short term. The main principle at work is acknowledgement of the dynamic and shifting nature of the change processes coupled with the necessity of coordination and structure. Coordination must be ongoing and take place both on a functional and a relational level. Where functional coordination is well-known and usually at the center of organizational awareness, relational coordination is – in contrast – a lot less in focus, but in need of the same kind of attention.

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Relational coordination involves exchanging knowledge and experience across professional differences, fostering a sense of common objectives along with mutual respect, and a focus on finding solutions rather than placing blame (Ernst & Chrobot-Mason 2010).

Structure may be provided in the form of meeting and process architecture, as described for instance in the Future Search process, Complexity Theory, Theory U, Presencing, Systemic Leadership, Open Space technology and other approaches to large group interventions (Owen 2008; Hornstrup et al 2005; Senge 2004; Scharmer 2009; Stacey 2001, 2012; Shaw 2002; Weisbord & Janoff 2007, 2010; Vestergaard 2012). These allow for focused and facilitated processes, which – precisely because they are framed and focused – may venture into and explore those aspects of the situation under scrutiny that are complex and potentially more conflict-filled, and which give rise to frustration and contention without compromising the complexity and richness and without losing sight of the common ground and the possibility for action. A common principle for the various approaches is the involvement of all the people or stakeholders in question in the process at least once during the process at the same time and in the same room. These approaches are used in some of our contexts, where they are applicable, and where it is possible to include engagement with larger groups with more stakeholders – mainly at SDU and FBK. At UU and RWTH, these approaches are not so readily usable in their original form, since the groups engaged in the task are smaller, or it is necessary to plan for stepwise processes, involving groups of relevant stakeholders and change agents separately. However, even in these contexts, the underlying principles of dialogue, engagement and processual focus are employed.

## OPEN SPACE TECHNOLOGY – AN EXAMPLE OF LARGE GROUP INTERVENTION

### METHODOLOGY

Open Space Technology (OST) is a methodology developed by Harrison Owen (2008) in the late Eighties, to foster and support discussions focused on a specific topic or task with large groups and to search for solutions/ proposals in a cooperative way. It is a simple and powerful way to catalyze effective working conversations on compound issues. Specifically, OST is a workshop design tool to use when the situation at hand includes a large and diverse group of people dealing with complex and potentially conflicting material; it is a facilitation method in which people can identify specific issues on a given topic, self-select into discussion groups, and work with others concerned with the same issue. It is used in contexts including strategic direction setting, envisioning the future, policy making consultation with stakeholders, collaboration and deep learning about perspectives and community planning.

We think OST can be adapted to gender-related issues within organization as these are often controversial, complex and multifaceted and can potentially and transversally be of concern to all the personnel of an organization. In other words gender issues seem to constitute the four conditions for

OST: high level of diversity of participants; high level of complexity of issues to be dealt with; high level of conflict (actual or potential); the need for decisions to be made quickly.

OST operates under four principles and one law. The principles are the following:

- *whoever comes, are the right people*: “The fundamental requirement is people who care to do something. And by showing up, that essential care is demonstrated”
- *whatever happens, is the only thing that could have happened*: “keeps people focused on the here and now, and eliminates all of the could-have-beens, should-have-beens or might-have-beens”
- *when it starts, is the right time*: “alerts people to the fact that inspired performance and genuine creativity rarely, if ever, pay attention to the clock. They happen (or not) when they happen”.
- *when it’s over, it’s over*: “do what you have to do, and when it’s done, move on to something more useful”<sup>3</sup>.

The law is known as the “law of two feet” and implies that if one finds oneself in a situation where one is not contributing or learning, it is possible to move to another group/discussion.

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<sup>3</sup> The quotes are from Owen 2008, pp 91-96, see also Owen’s Open Space Technology website: [http://www.openspaceworld.com/brief\\_history.htm](http://www.openspaceworld.com/brief_history.htm).

# INSTITUTIONAL CONTEXTS

The four WP3.2 partners come from four different countries and from different institutional contexts, both in terms of what is nationally at stake, what the organizational context prescribes and delineates, and the location of the FESTA-team within the organization. Understanding these relative differences is important in assessing our individual points of departure for the FESTA tasks and objectives, and also the way they ultimately are put into practice.

For these reasons, the following section presents a brief overview of each of the four participating partners' organization in overall terms, their organizational structure along with the organizational location of each FESTA-team and, last, a short comparison of the most salient features and relative differences.

Appendix 1 provides more elaborated descriptions of each of the four organizations.

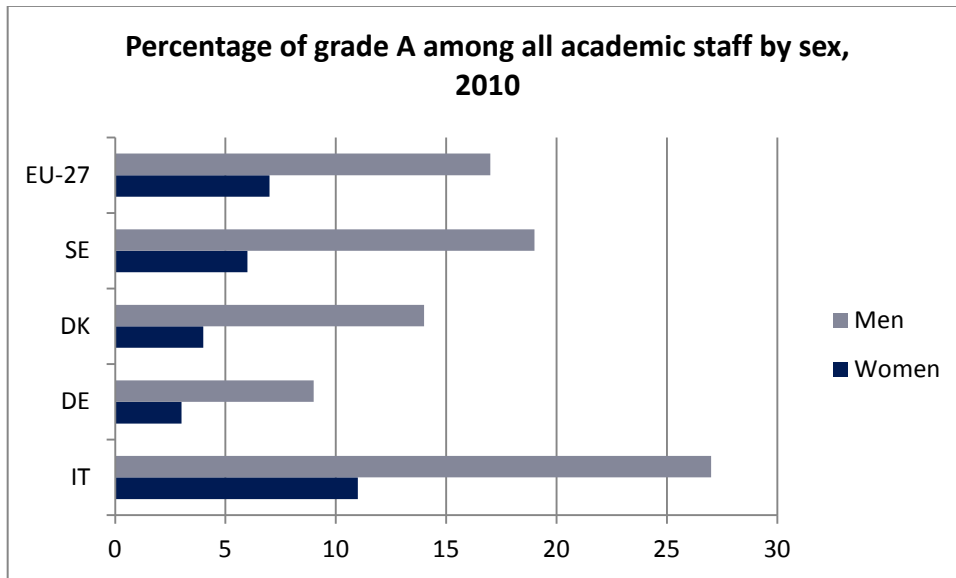
In order to see the four institutions in a wider context in their respective national contexts and in relation to one another, we have extracted the following comparative charts based on She Figures 2012 (European Commission 2013) of

- 1) the distribution of gender at the most senior academic levels in the four countries
- 2) the distribution of gender in heads of universities (and assimilated institutions) in the four countries
- 3) the relative chance for women, as compared to men, to reach top positions in Academia (Grade A) as shown in the Glass Ceiling Index in the four countries

Please note, however, that these figures relate to aggregate numbers for countries and are not directly applicable to our four individual contexts, so a direct 'translation' into the four specific contexts in WP3.2 is not possible. Also, the definition of the different categories (in particular Grade A) has very different implications in the four national contexts represented in WP3.2. Thus, in the case of Germany all people under the level of professorship (with and without a doctoral grade) fall under the lowest level, which explains why this group is so large relative to the other three national figures. Full professors, however, fall under both grades A and B. This is in direct contrast with for example Italy. Last, but not least, FBK as a private research foundations falls outside a possible comparison based on She Figures, since here they do not operate with highest academic positions, but rather with research contracts, and then it is the contractual level which is graded.

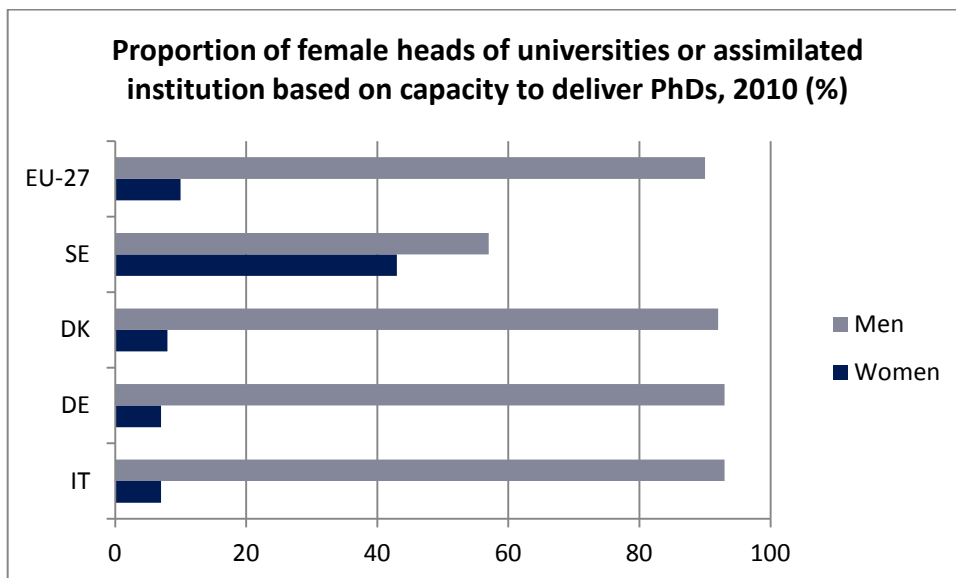
Even with these reservations concerning the usefulness of select, extracted comparisons based on She Figures, we believe that the following three figures provide an interesting backdrop for understanding the four individual contexts. Please refer to She Figures 2012 for further information and findings.



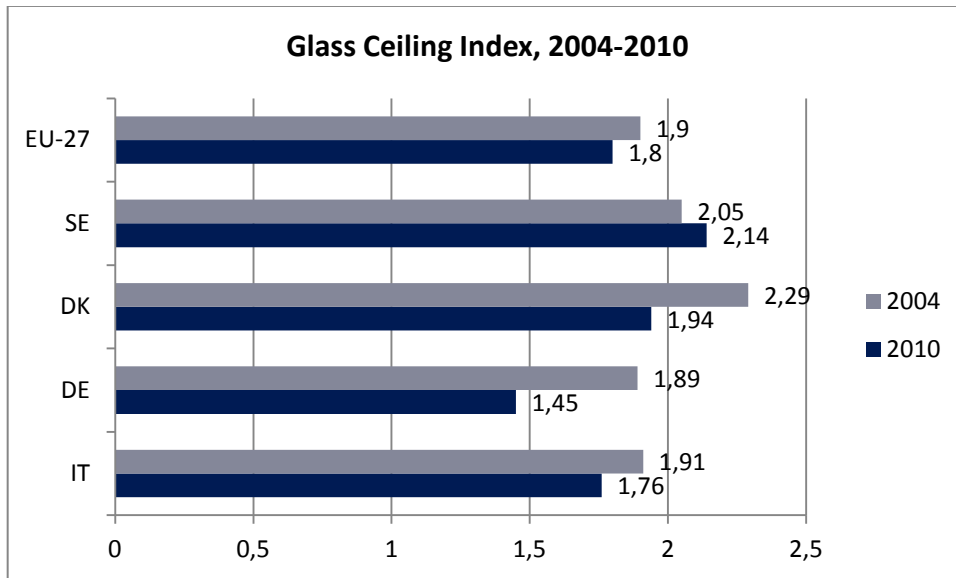


Extract based on She Figures 2012 (2013), p. 92

Explanatory note: According to She Figures 2012 (p. 87), the definition of Grade A academics is: “The single highest grade/post at which research is normally conducted”. For Sweden this means professors (p. 143); for Denmark professors, academic directors and department directors (p. 141); for Germany professors (C4/W3) (p. 140); and for Italy full professors (p.142).



Extract based on She Figures 2012 (2013), p. 116



Extract based on She Figures 2012 (2013), p. 96

Explanatory note: According to She Figures 2012 (p. 95), the Glass Ceiling Index (GCI) “measures the relative chance for women, as compared with men, of reaching a top position. The GCI compares the proportion of women in grade A positions... to the proportion of women in academia (grade A, B [researchers working in positions not as senior as top position (A) but more senior than newly qualified PhD holders, p.87], and C [the first grade/post into which a newly qualified PhD graduate would normally be recruited, p.87]), indicating the opportunity, or lack of it, for women to move up the hierarchical ladder in their profession. A GCI of 1 indicates that there is no difference between women and men being promoted. A score of less than 1 means that women are overrepresented at grade A level and a GCI score of more than 1 points towards a Glass Ceiling Effect, meaning that women are underrepresented in grade A positions. In other words, the interpretation of the GCI is that the higher the value, the thicker the Glass Ceiling and the more difficult it is for women to move into a higher position.”



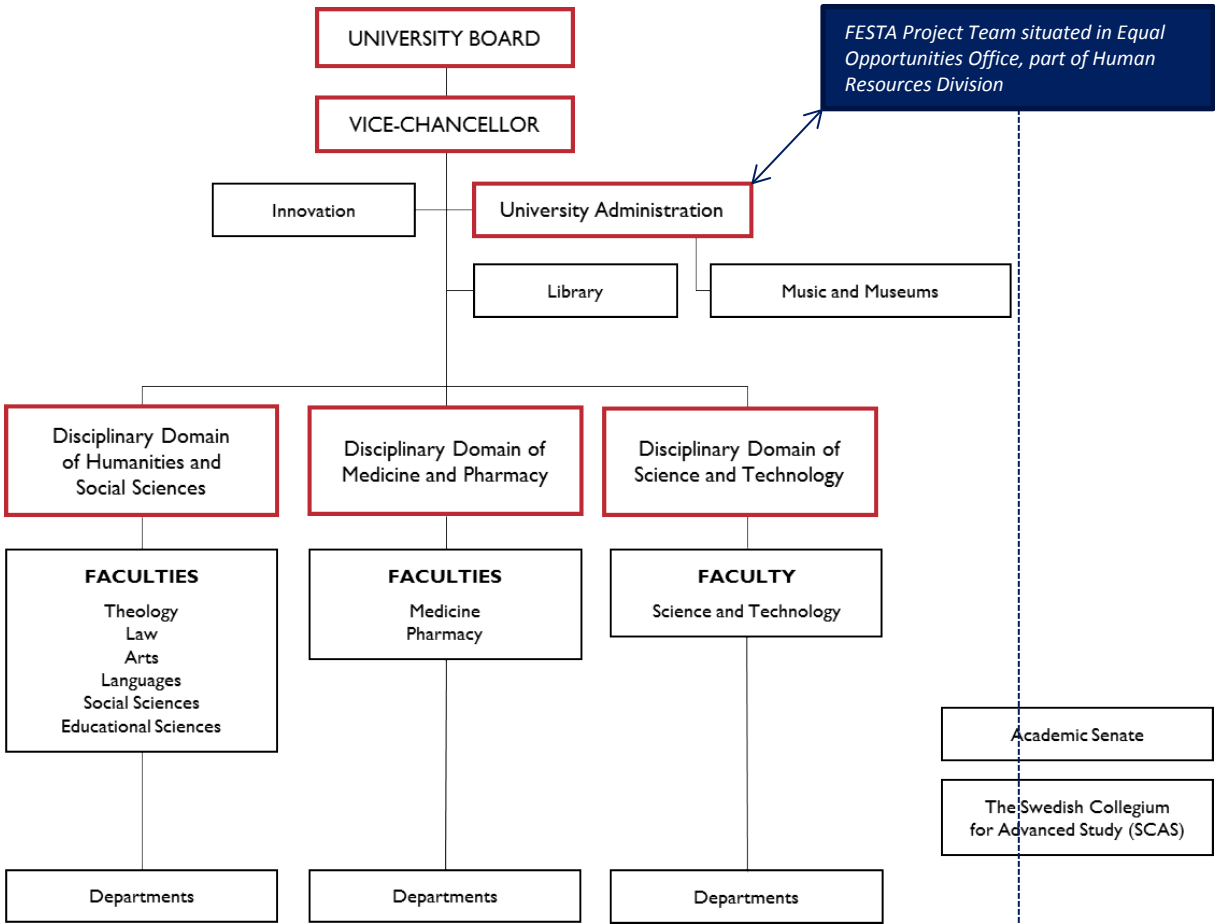
## UPPSALA UNIVERSITY (UU)



Tommy Westberg

### PARTNER UU

- Number of employees: c. 6,000. Some 600 full professors (24% women). 40,000 students, corresponding to about 23,000 full-time students
- Some 70 undergraduate programmes, about 60 Masters and over 2,000 freestanding courses
- Postgraduate education includes 2,400 doctoral students (49% women)
- Turn-over: 583 Million Euros. About 50% of research is funded by external sources
- Three Disciplinary Domains: Humanities and Social Sciences, Medicine and Pharmacy and Science and Technology. Nine faculties
- Participation in WP1, WP2, WP3.2, WP4.2, WP5.2, WP6.1+6.2 and WP7
- FESTA Project Team situated in Equal Opportunities Office, part of Human Resources Division
- Representing in FESTA: Science, gender/social studies and management/administration



The FESTA team is represented by:

- FESTA coordinator, task leader for task 5.2.: Minna Salminen-Karlsson, associate professor in sociology, researcher at Centre for Gender Research and gender equality specialist at Human Resources Division, Equal Opportunities Office.
- Coordinator for all tasks at Uppsala University: Nina Almgren, PhD in history and gender equality specialist at Human Resources Division, Equal Opportunities Office.
- Internal expert: Elisabeth Larsson, associate professor in scientific computing, senior lecturer at Department of Information Technology, Division of Scientific Computing.
- Team member task 3.2.: Louise Kennerberg, analyst at Human Resources Division, who has developed the gender equality indicators at Uppsala University before FESTA.
- Team member task 6.2.: Ulrike Schnaas, educational developer at Planning Division, Quality Enhancement and Academic Teaching and Learning, Development of teaching and learning.
- Team member task 6.1.: to be appointed.



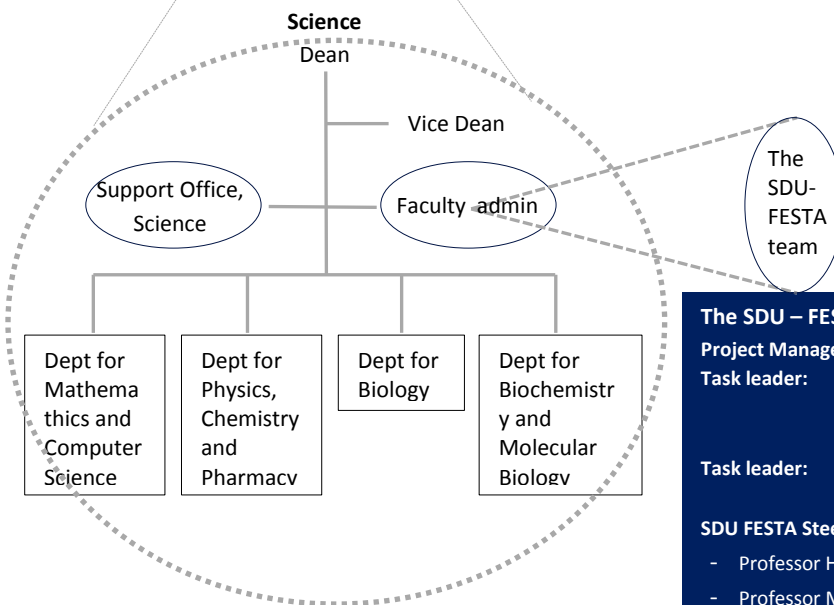
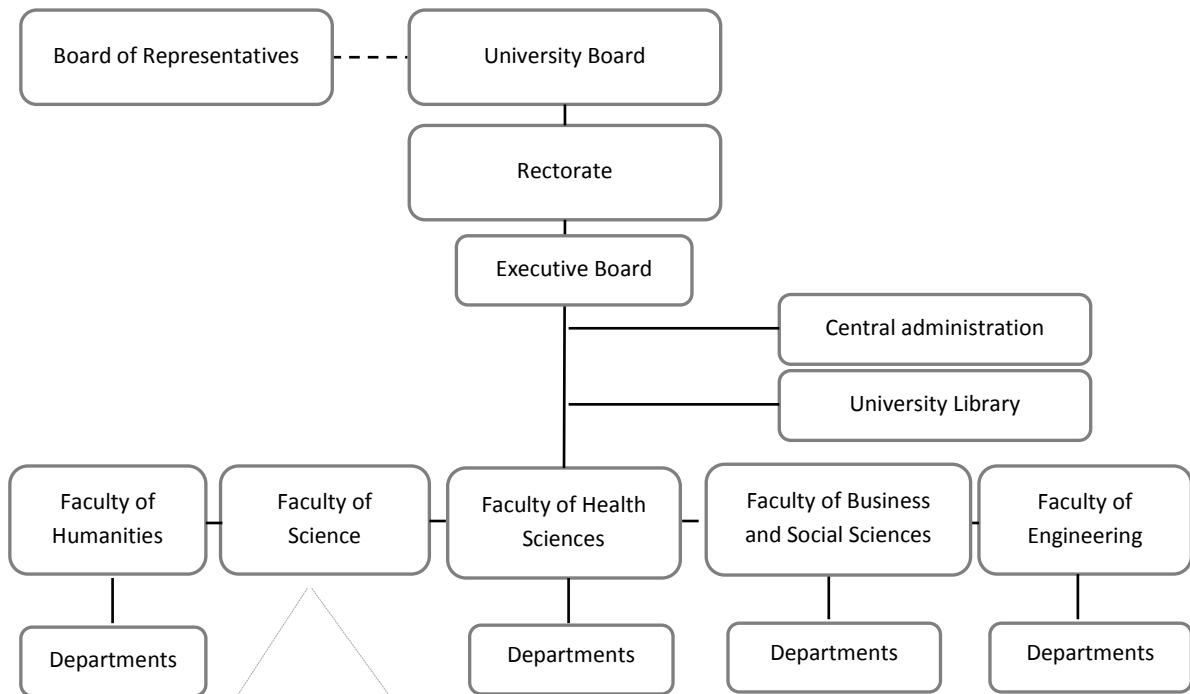
## UNIVERSITY OF SOUTHERN DENMARK (SDU)



Steen Høyer

### PARTNER SDU

- Number of employees (2012): 3,418. Scientific staff: 1,973. Tech/adm.staff: 1,445.  
Full professors: 223 (16% women)
- Postgraduate education includes: 881 doctoral students (58% women)
- Student body: 28,729 students
- Educational programmes: 93 BA (16 in English). 131 MA (67 in English). 21 professional Masters programmes. 11 diploma programmes (continuing education at the level of BA or MA), part time studies and The Danish University Extension
- Turn-over: DKK 351 mio €. Approximately 50% of research is funded by external sources
- Five faculties: Science, Health Science, Engineering, Humanities and Business and Social Science
- Participation in WP1, WP2, WP3.1, WP3.2, WP6.1, WP6.2 and WP7
- Project team situated in Dean's Office/Faculty administration
- Representing in FESTA: administration and leadership, gender specialist and Science
- FESTA SDU Steering Committee: Dean of Faculty of Science, Head of Department of Biology, Chair of SDU's central Equality Board and Head of unit for Organizational Development at the Human Resource Services



**The SDU – FESTA team:**

**Project Manager:** Eva Sophia Myers, Head of Faculty Admin

**Task leader:** Liv Baisner, Academic administrative officer and representative in the SDU Equality Board and Faculty Equality Board

**Task leader:** Gitte Toftgaard Jørgensen, Academic administrative officer

**SDU FESTA Steering Committee:**

- Professor Henrik Pedersen, Dean of Science
- Professor Marianne Holmer, Head of Biology
- Professor Nina Dietz Legind, Chair of SDU's Equality Board
- Chief Consultant Jakob Ejersbo, Head of unit for organizational and personal development

External supervision: Gender expertise, statistical expertise

## RWTH AACHEN UNIVERSITY



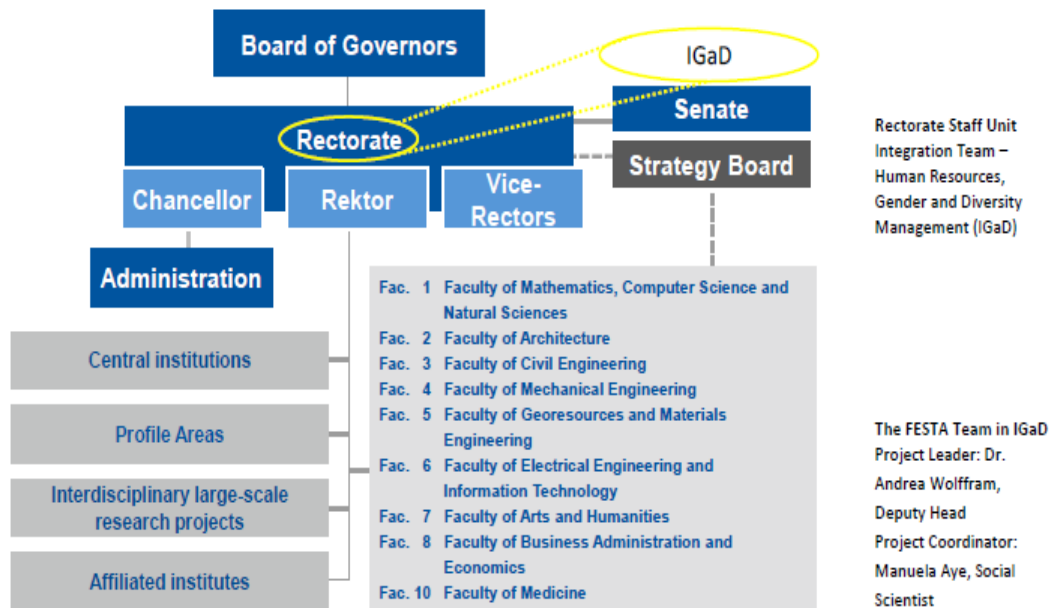
Peter Winandy

### PARTNER RWTH

- Number of employees (2012): 8253 (31% women). Scientific staff: 2022. (34% women) Tech/adm. staff: 1879 (43 % women), external funded staff: 2838 (25,65 % women).
- Professors: 512 (14,6% women) (Dez. 2013)
- Students: 40375 (31,1 % women)(Nov. 2013)
- Postgraduate education includes: 4049 doctoral students (31,7 % women) (2012)
- Educational programmes: 134 (BSc, MSc, BA, MA, PhD)
- Annual revenue: 793,6 mio € (321 mio € (40%) is funded by external sources) (2012)
- 9 Faculties (mainly engineering and natural science)
- Participation in WP2; WP3.1 +3.2; WP5.1-5.2; WP6; WP7
- FESTA Project Team: Integration Team – Human Resources, Gender and Diversity Management (IGaD)
- Representing in FESTA: gender, administration and leadership



## IGaD located in Governance Structure of RWTH Aachen



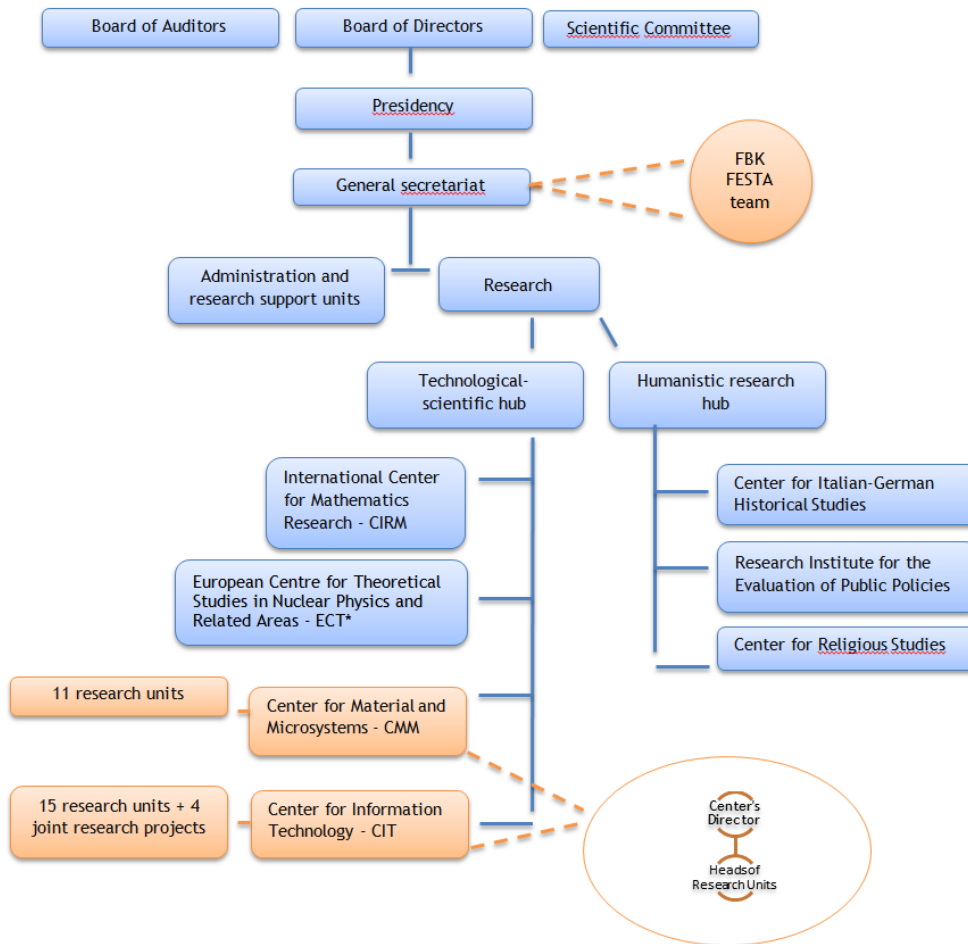
## FONDAZIONE BRUNO KESSLER (FBK)



C. Baroni – Archivio FBK

### PARTNER FBK

- Total staff (31.12.2012): 482 (33,0% women); research staff: 337 (23,4% women); Tech/adm staff: 145 (55,2% women)
- PhD students (31.12.2012): 88 (29,5% women)
- Senior researchers (level 1°): 22 (0% women); Senior researchers (level 2°): 48 (16,7% women)
- Two disciplinary domains: Science and Technology; Humanities and Social Science
- Four scientific-technological research centers
- Three humanistic research centers
- FESTA FBK steering committee: General Secretary, Head of HR and four FBK senior researchers.
- Participation in WP2, WP3.2, WP 4.1 + 4.2, WP5.1, WP6.2, WP7
- FESTA project team is situated in the General Secretariat
- Representing in FESTA: leadership, administration, gender/social studies and organizational studies



The team FESTA in FBK is represented by:

**Scientific responsible person:** Andrea Simoni, General Secretary

**FBK FESTA Steering Committee:**

- Alessandro Dalla Torre, Head of Human Resources
- Lorenza Ferrario, senior researcher of the CMM
- Ornella Mich, senior researcher of the CIT
- Anna Perini, senior researcher of the CIT
- George Pucker, senior researcher of the CMM

**Project Manager:** Ornella Mich, senior researcher of the CIT;

- Task members:** Tatiana Arrigoni (WP2),  
 Valentina Chizzola (WP5.1)  
 Mario Conci (WP7)  
 Anna Perini (WP6.2)  
 Barbara Poggio (WP3.2, WP 5.1)  
 Alessandro Rossi (WP4.2)  
 Liria Veronesi (WP3.2, 4.1, 4.2)  
 Marco Zamarian (WP4.2)

## COMPARISONS BETWEEN PARTNERS – DRAWING OUT THE DIFFERENCES

Differences between and defining characteristics of the participating partners are important in understanding the scope of possible actions and initiatives in our awareness raising task. They are also important in understanding the points of departure and therefore also for the four approaches represented in task WP3.2 – raising organizational awareness.

One important comparison between the four partnering institutions to highlight is the differences in percentage of women at senior levels compared to the percentage of women at the level of doctoral students. (Note that these figures cover the entire organizations):

	Senior academic positions (Grade A) <sup>4</sup>	Doctoral Students
UU	24%	49%
SDU	16%	58%
RWTH	14.6%	37%
FBK	-	-

In terms of organization, UU and RWTH share the characteristic that FESTA is situated within the main university administration close to the rectorate and/or within the HR department. UU, SDU and RWTH are all comprehensive universities, whereas FBK is a non-profit organization operating as a legal entity of private law in the scientific and humanist domains. Teaching is not part of FBKs activities. FBK hosts PhD students through specific agreements with universities. Its status as a research foundation means that it has its own governance structure and governing bodies different to a university structure.

In terms of gender context, UU and RWTH share the fact that they have national, focused and detailed gender policies, monitoring and follow-up practices.

At UU and RWTH, FESTA is integrated into a wide, well-defined and comprehensive set of measures. Thus, not only are the FESTA-teams of UU and RWTH situated in units that have gender, diversity and antidiscrimination as their primary objective and task, the initiatives within FESTA will continue, develop and deepen measures already in place in the respective institutions prior to FESTA and will continue also after the end of the FESTA project.

At FBK, the FESTA-project is the first self-financed gender initiative, with people employed on the project and there are no gender legislations or policies in effect, nor is there any gender equality office or organizational focus on gender. This has implications for the way the FESTA-team must introduce and negotiate the approach, the findings and the possible implications of FESTA with a wide array of people, levels and functions.

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<sup>4</sup> Please note, that this categorization does not account for the positions structure of FBK, where the positions are not grouped into academic positions but rather into contractual levels. This is also the reason why comparative data cannot be obtained for FBK.

At SDU, there are national policies and legislation, but no gender equality office. The organizational focus on gender is anchored in a loosely constituted University Equality Board with all units of the university represented. SDU differs from the other three partners in that the FESTA project is anchored in the management and general administration of the Faculty of Science and does not have gender expertise within the team. SDU as FESTA-partner represents science, management and administration and as such focuses on effecting direct and tangible changes within the FESTA-period. Also, at SDU, there is a task of effecting an integration of the FESTA-initiated measures and tools in the wider practices of the university via the Central Gender Equality Board.

UU and RWTH share the fact that the FESTA project is aligned with a firmly established gender equality organization and aligned with the organization's strategic objectives for gender and equality. However, as comparable as they are, there are still differences between UU and RWTH. At UU, many of the FESTA initiatives – notably the ones in task WP3.2 – aim at piloting new applications of the already established gender monitoring measures in three different departments with very different cultures, contexts and challenges. At UU, the work within FESTA will take place in smaller groups, such as the departmental gender equality groups and department management. At RWTH the FESTA-work is integrated into the university's general equality and diversity strategic work and is therefore mainly directed at the policy-making level and the rectorate and faculty managements.

At SDU and FBK, on the other hand, it is very much up to the FESTA-project to set anchor and negotiate integration of FESTA-initiatives into the organization and its strategic objectives and monitoring procedures.

Clear national differences prevail apart from the ones drawn out here<sup>5</sup>, among which it is evident that Italy stands out in a (Southern European) league of its own in comparison with Sweden, Denmark and Germany, who make up a much more homogenous, and Northern European, picture.

Detailed descriptions of the four partners' institutional context are provided in Appendix 1, and individual characteristics and conditions will also be apparent in the following sections.

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<sup>5</sup> See the European Equality Index (EIGE-reports) for further details and comparison of equality status in Europe: <http://eige.europa.eu/content/gender-equality-index>.

# METHODOLOGICAL MANUAL

## TWO SETS OF TOOLS:

- 1) FOR COLLECTING AND UNDERSTANDING STATISTICS AND
- 2) FOR TURNING FIGURES INTO AWARENESS

The Methodological Manual describes the two sets of tools we have developed for the task of raising organizational awareness. The first set is for collecting and understanding the statistics that make up the data-component of our task – the foundation from which we present and discuss organizational gender patterns. There are four tools in this set: *Tool 1.1: Dimensions*, *Tool 1.2: Hypotheses*, *Tool 1.3: Indicators*, and *Tool 1.4: Log Books* to document the decisions and actions we have undertaken along the way.

The second set consists of tools for turning figures into awareness. There are three tools in this set: *Tool 2.1: plans and scripts for dialogues at meetings and seminars*, *Tool 2.2: samples of discussion material* and *Tool 2.3: templates for action plans*.

In the following, the first set – tools for collecting and understanding statistics – will be presented together. In what follows directly after this introduction is first an overall description of the tools. Then follows a more elaborate presentation of each partner’s work with the tools. For reference and exemplification, three of the four tools in this first set – *Dimensions*, *Hypotheses* and *Indicators* – will be presented in Appendices 2 and 3. In order to illustrate the strong internal connectedness between the three tools, *Indicators* will be presented first in connection with Appendix 2 *Dimensions and Indicators*, and then in connection with Appendix 3 *Hypotheses*.

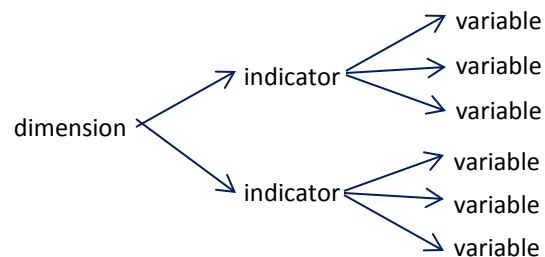
The second set – tools for turning figures into awareness – is somewhat more hypothetical in nature, since these tools pertain to the phase of the task which according to the project plan is just about to start (spring of 2014). Also, they do not have as much mutual overlap as the tools in the first set and they will therefore be presented separately and mainly in the form of samples.

# THE FIRST SET OF TOOLS: COLLECTING AND UNDERSTANDING STATISTICS

## TOOL 1.1: DIMENSIONS

The first tool, *Dimensions*, describes what it is we are trying to measure. Dimensions are not directly observable but define how to categorize and understand indicators. Dimensions also allow us to see if indicators validly and reliably show what they intend to point out. Indicators become measurable through variables. Thus, variables are observable facts which may say something about the dimensions via indicators. Dimensions may have more than one indicator and indicators may have more than one variable, and thus there may be more than one variable that shows aspects of the same dimension. This is the case when a dimension is multidimensional. Typologies, indices, scales and tests are examples of the combination of several single indicators.

Despite our different understanding and use of the terms – even within our small community of the four partner’s in FESTA, we will attempt a diagrammatic overview of the relation between dimensions, indicators and variables:



## TOOL 1.2: HYPOTHESES

Where dimensions describe what we are trying to measure, *Hypotheses* – our second tool – point to what we think or know that the indicators will display. The hypotheses we have each formulated are different and in this way reflect both our organizational context and position as agents within our respective organizations and the overarching strategic objectives stemming from these positions. The hypotheses are in different ways related to the dialogues and discussions in the units. In the following, our different ways and perspectives on how to formulate hypotheses will be presented.

## TOOL 1.3: INDICATORS

The third tool, *Indicators*, point to and illustrate the dimensions along which our data have been defined. Indicators become measurable through variables, and there may be more than one variable for each indicator. Descriptions of the source of the data – the where, how and by whom the data will be collected – is included in the indicator tool.

In the following four detailed descriptions, it will be clear how the task of defining indicators has been a dynamic and ongoing process with many turns along the way – in some cases the first designs have had to be abandoned, since data have been difficult or impossible to collect or have turned out to be less clear and indicative than initially supposed. In our definition of which data to collect, we have relied on the guidelines laid down in the Frascati Manual (OECD 2002).

Common to all the four partners' sets of indicators is the fact that they are defined in relation to other statistical measurements and management practices already established in the respective organizations, even though the extent to which measures are already in place varies. One of the objectives of task WP3.2 is to implement gender sensitive data collection into the standard practices of the institution – that is, integrate the data collected in relation to FESTA task WP3.2 with the organization's established procedures for collecting Key Performance Indicators, as well as providing reliable and useful data for gender and equality strategies and plans in the organization. In the description of each partner's indicators examples of the degree and manner of how this integration will take place are provided.



## TOOL 1.4: LOG BOOKS

The fourth tool we have made use of is *Log books*. Log books serve one main function, namely recording all the big and small decisions and actions along the way in formulating indicators and processing data, so that it is possible for us to track the ensuing implications of our decisions and actions. Log books are particularly useful as a memory aid in the complexity of data processing.

Since they have mainly served as a working tool for these purposes, the log books in their entirety will not be presented here. Instead, as our log books fill an important function in the following four accounts of how our indicators have ended up looking as they do, they will therefore be presented, if only indirectly, in the following four descriptions of the other tools.

In order to give an idea of how we have actualized the log books in different ways, the next page shows a few examples of log entries. These are intended merely as samples of usage and are neither comprehensive nor fully representative (thus, only samples from three of the partners are shown here):

### SDU LOGBOOK

DATE	TOPICS	WITH WHOM	WHERE	RESULTS
June 28 <sup>th</sup> , 2012	The database PANDA and its information regarding funding applications	Officer at the faculty's pre- and postaward unit, FESTA-team	Support Office Science	We defined the exact form of data we need from PANDA for the Indicator "Patterns of funding application"
Nov 13 <sup>th</sup> , 2012	The definition of activities to be included as variables for the Indicator "Scientific production". Moreover which publications count as scientific production?	Vice-Dean, FESTA-team,	Dean's Office, Faculty of Science	Definition of variables for Indicator "Scientific production" completed.
Jan 31 <sup>st</sup> , 2013	Definition and collection of data from Scientific Citation Index	Librarian at SDU's research library, FESTA-team	SDU Library	At the meeting with an expert from the Library at SDU we defined extract of data from Science Citation Index with respect to the variable "citation" under Indicator "Scientific Production".

## RWTH LOGBOOK

DATE	TOPICS	WITH WHOM	WHERE	RESULTS
Sep 18 <sup>th</sup> , 2012	Presentation of our indicator catalogue	Vice-Rector, Deputy Chancellor, Head of Division. Head of Division., Dr. Andrea Wolffram, Manuela Aye (FESTA-Team)	Rectorate	We supported the indicator catalogue and axed a few individual indicators because they aren't realizable (for data protection).
Dec 10 <sup>th</sup> , 2012	Presentation of our indicator catalogue, Scan of the data availability	Head of Department, Head of Division, Head of Division, Dr. Andrea Wolffram, Manuela Aye	Department of Human Resources	First round of clarification if data are available with regard to indicators based on personnel factors
Dec 19 <sup>th</sup> , 2012	Presentation of our indicator catalogue, Scan of the data availability	Head of Department, Head of Division, Head of Division, Dr. Andrea Wolffram, Manuela Aye	Department of Academic Affairs and Registrar's Office	Among others: prices, courses/lectures

## FBK LOGBOOK

DATE	TOPICS	WITH WHOM	WHERE	RESULTS
May 23 <sup>rd</sup> , 2012	The measurement of the scientific production and of networks	Research Assessment Unit	Research Assessment Unit	Quantity and type of publication (articles of Journal and conference proceedings) as indicators of the 'scientific production', quantity and destination of business trip as indicators of 'Network'.
June 15 <sup>th</sup> , 2012	Selection of indicators relating to contractual terms	HR Unit, Accounting Unit, General Secretary	HR unit	Evaluation of the reliability of the selected indicators
Aug 1 <sup>st</sup> , 2012	The new HR management software INAZ	HR Project Manager, Accounting Unit, HR Unit, General Secretary	HR Unit	Import of the selected indicators into INAZ
Aug 7 <sup>th</sup> , 2013	Requisite for the new data warehouse	General Secretary, HR Unit	General secretary	Import of the selected indicators into the new FBK data warehouse

## **PARTNERS' DESCRIPTIONS OF THE PROCESS OF CONSTRUCTING *DIMENSIONS, HYPOTHESES AND INDICATORS***

The following four sections describe the process of constructing the three tools: *Dimensions, Hypotheses and Indicators* at each of the four partnering organizations.

### **UU: CONSTRUCTING *DIMENSIONS, HYPOTHESES AND INDICATORS***

Uppsala University started to work on statistical gender equality indicators before FESTA. The initiative was already taken in 2004 by the central Gender Equality Committee (now Equal Opportunities Council). Six years later, financing from the state Delegation for Gender Equality in Higher Education gave the work a real boost. The fact that a project leader, Louise Kennerberg, could work full-time with the indicators was crucial to complete the indicators (Kennerberg 2012). The point of departure for the work was to complete a well-functioning self-evaluation and mapping tool to facilitate the gender equality work. The target group for the indicators was primarily persons responsible for and working on gender issues at departments/faculties/equivalent, e.g., gender equality officers, personnel administrators and heads of department. The indicators were also meant to serve as information to all employees and students at the university.

The availability of gender statistics is essential to enable the university to work towards promoting gender balance among staff and students. According to the Swedish Discrimination Act (SFS 2008:567), all employers should promote gender balance in different types of jobs and in different categories of employees. Furthermore, it is the employer's duty to act to reduce and eliminate differences in working conditions and make it easier for all employees to combine work and parenthood. The Swedish Higher Education Act (SFS 1992:1434) also stipulates that universities should observe and promote gender equality, and actively expand their recruitment.

Uppsala University has, in its Equal Opportunities Programme, formulated objectives consistent with the legislative texts. The programme specifies that the university will work to ensure, with respect to employment categories, including that of doctoral students, that every workplace (department, unit, etc.) is characterised by an equal gender distribution. This also applies to the student populations of each first-cycle course or study programme/discipline. By "equal gender distribution" a distribution according to which each gender accounts for at least 40% of the total is implied.

The gender equality indicators were intended to provide an easily accessible quantitative description of important equality aspects of the university. For people actively working with gender equality work, the

tool would mean that it was no longer necessary to individually compile these statistics. This would mean time saved which might lead to more time for other areas of gender equality work. Ultimately this could result in more effective gender equality work and to more informed questions being asked.

The ten indicators which existed before FESTA are the following:

- Employees: leadership positions, positions, form of employment, parental leave and sick leave.
- Doctoral candidates: degree of (research) activity, financing and third-cycle (licentiate/doctoral) degrees.
- Students: registered students and first- and second-cycle degrees.

The indicators are illustrated by a meter and a table (see samples of discussion material). They are of two different types with two different methods of calculation:

1. "Co-indicators" measure the difference between the proportion of women and men in a given group, such as the percentage of registered students who are women and men. Indicators of this type: leadership positions, positions, first- and second-cycle degrees, registered students and third-cycle (licentiate/doctoral) degrees. Goal: at least 40 per cent of each sex in a group (as defined in the Discrimination Act).
2. "Separate indicators" measure the relative difference in the proportion of women and men belonging to a specific group. For example, the percentage of women who are sick long-term and the percentage of men who are also sick. Indicators of this type: form of employment, parental leave, sick leave, doctoral candidate's (research) activity and financing. Goal: no more than 5 percentile point difference between the relative proportion of women and men belonging to a category.

The indicators are available on university, disciplinary domain, faculty and department level for all students and employees at Uppsala University. However, on department level only heads of department, gender equality officers and personnel administrators can see the sensitive indicators for parental leave, form of employment and sick leave for their own department. It is easy to compare the various disciplinary domains, faculties, departments and disciplines with each other and also see how the gender distribution has changed over time, from 2008 and onwards. It is possible to compare form of employment, parental leave and sick leave between other research staff, other teaching staff, doctoral candidate, senior lecturer, professor and support function.

At the outset of the Uppsala University work with indicators it was important to clarify whether the indicators would rest on a specific theoretical basis. The premise of the earlier work with the design had partly been a theory of gender structure designed by Anna Wahl and others (Wahl et al 2001), and

partly the key figures for gender equality defined by the Swedish University of Agricultural Sciences. However, there was no detailed analysis on the likelihood that the specific indicators could measure the factors that were mentioned in theory. Therefore it was decided that the specific choice of indicators would not be justified by a theory as a starting point, but rather due to the fact that they represent factors that are available in the statistics and that can be measured for the entire university.

The numbers are taken directly from the university's data systems: Primula, which is the university's payroll and HR systems, and Uppdok, which is part of the national LADOK system for student administration. Thus no extra reporting is required and the data becomes more reliable and comparable. The choice of indicators has also been based on Uppsala University's gender equality efforts as well as on detailed knowledge of the university's organization from a gender perspective. It is important to note that the indicators refer to three of the five areas, which have been specifically pointed out by the State Delegation for Gender Equality in Higher Education, namely differences between women and men with regard to study rate, dropouts and propensity to complete degrees, women's and men's differing opportunities for research careers, and the gender imbalance at senior positions in the university.

One of the ideas with the indicators was that they would raise awareness about what gender equality can entail since they highlight several different aspects of gender equality in such tangible ways. The gender distribution among professors is something that is often discussed but differences in sick leave, parental leave or form of employment is perhaps something which less frequently comes up. Here the indicators were intended to serve as "eye openers".

Because we already had done a lot of work on indicators, our intention with the FESTA project was to be able to present our way of working and to find out if there were indicators we had missed, and also if other universities/research organizations had found simple methods for collecting data for indicators that we had not included, due to the work that would be required to keep them continuously updated. In general, we based the discussion and the selection of indicators on two questions: How can we use the indicator in our work for gender equality on a permanent basis, even after the end of FESTA? Is the usefulness of an indicator worth the effort of collecting and analyzing the relevant data, a) as a once-off occurrence, or b) continuously after the end of FESTA?

Considering these two questions, our preliminary suggestion for the FESTA-project at Uppsala was:

- 1) To continue with the indicators at Uppsala University already in existence prior to FESTA.
- 2) To include age in Uppsala University's existing indicators on leadership positions, positions, form of employment, parental leave and sick leave. We planned to include age not by year of birth, but in intervals, to make groups that are big enough to avoid integrity problems.

- 3) Uppsala University would be the site for a national pilot study on how the gender distribution of internal research resources can be tracked. Our way of conducting that study would benefit FESTA too.
  - 4) To see if and how it is possible to extract (the official) gender distribution of teaching/research duties from our current staff database. (This would be done by seeing from which accounts the persons in question are paid.
  - 5) Differences in salaries between women and men can now be found on the university web on faculty level for all employees and on department level for heads of department and personnel administrators, but not in a reader-friendly format. We have found that it is difficult to create any defined salary indicator similar to the other indicators. The salary statistics as a whole will be redesigned in 2014-2015. We will work on improving the interface for gender and salary statistics, and link to that from the indicator webpage. As salaries are negotiated individually, they may vary considerably within each category. The salaries are set in local negotiations between the university and their union counterparts. At Uppsala University agreements have been reached concerning special salary grades for doctoral candidates. The salary for doctoral employment is also dependent on the progression of research. On completing 50% and 80% of the doctoral studies, salary is raised in accordance with a 'ladder' model.
  - 6) To extract turn-over/retention data from our present databases. We already have an indirect indicator for the gendered distribution of turn-over/retention as we have the gender distribution of the different positions and can see how they differ. We also intend to extract data on people who leave Uppsala University, or leave their research career at the university (e.g., to go into administration) outside these positions (as senior lecturers/professors, in the middle of their doctoral studies or post doc periods).
  - 7) To do statistics on success rates of applications from women and men to postdoctoral research fellow, senior lecturer and professor positions. This had to be done by extracting data from the electronic application system of the Faculty of Science and Technology, where every applicant marks his/her gender. This would be done once for the time period 2008-2011, to check and evaluate the effort/value ratio.
  - 8) To work for the possibility of obtaining gendered output from and including particular questions in the coming university-wide employee satisfaction survey.
  - 9) Information and documentation on the gendered composition of investigative and decision-making bodies would be manually collected from administrators at the faculty and each of the six departments involved in the FESTA project.
  - 10) To NOT collect data on publishing, conferences, success in external fund applications etc, since
    - a. This would require extra effort, which is hard to sustain after FESTA.
    - b. We did not know how to generally use this kind of data in our gender equality work.
-

For several reasons, specified below, the following indicators were deleted from the first draft:

- 1) Registered students and first- and second-cycle degrees. These gender equality indicators existed before FESTA, but are not included since FESTA is concerned with implementing changes in the working environment of academic researchers. We have also deleted support functions from positions for the same reason.
- 3) Internal research resources. The study at Uppsala University suggests that it is possible to extract such basic data in different categories of staff and disciplines from our current data systems. Deeper information on the individuals who receive the funds – in the form of salary and/or for financing other costs – can also be extracted from our systems, but requires much more work and takes longer. Uppsala University might take part in a study on the gender distribution of internal research resources conducted by the Swedish Agency for Public Management, which has been instructed by the government to do such a survey/analysis in a few universities. We have pushed for this, since Uppsala University with its highly advanced monitoring systems served as exemplary case in the national pilot study. This, however, falls outside the scope of FESTA both in terms of timespan and extent, and for these reasons, this indicator has therefore been left out of the present task.
- 4) Teaching/research duties. We cancelled this indicator along the way because the effort/value ratio was unreasonable.
- 6) Turn-over/retention. It was not possible to extract such data from our present databases.
- 8) Job satisfaction and motivation. In the current situation the university will not make a wide employee survey, which requires a huge effort to implement and does not give as specific results as if implemented when needed or requested by the heads of department. In the second case, the survey can be tailored to the department concerned (they can choose to focus on some parts). Therefore heads of department/equivalent are instead given the opportunity to survey the work environment in the work place by using the tool work environment indicator. It requires an unreasonable amount of work by the departments to call for this indicator and therefore we chose to leave it out.
- 9) Investigative and decision-making bodies. We omitted faculty organs as we work on department level.

The indicators in existence prior to FESTA are presented in the General management information system (GLIS), which is an internal portal at Uppsala University's web that collects several statistics regarding the activities of the university. All information about the underlying statistics and all calculations have been made available on the web. This is critical for the credibility of the indicators, especially in a scientific-technological organization where mathematics and calculations are common tools. A further advantage of a thorough record is that it is easier to make adjustments or further developments of the indicators.

The design of the ten original indicators was carried out at the Equal Opportunities Office in collaboration with the central Gender Equality Committee and its chairperson, people working with the different statistical systems, groups and researchers at the university. Tests were carried out in equality groups in five departments. These tests were intended to anchor the indicators among persons belonging to the target group and to receive feedback and suggestions for changes. Our new indicators included in WP3.2 have been discussed with the persons involved in the project and the former head of Equal Opportunities Office. We have also been in contact with people at the Faculty Office for Science and Technology and our chosen departments to find out how to collect and extract relevant statistics.

Uppsala University's existing web tool is to be used long-term in the university's gender equality work. There the indicators are updated at the start of each year with last year's data. The system is built up year by year so that it is possible to compare the years in an ever increasing database. The tool is also continuously refined and this work will go on after FESTA, although to a lesser extent. The existing indicator tool is managed by the Human Resources Division.

The new indicators which are not part of the university data systems will initially be presented to different gender equality groups and heads of department at the chosen departments in the framework of FESTA. Whether the collecting and processing of the new indicators will be continued will depend on an evaluation of the effort/value ratio. We will find out if it is possible for the Faculty Office for Science and Technology to continuously process data on gendered success rates for appointments. Gender balance in investigative and decision-making bodies is already formulated as standing assignments in the equal opportunities plans for the departments along with nominating regulations to make them achieve that end.

At Uppsala University each department/equivalent with at least 25 employees must draw up a gender equality plan every three years. The individual unit plans must be grounded in the pan-University gender equality plan and the corresponding faculty-level plan. We are going to bring together the work with gender equality plans at department level with this task and thereby making it part of the regular gender equality work. Three out of six chosen departments have decided to work with the indicators. We will support them in analyzing the indicators and creating action plans to improve the statistics, as well as follow how the action plans are put into practice.

As the name suggests, indicators are supposed to give an *indication* of the current gender equality situation (and trends over time) and in that way provide support for priorities in the gender equality work. Where indicators suggest gender imbalances follow-up is needed in terms of qualitative analysis before conclusions can be drawn and proposals for action formulated. For example, gender imbalance in sick leave may indicate gender-specific differences in the physical and psychosocial environment, but



we have to carry out a gender equality analysis to find out if this is actually the case or if there are natural explanations (e.g., exceptional circumstances in any given year, a “small base” value, age distribution etc.). In that sense the indicators are not in themselves unambiguously correlated to gender equality.

We believe that the data provided by the indicators give people working on gender equality more time to do the essential analyses of what the numbers mean – i.e., to conduct more interpretative analysis of the indicator values – and to formulate action plans. The departments will then have room and power to implement the measures they consider necessary. We think, that we (the FESTA-team) – together with the departments in the FESTA frame – will find a way to work that can be applied to more departments and ensure continuous work with indicators, also after the end of FESTA. At the moment of writing this toolkit, the Equal Opportunities Office is implementing a template for the three-year gender equality plans (see the section on Tool 2.3 Template for action plans below). The indicators have been integrated into this template, thus motivating the departments to regularly make use of them. Moreover, a high-priority target for gender equality work in the action plan for equal opportunities 2014-16 at Uppsala University is to investigate the application of gender equality indicators at the local level (to be approved by the Vice-Chancellor).

In defining the dimensions, we have followed a pragmatic approach based on experience with the organization of gender equality work and our existing indicators and variables. Initially we structured our indicators according to dimensions that were more in line with SDU’s and FBK’s, i.e., we set out to measure gender equality in work and study conditions, parenting and career development. Later on, we decided instead to define the dimensions in the frame of standing assignments to departments/ equivalent at the university as our function is to facilitate and monitor the work with, for example, writing gender equality plans. It is the stated objective of Uppsala University that Gender equality work must be integrated into all activities of the university. This means that the work primarily consists of standing assignments in various parts of the organization. These assignments are formulated in general terms in order to be applicable to all operations. How the assignments have been concretized is to be accounted for in the annual follow-up, which every department must do.

We have structured our indicators according to the following four dimensions/standing assignments:

- Work and study conditions
  - Form of employment
  - Parental leave
  - Sick leave
  - Third-cycle (licentiate/doctoral) degrees
  - Doctoral candidate’s degree of (research) activity
  - Doctoral candidate’s financing

- Leadership positions, investigative and decision-making bodies
  - Leadership positions
  - Investigative and decision-making bodies
- Salary
  - Salaries per position and age
- Recruitment
  - Positions
  - Success rates of appointments to senior lecturer, professor and postdoctoral research fellow positions

The hypotheses we have formulated for every indicator (see Appendix 3) point to what we think or know the indicators will display. As Uppsala University started to work with gender equality indicators prior to FESTA, some facts were already known and we had an understanding of what these facts indicated. For our newly added indicators, the hypotheses point rather to what we think they will show and what the expected facts may give an indication of.

We intend to use the indicators to shift the focus from “fixing the numbers of women” to “fixing the institutions”. We expect that the action plans based directly on the indicators will improve the indicator values. However, we also believe that to create a working environment where indicators will point to gender equality in a permanent and stable way, even long-term actions, which aim at changing norms and practices, are important – such as the FESTA actions of changing gendered perceptions of excellence and informal decision-making processes.

## SDU: CONSTRUCTING *DIMENSIONS, HYPOTHESES AND INDICATORS*

From the outset, the FESTA project was defined as strictly a faculty concern – and *not* a University of Southern Denmark project. At the university level, FESTA at the Faculty of Science has recently been termed a pilot project for a number of initiatives for the entire university inspired by FESTA and formulated by the Vice-Chancellor’s Gender Equality Board (GEB). Our ambition with the collection of statistics in WP3.2 is to show results and effect with our project and lift the collation and perspectives of statistical material to become an integrated part of the statistical reports at SDU and thus embedded in the central administrative procedures. This process takes place through GEB.

SDU does not collect gender related data in a single database and therefore we have had to establish a baseline in the first place. This entailed a decision to collect as much data as possible even though the effort/value ratio was poor. Furthermore, we have had to consider how to divide the datasets between iterative collations that can be integrated into SDU’s overall reporting and monitoring practice subsequent to FESTA and once-off more qualitative collections conducted within WP3.2.

The scope of the indicators and the processes for data analyses were approved by an internal WP3.2 Steering Committee, as well as the faculty management group. Moreover, at various critical stages in the data collection and evaluation process we have consulted with a gender equality expert, a social scientist and an in-house statistician for gender expertise as well as for reliability and validity of the data. In the process of defining indicators and possibilities for collection of data we have had meetings with the different central administrative units at SDU: the budgeting unit, the library, the pre-award support unit, the HR-unit.

Our data stem primarily from existing but unjoined data sources, both national and institutional:

- ØSS-data are general SDU data from the payroll system
- PU:RE is a Danish database where information on researchers, publications, research projects and research activities can be found
- PANDA is a specific SDU database where applications for external funds are registered as well as information on granted and non-granted applications.
- “Trivselsundersøgelse”<sup>6</sup> is SDU’s tri-annual job satisfaction survey (the latest conducted in the fall 2012).

The baseline and database were established by collecting data with the different units and departments, who delivered data to the project. Data have been collected on an individual level but analyzed and presented at an aggregated level. The data are registered in an SPSS-database, cross-tabulated with

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<sup>6</sup> The English term is: ‘Job satisfaction survey’

each other and then exported to an Excel spreadsheet. Our data are also cross-tabulated with other national reports and international findings on relevant subjects. The data analyses will be published in-house in a report with an appendix where all tables are collected. In addition,, the most salient points will be presented in a powerpoint-presentation illustrated with graphs and tables. These together will serve as the basis and documentation for the awareness raising dialogues in the units.

The development of the baseline is only for the purpose of FESTA and will not be continued after FESTA (unless the GEB and the EB decide otherwise). The ambition, however, is that individual data which form parts of the baseline will be integrated in the overall SDU monitoring procedures. The first step of this integration has already taken place as SDU's Executive Board approved the new strategy for 2014-2016 on the basis of input from GEB. SDU's Executive Board has decided that the Academic Councils, heads of department, Department Councils and the Faculty Equality Boards have to discuss statistical data and relate these to the gender distribution of the respective units. This is to serve as basis for implementing specified targets and policies for gender distribution at the various levels of management and leadership. The stated purpose of this plan is to raise organizational awareness and in a wider perspective to initiate change.

Due to the Act to amend the Gender Equality (Consolidation) Act No. 1678 of December 19<sup>th</sup> 2013<sup>7</sup>, SDU, along with all Danish universities, is legally obligated to report gender balance data to the ministry. In addition, as part of the University Contract, SDU is obligated to meet defined targets to ensure a balanced gender distribution among permanently employed academic staff. Furthermore, the faculty equality boards and GEB report their activities to the Executive Board once a year. As part of the gender strategy for SDU in the period of 2014-2016, presented to the Executive Board in December 2013, several of the FESTA-projects at the Faculty of Science will serve as university pilot projects, where the experiences from the FESTA-project will be incorporated into relevant activities at SDU<sup>8</sup>.

We have chosen to structure our data along the following three dimensions:

- Gender equality in career development
- Gender equality in research (production and funding)
- Work/life balance

These three dimensions are made measurable through the following indicators:

- Gender equality in career development:

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<sup>7</sup> Bekendtgørelse af lov om ligestilling af kvinder og mænd, LBK nr 1678 af 19/12/2013

<sup>8</sup> This includes improving meeting culture (WP6.1), for example as part of the activities in the SDU leaders' network as well as in the introduction programme for leaders, and as a professional training course as part of SDU's in-house training catalogue. The objective of this is to improve the ways meetings are conducted at SDU by training people responsible for meetings in general facilitation skills as well as gender and diversity sensitization. Experience from the FESTA task WP6.2 – PhD Supervision will be incorporated in SDU's general course for PhD supervisors and in other relevant activities.

- Patterns in hiring
- Gender profile of Councils, committees and boards
- Gender profile of Leadership and management
  
- Gender equality in research
  - Scientific production
  - Patterns of fund application
  
- Work/Life balance
  - Parental leave
  - Job satisfaction and motivation

The following variables/indicators have been weeded out:

- “Permanent/restricted time period” and “Working hours”:  
 The idea with this indicator was to cross-tabulate data on type of contract (permanent/restricted time period), working hours and salary against age, gender and position. However, the Human Resource Services and the Financial Services at SDU have estimated that at an organizational level it is too difficult to obtain data on type of contract and working hours. Moreover, data on salary is too sensitive a subject, as it is not possible to keep confidential, which is a legal right in Denmark.
  
- “Absence and leave”:  
 The idea with this indicator was to look into patterns of gender roles related to absence and leave, by comparing the patterns of this for younger male and female researchers and cross-tabulating the data with the data on work/life balance. Moreover we wanted to compare our data with national statistics. However, the numbers are too small.
  
- “Recruitment”:  
 Our thought in the first place was to be inspired by data from the FESTA task concerning excellence in hiring (WP5). The indicator has been lifted out due to the fact that this type of data can only be collected on an individual basis and cannot be integrated into general monitoring practices, and is furthermore too sensitive.
  
- “Leaders’ use of statistics”:  
 We chose to redefine this collection not as part of the dataset but as part of the evaluation of task WP3.2. Moreover, together with the relevant SDU units, we have defined this as more relevant on the SDU-level.

- “Retention and turn-over”:  
A survey on reasons for terminating employment at SDU was originally carried out by the Human Resource Services for the GEB in the fall of 2012. However, the survey had too few respondents, and the reliability and validity of the data has consequently been deemed not up to sufficient standards.
  
- “Parental leave”:  
Initially we planned to supplement statistical data on parental leave with a survey in order to investigate: Is there variation in younger scientists’ use of maternity/paternity leave compared to older scientists? How many female/ male scientists take parental leave? And for how long? And when do they start their parental leave – three weeks or one day before birth? How much do scientists work during their parental leave? Do male scientists on parental leave use it as a way to advance quicker? However, we have decided not to do a survey due to the sensitive nature of the subject.
  
- “Internal councils, committees and boards”  
Initially we planned to supplement statistical data on engagement with internal councils, committees and boards with a survey in order to investigate: how much average time do scientific personnel use on councils, committees and boards? How active are female scientists in councils, committees and boards? Is there a correlation between how engaged female scientists are in networking and how their careers advance? Are female scientists more often active in educational/ study related councils, committees and boards? However, we have decided only to collect these data once as a supplement to a baseline and have decided to not do a supplementary survey, due to time and effort/value-ratio considerations and also due to the fact that information on internal committees and boards have only relative interest, especially when the same information on external engagement can at best only be sketchy.
  
- “Scientific production”:  
Initially we planned to supplement statistical data on scientific production with a survey and interviews in order to shed further light on prevailing norms and traditions within disciplines for publishing etc., if there seem to be consistent internal differences between disciplines. However, we have decided that a survey and interviews are beyond the scope of the present project.

For each of our indicators we have formed hypotheses in the form of positively stated beliefs of what the indicator will show. The variables – that is, the data collected – can then either confirm the hypothesis or the opposite. See Appendix 3 for the specific hypotheses.

## RWTH: CONSTRUCTING *DIMENSIONS, HYPOTHESES AND INDICATORS*

At RWTH Aachen University the work on monitoring numbers and structures of employees and gender equality activities was initiated with the introduction of the Gender equality action plans in 1998, where it became mandatory for German universities. This happened with the passing of the States gender equality law (LGG) and the demand for developing gender and diversity strategies initiated by the Federal Ministry of Education and Research and a German funding body. The first equal opportunities strategy of RWTH Aachen (2008-2012) – developed as part of the Professorinnenprogramm (programme for female professors) launched by the Federal Ministry of Education and Research in 2007, and the statement on the implementation of the German Research Foundation (DFG) research-oriented standards on gender equality at RWTH Aachen in 2008 – primarily focused on the goals of equal opportunities for women in science and promotion of family-friendliness. In 2013 a follow-up of the first equal opportunities strategy was carried out.

With the help of gender controlling, the RWTH Aachen University seeks to anchor equality awareness in their planning and control systems, following a gender mainstreaming approach. Based on binding equality goals whose achievement can be verified, the rectorate embraces the implementation of equal opportunities measures as a management task. The goals and measures, which are defined in the equal opportunities strategy and in the statement on the implementation of the DFG standards, are evaluated on a regular basis.

Gender controlling thus contributes to making the status quo and the goals of the equal opportunities activities at RWTH more transparent and to analyze the effectiveness of gender equality measures. In the long term, the objective is to raise awareness of gender and diversity issues at the university, with the ultimate aim to result in a culture that considers the diversity of students, faculty and staff a valuable resource and which has processes in place that are free from discrimination.

In the context of FESTA we have defined four areas (fields of action) and their respective dimensions where we wanted to look deeper into gender equality demands and which indicators it would be possible to collect. In other words, we are looking for measurable gender gaps in our institution where, up till now, no deeper attention has been paid, and our aim is to describe and analyze them annually.

A number of common underlying theoretical assumptions derive from both the gender studies and the gender mainstreaming approach when it comes to measuring the fairness of opportunities between genders. However, there is a crucial difference between gender studies and gender mainstreaming as a political strategy. Gender studies describe scientific analyses of existing gender relations, while the main concern of gender mainstreaming as a political strategy is to institutionalize gender justice into society. While the concept of gender studies is committed to reflection, ascertaining the (a?) truth and causing uncertainty in existing relations, the term gender mainstreaming stands for empowerment as an enhancement of creative options and a positive increase in power. Despite this difference, Degele points out (2005) that the strategy of gender mainstreaming combined with gender studies is well suited to be a reorganizational approach with regard to gender equality. However, this can only be the case, if the strategy does not confine itself to its descriptive and normative means but is also implemented into the practices and structures of an organization. In reference to the RWTH, the aim is thus effective integration of this concept.

RWTH has developed a gender and diversity strategy and established four major fields of action: in the field of science and education and in the realm of organization and employment. Whereas the first two fields deal with issues that refer to the university as a research and educational organization, the second group is concerned with issues that refer to the university as employer. Thus, the gender and diversity strategy focuses on the areas of research and teaching, organizational and human resource development.

In reference to research and teaching, RWTH focuses on the institutionalization of gender and diversity as knowledge integrated with the content of education and research, i.e., establishing gender and diversity as acknowledged independent scientific disciplines, raising awareness in teaching bodies and promoting interdisciplinary research.

With regard to the organizational and personnel development the focus is on data that not only counts heads on the different steps of qualification levels but also makes visible gender inequality in working and contract conditions. Finally, the main aim of the gender and diversity strategy is a change in the scientific culture towards more gender justice. (e.g., Leicht-Scholten & Wolfram 2010). Furthermore, Kraus (2010) mentions four problems that can produce bottlenecks for women's academic careers:

- structural conditions for academic careers in Germany (structure)
- difficulties with categorizing and evaluating scientific performance (individual-related)
- relevance of the concept 'Science as way of life' (individual-related)
- role of competition and agonal behaviour patterns in Science (individual-related)<sup>9</sup>

Coming from this background we developed the following four areas for FESTA with their respective dimensions and indicators to deliver new information. These go beyond already existing data collections at RWTH:

### **1) Gender Mainstreaming in Research**

#### **– Degree of gender aspects in research**

- Indicator: Funded projects with gender aspects

Hypothesis: Gender expertise at RWTH University is insufficient.

Rationale: It is necessary to build up gender expertise within the group of researchers to ensure that gender aspects are incorporated in research

#### **– Position of women in science**

- Indicator: Share of projects led by women
- Indicator: Female share of invited conference presentations / other presentations
- Indicator: Female share of publications

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<sup>9</sup> Vgl. Kraus, Beate (2010): Das Projekt „Gleichstellung in der Wissenschaft“: Anmerkungen zu Mühlen der Ebenen. In: Bauscke-Urban, Carola u.a.: Subversion und Intervention. Wissenschaft und Geschlechter(un)ordnung. S.30.



- Indicator: Prizes / Awards / Honors held by women relative to the entire population

Hypothesis: The assumption is that there are fewer women who are project leaders and they have less presentations, publications and prizes.

There are still gender biases in acceptance, perception and estimation of scientific qualification and activities within the scientific community.

Rationale: The indicators provide information on the degree of integration into the scientific community and the recognition of academic performance. They are features in the evaluation of the performance of scientists. The indicators refer to the "glass-ceiling" and its causes, such as the devaluation of female performance or the "less time resources for research problems".

## **2) Gender Mainstreaming in Education**

### **– Degree of gender competence of teaching staff**

- Indicator: Courses with gender aspects in the headline of the course announcement in relation to all courses
- Indicator: Courses with gender aspects in the announcement description in relation to all courses

Hypothesis: Gender expertise at RWTH University is insufficient.

Rationale: Indicators provide information on how many teachers have gender expertise and about the opportunities for students to hear contents with gender reference in the courses. Gender Mainstreaming in Teaching requires gender expertise of scientific teachers.

### **– Gender sensitive distribution of education work load**

- Indicator: Share of women who carry out educational tasks relative to the share of women at the faculty

Hypothesis: Women's involvement in teaching is significantly stronger than men's, which can lead to disadvantages in individual careers.

Rationale: Work load due to teaching obligations diminish time resources for research that is more valued and has higher status than teaching and therefore has more impact on successful science careers.

## **3) Gender Equality in Human Resource Development**

### **– Degree of gender equality in career development**

- Indicator: Contract conditions (part time/full time, duration of contracts)
- Indicator: Success rate of applications for professorships of men and women
- Indicator: Age at first appointment on professorship
- Indicator: Status of professorship (short-term / long-term contract)

- Indicator: Share of women in boards and committees
- Indicator: Share of female PhD-students with scholarship/with contract
- Indicator: Personnel talk before maternity/parental leave

Hypothesis: It is assumed that women still do not have the same career opportunities as men.

Rationale: The indicators show the apparent discrimination based on the chances of career development for women and men.

#### **4) Non-discriminating organization**

##### **– Degree of gender equality in budgeting**

- Indicator: Negotiated resources in appointment negotiations (salary and equipment)
- Indicator: Negotiations with professors to remain (and appointment procedures with assistant professors)
- Indicator: Salary including bonus of scientific staff
- Indicator: Financing of projects led by women and men
- Indicator: Expenses for gender equality measures

Hypothesis: Women are discriminated in budgeting and the job infrastructure (rooms, personnel, money).

Rationale: Gender Budgeting allows an equal distribution of resources. The objective of gender budgeting is to examine whether the allocation is consistent with the requirements of both sexes. In addition, the allocation of financial resources and equipment of a professorship is equal between female and male professors or if there is discrimination will be monitored.

##### **– Grade of homogenization in the scientific careers**

- Indicator: CVs of male and female professors
- Indicator: Analyses of follow-up contracts in relation to former contract after obtaining a PhD degree

Hypothesis: Women usually do not have an ideal career (level of homogenization).

Rationale: Studies show that straighter career paths lead to better chances for gaining professorship (e.g., Meuser 2007). There is evidence that women in particular do not follow pure "scientific career paths", but rather are employed in academia after 'detours' out of academia.

##### **– Work (Science)/ Life Balance**

- Indicator: Maternity and Parental leave
- Indicator: Exit and re-entry talks
- Indicator: Reduction in working hours due to care of family members

Hypothesis: Work (science)/ life balance issues are not gender neutral. Women more often go into parental leave and reduce working hours. Motherhood and fatherhood is not an issue of human resources development at universities.

Rationale: The indicators show the influence of individual lifestyles and its impact on the working hours, flexibility and consequently on the career opportunities, especially for women. In this section we could draw on the strategy of "audit family-friendly university", which has been pursued by RWTH since 2009 aiming at a "stage of life-oriented" career development.

### **Institutionalization of Gender Equality and Gender Mainstreaming**

- Indicator: gender structures
- Indicator: gender experts
- Indicator: gender concepts
- Indicator: gender aspects in the institutional strategies

Hypothesis: A high level of institutionalization of Gender Equality is the fundament for structural and cultural transformation processes.

Rationale: A strong institutionalization of equal opportunities is the basis for structural and cultural change processes.

After building up this theoretical framework, we first presented our approach to the Rectorate and Department for Controlling and Strategy Development. They agreed in general with the concept, however, it quickly became clear that not all indicators would be realizable due to missing data or due to data protection issues. To this group of indicators all those within the dimension "Homogenization of scientific careers" belong. In the view of the Rectorate and the Department for Controlling and Strategy Development it is not possible to make data collections about career paths ensuring anonymity, because all biography analyses are easy to connect with the professors, especially within the small group of female professors.

Subsequently we spoke with the different departments about the realization of the data collection (see Logbook). Some of the necessary data were already collected, so that we could have them for the first year 2012. Others have not yet been gathered but collection was seen as possible. Thus, the data collection for these variables began in the beginning of 2013, so that in the beginning of 2014 we can start to analyze them from the year 2013 onwards. Last, data for some of the indicators were not available in the in-house databases.

Consequently, the following indicators had to be weeded out:

- Indicator: Female share of invited conference presentations / other presentations
- Indicator: Share of women who carry out educational tasks relative to the share of women at the faculty
- Indicator: Share of female PhD-students with scholarship/with contract

- Indicator: Personnel talk before maternity/parental leave
- Indicator: Negotiated resources in appointment negotiations (salary and equipment)
- Indicator: Negotiations with professors to remain (and appointment procedures with assistant professors)
- Indicator: CVs of male and female professors
- Indicator: Analysis of follow-up contracts in relation to former contract after obtaining a PhD degree
- Indicator: Exit and re-entry talks
- Indicator: Reduction in working hours due to care of family members

With regard to the sustainability of our work, the idea is to implement the indicators in the official controlling procedures such as the gender action plans.

## FBK: CONSTRUCTING *DIMENSIONS, HYPOTHESES AND INDICATORS*

The objective of the selected indicators is to furnish relevant gender equality statistics from different aspects of the working environment in FBK in order to raise awareness of possible gender imbalance and, if necessary, to develop and implement suitable gender action plans and policies.

Gender statistics allow for quantitative descriptions of the gender distribution of different aspects of FBK working conditions and staff structures. Although they, alone, are often not sufficient to offer a comprehensive analysis of the investigated issues, their advantage is to provide an easily accessible and measurable framework, highlighting those aspects that are worth investigating further and that need more in-depth understanding. In other words, we can say that the utility of the gender statistics is to raise consciousness and guarantee a continuous monitoring of the gender equality status of FBK. They play the role of alarm signals and constitute materials that may serve as basis for debates and dialogues within FBK.

In FBK the choice of relevant gender-related indicators follows several criteria:

- 1) coherence with the aims of WP3.2
- 2) coherence with relevant literature on gender equality in working research contexts
- 3) availability of FBK in-house databases
- 4) effort/value ratio related to data organization, update and analysis. That is, we have chosen the indicators according to an evaluation of whether the benefits that the measures furnished are worth the effort and the cost of structuring and analyzing them
- 5) possibility of updating data after the end of FESTA

Before FESTA, FBK data on personnel and working conditions mainly served to accomplish diverse and separate administrative tasks (e.g., contractual procedures, accounting, budgeting). They were organized in differently structured, not directly accessible, databases (mainly in Excel format) managed by specifically appointed employees. Due to this, the first attempt to produce integrated gender statistics required a large amount of preparatory work to reorganize and create merged databases as well as the cleaning of data. This took place during 2012. In 2013, a wider institutional and formal initiative of data organization and management has taken place in FBK. The first step has been carried out by the HR unit by adopting an integrated HR management database software, INAZ, to store, organize and query HR-related data.

The second action is supported and coordinated by the General Secretariat and deals with the implementation of a unique and more complex FBK data warehouse (DWH) containing most of the FBK relevant data (e.g., personnel, budgeting, travels and business trips). The management of the General Secretariat, which has managed and supervised all the work processes, has favoured and allowed for joint and collaborated actions between different relevant FBK actors (HR unit, Accounting Unit, FESTA team, Research Assessment Unit).

The FESTA team has been involved in both actions, and thereby we have had the opportunity to integrate the selected gender indicators into INAZ, first, and DWH, second.

The work done during the last year in FBK has been relevant for several reasons:

1. the automation of data processing
2. the availability of instant analysis, at different dates and range periods
3. the presence of a unique data storage, whose reliability has been tested and evaluated
4. the continuous (supervised) update of data on gender equality indicators also after the end of FESTA

The selection of the indicators in task WP3.2 is inserted in a structured methodological process called operationalization that allows for the measurement of abstract concepts through their final empirical transformation into a set of variables. The empirical definition has required the following steps: the identification of dimensions; for each dimension, the identification of indicators; and for each indicator, the identification of a set of variables by which to measure the indicators.

The concept of “gender in scientific-technological academia” is represented by four dimensions; they themselves are measured with several indicators.

1) Gender equality in working conditions:

- Female presence – The gender composition of research centers and units allow us to identify the extent of (possible) gender gaps in specific units and research domains.
- Terms of employment – we can extract the gender composition of some terms of the occupational condition (as well as the specific benefits associated with them).
- Salary – this measures of the extent of the (possible) gender pay gap.
- Sick leave – this can be considered as a proxy of the quality of workplace well-being.

2) Gender equality in career development

- Promotion – this offers a snapshot of organizational career mobility and the possibility of identification of factors of career promotion or hindrance
- Turn-over
- Recruitment – this offers information on the gender composition of the applicants to the available positions, of the selected candidates and of the members of the selection committee.
- Leadership – this is a scientific career indicator which provides a measure of the gender composition of the leadership positions (with formal power and responsibilities); it shows (possible) glass ceiling effect.

### 3) Gender equality in research activities

- Network – this is both an indicator of performance and of the chance to be part of formal and informal networks of the scientific communities (and, thus, the possibility to take advantage from them, in terms of resources, information, references..); Networks can also offer opportunities for career development.
- Publications – they are measures of the scientific performance and constitute one of the research evaluation criteria.

### 4) Work/Life balance

- Absence for care – it is useful to describe the gender distribution of family burden and commitment in relation to career trajectories.
- Tele-working – this measures the gender distribution of the participation to this specific FBK action aimed at fostering better work/life balance.

Details of the empirical definitions of each dimension are elaborated in Appendix 2, but we offer here an example. For the dimension “gender equality in research activities”, we have pinpointed two indicators i.e., Network and Publications, as we suggest that both of them constitute valid markers to measure the condition of parity between genders in the research environment. To measure “Network”, we refer to the quantity of business trips done in order to participate in conferences and/or in meetings and to the place of destination as a proxy of the internationalization of the network; to measure “Publications”, we refer to two variables namely the quantity and type of publications (i.e., journal articles and, separately, conference proceedings).

Indicators have been discussed within and between different FBK teams: they have been selected first within the WP3.2 team, then shared with the Human Resource Unit in order to integrate knowledge of FBK in-house databases and to map data sources.

The last version of FBK gender equality indicators (cf Appendix 2) is the result of several considerations and consequent modifications. Following considerations focused on the possibility to have a wider and deeper insight into gender issues in FBK, a few “recommended” indicators have been added to a preliminary list. They refer to:

- “Scientific production”, as indicators of research performance is one of the criteria of research assessment. Specifically we decided to consider Publishing (number and type of publications) to measure the scientific production. FBK takes part in the Italian Research Assessment Exercise that ANVUR (National Agency for the Evaluation of the University and Research system) carries out on behalf of the Italian Ministry for Education, University and Research. Within this context, FBK is collecting and monitoring data on publishing by means of the so-called U-Gov system, an integrated information system that allows researchers, with prior authentication, to insert their publications. Specific indexes (i.e.: H index, impact factor), however, are not included as they are not equally

suitable for all the scientific communities, nor technological patents and prizes as the attribution to a well-defined group of researchers is not always feasible and reliable

- “Network”, as a condition of career advancement and of establishing strategic positions; it is measured with the participation in conferences abroad and/or in Italy. It is collected by means of the online forms that FBK researchers fill out in order to serve administrative tasks and to ask for permission to go. Indications on destination, reason and duration of the business trips are given.
- “Family/work balance”, measured with the use of tele-working, period of maternity/paternity leave and days of absence for child/family care
- “Salary”, as a measure of the extent of the (possible) gender pay gap. We consider the fixed gross component of the salary and, also, its variable component which includes the productivity bonus, allowances and results of individual negotiations
- “Recruitment”, monitored through data on gender distribution of the applicants to (open and internal) research calls, winner candidates and members of the evaluation committee

Due to their scarce reliability and effectiveness, to their lack of availability and costly updating, the following indicators have been deleted from the first draft:

- “Quantity and type of research projects a researcher is involved in”: i.e., the quantity of research projects a researcher has worked on during a year and the type/relevance of those projects (international, European, Italian, local, based on the agency of funding). A test on data collection show that relevant data required a (too expensive) manual extraction from the database of the budget accounts; moreover, their traceability is not reliable
- “Patents and prizes”: relevant data are few, incomplete and not reliable (as it is difficult to connect them to specific researchers unless they insert them in their CVs, which are often not reliably updated)
- “External fund application”: i.e., an indicator of the capability of researchers to obtain external funds for their research. A test of data selection and quality showed that relevant data were not sufficiently reliable, due to the fact that it is often the person with formal power who formally stands as applicant rather than the researcher who is effectively applying for funds
- “Gender related events and costs”: relevant data are not significant as FBK research domains do not include gender-related issues and, consequently, the quantity of events on gender issues have been very limited
- “Membership of committees/boards outside FBK”: relevant data are not reliable as not all the researchers furnish this type of information in their CVs and, moreover, their update is not guaranteed
- “Seniority” meant as length of service in FBK: only partial data are available in HR databases i.e., available data on seniority refer only to researchers with fixed-term contracts



- “Subjective data” on researchers’ job satisfaction and work motivation/commitment. According to a benefit/cost ratio we decided to focus on objective data, already available and updated within FBK administrative units. Conversely, subjective data requires extra work as collection needs the administration of questionnaire and/or interviews.

Data on selected indicators are analyzed by means of bivariate and multivariate statistical methods. Cross-comparisons with gender are always considered, so that we are able to obtain the gender distribution of each of the selected indicators. Additionally, in order to offer a more in-depth analysis, we are considering conducting multivariate analysis that explores possible interaction effects with other indicators and controls the effect of intervenient variables such as age, citizenship, educational level of the researchers. Data are collected at an individual level but, in line with WP3.2, they will be analyzed and presented at an aggregate level.

The research hypotheses we follow, focus on two main metaphors/aspects widely studied and interpreted in previous studies. First, the “leaky pipeline” refers to the progressive decrease of proportion of women in higher ranking research positions, where there is a definite overrepresentation of men. The “leaky pipeline” hypothesis explains this discrepancy by focusing on the selection steps during the scientific careers (e.g., in an FBK context, from PhD to researcher R4, R4 to R3, R3 to R2, R2 to R1) that register a drop out of women and a higher selection of men, whose overrepresentation increases with each “juncture in the pipeline” of a research career (Blickenstaff 2005; Purcell, MacArthur & Samblanet 2010). Connected to this, the “glass-ceiling” hypothesis states, that not only is it more difficult for women than for men to be promoted in the hierarchy within workplaces, regardless of their qualifications or achievements, but also that the obstacles women face relative to men become greater, as they move up the hierarchy. The glass-ceiling indicates the invisible upper limit in organizations, above which it is difficult or impossible for women to rise in the ranks. It is *glass* because it is not usually a visible barrier, and an individual may not be aware of its existence until she “hits” the barrier. The barrier is not an explicit practice (Cotter, Hermsen, Ovadia & Vanneman 2001).

Second, homophily refers to the tendency for similar individuals to associate with each other. That is, people tend to interact primarily with others who are similar in given characteristics (like gender) and tend to build gender-homogeneous networks. According to this principle, when it comes to making decisions on promotion and recruitment, the predominantly male decision-makers prefer to promote and/or hire men (rather than women) to higher positions (McPherson et al. 2001; Kegen 2013).

Specifically in the FBK context, we expect to highlight a certain degree of gender difference for each collected indicator (see Appendix 2):

- lower presence of women among FBK research personnel
- lower presence of women in the highest contractual level positions
- lower income (at each contractual level) for female researchers

- less promotions for female researchers than for male colleagues
- higher turn-over rate for women researchers
- lower quota of female selected candidates during recruitment processes
- lower female participation rate in conferences/meeting i.e., less chances to create and foster networks
- lower presence of women in responsibility roles
- less female authorships
- women are absent from work more often than men due to family/children care
- women are absent from work more often than men due to their own illness (considered as a proxy of the quality of the working environment).

Only on the ground of the results of the preliminary bivariate analyses will we be able to formulate more complex and refined research hypotheses. By now we can say, in broad terms, that we intend to analyze the effects of gender (and how it intervenes) on the complex relations between career predictor variables and career indicators. By career predictor variables we refer to the quantity of publications, networking indicators, presence at work; by career indicators we mean contractual level and terms, salary, responsibility roles.

We will verify whether:

- male principal investigators have higher values of selected career predictors than female PI's
- women as principal investigators present the same (or better) characteristics, in terms of both career predictors and career indicators, as men do

Following preliminary analyses, we will highlight control variables and hold them constant, thus removing their effects. Example of control variables are: age, educational qualification and place of birth (as a proxy of citizenship) of researchers.

## COMPARATIVE CONSIDERATIONS CONCERNING *DIMENSIONS, HYPOTHESES AND INDICATORS*

In the above sections we have described the individual processes with formulating hypotheses, dimensions and indicators. In this section we will present a few of our considerations in comparing the four different contexts and practices concerning hypotheses, dimensions and indicators.

At UU the primary focus is on developing and supplementing already existing indicators and variables based on gender relevant and extensive staff data and the organization of gender equality work at UU rather than on any pronounced theoretical orientations. A guiding principle has been how to integrate the FESTA-indicators in the university gender equality efforts on a permanent basis. Hypotheses are not really used at UU, and to the extent they are, they have a more descriptive than explanatory focus. Also, at UU there is relatively little focus on dimensions, instead dimensions have been tailored around the institutionally demanded gender equality requirements and in the frame of standing assignments for the departments in the central equal opportunities plan and the objective to facilitate the obligatory handling of gender equality issues – the strong connection between UUs FESTA involvement and the ordinary gender equality work being characteristic of UU.

At SDU, the main focus is on working with existing datasets and putting them together to see if more gender specific and -sensitive information can result. Indicators have been formulated in line with the topics we have wanted to elucidate. For each of the indicators hypotheses have been formulated in the form of positively stated beliefs of what the indicator will show. The variables – that is, the data collected – can then either confirm the hypothesis or the opposite. The long term perspective is to see if such data can be integrated into the university's general monitoring practices and a more focused gender equality follow-up. At SDU, strategic objectives will be formulated in dialogue with the faculty management group and with the departments and collegiate bodies.

At RWTH, the objective is to systematically compile and analyze already existing data that are gender relevant. The hypotheses developed at RWTH derive from research findings, and the objective is to see to which extent these findings are also valid in the RWTH university context. This constitutes the basis for raising awareness among university people, which in turn is a starting point for changes in behaviour. Due to RWTHs strong theoretical focus, there is relatively more focus here on dimensions than the case of the other three partners, where the relative weight is on pragmatic experience with the respective organizations. RWTHs hypotheses are targeted more at dimensions than indicators, which is in line with a strong theoretical approach and clear political position within the university.

FBK is a research center and not a university; this means that FBK does not focus on teaching duties and education (courses, research in gender studies, etc), they have different roles than at universities (e.g., no assistant professors, full professors) and they have their own typology of contracts and positions. And last, but not least, FESTA represents the first attempt at FBK to look at gender statistics systematically and in depth. This approach entails that a baseline of knowing the institution in terms of gender in/equality first has to be established. Hypotheses developed at FBK thus have more descriptive than explanatory focus.

The following table sums up the total list of Indicators and which of the four partners make use of them. The indicators, which through the process of qualification and implementation are still included in the four respective sets of data, are indicated by black font. The indicators, which along the way have been omitted for the reasons described in the sections above, are indicated by grey font.

Since the Indicators are grouped and understood differently in each of the four partnering organizations (see Appendix 2 for the individual grouping), the table below should be read with a certain amount of global understanding that the indicators are themes rather than exact replicas of each other.

Our hope with the table is that it is possible at a glance to see differences between the four partnering institutions as well as get a sense of what has had to be left out – and how both categories (prevailing and omitted indicators) have resemblances across the four institutions if not direct similarities.

The processes of establishing data have been instructive for all four institutions not least in terms of which information is privileged and how, what is ignored, and where there are knowledge gaps as well as data/technology gaps, along with the various reasons for these gaps.

INDICATORS	UU	SDU	RWTH	FBK
Female presence				x
Terms of employment /form of employment/contract conditions	x	x	x	x
Salaries per position and age/ Salary including bonus of scientific staff /Salary	x		x	x
Sick leave	x			x
Parental leave /absence and leave/ Maternity leave and Parental leave/ Absence for Care	x	x	x	x
Seniority				x
Doctoral candidate's degree of (research) activity	x			
Doctoral candidate's financing/ Share of female PhD-students with scholarship/with contract	x		x	
Third-cycle degree	x			
Registered students	x			
First – (basic) and second-cycle (advanced) degree	x			
Teaching/research duties/ Share of women who carry out courses in comparison to their share at faculty	x		x	
Job satisfaction and motivation	x			
Success rates of appointments to senior lecturer, professor and postdoctoral research fellow positions/Success rate of applications for professorships of men and women/Promotion (both horizontal and vertical)	x		x	x
Age at first appointment on professorship			x	
Status of professorship (short-term/long-term)			x	
Personnel talk before maternity/parental leave			x	
Patterns in hiring/recruitment		x		x
Leadership positions /Leadership and Management /Leadership	x	x		x
Councils, committees and boards /Share of women in boards and committees/Membership to committees/boards/councils outside FBK		x	x	x
Leader's use of statistics		x		
Positions	x			
Turnover/retention	x	x		x
Investigative and decision-making bodies	x			
Internal research resources	x			
CV's of male and female professors			x	
Analysis of follow-up contracts			x	
Network				x
Financing of projects lead by women and men/Projects			x	x
Expenses for gender equality measures/Gender-related events and their costs			x	x

INDICATORS	UU	SDU	RWTH	FBK
Scientific production/ Female share of publications/Publications		x	x	x
Patterns of fund applications/External fund application		x		x
Funded projects with gender aspects			x	
Exit and re-entry talks			x	
Reduction in working hours due to care of family members			x	
Job satisfaction and motivation		x		
Tele-working				x
Subjective data: Job satisfaction/work motivation/commitment				x
Share of projects lead by women			x	
Share of invited conference presentations/other presentations/poster given by women			x	
Prizes/Awards/Honors held by women relative to all prizes etc./ Patent, prize and technological transfer			x	x
Courses with gender aspects in the headline of the course relative to all courses			x	
Courses with gender aspects in the description of the course relative to all courses			x	
Negotiated resources in appointment negotiations			x	
Negotiations with professors to remain (and appointment procedures with assistant professor)			x	
Gender structures			x	
Gender experts			x	
Gender concepts			x	
Gender aspects in the institutional strategies			x	

## THE SECOND SET OF TOOLS: ‘FROM FIGURES TO AWARENESS’

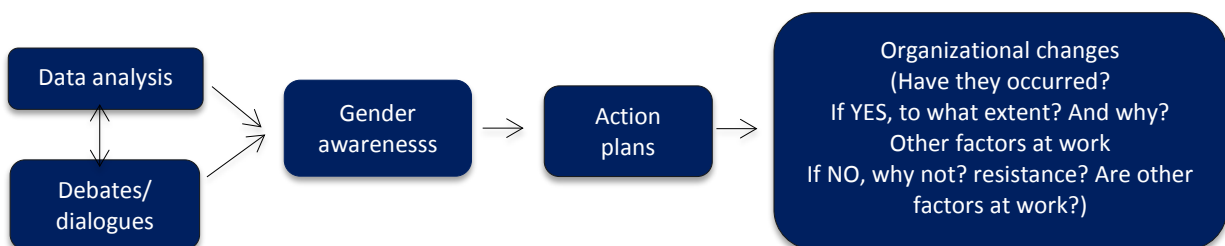
The broad aim of task WP3.2 is to raise organizational awareness oriented at ensuring changes towards gender balance and female empowerment in scientific and technological domains. In this context, two instruments are considered suitable for raising awareness: organizational statistics and debates/dialogues. Specifically, statistics on working conditions in general and on gender im/balance in a predefined set of dimensions in particular will serve as material input for discussions during the debates or dialogues (depending on the adopted approach) with different and relevant participants. Over and above the presentation of the statistical findings, the dialogues will be designed and conducted according to participatory and inclusive meeting practices, as defined in creativity, innovation and change management literature and practices (see sections above on *Inspiration from the fields of implementation and Innovation and Open Space Technology*) – yet adapted to the specific context and situation of each meeting and its participants.

Raising awareness is not an end in itself. Rather, it is a means to achieve the planning and the implementation of actions aimed at causing organizational and structural changes. We could thus infer that if action plans are drawn and put into practice, gender awareness at the organizational level is raised. This, however, could be seen as a problematic and oversimplified conclusion, since other factors may be at work, such as political agendas, that sidestep or hinder action in taking place. Conversely, changed behaviour (actions) can also be caused by politics alone, which may not necessarily be connected to or caused by raised awareness.

In task WP3.2 we have identified six steps in our task of raising awareness, which may not necessarily take place in sequence but rather in iterative cycles (for instance, meetings may lead to deeper understanding and analyses):

1. mapping of gender inequalities
2. analyzing conditions
3. raising awareness through dialogues and debates
4. formulating objectives and measures and action plans
5. implementing measures
6. evaluating the outcome

A graphic representation of our intended path to raised awareness could look like this:



Data on selected indicators are relevant to show significant evidence and facts, to transmit knowledge, furnish baselines, underpin arguments, qualify discussions and serve as preparation for debates/dialogues that constitute the ‘arena’ for data dissemination and interpretation, exchange of perspectives, evaluation of the on-going process, and of shared planning of actions and policies. Especially, debates and dialogues may set the frame for creating the conditions for involving people in the work and processes towards gender equality. Engagement and awareness are relevant for two main reasons: on one hand, to implement policies at the organizational level there is the need to collaborate with the management and the leadership of the organization with the policy making power; on the other hand, if change is the aim, policies and actions necessary for the change need to be shared, accepted and embraced by researchers, not imposed on them.

The following sections describe the tools we are presently in the process of developing for the coming task of turning our statistics into material to be presented and discussed as well as scripts and plans for how, when, where, and with whom our material should be discussed and how the involved units and people may plan and track ensuing action.

Tool 2.1: *scripts for leadership seminars and dialogue meetings* include overviews of the planned interaction with units, management and other relevant stakeholders as well as more detailed plans of single meetings.

Tool 2.2: *samples of discussion material* show examples of material input to be used in the awareness raising dialogues with the different units. At the time of this publication (February 2014) this tool is in three out of the four partnering institutions (SDU, RWTH and FBK) far from finished. The final presentation material here will be a product of careful collaboration with various stakeholders, as outlined in Tool 2.1. The meter developed and presently in use at UU is already complete and comprehensive and out of the four samples shown here also the most innovative way to present data.

Tool 2.3: *samples of templates for action plans* offer tentative ideas for how to formulate action plans at SDU and FBK. These will also be formulated in close collaboration with various stakeholders during the dialogue planning and process. In contrast, UU and RWTH will align the action plans of WP3.2 with the established and mandatory gender action plans.



## TOOL 2.1: SCRIPTS FOR LEADERSHIP SEMINARS AND DIALOGUES

Meetings can follow different approaches (debates, dialogues, lectures, facilitated discussions), can involve different participants and stakeholders (management, researchers, leadership, trade unions, experts or privileged actors in equal opportunity issues in gender studies etc.), can assume different forms according to the people involved (plenary sessions or a closed and strategic meeting), can deal with different specific issues and can have different objectives (informative, preparatory, executive). Moreover, they can occur once or they can be reiterated and they can be carried out with different methods (non-structured dialogue, brain-storming, focus group, open space meeting etc.). According to their specific organizational contexts, WP3.2 partners choose the most suitable way to reach their specific and defined aims. These choices depend on whether the initial intention of the meeting is to formulate action plans, for instance as part of larger national or university legislation. Thus, there are individual differences in whether partners see their role as pure presenters of statistics to spur debate and dialogue, facilitators of the debates/dialogues, and/or as facilitators of a formulation of action plans.

To keep track of the meetings organized within each organization and register their main features we decided to fill in a shared template:

DEBATE	ORGANIZATIONAL LEVEL	PARTICIPANTS	AGENDA/ISSUES	SCHEDULE (APPROX)	COMMENTS
1					
...					

For every meeting, identified through an ID, each partner will highlight:

- organizational level (university, department, faculty) at which meetings occur;
- participants (and their role);
- agenda/issues treated;
- time of occurrence;
- comments (perceptions, intended outcomes, approach and methodology).

In each of the following four descriptions and samples, it will be clear that various considerations have gone into the planning of the meetings, who to involve, when and with which sequence and frequency, how to allow for reflection and movement, how to put power and emphasis and authority into the presentation, how to adapt to the specific context of the project team and the overriding political and strategic aims and intentions.

## PARTNER'S MATERIAL – TOOL 2.1. SCRIPTS

### UU – SCRIPTS

Dialogues will be conducted on departmental level with heads of department and gender equality groups. At department level, operational responsibility for gender equality work rests with the heads of department. Each department must appoint a gender equality group and a gender equality officer. Both employees and students must be represented in this gender equality group. It is the task of the gender equality groups to prepare the three-year gender equality plans as well as the annual evaluations of these. Drafts on gender equality plans are discussed and decisions taken in the department boards.

The aim of the dialogues is to show how the departments can use the indicators in their ordinary gender equality work. We want to give a spark to inactive gender equality groups by giving them something to work with and for the more active gender equality groups we want to show how the indicators can be included in their on-going work. We will do this by participating in the gender equality group meetings, where we will have a supportive role as gender equality specialists.

Our dialogues build on the following parts:

1. Initial thoughts on dialogues have been discussed with heads of department and chairpersons of gender equality groups, who want to bring together the gender equality plans at department level with the work from this FESTA task.
2. An initial mapping of “the gender equality climate” in the departments has been carried out before the actual dialogues. We have obtained insights on specific topics/aspects when meeting heads of department, gender equality groups and administrative personnel. Moreover, interviews conducted at two of the departments have furnished us with relevant qualitative information on subtle perceptions of excellence in the working environment and/or informal decision-making and communication processes.
3. Information on gender equality indicators. This runs alongside the dialogues and aims at informing the gender equality groups on how to use the indicators. The information is linked to the initial meeting with the gender equality groups.
4. Brainstorming meetings and workshops with gender equality groups where gender equality problems shown in the indicators are discussed. The groups decide which indicators they are going to work with.
5. Workshops on action plans with gender equality groups and discussions concerning the results of other FESTA tasks.
6. Feed-back and follow-up of implementation.

However, as regards point 4-6 we leave open to changes if the heads of department and the gender equality groups prefer alternative methods.

We plan to meet with heads of department and chairpersons of gender equality groups in early spring 2014 to discuss realization of dialogues in gender equality groups. We will focus on making decisions on how to present the statistical findings, how to engage and include the people at the department and how to set the framework of the meetings. What help do they need to do this gender equality plan? What do they expect us to do?

In late spring/early summer 2014, a presentation of findings and dialogues will take place in the chosen departments, organized as one to two-hour regular meetings of the gender equality groups. These meetings will cover the following three points:

- 1) Presentations of key findings, to avoid too much information.
- 2) Discuss and define the problems. Why do the indicator values look the way they do?
- 3) Finding solutions and formulating action plans.

Our dialogues will not be as formalized and structured as for the other partners, since the groups directly engaged in the task are small. We will not draw on large group interventions practice, even if we share the principles of collaboration between different competencies and experiences, of inclusion and establishing common ground. We also share its focus on finding solutions rather than placing blame.

Our expectation with the dialogues is to find ways to work that can lead to deeper understanding and analyses and that motivate the people responsible for gender equality activities in the university's departments to use the indicators and invest their energy in analyzing conditions and implementing measures.

## SDU – SCRIPTS

SDU plans to meet with representatives from the HR-unit in late winter/early spring 2014 about their involvement in WP3.2, specifically with respect to a seminar for heads of department and facilitation of dialogues and debates in units.

In February 2014, there will be a meeting with a test panel consisting of representatives from all four departments at the Faculty of Science of both genders and diverse nationalities. The focus will be a preliminary presentation and discussion of findings and ways to present these. Moreover, we will focus on making decisions on how to present our statistical findings, how to engage critics and how to involve key persons 'on the floor', who may support the facilitation of discussions and dialogues in the units.

At the beginning of March 2014, a presentation of findings and initial debate will take place in the WP3.2 Steering Committee, in the Faculty Equality Committee and in the Faculty Management Group. The focus in the meeting with the faculty management is a decision on 'differentiated' debates: do certain indicators need a different context to be processed – for instance in the Academic Council or the Liaison Committee of the Faculty. If so, what, when, and how? This follows a decision in the Faculty Management Group on specific strategic objectives for equality measures at the Faculty over and above the objectives set in relation to fulfilling the University Contract and the measures proposed by the Vice-Chancellor's Equality Committee.

In April 2014, we will host a seminar for heads of department at the Faculty of Science as a lead-up to the dialogues in the departments. The agenda of the seminar covers the following issues:

- Run-through of statistical material and 'pilot' discussion
- Mapping of expected outcomes of the dialogues – also in relation to strategic objectives for the individual departments as well as for the Faculty (lead up to: what is possible to take action on, and how)
- Input to finalizing presentation material
- Input to finalizing debate-facilitation plan and dates
- Finalizing template for action plans

In spring 2014, a presentation of findings and initial debate will take place in the Academic Council and Liaison Committee of the faculty. These presentations are followed by dialogues in May 2014 in the four departments at the Faculty of Science, organized as two to three-hour thematic meetings on equality, diversity and their importance for research environment and quality. These theme meetings will include the following three points:

- PowerPoint presentations of findings in WP3.2
- facilitated discussions

- conclusion and – if possible – formulation of action plans.

The facilitation of the discussions will draw on large group intervention practices along the lines of Open Space Technology and principles of inclusion and establishing common ground developed for instance in Future Search, Theory U. The specific methodology proposed here is ‘the Spiral’<sup>10</sup>.

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<sup>10</sup> A fuller description of the spiral is provided here:

*Participants in the spiral:* Participants in the spiral are people who have a stake in the topic if such a topic is announced. If there is no defined topic, the people present define what is important to them to talk about.

*Sequence and rules of the Spiral:* The rules are simple and usually after the first round the conversation is self-organizing – though having a mild facilitator present is often useful until the interactive pattern has become well-known. It is useful (but not necessary) to have a defined topic.

There are several rounds clockwise – as many as is possible in the time allotted OR until everyone says ‘Pass’.

Everyone speaks in turns. I say what is on my mind about the topic. I address the present community. I speak on behalf of myself alone – that includes decisions: if I make decisions, I only commit myself. It is possible to ask questions but a direct response is not necessarily to be expected – it may or may not be given as the spiral moves along. And may take on unexpected nuances and forms. The only commitment every participant has, is to say what is on one’s mind – no more, no less. There is no outer compulsion or expectation for anyone to pick up on what has been said already. If, however, there is an inner need, there is no such thing as redundant repetitions – if the same things are said more than once, this is amplification and can be seen as the relative weight or importance of the spoken to the people present.

There is no ping-pong to break the sequence. I have to wait my turn.

If, when it is my turn, I have nothing to say, I say ‘pass’. I can speak again when it is my turn next.

*Timing, beginning and ending the spiral:* The same person begins and ends the spiral. It may be good to take two rounds and then evaluate the need to go on. Otherwise the spiral can be timed either by allotting a set amount of time, which the facilitator keeps track of, or by letting the spiral go until there is a complete round of ‘pass’es’ – in which case the topic is exhausted and it is time to move onto decision-making and action. Sometimes this stage comes all by itself and the Spiral disintegrates before the ‘pass’-round. In this case, it is necessary that someone formally closes the spiral.

It is useful to lead up to the spiral with a three-to-five minute group or pair discussion or written, private reflection on the topic. The written reflection is done in this way: Everyone has pen and paper. The facilitator calls out two-to-three ‘layering’ questions, to which participants are asked to write their immediate responses by setting pen to paper and writing continuously for the entire three minutes. The first question is called out and repeated. After about a minute, the second question is called out. The questions are along the lines of:

- 1) *What has struck you about the topic?*
- 2) *What is important to take note of and possibly do something about?*
- 3) *Why is it important?*

It is useful to introduce the written reflection by saying that the reflections are private and the objective of the exercise is to tune and focus the minds of the people present to the topic – much like the orchestra before the conductor appears on the podium.

The spiral springs from a Hawaiian tradition called Ho’oponopono which means to set things right or disentangle. As the practice has been adapted to other situations and cultures, it shows up as a useful and efficient way to survey the grounds for making inclusive and sustainable decisions. The spiral is remarkably effective. It can be used in any size group. It is used mainly to *investigate* a situation or question or conflict, with a genuine openness for what the outcome can be. Decisions and solutions are formed after the spiral. However, decisions and solutions more often than not emerge during the spiral with surprisingly potent, creative and rich precision as well as a clear mandate of the stakeholders to the topic.

Here follows a script for the first such three-hour thematic meetings at the departments – note: this is an initial proposal for one of our smaller departments to be adjusted and finalized by the heads of department.

TIME (APPROX)	ACTIVITY	REMARKS	WHO
13.00	Welcome, reason for and objective of meeting and short presentation of FESTA WP3.2, and agenda	40-45 participants	HoD
13.10	Presentation of findings 1) Gender equality in career development 2) Gender equality in research 3) Work/life-balance	PPT with WP3.2-findings	FESTA-team
13.25	Facilitated discussion: Discuss in groups of three (5 minutes): <i>what strikes you?</i> Plenum – <b>a spiral</b> : after the first round, the subsequent rounds may be introduced by a question, depending on what has emerged during the first round: <i>What is important to note? Are there any surprises? What is important and necessary to do? What could the reasons be for the individual responses?</i>	Each round may take up to 20-25 minutes	HoD and facilitator
14.55	Status in groups of three: <i>what has this discussion been like? Are we ready to go on to formulating more firm solutions? Decisions on actions to be taken? Or do we need to set time aside for further in-depth discussions, investigations?</i>		Facilitator
15.10	Comments and plan for next steps		Facilitator
15.45	Closing remarks by HoD		HoD
16.00	End of meeting		

Evaluation on the task WP3.2, including actions taken, changes in statistics in the individual departments and the efficacy of raising organizational awareness will take place in early fall 2015 and late spring 2016. This will take the form of follow-up on statistics, focus-group interviews and as two more rounds of dialogues in the various units.

An overall evaluation of the implementation of action plans and the degree to which the use of developed dimensions and statistics have become integrated as leadership tools and measures at all levels at SDU will take place fall 2015 and again late spring 2016. However, the Vice-Chancellor's Equality Board has recently proposed a wider integration of FESTA actions, including collection of statistics as done in WP3.2 and facilitation of awareness raising dialogues in units outside the Faculty of Science.

Overall plan for presentation and dialogues in units at SDU/Faculty of Science:

<b>LEVEL</b>	<b>PARTICIPANTS</b>	<b>AGENDA</b>	<b>SCHEDULE (APPROX)</b>
FESTA + SDU-HR	FESTA-team, HR: Head of unit and consultant	Meeting with Human Resource Services for SDU, Unit for Organizational development.	Feb 2014
FESTA + researchers	Background group – representatives of all four departments – interested researchers of both genders and diverse nationalities	Preliminary presentation and discussion of findings and ways to present in background group of selected and interested scientific staff from the four departments at the Faculty of Science.	March 2014
Management	WP3.2 Steering Committee, FESTA-team	Presentation of findings and initial debate in the WP3.2 Steering Committee.	March 2014
FESTA	FESTA-team, Faculty Equality Committee	Preliminary presentation of findings to the Faculty Equality Committee.	March 2014
Department	Heads of department, Faculty of Science, FESTA-team	Presentation of findings and initial debate in the Faculty Management.	March 2014
Department	Heads of department, Faculty of Science, HR, FESTA-team	Seminar for heads of department – Lead-up to debates in departments.	March 2014

FESTA	Faculty Academic Council, Liaison Committee, FESTA-team	Presentation of findings and initial debate in the Academic Council and Liaison Committee of the Faculty.	May 2014
Department	Heads of department, Faculty of Science, HR-consultant, FESTA-team	Debates in the four departments at the Faculty of Science	May 2014
Department	Heads of department Faculty of Science, HR, FESTA-team	Evaluation data and observations, Follow-up dialogues in Departments	Fall 2015 + late spring 2016
FESTA	FESTA-team	Evaluation of the implementation of action plans and the degree to which the use of developed dimensions and statistics has become integrated as leadership tools and measures at all levels at SDU	Winter 2015/2016



## RWTH – SCRIPTS

Dialogues are to be conducted on different levels of the university. The people who will be addressed are university leaders (university management), administrative personnel as well as researchers. The aim of the dialogues is to produce (more) effective gender action plans on the basis of a heightened awareness. This is to be achieved by integrating more systematic data in the plans relevant for indicating gender injustice in scientific careers (i.e., indicators) and thus constitute a useful basis for effective gender equality measures. By law, gender action plans at universities in Germany have to be developed. They are developed in the faculties with assistance from the central administration. However, evaluations of the recent gender action plans have shown that they were often superficial and without any impact. Reasons for this could be that data collections are too general with too little specific reference to scientific careers, and that there is ignorance and helplessness in the faculties and among the people selected by the deans to formulate the gender action plans. Once written, the plans have to pass the senate of the university. However, it is not a far cry to assume that also this board is characterized by helplessness and ignorance concerning gender issues and possibilities for action and implementation to be able to question and qualify the contents of the plans. Thus, the gender action plans up till now have merely been compulsory paper exercises. Our aim in FESTA is to change this through relevant dialogues based on our gender equality indicators and the findings from the data.

We started with the dialogues with members of the Rectorate and with leaders from the administration, especially with the responsible leader of the department for “planning, development and controlling”. In 2012, the concept for the development of the indicators was discussed and adapted with these stakeholders. Subsequently, we launched the data ascertainment, which has been assessed in several departments of the administration. In June 2013, we discussed the first findings of the gender monitoring based on our indicators with the Rectorate, and the agreement was made to discuss findings of the gender monitoring once a year.

Our plan is now to approach three of our nine departments, focusing primarily on the engineering and science departments. In the summer of 2014, new gender action plans have to be developed, and this is a prime arena for the FESTA project to conduct dialogues within the departments and help them develop serious and effective gender action plans.

	<b>ORGANIZATIONAL LEVEL</b>	<b>PARTICIPANTS</b>	<b>AGENDA</b>	<b>WHEN (APPROXIMATELY)</b>
Debate 1	Board RWTH	Vice-Rector + Management	Presentation and discussion of the developed indicators and results of WP3.2	Summer 2013, Spring 2014, 2015, ongoing
Debate 2	Faculty Level (3 Faculties)	Head of the Faculty (Dean), and the faculty board members	Discussion on the (integrated) results of FESTA WPs 3.2, 5.1 and 5.2	Spring 2014
Debate 3	Faculty Level (3 Faculties)	Responsible Persons who are involved in developing gender action plans	<p>Presentation of and Discussion on the (integrated) results of FESTA WPs 3.2, 5.1 and 5.2 , e.g.</p> <ul style="list-style-type: none"> <li>• the working conditions/ working structure and actions for improving qualification of female young researchers</li> <li>• Gender Studies in Education and Research</li> <li>• Funding of Projects</li> <li>• Harmonizing Career Development and Work Life Balance</li> <li>• Actions for reducing the under-representation of women</li> </ul>	Spring 2014
Debate 4	Equal Opportunities Committee of Senate	Rectorate, Staff Councils, Group Representation	We presented and discussed already in June 2013 the conception of the FESTA Project and will present gender monitoring once a year in this board.	Summer 2013, Spring 2014,2015

## CONCEPT FOR CONDUCTING THE DIALOGUES IN THE FACULTIES

Due to very different levels of awareness about gender equality in the departments at present the first step is to win access to the different levels of a faculty and to address these different levels in their respective roles. Therefore the deans will be addressed on the strategy level and the responsible persons or boards are to be addressed on the level of developing measures and activities.

From this follows, that we will present and discuss the findings of our gender monitoring in the board of faculty leaders (deans and professors) and in the faculty board within a rather short time frame. Additionally, these persons have the possibility to participate in our FESTA workshops that are carried out within the continuing learning programme (CLP) or as World Café<sup>[1]</sup> (Brown & Isaacs 2005) in the course of a lecture series that were developed in the context of WP 5.1 and 5.2 (cf. description in the introduction of this toolkit).

However, with the focus on the gender action plans we want to facilitate deeper dialogues with the persons (researchers, students as well as faculty managers and the equal opportunities officer of the respective faculty,) who are responsible for the development of these plans. We assume that the number of persons from each faculty will range between five and ten people. Therefore we want to shape the workshops with a dialogic approach called dialogic communication.

Dialogic communication is an approach that aims at strengthening a common exploring and understanding of problems (cf. Bohm 2002). In a dialogue it becomes possible to achieve a stance and mode of conversation that allows people to learn about their own points of view and suppositions and to leave retracted thought patterns. In contrast to this, a discussion is more about the domination of one opinion over another opinion. Dialogic communication opens up a room in which people have an opportunity to think creatively and collectively and to communicate together. In a dialogue people can recognize the roots of their suppositions and judgments. Dialogues give rise to a laboratory for change and development processes. Thus, a dialogue fosters and makes possible the bridge building between separate positions. Finally, FESTA team members will support the dialogues as dialogue facilitators. Our task as dialogue facilitators is to create space for dialogue and to support the dialogue partners to conduct conscious dialogic communication.

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<sup>[1]</sup> For more information cf. <http://www.theworldcafe.com/method.html>

## FBK – SCRIPTS

We are conducting dialogues and organizing seminars according to two approaches – bottom-up and top-down – as well as one principle – the sharing of views that lead to a shared gender plan. We are thus involving both the researchers themselves, from the bottom, and the leadership, from the top, in the definition and planning of the dialogues.

Each organized meeting starts with the presentation of data and integrated findings of all the FESTA workpackages (WPs). The FESTA team supports evidence and hypotheses with all the data, both qualitative and quantitative, which we have obtained from the different tasks in such a way as to be able to furnish complete and deep analyses of the gender in/equality in FBK and to offer insights on different specific aspects/topics such as recruitment, perception of excellence, formal and informal decision-making and communication processes, gender distribution of specific employment conditions and of other collected indicators.

After the data presentation and related comments – which are relevant for the raising of organizational awareness – dialogues with the interlocutors are opened up and oriented to a shared identification of policies and/or actions promoting gender equality.

We expect different approaches to the dialogues and different feedback and styles according to the role of the actors involved, and they can all contribute with particular points of view and perspectives. Contributions can be directed at highlighting formal directives and/or legal constraints, at guaranteeing endorsement, at formulating proposals and ideas, or at improving processes.

Our plan for dialogues is structured as follows.

We invite FBK researchers to discuss in two open meetings the FESTA findings and possible related gender policies, suitable for the FBK context. We maintain that the involvement of the actors who will be the subjects of a policy is fundamental for ensuring its positive implementation and consequent impact (debate 0).

Subsequently, we meet the Head of Human Resources and the General Secretary to discuss the most striking results and analyses emerging from our findings and Debate 0 (gender pay gap and glass ceiling, for example) and to share the scheduling of following steps (debate 1).

During the meetings with the two Research centers' directors we share our proposal to involve the two Boards of Research Centers into the dialogues on gender-related emerging issues and we intend to finalize their scopes, procedures and organization (debate 2).

Each of the two Boards of Research Centers comprises the Heads of Research Units and the Director of the Center (about twenty people on each Board); during these meetings we intend to present and discuss a very first draft of gender-related policies, asking for suggestions and feedback (debate 3);

An updated version of a gender plan – made up of a set of policies oriented at gender equality – will be formulated and presented to the trade union representatives (debate 4). A final version of the gender

plan will be presented to all FBK staff after possible changes and consequent renewed meetings with relevant participants (debate 5).

After a brief illustration of the scope and of the expected outcomes of the meetings and after the presentation of the most significant gender statistics, Debates 1, 2 and 4 take the form of non-structured dialogues aimed at sharing points of views, perspectives and organizational tasks. Debate 5 will be structured as a “frontal lecture” followed by a discussion section. During Debates 0 (November 2013 and February 2014) we have applied Open Space Technology (OST) and we will do the same during Debates 3 (March and April 2014).

An OST meeting proceeds along the following process:

- The facilitator welcomes the participants invited to the meeting – and who spontaneously and committedly accepted to take part to it – and provides an overview of the theme faced and of the process i.e., explains how the meeting works. Facilitator’s main role is to clarify the goal to reach through the discussion and to let the participants work autonomously. He/she does not have to exercise control on the process as the groups choose how to organize their discussions and related details.
- Facilitator invites people to highlight some specific aspects related to the main topic of the discussion, for example if the main topic regards gender (im)balance in a specific institution, related aspects may refer to gender inequality in the recruitment processes, work-life balance, reasons/implication of the gender inequality, gender inequality of specific terms of employment, gender and leadership styles, gender pay gap (...). The sub-themes will then constitute the topics of the sub-groups discussions. In this way the agenda items of the meeting are created by the participants themselves.
- Once the points of the agenda are completed (no other proposals come out) and related time and place are arranged, participants can freely decide to which sub-group of discussion to participate.
- The discussions start. The space organization of the OST meetings has a circular chair arrangement – signifying that all participants are equal – and the room has to be comfortable and quite informal.
- During the dialogue session recorders, determined by/within each group, capture the relevant points and write the report that, in this way, is immediately available to and shared with all participants. All the reports of the sub-discussions will finally be rolled into one document by the end of the meeting. Technology can be used in this phase as instant proceedings, which – following a standard template – can be typed on a laptop, printed and shared.
- The meeting ends with a closing circle where people are invited to share comments, insights and commitments arising from the processes (Owen 2008).

During the first Debate 0, held in November 2013, the FESTA team presented statistics on gender (in)equality in FBK in relation to indicators identified in WP3.2 (30 minutes). Participants then proposed two main themes:

- 1) what aspects intervene in influencing the female underrepresentation in FBK? Is it a tolerable situation?

2) what are the actions/policies we need to implement if we aim at gender equality in FBK?

The two issues have led to the creation of two discussion groups: ten researchers participate in the sub-group associated with issue (1), ten people have joined sub-group (2) and each group engaged in one hour discussions.

The two groups finally reported the specific topics they focused on and related suggestions of “good” actions. For illustrative purposes, emerging proposals are the following: training courses on leadership competences specifically arranged for women who aim for new roles in research; open calls for all the job positions, also for the senior ones; training courses on stereotypes in order to be aware of them and (possibly) to avoid them; monitoring of the new internal reorganization (regarding the MM Center) and of the criteria adopted to allocate people to (apical) roles; monitoring of the new “Joint Research Projects” that are headed also by women in order to understand if diverse selection criteria and/or processes and/or modalities have been adopted.

The second debate 0, held in February 2014, dealt with the concept of Excellence and the main outcomes of WP5.1 were presented. Related discussions regarded: 1) what allows for discrimination and bias? 2) How is it possible to mitigate bias of an evaluation model?

Also in this case, two groups were formed and they reported, among others, the following proposals: transparency of the selection criteria forms and of their respective weight; assessment of the ‘soft’ skills as well as the technical/specialized ones; introduction of career evaluation *in itinere*; creation of a control body of the selection processes.

Also debates 3, with the Research Boards of CIT and CMM, will be organized according to OST. Compared to debates 0, the FESTA team will suggest three main thematic areas of discussion (recruitment, training during the career trajectories, work/life balance and time management) – that emerged as relevant during the previous dialogues – and some of the related policies/actions. A preliminary agenda of the meeting (3 hours max.) follows:

- Purpose of the meeting and expected outcomes
- Presentation of the FESTA project
- Presentation of FBK gender-related statistics (WP3.2 findings)
- Presentation of the thematic areas of discussion and some related (possible) policies/actions
- Discussion within small sub-groups of people (max 5/6); each person can choose the group (i.e., thematic area) he/she wants to join
- Reporting of proposals and/or considerations of each sub-group
- Comments and plan for next steps by FESTA team
- Closing remarks by FESTA team

ID DEBATE	ORGANIZATIONAL LEVEL	PARTICIPANTS (besides FESTA team)	AGENDA	SCHEDULE (APPROX)		USE OF OST <sup>11</sup>
<b>Deb 0</b>	FBK level	FBK researchers (open invitation)	Presentation of selected FBK data according to the indicators highlighted in WP3.2 (first meeting) and to topic and outcomes of WP5.1 (second meeting). Aim: active involvement of FBK researchers directed at dialogues on proposals of a gender equality plan	November 2013 and February 2014	Bottom level	yes, in both meetings
<b>Deb 1</b>	FBK level	Head of HR + General secretary	Presentation of the most relevant results of WPs 3.2, 4.1, 4.2, 5.1 and discussion on possible gender-related policies. Active involvement of leadership in the process towards a gender plan is fostered in order to have their endorsement.	December 2013 (more than one meeting will probably be needed)	Top level	no
<b>Deb 2</b>	FBK level	Research centers' directors	Together with the Head of HR, the Directors of the Centers are involved in order to discuss together the proposal of a gender action plan and have their support, too.	January 2014 (more than one meeting will probably be needed)		no
<b>Deb 3</b>	FBK level	CIT research board + CIT Director; CMM research board + CMM Director	Presentation of the most relevant results of WPs 3.2, 4.1, 4.2, 5.1 and discussion on possible gender-	March and April 2014	Bottom level	Yes, in both CIT and CMM boards

<sup>11</sup> OST: Open Space Technology

			related policies.			
<b>Deb 4</b>	FBK level	Head of HR + Trade union	The proposal of a gender action plan is discussed with the trade union in order to know about possible constraints and legal directives.	April 2014 (more than one meeting will probably be needed)		no
<b>Deb 5</b>	FBK level	FBK researchers (open invitation)	Open presentation of the FBK gender action plan and its rationale	(to be scheduled)		



## TOOL 2.2: SAMPLES OF DISCUSSION MATERIAL

Raising organizational awareness in the understanding of this task is – with our statistical findings as a point of departure – to raise questions and have focused dialogues with the organization, i.e., its leaders, units, boards, and functions. In keeping with FESTA’s overall purpose, the ultimate objective is to move to a change in the actual, everyday behaviour in ways that are more gender sensitive and allow for more real diversity in everyday interactions as well as on strategic levels.

However, tracking the changed behavior lies somewhat outside the scope of this project, and in the project, we must therefore keep our focus on how to spark the interest and facilitate openness to a more gender- and diversity sensitive outlook that in turn will spur a tangible change in behaviour.

Many considerations have gone into how and what to present in the various contexts where we will present our findings and aim to raise awareness. These considerations include: how to get the main points across with traceable impact? How to get past obvious points of contention in order to stay on track with the important issues? Which examples and arguments from other contexts and situations will be useful in putting forward our points? How do we present a complex reality with many conflicting interests in simple and comprehensive ways, without losing validity and authority? How do we strike the right balance in reaching both peoples’ minds and hearts? How can we as presenters know when we have started opening minds – and doors? And how may these presentations and the ensuing dialogues prepare the leaders and other people responsible for taking actions and defining steps?

In our considerations we have also had an eye and ear open for what might be new to the people involved in the dialogues as well as what the individuals and the units stand to gain from potential changes

This section will present examples of what we at the moment of finalizing this toolkit are planning to present. Once again, the samples presented here will vary according to our different contexts, positioning, strategic objectives and scope and nature of contact with the units where we will make our presentations.

Uppsala University already has an accessible and innovative tool for gender equality indicators that shows gender balance among employees, doctoral candidates and students in ten different areas. The tool provides us with a very useful basis for the dialogues. Lessons learnt about raising awareness from our dialogues will be included in our existing training courses “Gender equality indicators” and “Practical gender equality work”, which the Equal Opportunities Office at the HR Division mainly offers personnel administrators, gender equality representatives/pilots and heads of department.

At SDU, the data will be collected and published in-house in a report of findings and conclusions shown with graphics, charts and tables. As an appendix to this report, the tables with all the collected data arranged according to indicators will be presented. Together the report and the appendix will serve as documentation and supplementary information for the planned awareness raising dialogues. In addition, powerpoint presentations with the most salient points from the report, along with examples and documented findings from other contexts and studies, as well as the focus areas to be discussed in the dialogues, will serve as the direct material input in these meetings. These points and focus areas will be the result of close collaboration between the FESTA team, and the faculty management group, as well as with the WP3.2 steering committee.

At RWTH, the data were and will be annually collected and analyzed for the whole university and separately for the three selected faculties. Afterwards data will be edited in a power point presentation and in a handout for the workshops at the faculties. Our intention is to institutionalize an annual gender monitoring report.

At FBK collected data on selected indicators will be periodically analyzed to test whether significant changes (in terms of either improvement or worsening of gender equality aspects) take place during the five year duration of the FESTA project. As discussion material, data will be internally shared at different meetings with diverse participants, at different levels, serving different specific purposes. A plenary presentation of gender statistics is also considered. PowerPoint presentations – with data mainly shown in form of tables, graphics and charts – will be used to spread outcomes. It is also possible to think about a final internal report collecting time series statistics with relevant description and trends.

## PARTNER'S MATERIAL – TOOL 2.2 PRESENTATION MATERIAL

### UU – PRESENTATION MATERIAL

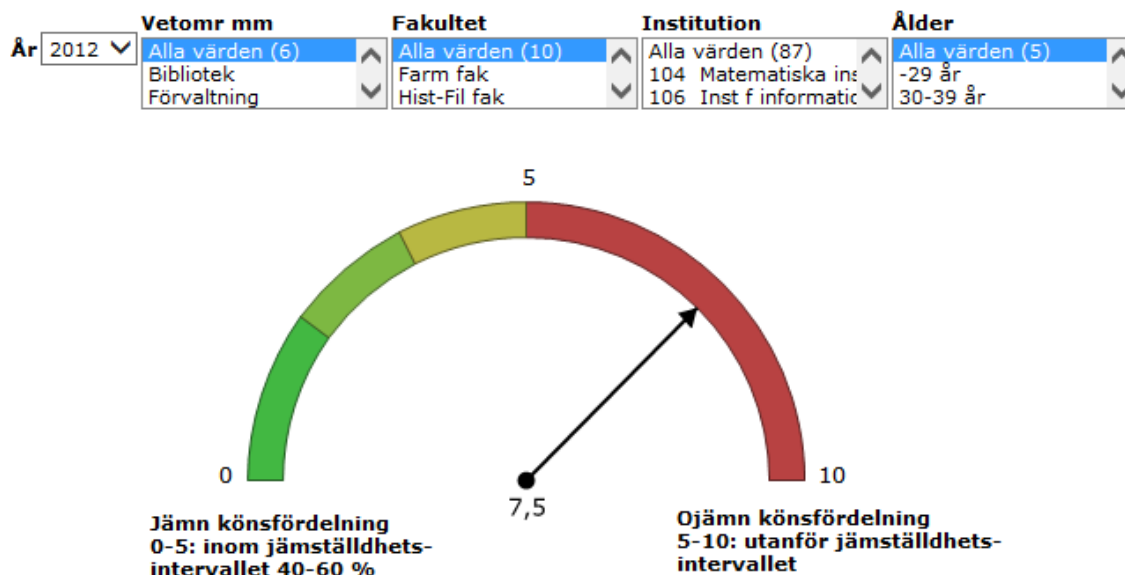
Uppsala University's tool for gender equality indicators is essentially a visual device to present statistical data in an engaging way. The indicators are illustrated with a speedometer and a table. The meter is supposed to give all employees and students at the university an indication of the gender equality situation at the touch of a keyboard. The pointer marks the indicator value, with 0 at the far left and 10 on the right. The scale is divided into two fields of color: green for values 0-5 and red for the other values. The indicator value 5 represents the limit of what is acceptable from a gender equality point. The field of yellow-green color indicates a location close to the limit, which means that special attention is warranted. Red mark shows that the area in question definitely requires further analysis and action. The table gives a more nuanced understanding of the variation behind a particular indicator and more detailed information for people at the university with responsibility for gender equality activities. Each indicator is based in turn on statistical data from one year back in time unless otherwise noted. The HR division has information and documentation on the construction of the indicators (only in Swedish).

Our sample of discussion material is only in Swedish and therefore accompanied by the explanatory text below. At the top of the indicator there is a scrolling list where you can choose year (*år*), disciplinary domain (*vetområde*), faculty (*fakultet*), department (*institution*) and age (*ålder*). The meter displays the weighted average value of a number of variables (*delgrupp*), the higher the value, the more pronounced gender imbalance. The table shows the statistical data for the variables. Variables are in some cases very small and a single person can then have a significant impact on gender im/balance. If the meter shows red or if there are one or several red dots in the table it means that there is gender imbalance in this category. The indicators are always gender-neutral, i.e., they give indications be it women or men who are most/least part of the group.

For each variable and year are calculated how many FTEs (*HTEKV*) women (*kvinnor*) worked and how many FTEs men (*män*) worked. FTE (Full Time Equivalent) means that a person worked full time for a year or several people who part-time, adding up to one FTE. Then an indicator value (*indikatorvärde*) is calculated for each variable. The value shows the difference between men and women in worked FTEs. A high value indicates a large difference and a low value means a small difference. In the next step the indicator value is recalculated (*omräknat indikatorvärde*). This is done so that all indicator meters should have the same scale. Then the recalculated indicator values are weighted. The number of FTEs of that specific variable compared to the number of FTEs in all variables in total is used as weight (*vikt*). Finally a weighted average value (*omräknat indikatorvärde'vikt*) is calculated for the variables. It is the weighted average value that is displayed in the meter.

The indicator shows the gender im/balance in leadership positions (*ledning*) at two of our chosen departments and involves comparison to the Swedish norm of at least 40 percent of each sex in a group. The leadership positions are here divided into two groups: Academic leaders (*akademiska chefer*), e.g., heads of department and director of studies, and professors (*professorer*).

## Ledning



Den här indikatorn visar könsfördelningen i universitetets ledning. Ledningen delas in i tre grupper: akademiska chefer (t ex dekaner och prefekter), professorer och övriga chefer (t ex chefer inom förvaltningen).

Mätaren visar skillnaden mellan andelen kvinnor och män. Ju högre värde desto mer ojämn könsfördelning. Tabellen visar det **statistiska underlaget** för de tre grupperna. En röd prick indikerar en ojämn fördelning. Observera att grupperna i vissa fall är mycket små och att en enskild person då har stor betydelse för könsfördelningen. Om mätaren visar rött eller om det finns en eller flera röda prickar i tabellen bör detta **undersökas närmare**.

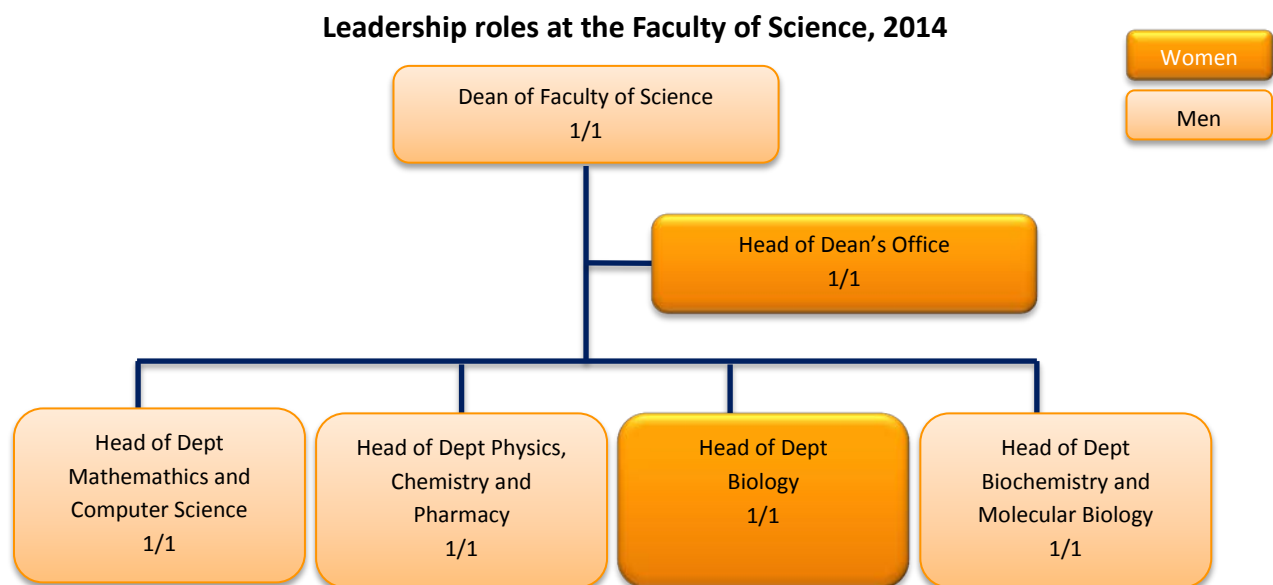
Delgrupp	HTEKV Tot	HTEKV Kvinnor	HTEKV Män	% HTEKV Kvinnor	% HTEKV Män	Indikator-värde	Omräknat Indikator-värde	Vikt	Omräknat Indikator-värde*Vikt
Akademiska chefer	7,8	1,4	6,3	18,3	81,7	0,63 ●	7,72 ●	0,21	1,58
Professorer	30,0	6,2	23,9	20,5	79,5	0,59 ●	7,43 ●	0,79	5,91
Total	37,8	7,6	30,2					1,00	7,49

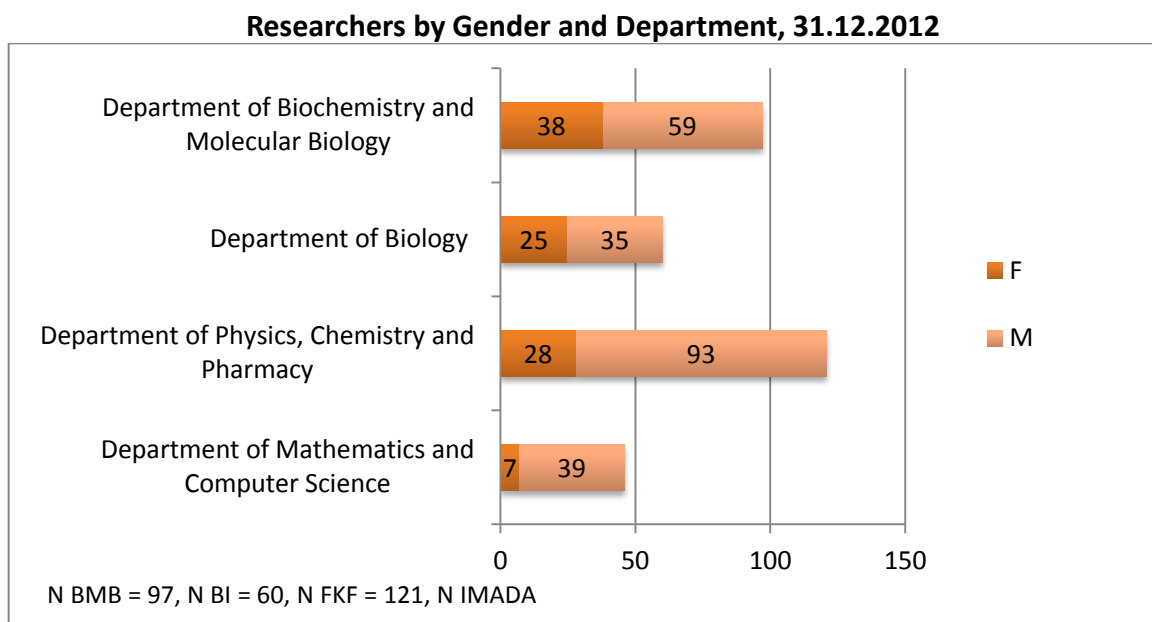
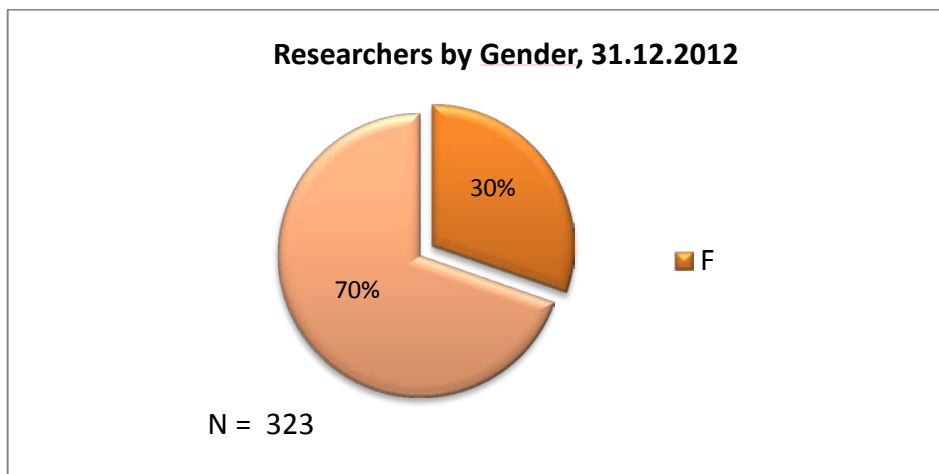
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\*Observera att det kan förekomma vissa avrundningsfel i tabellen.

## SDU – PRESENTATION MATERIAL

The following graphs, bars and figures show various aspects, we find of particular interest and which may serve as openings for the dialogues. These will be further qualified and perspectivized by other findings both from our own dataset and from other national and international findings. The data presented will be part of the powerpoint presentations on which to base our dialogues. They highlight particularly salient and/or problematic points. The presentations will be supplemented by a comprehensive report of findings and conclusions for the Faculty of Science, presented with text, figures, charts, graphs and tables, as well as with background data in table form.

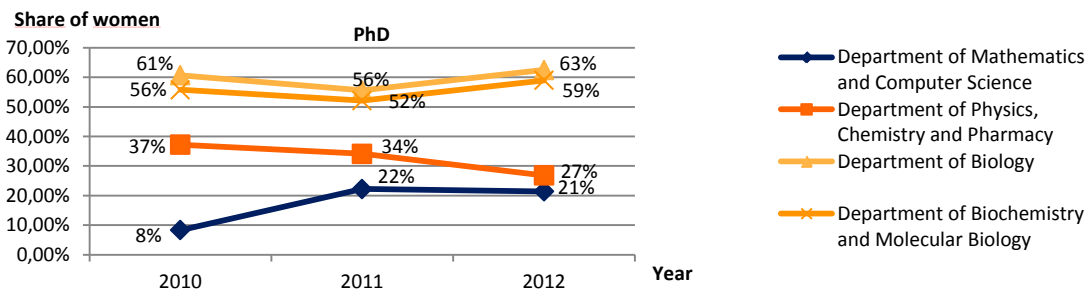
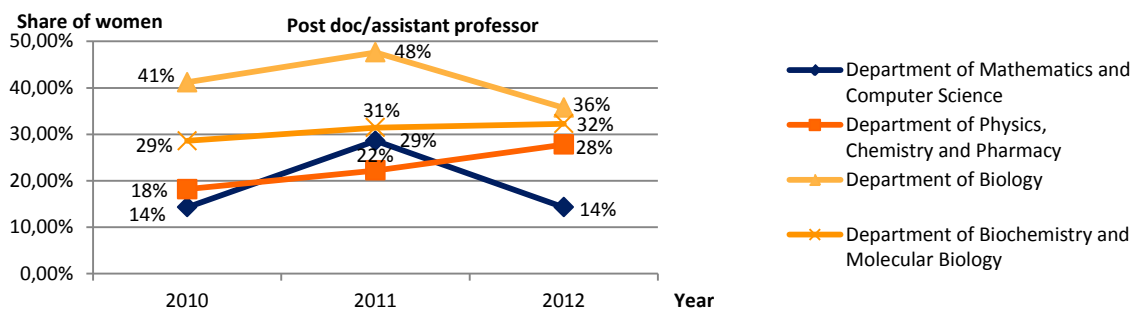
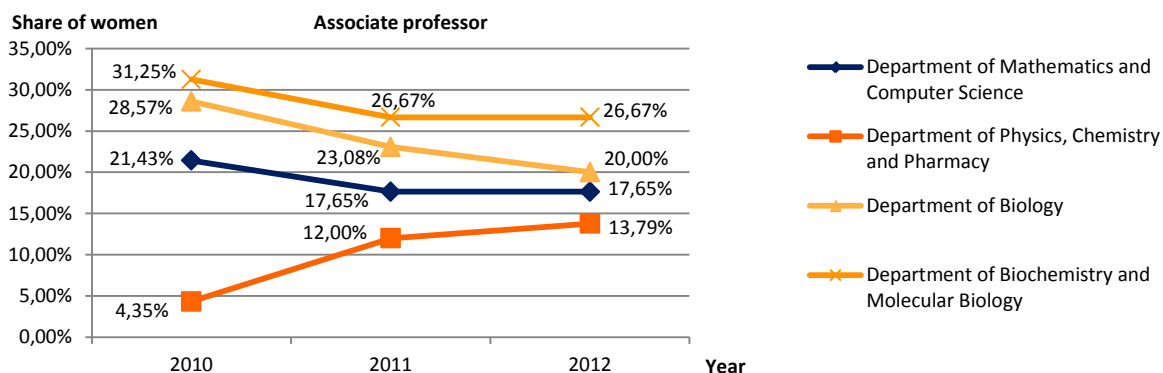
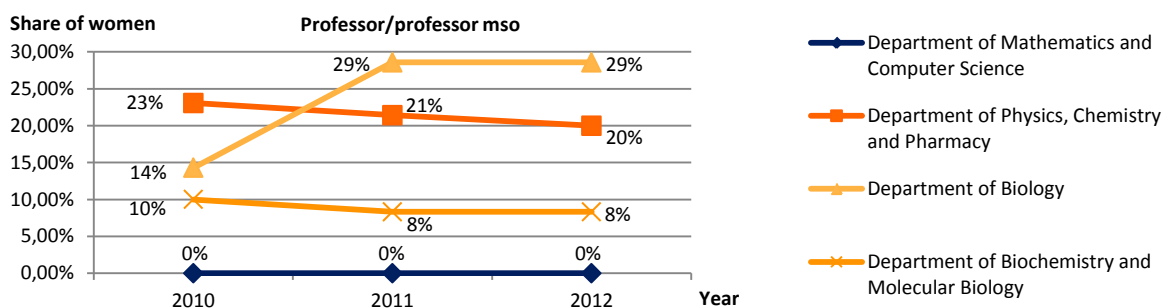




### Researchers by Gender and contractual level, 31.12.2012

	Women	Men	Total
Professor/professor mso	6	35	14,63%
Associate professor	14	62	18,42%
Post doc/ Assistant professor	26	62	29,55%
Ph.D.	52	66	44,07%
<b>Total</b>	<b>98</b>	<b>225</b>	<b>30,34%</b>

## Patterns in employment per department and contractual level, 31.12.2012

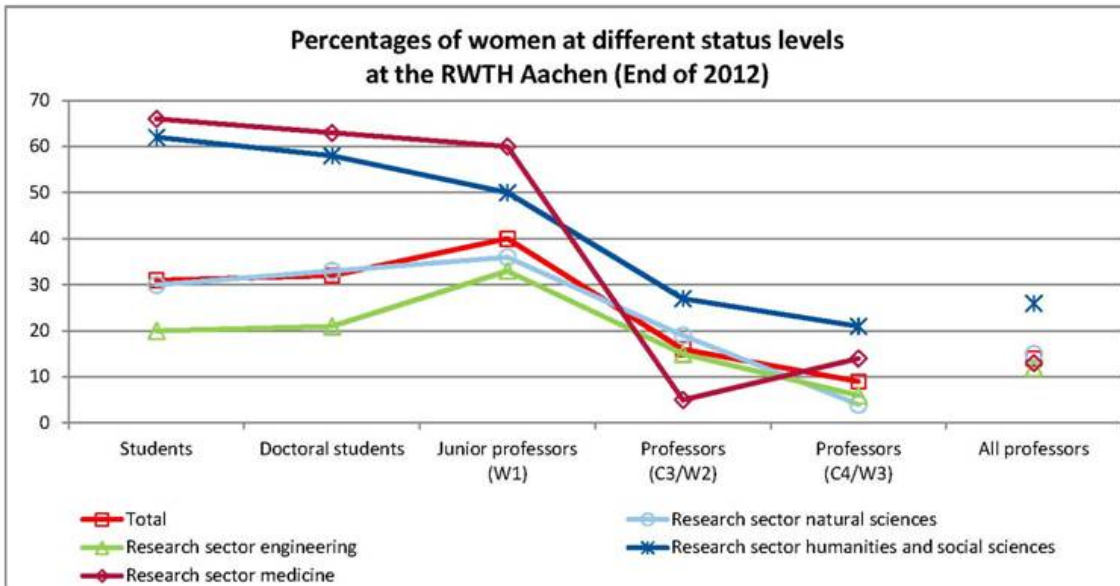


# RWTH – PRESENTATION MATERIAL

RWTH has already made publically available a range of statistics that refer to students and employees and which differentiate between the faculties in the so called *Zahlenspiegel* (mirror of numbers). These statistics also differentiate between genders and deliver a huge range of information necessary for monitoring gender equality at RWTH. Thus they give us a good starting position for the dialogues as the following examples illustrate:

## Share of women at the RWTH Aachen University

At the beginning of our debates we will start with the status quo of the share of women in research in general and in the different disciplines in the University in particular.



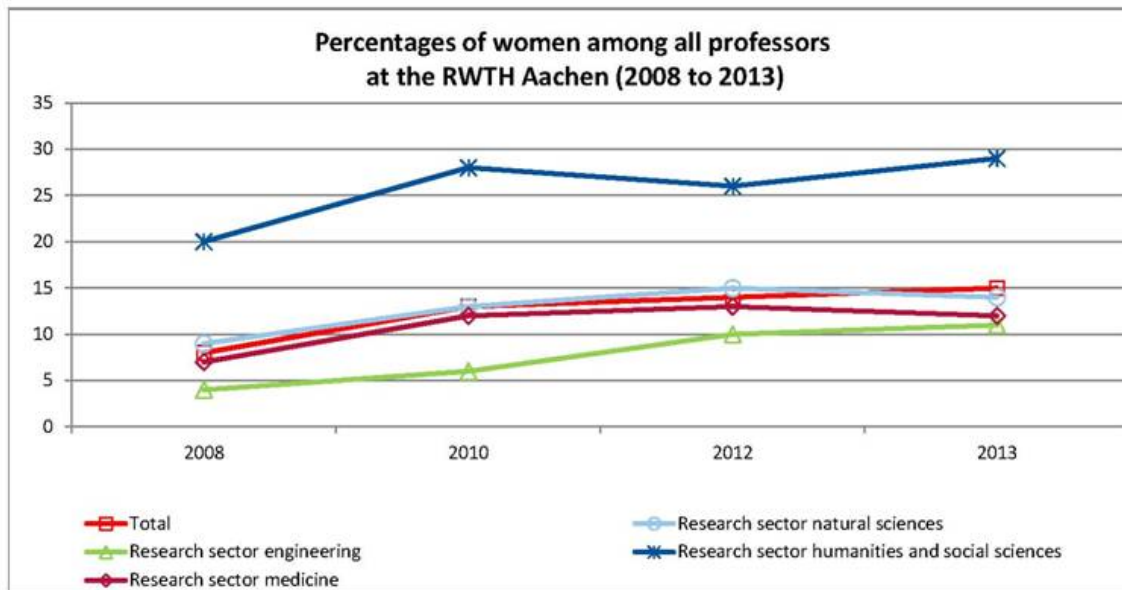
Source: Division 6.3 - Controlling and Information Management of the der RWTH 2012.

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Percentages of students and doctoral students: Wintersemester 2012/2013, Percentages of professors on 12/01/2013

The Figures 2012 categorized junior professors as academic staff grade C; professors (C3/W2) as grade B and professors (C4/W3) as grade A (p. 140).





Source: Division 6.3 - Controlling and Information Management of the der RWTH 2012

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Within WP3.2 it is our aim to expand these statistics by developing new indicators (see above) and by checking if data for these indicators are available at RWTH

Some of these data can be found in the framework plan for gender action. Among them are for example the share of women on boards and committees:

#### ***Share of women on boards and committees***

When it comes to the University level, the share of women on boards is 14,4 %. On the faculty level, the share with 19,1 % is much higher, although large differences can be seen within the faculties. The faculties “Georesources and Materials Engineering” and “Electrical Engineering and Information Technology”, for example, have only one female member of their faculty council.

Moreover, we could compile data that are available in the data storages of the respective administrative departments. For example data that refer to the indicator “Degree of gender competence of the teaching staff”:

#### ***Degree of gender competence of the teaching staff***

- Courses with gender aspects in the head line of the course relative to all courses;
- Courses with gender aspects in the description of the course relative to all courses

Semester	winter 2011/12	summer 2012	winter 2012/13	summer 2013
number of courses with gender aspects (for both indicators the same)	5	6	6	8
number of all courses	approximately 3000 courses			

Finally, some of the indicators have delivered data where data protection concerns emerged so that they cannot be analyzed at the faculty level. This was for example the case for the indicators “Financing of projects led by women and men” and “Share of projects led by women”:

***Share of projects led by women and financing of projects***

The data show that female professors lead fewer projects than male professors but the difference is only small. Against that the difference with regard to financing is very large in all faculties. These findings correspond with recent research finding of the German Research foundation (DFG). In the debate with the Rectorate and also with the leaders of the faculties, these findings engaged huge interest and possible reasons for the findings were discussed in depth.

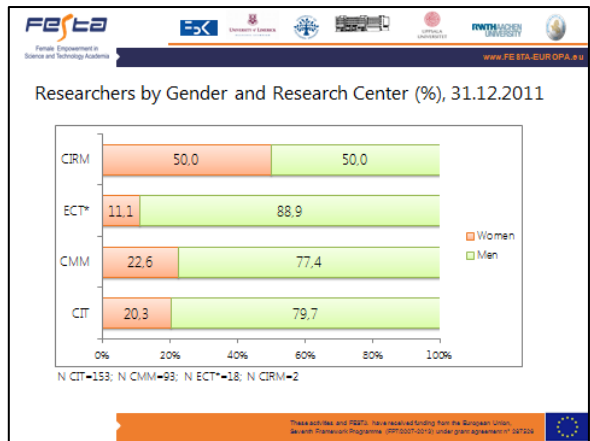
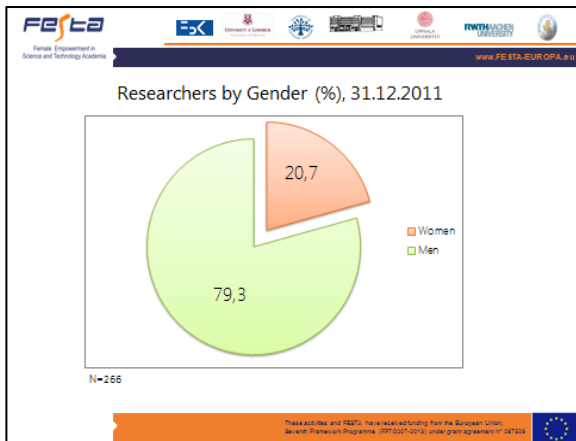
# FBK – PRESENTATION MATERIAL

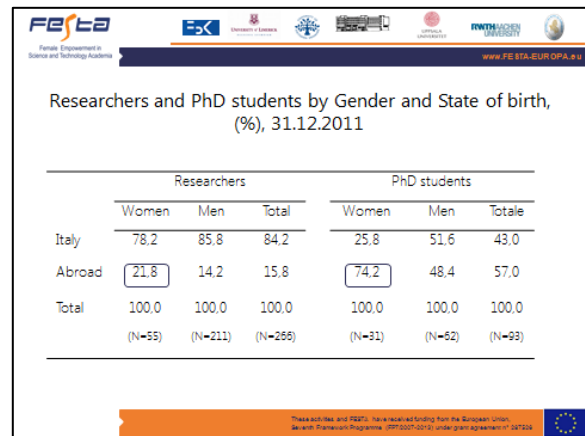
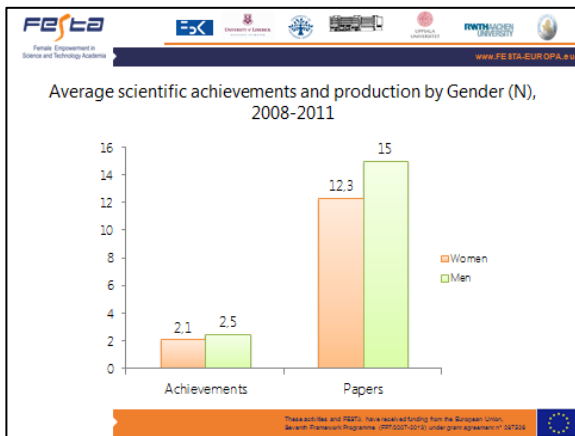
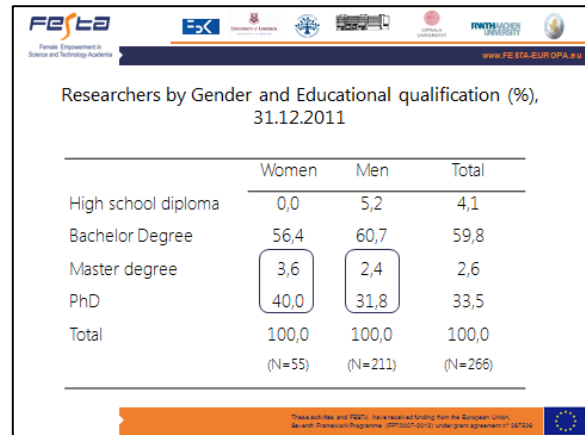
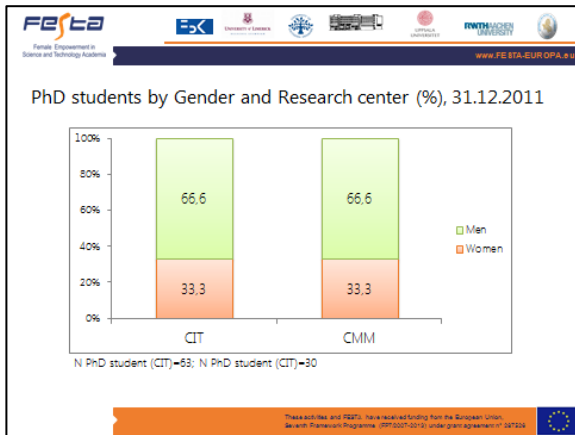
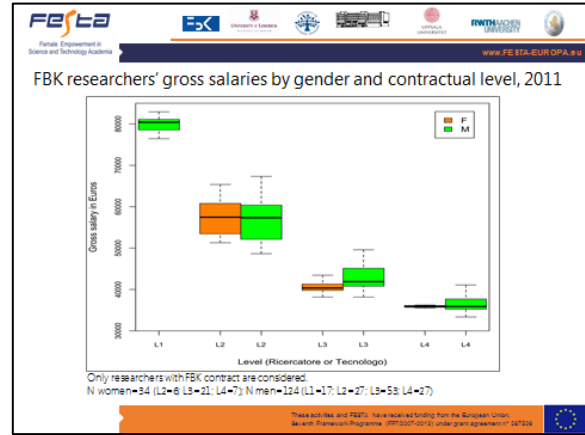
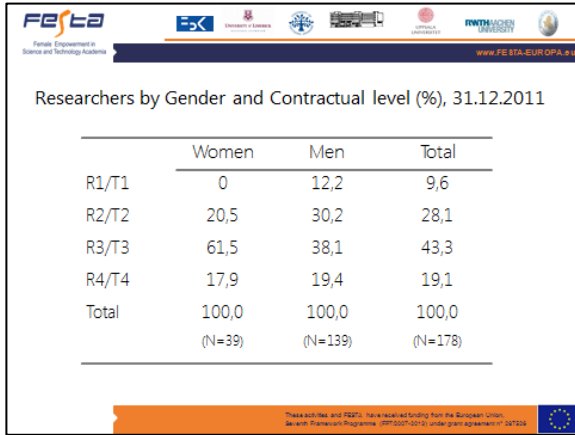
The following slides represent an example of material used during the first dialogue we had with FBK researchers in order to raise awareness as well as foster their comments, opinions and proposals for policies and/or actions oriented at creating gender balance in all the working aspects investigated. Data presented in the slides refer to the FBK staff of the scientific-technological research centers (administrative personnel excluded), with reference to year 2011 – in order to monitor the situation at the beginning of FESTA, February 2012. In the following years, comparisons with subsequent data analyses will show potential improvement or worsening of gender equality in the FBK working environment.

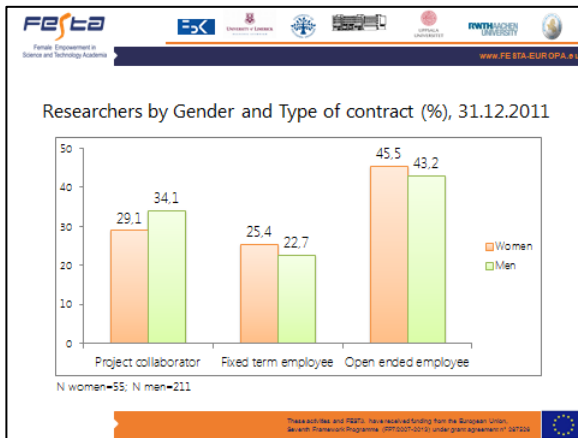
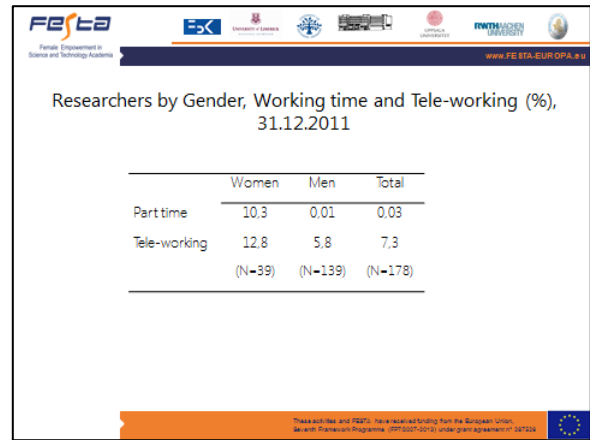
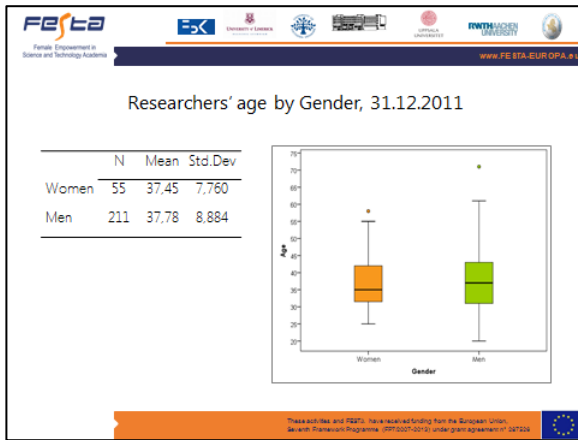
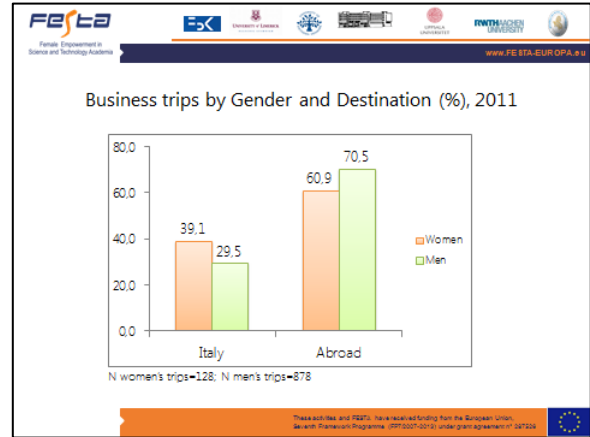
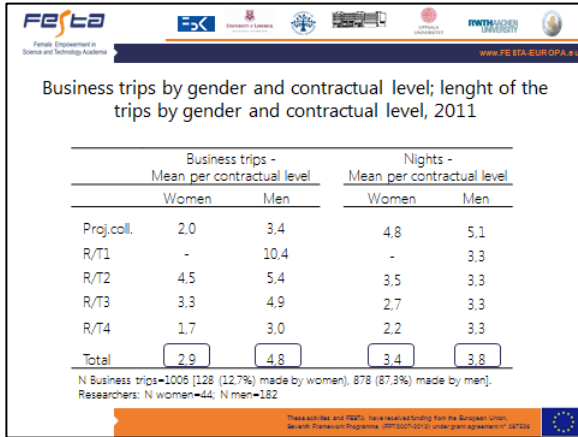
**FESTA EU-project**  
Female Empowerment in Science and Technology Academia

**Pranzo Sui Generis**  
November 14th 2013

These activities and FERTS have been cofunded from the European Union, as part of Framework Programme (FP7) 2007-2013, under grant agreement n° 247224







**THANK YOU!**

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## **TOOL 2.3.: SAMPLES OF TEMPLATES FOR ACTION PLAN**

As we believe that organizational awareness can only in the final analysis be seen through a change in behaviour, the last tool we have developed is templates for action plans. As is evident in the following sections, two of our partners, UU and RWTH, work within the framework of the respective university gender action plans already in existence. SDU and FBK, on the other hand, have no such centralized and/or legal format for such action plans, and therefore they will make use of the presented templates as points of departure for formulating more detailed action plans that may be put to use in the course of the dialogues in the units based on our statistical findings.

It is important here to note that we are fully aware that this kind of dialogue often has to take place a number of times before real and differentiated action plans can begin to be formulated. Indeed, enforcing formulation of action plans at a premature stage can be directly counterproductive and may raise more resistance than goodwill. We are also aware that dialogues, such as the ones we will facilitate, can produce differing degrees of concreteness, quality and scope of possible actions in different directions at the same time.

When used right and timely, action plans may serve an important function in measuring, tracking and follow-up, committing people to intentions and ambitions. In this way they are management tools, that may require clear objectives and dedicated work to produce, but will help to increase the degree of systematicity and follow-through and -up.

## PARTNER’S MATERIAL – SAMPLES OF TEMPLATES FOR ACTION PLANS

### UU – TEMPLATE FOR ACTION PLAN

Uppsala University has created a template for a three-year gender equality plan for all departments. The indicators have been integrated in this template for the departments to regularly use them when they, for example, analyze the current situation prior to writing gender equality plans. At Uppsala University, this template can be accessed electronically.

Template for three-year gender equality plan for departments:

Department/equivalent	Name of department		
Date	Start date of the plan		
Cooperation	Who have worked with the plan		
Gender equality group	Who belong to the gender equality group of the department		
Evaluation of last year’s gender equality plan and gender equality work	Explain in detail how the previous year’s assignments and measures have been implemented		
Description of the state of the art		F	M
Employees including doctoral candidates with employment	Number of employees		
	Number of positions		
	Number of full time employees		
	Average age		
	Percentage of employed women and men		
		F	M
Leadership	Academic leaders (deans, heads etc.)		
	Professors		
	Other leaders		
Positions	Senior research engineer/equivalent		
	General administration		
	Teaching assistant		
	Assistant research work		
	Building, procurement and environment		
	Leadership work		
	Doctoral candidate		
	Postdoctoral research fellow		
	Researcher /equivalent		
	Research group leader/equivalent		
	IT work		
	Office services		
	Culture and information		
	Laboratory research work		
	Planning and administration of research and education		
	Professor		
Garden, technology and service			
Lecturer			

	Senior lecturer		
Form of employment	Permanent contracts < 50 percent Permanent contracts ≥ 50 percent Permanent contracts 100 percent Fixed-term contracts < 50 percent Fixed-term contracts ≥ 50 percent Fixed-term contracts 100 percent		
Parental leave	Parental leave (parental benefit) Temporary parental benefit for care of sick children Unpaid leave		
Sick leave	Short term sick leave Long term sick leave		
Doctoral candidate's degree of (research) activity	10-40 percent 41-60 percent 61- 80 percent 81-100 percent		
Doctoral candidate's financing	List existing forms of financing and % of women and men		
Third cycle degree	Doctoral degree Licentiate degree		
Registered students	First (basic) level Second (advanced) level		
First- and second-cycle degree	First (basic) level Second (advanced) level		
Comment shortly on the figures which do not show a gender equal distribution			
Standing assignments in the central gender equality plan	Cut and paste the standing assignments in the central gender equality plan that are relevant for you: Work and study conditions Information Leadership positions, investigative and decision-making bodies Salary and competence development Recruitment		
Standing assignments in the gender equality plan of the disciplinary domain	List the standing assignments from the gender equality plan of the disciplinary domain		
Standing assignments carried out annually by the department	List the specific assignments at the department		
Targets in the gender equality plan of the disciplinary domain	List the targets in the gender equality plan of the disciplinary domain that is relevant for you.		
Measures in the gender equality plan of the disciplinary domain	List the measures in the gender equality plan of the disciplinary domain that are relevant for you		
Targets of the department	List the targets that you want to achieve during the period		



Measures	
Measures year 1	What – what will be done? How – how will it be done? When – when will it be done? Responsible – who is responsible for getting it done? Who – who are going to do it?
Measures year 2	What – what will be done? How – how will it be done? When – when will it be done? Responsible – who is responsible for getting it done? Who – who are going to do it?
Measures year 3	What – what will be done? How – how will it be done? When – when will it be done? Responsible – who is responsible for getting it done? Who – who are going to do it?

## SDU – TEMPLATE FOR ACTION PLAN

	<b>GENERAL ISSUE</b>	<b>GOALS</b> Description of the goals you want to achieve	<b>ACTION</b> Description of actions to be undertaken	<b>RESPONSIBLE</b> Name	<b>SCHEDULE</b> Start/Finish	<b>FOLLOW UP</b> How/When you follow up on actions undertaken – do they work?	<b>COMMENTS</b> Other, resources required etc.
<b>A</b>	<b>GENDER EQUALITY IN RESEARCH</b>						
1							
2							
3							
<b>B</b>	<b>TEACHING &amp; EDUCATIONAL TASKS</b>						
1							
2							
3							
<b>C</b>	<b>ADMINISTRATIVE TASKS</b>						
1							
2							
3							
<b>D</b>	<b>GENDER EQUALITY IN CAREER DEVELOPMENT</b>						
1							
2							
3							
<b>E</b>	<b>GENDER EQUALITY IN WORKING CONDITIONS</b>						
1							
2							
3							
<b>F</b>	<b>WORK/LIFE BALANCE</b>						
1							
2							
3							

# RWTH – TEMPLATE FOR ACTION PLAN

RWTH's work with action plans follows the format of the already existing Action Plans on Gender Equality. This "Plan for the Promotion of Women" at Universities in our State North-Rhine Westphalia, consists of a central framework plan for the whole University and the faculties and administrative women-promotion-plans. The framework plan implements the regulations of the North-Rhine Westphalia Gender-equality-law (GEL/LLG). It was launched in 1999. The plans determine the setting of targets with regard of the increase of women in areas where they are underrepresented and the promotion of women; furthermore, they determine the methods and controlling tools that are used to achieve the specific targets.

Obligatory Frame of the "Plan for the Promotion of Women" with time perspective of three years:

1. Introduction
2. Survey and analysis of the employees and studying structure
  - 2.1. Professors of the faculty XY
  - 2.2. Scientific staff of the faculty XY
  - 2.3. Non-scientific staff of the faculty XY
  - 2.4. Students of the faculty XY
  - 2.5. Composition of the committees of the faculty XY
3. Prognosis of vacant positions
4. Target-settings related to the amount of women at engagement, promotion and upgrading
5. Internal faculty actions for the promotion of equality
  - 5.1. Actions to improve the compatibility of family and profession/studies
  - 5.2. Actions to improve the working conditions/ working structure
  - 5.3. Actions for reducing the under-representation of women
  - 5.4. Actions for qualification
6. Assessment of the actions realized until now
7. Gender in research and teaching
8. Success
9. Gender oriented finances and staff
10. Concluding remarks

These Action plans have to be revised every three years. The new plans have to be developed and adapted in the summer 2014, and it is the intention of the FESTA team to act as consultants in this process (cf. section leadership seminars and dialogues).

## FBK – TEMPLATE FOR ACTION PLAN

	GENERAL ISSUE	GOALS Description of the goals you want to achieve	ACTION Description of actions to be undertaken	PARTICIPANTS in the dialogues	BENEFICIARIES of the actions	RESPONSIBLE Name	SCHEDULE Start/ Finish	FOLLOW UP How/When you follow up on actions undertaken – do they work?	COMMENTS Other, resources required etc.
<b>A</b>	<b>GENDER EQUALITY IN WORKING CONDITIONS</b>								
1									
2									
3									
<b>B</b>	<b>GENDER EQUALITY IN CAREER DEVELOPMENT</b>								
1									
2									
3									
<b>C</b>	<b>GENDER EQUALITY IN RESEARCH</b>								
1									
2									
3									
<b>D</b>	<b>WORK/LIFE BALANCE</b>								
1									
2									
3									

## SUMMARY

With this toolkit our intention has been to provide information and inspiration on a practical and applicable level. Our primary target group is gender and HR practitioners, who are in a situation where they know action has to be taken in order to effect change at different levels in the way organizations deal with gender inequality and imbalance, but find practices and examples hard to come by.

The premise for this work has been to let the toolkit serve first and foremost as a framework for seeing possible ways to handle the task of raising awareness of gender imbalance in order to, ultimately, effect changes in actions and behaviour – on every level. The palette presented here thus represent vast differences in approach, in concrete definitions of indicators, hypotheses and dimensions, data collection and analysis as well as who to interact with, when and how. These differences are to a large extent due to our individual contexts, both national, political, institutional, sector specific and in terms of project situation and organization. Our conclusion is that there can be no toolkit on how to implement gender change using the approach presented here, which may be a one-size-fits-all. Rather, gender monitoring and awareness raising must necessarily be adapted to the local conditions and objectives of the organization in question.

Our work has made us aware of the importance of analyzing and understanding our individual points of departure. A thorough analysis and understanding of this is fundamental for the planning of the next steps: which dialogues and negotiations to have with whom. Along the way, our work has taken us through the process of defining and qualifying the basis as well as theoretical and methodological approaches for our data material: dimensions, hypotheses and indicators. An important element in this has been negotiations and collaboration with relevant other units and functions in order to ensure data validity, reliability, relevance, usefulness, and political attention. Next, collection and analyses of the data have taken place, often with implications for the definition and applicability of the various indicators, as is amply evident in the sections on how each of the four partners constructed dimensions, hypotheses and indicators.

In line with our task objective to raise awareness and our modus operandus to do so by presenting carefully compiled evidence and on this basis to engage relevant people at the different organizations in dialogues which may facilitate – ultimately – concrete changes in behaviour, an important step in our process is to turn the figures into presentation material. This brings along an entire set of considerations on how to present material and facilitate settings where the data can be discussed and action plans may be formulated. Along with who to engage and when.

We find ourselves in the interesting situation, where all these processes are up and running, and that most of them are iterative occurrences, necessitated, fed and amplified by each other.

At the time of compiling the toolkit (February 2014), we are nearing the end of the data collection and analyses, and getting ready for the presentation of this material and facilitating dialogues on the basis of them. In terms of the tools presented here, this crux in time corresponds with the division between the first and the second set of tools. The first set of tools – collecting and understanding statistics – therefore makes up a concrete, after-the-fact presentation of what we have done. The first set of tools is further documented and elaborated in Appendices 2 and 3. In contrast, the second set of tools – from figures to awareness – is still in the making and open to changes. This set therefore consists mainly of samples of possible realizations.

The first set of tools – collecting and understanding statistics – consists of four tools:

- *Tool 1.1: Dimensions:* This tool describes what it is we are trying to measure – dimensions are themselves not visible.
- *Tool 1.2: Hypotheses:* This tool points to what we think or know that indicators will display and why.
- *Tool 1.3: Indicators:* This tool measures and illustrates the dimensions along which our data have been defined. Indicators become measurable through variables. They confirm or dismiss hypotheses.
- *Tool 1.4: Log Books:* This tool documents the decisions and actions undertaken along the way.

The second set of tools – turning figures into awareness – consists of three tools:

- *Tool 2.1: plans and scripts for dialogues at meetings and seminars:* This is a planning tool for the approach, framework and facilitation of the various dialogues to be held in the task of raising organizational awareness.
- *Tool 2.2: samples of discussion material:* This tool consists of samples of the material input based on the statistical findings to be used as the basis for dialogues and awareness raising sessions.
- *Tool 2.3: templates for action plans:* This tool is meant as a support in formulating action plans and tracking and evaluating ensuing action.

Our process has shown us that not only is understanding our individual contexts of vital importance, this understanding and deep knowledge is greatly enhanced by comparative knowledge of how things are done elsewhere – and here our four different contexts and respective practices and possibilities have proved valuable. Therefore we have put relatively strong focus on descriptions and comparative considerations of and between each of our four institutional contexts, practices, decisions and solutions. Appendix 1 provides an elaboration of institutional contexts.

Our hope is that you have also found this comparative approach valuable in considering your own practices, possibilities and needs. Thank you for your attention.

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EIGE: Gender Equality Index – Country Profiles ISBN 978-92-9218-311-0; doi:10.2839/99105

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Female Empowerment in Science and Technology Academia

## APPENDICES 1-3

### FESTA TOOLKIT WP3.2



- FESTA is an EU- Framework 7 funded project under:  
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- [ISBN-number]
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# APPENDICES 1-3

## FESTA TOOLKIT WP3.2

### Towards Raising Organizational Awareness

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Female Empowerment in  
Science and Technology Academia



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## APPENDIX 1 – INSTITUTIONAL CONTEXT ELABORATED

The four WP3.2 partners come from four different countries and from different institutional contexts, both in terms of what is at stake on the national levels, what the organizational context prescribes and delineates, and where the FESTA-team is situated and can work from and with. Understanding these relative differences is important in assessing our individual points of departure for the FESTA tasks and objectives, and also the way they ultimately are put into practice.

Appendix 1 provides elaborated insight into organizational structure and decision making, funding, teaching and research, employment, hiring and promotion, advertisement and appointment, and gender structure at each of the four different WP3.2 partner organizations.

## INSTITUTIONAL CONTEXT UPPSALA UNIVERSITY (UU)

The FESTA project team at Uppsala University is situated in the Equal Opportunities Office, which is part of the Human Resources Division at the University Administration. The Equal Opportunities Office is an administrative unit under the central Equal Opportunities Council. Besides investigating appeals, informing university staff, and coordinating equality work done by departments, it largely works proactively, giving seminars about equality in different areas of academic work. The FESTA project is a cooperation between the Equal Opportunities Office and the Faculty of Science and Technology.

The FESTA team is represented by:

- FESTA coordinator, task leader for task WP 5.2.: Minna Salminen-Karlsson, associate professor in sociology, researcher at Centre for Gender Research and gender equality specialist at Human Resources Division, Equal Opportunities Office.
- Coordinator for all tasks at Uppsala University: Nina Almgren, PhD in history and gender equality specialist at Human Resources Division, Equal Opportunities Office.
- Internal expert: Elisabeth Larsson, associate professor in scientific computing, senior lecturer at Department of Information Technology, Division of Scientific Computing.
- Team member task WP3.2: Louise Kennerberg, analyst at Human Resources Division, who has developed the gender equality indicators at Uppsala University before FESTA.
- Team member task WP6.2: Ulrike Schnaas, educational developer at Planning Division, Quality Enhancement and Academic Teaching and Learning, Development of teaching and learning.
- Team member task WP6.1: Fredrik Molin, PhD in Business Studies and researcher at IPF (Institutet för personal- och företagsutveckling).

The description of the structure and governance below covers Uppsala University as a whole and not solely the Faculty of Science and Technology or the departments, which have chosen to participate in the FESTA project. This is in order to be able to make a comparison of context between partners.

## ORGANIZATIONAL STRUCTURE AND GOVERNANCE OF UU

### ORGANIZATION STRUCTURE AND DECISION MAKING

Uppsala University is a government-funded higher education and research institution. It is located on several campus areas in Uppsala and from July 1<sup>st</sup> 2013, Uppsala University has incorporated Gotland University College, and has now also a campus at a distance.

Uppsala University consists of three disciplinary domains: Science and Technology, Medicine and Pharmacy and Humanities and Social Sciences, which in turn are divided in faculties, numbering nine in total. Uppsala University has around 4 500 academic staff and 1 500 support staff, including units like the University Library. The university has about 40 000 students.

The Swedish government governs the universities by a yearly letter of regulation, which gives general goals and orientations. Uppsala University is governed by the University Board. The University Board oversees all Uppsala University business and is responsible for ensuring that its assignments are executed. The Board is an overall planning and controlling body. The university has an Internal Audit directly accountable to the University Board. The majority of the members of the University Board are non-academics and they are directly nominated by the Swedish Government. In addition, the board includes representatives of staff and students.

The Vice-Chancellor is the head of the university as a public authority and the operative manager. The Vice-Chancellor is appointed by the Swedish government. The Vice-Chancellor has a deputy – titled Deputy Vice-Chancellor – who serves in the Vice-Chancellor’s place when he or she is not on duty and who otherwise substitutes for the Vice-Chancellor to an extent determined by the Vice-Chancellor. The Vice-Chancellor’s decisions are normally made at special meetings in the presence of the Deputy Vice-Chancellor, the University Director, and student representatives. The University Director is the head of the administrative support organisation of the university.

The Disciplinary Domain Board is the decision-making body of the disciplinary domain. The majority of the members of the Disciplinary Domain Board are individuals with academic competence. The chair of the Disciplinary Domain Board is titled the Vice-Rector. Disciplinary domains are organized in faculties with the faculty boards, and departments with the department boards.

Students and PhD students have the right to be represented in all of the university’s decision-making and investigative bodies.

#### **FUNDING**

The Board confirms the university’s budget, including the distribution of the collective resources and the principles governing the use of resources. The university’s budget is affirmed in the Swedish state budget by the parliament. About 65% of the university budget is directly financed by the government, approximately 30% for teaching and 35% for research activities. 35% of the university budget comes from external funding secured in competition, either

governmental or EU research funding or cooperation with private financiers, for example collaboration with industry. Funding for teaching is mainly based on the number of enrolled and graduated students, and adjusted according to discipline. The government sets yearly limitations for the maximum number of students that will be financed. The university may receive subsidies and donations and join partnerships with private organizations concerning both research and teaching. The financial turn-over of Uppsala University is around 583 Million Euros.

Higher education in Sweden is free for students from the EU/EEA and for students participating in exchange programmes. Students from other countries must pay tuition fees. A number of scholarships and grants are available. State funds may not be used for scholarships for PhD students, because of the general rule that a PhD position is regular employment. Yet, a number of PhD students work on scholarship at the early stages of their careers.

#### **TEACHING AND RESEARCH**

The government decides which academic areas the university is allowed to give courses and programmes. The Higher Education Authority (under the Ministry of Education and Research) has to approve the programme plan and give the university the right to examine students from that programme. The universities are free to determine their own examination and grading practices.

#### **EMPLOYMENT, HIRING AND PROMOTION**

The Appointment Regulations determine, under the Higher Education Ordinance, what teaching positions may exist at the university as well as the university's work with recruitment and promotion of teachers.

According to the Higher Education Act there has to be professors and senior lecturers at every higher education institution. Beyond this, each higher education institution decides the categories of teachers. Uppsala University has professors, visiting professors, adjunct professors, senior lecturers, associate senior lecturers, postdoctoral research fellows, lecturers, adjunct senior lecturers and adjunct lecturers.

The Appointment Regulations constitute the pan-University point of departure for recruiting and promoting teachers. They have been complemented and adapted to local needs within disciplinary domains and faculties by local guidelines. The academic career path comprises associate senior lecturers, senior lecturers and professors. Additionally, there are postdoctoral research fellows, whose posts have the objective of obtaining qualifications. Alongside the possibility of being appointed without having had any previous teaching position at Uppsala

University, it is also possible to be promoted from one teaching position to another within the academic career path.

The general employment rules in Sweden require any temporary position which has been held by the same individual to be transformed to a permanent position after two years. However, PhD and post-doctoral fellow positions are exempted.

The departments define the specific job content and specify the tasks in the individual advertisements.

#### **Positions not requiring a PhD:**

*PhD student:* A fixed term position, normally consisting of four years of PhD studies interspersed with one year of teaching and/or administrative duties. It is also possible to hold the position for two years and finish with a licentiate rather than a doctoral degree.

*Lecturer:* A teaching position which does not require a PhD. Often temporary, but can be permanent. This position is used by departments to manage a teaching load normally (but not always) on early courses. For some people this is a position keeping them in the academia until they get into PhD education, for some, though few, it becomes a permanent position. The departments are expected to use this employment category very restrictively.

*Adjunct junior lecturer:* A person who brings special competence to the university, but whose main employment is outside the university. Fixed term position.

#### **Fixed term career building positions requiring a PhD:**

*Post-doctoral position:* One to two years. Normally including exchange between universities (i.e., post-docs at Uppsala University normally have done their PhD at another university, often abroad).

*Post-doctoral research fellow:* A fixed term position up to four years. Consists mainly of research, but also of teaching and administration.

*Associate senior lecturer:* A fixed term position up to four years. Consists mainly of research, also of teaching and administration.

The main difference between post-doctoral research fellow and associate senior lecturer is in the career track options. The position of post-doctoral research fellow is truly fixed-term, that is, at the end of the period the person has to apply for positions. An associate senior lecturer position can be transformed to a permanent senior lecturer position, after an evaluation of the person's achievements. It is not possible to be re-appointed to any of the two positions after

the fixed four-year period is over. Nor can the same person have both a post-doctoral research fellow position and an associate senior lecturer position in sequence. The different disciplinary domains favor these two alternatives differently. Associate senior lecturership is the predominant form at the Faculty of Science and Technology.

**Positions at the level of senior lecturer:**

*Senior lecturer:* Permanent position including both teaching and research. However, time for research in the position itself is scarce (10-20%), so the individual needs to secure additional funds to exchange teaching for research.

*Researcher:* Temporary position for, normally, working in (or leading) particular research projects, to which the position is tied. A common form of employment for both junior and senior researchers when a department is not in need for more teaching staff. The researcher may either bring in a researcher project, or be employed in someone else's project. The position may also involve teaching, if the department has temporary teaching needs.

*Reader:* Rather a degree than a position. Both senior lecturers and researchers (in rare cases even younger academics) can reach the degree of reader which is a prerequisite for becoming a professor.

*Adjunct senior lecturer:* A person who brings in particular competence to the university, but whose main employment is outside the university. Fixed term position.

Applicants for a position of senior lecturer are assessed on the basis of the qualifications stipulated in the job advertisement. The appointment as senior lecturer depends on both research and teaching qualifications. However, research qualifications are normally given more weight. The applicant is expected to have a qualification course in university pedagogy, if not, the employment is conditioned so that s/he is required to get that qualification during the first year of employment. Applicants from outside Sweden are expected to be able to teach in Swedish after two years. The applicants for senior lecturer positions at Uppsala University often have excellent qualifications, for example, having held a professorship somewhere else.

**Positions at the level of professor:**

*Professor:* There are two types of professor positions. Either the position is announced as a professor position, or the position is announced as a senior lecturer position, and the applicant desires to be proved and declared as 'professor competent'. If an applicant is declared to be professor competent, the position is transformed to a professor position. In general, resources for research tend to be better for the positions that originally were designed as professor positions, but institutional statistics make no difference between

professors who have reached their positions in these two different ways. Both types are permanent positions.

*Adjunct professor:* A person who brings in particular competence to the university, but whose main employment is outside the university. Fixed term position.

**Advertisement and appointment:**

All permanent positions have to be advertised. A position has to be described in a gender neutral manner. It is possible to use search committees, but in case this is done, the committee has to be gender balanced and recommend both female and male applicants. The advertising has to be done in a suitable way and it is mandatory to publish it on the university webpage. The time for application has to be at least two weeks. Temporary appointments up to one year need not be advertised.

For the positions of assistant senior lecturer, senior lecturer and professor, two peer reviewers from other universities have to be engaged, for the position of post-doctoral research fellow one peer reviewer. The two reviewers have to represent both genders, unless there are particular reasons (which have to be explained in writing). The department in question suggests reviewers, which are appointed by the faculty. The peer reviewers have to make a ranking of the applicants, though two applicants are allowed to have the same ranking when their merits are equal.

In particular cases the Vice-Chancellor may appoint a professor without the ordinary advertisement and competition. This procedure is expected to be used very restrictively and can be appealed in the Higher Education Appeals Board.

The appointment decisions are made by the appointment committees, which operate on faculty basis. The committees have to be gender balanced.

The Domain of Science and Technology uses a standard form for the peer reviewers, to be sure that all candidates will be evaluated for all the relevant aspects. In addition to the peer reviews, interviews and trial lectures are used. The decision has to be based on both scientific and teaching merits and what else has been stated as requirements in the job advertisement. The head of the department where the position is placed has a right to speak in the final meeting of the committee, but is not part of the decision. The decisions are normally based on consensus, even if a member has the possibility to file for dissent. For lecturers, the faculty board confirms the decision of the committee, for professors the rector confirms. All material, including the peer reviews and the minutes from the meeting are public. All appointments can be appealed in the Higher Education Appeals Board.

## GENDER STRUCTURE

The university's gender equality work is designed to meet the requirements established by the university, the Swedish State and society at large, as provided for in the Swedish Discrimination Act and other relevant laws, ordinances and internal rules and guidelines. Gender equality work must be integrated into all activities at Uppsala University.

### Organization of work

Overall responsibility for ensuring that equality issues are addressed in goal-directed fashion rests with the University Board and the Vice-Chancellor. Operational responsibility rests with the chair-persons of the faculty boards, the heads of department and all other leadership and management personnel at the university. The work in question shall involve cooperation among employers and employees and between the university and students. Special university-wide support functions serves to support a systematic approach to equality issues on the part of faculties, departments and other organizational units. A number of the university's research milieus represent valuable resources in this connection.

*The Council for Equal Opportunities* serves the Vice-Chancellor in an advisory capacity with regard to the long-term approach to equality issues in connection with the university's core undertakings of research, education and cooperation. This council comprises representatives from the relevant organisational units at the university and students representing the first-, second- and third-cycle programme levels. The Council for Equal Opportunities is concerned with discrimination based on sex, sexual orientation, gender identity and/or expression, ethnicity, religion or other belief, disability, age and social background. The Vice-Chancellor's advisor with regard to equality issues serves as the council's chairperson.

*The Equal Opportunities Office* at the Human Resources Division is responsible for fostering, coordinating, highlighting and complementing efforts at the various departments and faculties. It is an administrative unit under the Council for Equal Opportunities and consists of five people (three working with gender equality). The unit pursues its objectives in close cooperation with officials at the Student Affairs and Academic Registry Division, the Buildings Division and the Division for Communication and External Relations. The FESTA project is a cooperation between the unit and the Faculty of Science and Technology.

For local gender equality work, each department/equivalent must appoint a gender equality group and a gender equality officer. Both employees and students must be represented in this gender equality group. Similarly, faculty boards are recommended to establish special bodies to deal with gender equality matters (Faculty gender equality committees). The Faculty of Science and Technology has one such committee.



### *Gender equality plans and follow-up*

The university's gender equality work is conducted in accordance with the three-year gender equality plans established under Ch. 3 Sec. 13 of the Discrimination Act at the pan-university level, the disciplinary domain/faculty level, and department/equivalent level if at least 25 people are employed. These plans must contain goals that can be followed up and directives for time-specific, concrete measures including a clear assignment of responsibility.

Gender equality plans at various levels must harmonize in such a way that plans established at the disciplinary domain/faculty level are based on the pan-university plan and that departmental plans are grounded in both the pan-university plan and that of the respective disciplinary domain/faculty.

Pursuant to the Discrimination Act (2008:567) employers must engage in goal-directed work within the framework of their operations to promote equal rights and opportunities in working life without regard to gender.

Targets prioritized for the three-year period must be achieved as a result of the measures implemented during the period. The focus is therefore on annual quantitative and qualitative evaluations. At the end of the three-year period, the Council for Equal Opportunities submits a comprehensive report regarding target fulfilment to the Vice-Chancellor.

The officer in charge of each respective measure must present a report within the framework of the regular follow-up of activities. This applies to measures in all gender equality plans throughout the university, that is, at pan-university, disciplinary domain/faculty, and department/equivalent levels. Reports from assignments and measures must be included in the follow-up of activities in a manner that makes them readily identifiable and serviceable as a basis for analysis of target fulfilment.

Target fulfilment must be reviewed at the end of each year of activity. This applies to all gender equality plans throughout the organization. The responsibility for this review lies with the individual(s) charged with establishing the respective plans.

Gender equality indicators are designed to be used in this goal-driven work so that areas for improvement can be detected and impact of measures can be evaluated. They address ten areas: gender balance in leadership positions, gender balance in different positions, employment conditions (temporary, part-time), parental leave and sick leave for male and female employees, for PhD students their financing, degree of (research) activity and gender balance in degrees achieved, for students gender balance in enrolment and in degrees achieved.

The areas have been chosen on the consideration that they should be possible to extract from existing databases with no additional work required.

#### *Areas of work*

**Decision making bodies:** All important decision-making and preparatory bodies must have equal (in the range 40%-60%) representation of both women and men. Any deviation from this rule must in general be explained in writing. When putting forward candidates for positions, committees etc., both women and men have to be represented.

**Parental policy:** Employees of both genders are encouraged to take parental leave. The university supplements the refunds of the social security system (80% of salary) with additional 10%. In evaluating individuals, time for parental leave has to be subtracted from academic age. Combining work and family has to be facilitated. For example, no meetings or teaching is to be scheduled outside office hours and students should know their schedules well in advance.

**Recruitment:** Positions have to be described in gender neutral terms in advertisements. Female candidates in male dominated areas have to be paid particular attention to and search committees have to look for candidates of both genders. If two candidates have equal or almost equal merits, the one representing the minority gender is to be selected.

**Gender neutral salaries:** Salaries are examined every three years to discover and correct gendered differences in occupational groups doing the same or equal work.

**Information:** Information of Uppsala University's gender equality policy or more specific gender equality issues is given by personnel from the equal opportunities unit to all new employees during their 'introduction days', and to departments and faculties on request. In the university teacher and supervisory training gender issues in teaching are discussed.

**Harassment:** There is a procedure for managing cases of sexual harassment among staff and students.

**'Power package for gender equality':** Supplementing its ordinary gender equality work, in 2008 Uppsala University presented its 'power package for gender equality', with two aims: to increase the percentage of female professors and to increase the number of women in academic leading positions. The measures have included leadership training for women, special grants for women who take on leadership positions to compensate for loss of research time, special research grants for women close to professor competence and economic incentives for male dominated departments to recruit women.

### **Gender equality work at Faculty of Science and Technology**

In addition to the general university measures, the Faculty of Science and Technology has implemented some measures of its own. The faculty gives economic rewards to departments that recruit women for permanent or tenure track positions. The fixed term appointments of PhD students are not only lengthened with the duration of parental leave taken, but with three months extra to allow them time to get on track again. The faculty supports a mentoring program for female PhDs and female networks. In addition there are single measures, such as supporting a summer school for female PhD students in physics.

The Faculty Committee for Equal Opportunities requires reports from the departments about their equality work. An increasing percentage, presently around 50% of the people responsible for gender equality at department level, get some remuneration from the department for their work

### **WORKING CONDITIONS FROM A GENDER PERSPECTIVE**

Uppsala University is a large university and the disciplinary cultures and working cultures vary greatly between the disciplinary domains. Even the Faculty of Science and Technology with its 15 departments and 1 800 employees comprises a number of different research environments. The differences are due to different ways of doing research (from lab groups in biology to much more solitary research in mathematics), different department heads (who sometimes have significant influence, sometimes less so), different ways of organizing, different economic situations etc. In general the departments at the Faculty of Science and Technology are in a good financial situation and attract dedicated researchers from around the world. More than one third of the academic staff in the faculty comes from outside Sweden.

As for gender in the working environment the departments also vary. Investigations have been made in PhD students' experiences of their working environment at three departments. The results have not been statistically significant, but they indicate that male PhD students get more encouragement and are happier with their colleagues, their research groups and supervisors. More female than male students experience that they get particular tasks because of their gender and that their competence is questioned for the same reason. Female PhD students in general see problems with gender equality in their environment that male PhD students do not report, and say that men have more influence than women at their departments.

Similar investigations have not been made into the conditions of more senior employees. The PhD students (women more than men) who prefer a non-academic career after their degree point at the competitiveness and unsecure financing as the main problems in the academy. This is certainly the case at the faculty, where half of the research budget consists of external

funds. On university level, teaching is stressed as important and the demands increase with more diverse student groups, making it necessary to find a balance.

Most research groups are led by male professors, though there are a number of female and also young female research leaders. Through the work conducted in FESTA we have encountered both groups with women in early career positions, who are not interested in staying in the environment but rather aspire for a position somewhere else, as well as research groups which actually manage to attract women because of the female friendly working environment they provide.

## INSTITUTIONAL CONTEXT UNIVERSITY OF SOUTHERN DENMARK (SDU)

The FESTA project is not a project of SDU as such but strictly a faculty concern and will only gradually become a formal SDU-project at the widest level.

The FESTA project team at SDU is situated at the Faculty of Science, which is one of five faculties at the university. At the faculty level we have access to our departments and the possibility to make distinctive management decisions for our faculty, but not for the whole university. However, we can approach the university level indirectly through the Vice-Chancellor's Gender Equality Board (GEB).

The FESTA team is represented by:

- Project Manager: Eva Sophia Myers, Head of Dean's Office /Faculty Administration
- Task leader WP3.2, WP6.1 and WP6.2: Liv Baisner, academic administrative officer and representative in the GEB and Faculty Equality Board
- Task leader WP2: Gitte Toftgaard Jørgensen, academic administrative officer
- SDU FESTA Steering Committee:
  - Professor Henrik Pedersen, Dean of The Faculty of Science
  - Professor Marianne Holmer, Head of Department of Biology
  - Professor Nina Dietz Legind, Chair of GEB
  - Chief Consultant Jakob Ejersbo, Head of unit for organizational and personal development
- External supervision: Gender expertise, statistical expertise

The description of the relative autonomy below covers all of SDU and not just the Faculty of Science. This is in order to be able to make a comparison of context between partners.

## ORGANIZATIONAL STRUCTURE AND GOVERNANCE OF SDU

### ORGANIZATION STRUCTURE AND DECISION MAKING

SDU is a government-funded, independent institution within the public administration under the Minister for Science, Technology and Innovation. The university has to follow laws and regulations regarding university staff and institutional affairs.

SDU is a comprehensive university with both research and teaching at all levels. It has five campuses and was the first Danish university with decentralised campus structure. SDU was established in 1966.

Research, teaching, communication and the transfer of knowledge at SDU are grouped into five academic faculties:

- The Faculty of Humanities
- The Faculty of Science
- The Faculty of Business and Social Sciences
- The Faculty of Health Sciences
- The Faculty of Engineering

The faculties are supported by:

- The University Library of Southern Denmark, which provides relevant information for researchers, teachers and students at SDU. In addition to library services for SDU staff and students, the library also provides services for other interested external users, the business community and other libraries
- Joint services, which consists of all the administrative and service units that support the academic environments

The supreme authority at the university is held by the University Board (UB), which is responsible to the Minister for Science, Technology and Innovation for the activities and overall resources of the university. The University Board looks after the university's interests as an educational and research institution and establishes guidelines for its organization, long-term future and development. The UB enters into development contracts for periods of three years with the Minister for Science, Technology and Innovation, and formulates the mission and vision of SDU. The UB appoints the Vice-Chancellor, and, on the recommendation of the Vice-Chancellor, also appoints a Pro-Vice-Chancellor and a University Director.

The UB consists of nine members, of whom five are external members from private industries, two are students, one is a member of the scientific staff, and one a member of the administrative staff.

The Board of Representatives acts as the university's liaison with partners, the business community, the public sector and cultural institutions – regionally, nationally and internationally. The Board of Representatives consists of 42 members, who, under the terms of the statutes, will observe the activities of the university and be kept informed about matters affecting the university. The Board of Representatives discusses the university's research, courses and other activities on an overall level and can submit remarks on these areas to the UB. The Chairman and Vice-Chairman of the Board of Representatives are members of the joint committee, that

appoints the external members of the UB. The Board of Representatives meets three times per year.

Day-to-day management of the university is handled by the Vice-Chancellor within the framework established by the UB. The UB, the Board of Representatives and the day-to-day management are supported by the Management Secretariat.

The Pro-Vice-Chancellor assists the Vice-Chancellor in the day-to-day management as agreed with the Vice-Chancellor. The University Director is, on the authority of the Vice-Chancellor, head of the university's administrative functions and handles legality control.

The Vice-Chancellor is assisted in the day-to-day management by the Executive Board (EB). The Executive Board consists of the Vice-Chancellor, the Pro-Vice-Chancellor, the University Director, the five Deans and other management representatives selected by the Vice-Chancellor. The Vice-Chancellor is the chairman of the EB. The EB holds around 13-15 meetings per year. The rest of the university management, i.e., Heads of Department and Heads of Studies, perform their duties on the authority of the Vice-Chancellor.

SDU, with campuses in six cities, covers a wide range of academic competences and activities distributed across the five faculties.

## **FUNDING**

The UB must administer the funds of the university in a way that best promotes the university's objectives. Following recommendations from the Vice-Chancellor, the UB approves the university's budget, including the distribution of the collective resources and the principles governing the use of resources, and signs the financial statements.

The Minister of Higher Education and Science provides subsidies for the university's teaching, research and dissemination activities and other assignments allocated to the university. The margin for subsidies for research and dissemination activities and other assignments allocated to the university is laid down in the annual Central Government budget bill. Following negotiations with the Minister of Finance, the Minister of Higher Education and Science may lay down rules governing subsidies for the universities' activities, governing which students trigger subsidies and on the calculation of the number of active student FTE. The university may receive other subsidies and donations than those defined by the Appropriation Acts. The university may undertake income-generating and grant-financed activities.

Higher education in Denmark is free for students from the EU/EEA and for students participating in exchange programmes. All other students must pay tuition fees. The tuition

depends on citizenship, type of residence permit to Denmark, and the choice of studies. The university may claim a deposit from certain foreign applicants for processing their application for admission to a programme if their qualifying examination is not Danish.

A number of scholarships and grants are available from the institutions and from public funded schemes. The university may grant full or partial scholarships to select foreign students. The margin for scholarships and grants is laid down in the annual Appropriation Act. In addition the university is entitled to use surplus accumulated to grant additional scholarships or grants. The Minister of Higher Education and Science lays down rules governing the administration of scholarships and grants.

Within the above scope, the university disposes freely of subsidies, income and capital collectively.

The annual income of SDU (2012) is 351 mio €, out of which approximately 30% is external research funding from private or public funds and EU (that is, approximately 50% of research is externally funded).

#### **TEACHING AND RESEARCH**

The university determines which research-based programmes to offer within its academic fields. The programmes must be approved by the Accreditation Council (cf the Act on the Accreditation Agency for Higher Education). The Minister of Higher Education and Science lays down general rules governing programmes, including tests, examinations and grading.

#### **EMPLOYMENT, HIRING AND PROMOTION**

The university follows the rules laid down or agreed with the Minister of Finance concerning salary and employment terms, including pensions, for the university's staff. The university is also obliged to follow the rules laid down or agreed with the Minister of Finance concerning separate remuneration. SDU staff, who are employed in scientific positions, are subject to the regulations for scientific employees at universities. Below is listed the standard positions in the job structure for scientific staff, according to the Memorandum on job structure for academic staff at the universities. The job structure provides the framework for the positions. The university management defines the specific job content and specifies the tasks in the individual advertisements.



**Positions below the level of assistant professor:**

- PhD Fellow* The position of a PhD Fellow is a fixed-term education position. In Denmark (as in Sweden), PhD posts are employment-positions.
- Research assistant:* The position of a research assistant is a fixed-term academic position. The principal duties are research and/or teaching. The position is held for a maximum of three years. Reappointment is not possible. Applicants for the post of a research assistant must have a Masters degree.
- Assistant Lecturer:* The position of an assistant lecturer is a part-time position that carries out teaching activities. The position can be held for a maximum of three years. Reappointment is possible to the extent this is in accordance with the Fixed-Term Employment Act. Applicants for the position of an assistant lecturer must have a Masters degree.
- Part-time Lecturer:* The position of a part-time lecturer is a part-time position with main emphasis on the performance of qualified teaching duties. Both permanent and fixed-term employment is possible. Applicants for the position of an assistant lecturer must have a Masters degree as well as additional qualifications at high level.

**Positions at the level of assistant professor:**

- Assistant professor:* An assistant professorship is a further-education position. The main responsibilities are research (including publications/academic dissemination duties) and research-based teaching. Supervision is provided as well as the opportunity to enhance pedagogical competencies with a view to a written assessment of the assistant professor's teaching qualifications.
- Post-doctoral research fellow:* The position of a post-doc is a fixed-term academic position for up to a maximum of 4 years. Normally, the position will be weighted in favour of research. The position contains no enhancement of pedagogical competences. The post may therefore not alone qualify for appointment as associate professor/senior researcher.
- Researcher:* The position of a researcher is a further-education position. The main responsibilities are research (including publication/academic dissemination duties) and research-based Public Sector Consultancy. In addition, a certain amount of teaching may also be required. Supervision is provided as well as the opportunity to enhance pedagogical competencies with a view to a written assessment of the assistant professor's teaching qualifications.

Applicants for the post of assistant professor/post-doc/researcher must hold academic qualifications at PhD level. The post as assistant professor/post-doc/researcher may take the form of a fixed-term post held for a maximum of 4 years or a permanent post as part of which the employee after a maximum of four years transfer to a position of associate professor/senior researcher.

The university decides whether a position should be advertised as a fixed-term post or permanent post. Transfer to permanent employment requires no job advertisement. The reappointment of an employee in a fixed-term position is possible. However, appointment at the level of assistant professor may not exceed eight years, of which a maximum of six years as a fixed-term employee at the same institution. After six years as a fixed-term employee at the same institution, the employee leaves the post unless permanent appointment is obtained.

**Positions at the level of associate professor:**

*Associate professor:* The associate professorship consists mainly of research (including publication/academic dissemination duties) and research-based teaching. Associate professors may be asked to manage research, provide guidance and supervision of assistant professors and researchers as well as take part in academic assessments.

*Senior researcher:* The post of a senior researcher consists mainly of research (including publication/academic dissemination duties) and research based Public Sector Consultancy. In addition, a smaller amount of teaching obligations may be required. Senior researchers may be asked to manage research, provide guidance and supervision of assistant professors and researchers as well as take part in academic assessments.

Applicants for a position of associate professor/senior researcher are assessed on the basis of the qualifications stipulated in the job advertisement. Appointment as associate professor/senior researcher depends on research qualifications at the level that can be achieved by satisfactory completing a period of employment as an assistant professor/researcher/post-doc, but may also be obtained in other ways. It is assumed that applicants have received supervision and enhancement of pedagogical competencies and have received a positive written assessment of their teaching qualifications. The post of associate professor/senior researcher normally takes the form of permanent appointment, but may also be fixed-term.

**Positions at the level of professor:**

*Professor:* The professorship consists mainly of research (including publication/academic dissemination duties) and research-based teaching. Moreover research-based Public Sector Consultancy may be required.

Furthermore, professors may be asked to manage research, provide guidance and supervision of assistant professors and researchers as well as take part in academic assessments.

Applicants for a position of professor are assessed on the basis of the qualifications stipulated in the job advertisement, but must also be able to document a high degree of original academic production at international level, which documents that the applicant has contributed to developing the academic discipline. Emphasis must also be placed on assessment of the applicant's ability to manage research and any other management function.

*Professor with Special*

*Responsibilities:* The post of professor with special responsibilities involves fixed-term specific functions as well as duties that are otherwise associated with professorship. The special responsibilities may last three to five years with an option of a further extension, which means that total employment represents a maximum of eight years. Normally the positions are established with the view to appointing particularly talented, preferably young researchers to develop a promising discipline at international level.

*Adjunct professor:* A person who brings in particular competence to the university, but whose main employment is outside the university. Fixed term position.

**Advertisement and appointment:**

Positions at professor and associate professor level must be advertised internationally. The university lays down rules on the academic assessment of applicants in connection with appointments to academic positions. The Vice-Chancellor may decide to offer a candidate a position at professor or associate professor level without advertising the position if there is a particularly well qualified candidate for the position who, in an academic assessment, is found to be clearly better qualified than any others who might be considered for the position if it is advertised under the normal procedure.

If foundations, councils or non-governmental grant givers have made at least half the funding available for the appointment of a person nominated by the grant givers in question, the Vice-Chancellor may appoint this person without advertising the position, but only if there is a positive academic assessment.

Fixed-term appointment for a period of up to one year – or for up to two years for foreign employees at professor or associate professor level – and reappointment for up to one year

may take place without advertising, provided that the member of staff in question is assessed as academically qualified for the position.

The procedure for academic assessment follows the Ministerial Order on the Appointment of Academic Staff at Universities no 242 of 13 March 2012 (Ministry of Higher Education and Science), Conditions of employment 2007 for academic staff at universities, ref. memo of the University and Building Committee of 13 June 2007. Assessment is performed by assessment committees in accordance with the relevant job advertisement. The assessment committees must, as far as possible, be composed of an even number of members, of which the majority must be external to the SDU. An internal SDU rule stipulates that the assessment committee must have a mixed gender composition. Dispensation from this rule can only be given by the Dean.

According to the provisions for appointments Section 4, Subsection 2, the task of the assessment committee is to decide whether the applicants possess the academic qualifications in research, teaching, presentation etc. that are required in the conditions of employment and whether they meet the remainder of the academic qualifications stated in the advertisement. The assessment should be expressed in such a way that it presents both a factual and a comprehensive basis for a decision by management.

SDU uses an online recruitment system SDUjob – e-recruitment, and the submission of assessments of applicants for academic positions must be made in this assessment portal. It is the responsibility of the chairman of the committee to type up the individual assessment and to give the final collective assessment of “qualified” or “not qualified”. The individual members of the assessment committee must separately for each individual candidate give an assessment of “qualified” or “not qualified”. This assessment will consequently form the basis for whether the overall assessment of the given candidate is unanimous or based on a majority vote.

The assessment committee must not make a prioritized list of the qualified applicants – not even as an informal advice. The assessment is solely an academic assessment of whether the applicant is qualified for the position in question or not based on the requirements of the conditions of employment and the individual announcement.

Pursuant to 13(1) of the Consolidation Act no. 695 of 22 June 2011 on Universities (The University Act), the Statute for SDU stipulates that scientific appointments are the Dean’s responsibility, as delegated by the Vice-Chancellor. They take place by an appointment committee, chaired by the Dean and with the Head of Department and Chairman of the assessment committee as given members. The Dean may call upon other members of the appointment committees. The basis for the task of the appointment committee is the

unprioritized list of qualified candidates prepared by the assessment committee and interviews. For assistant, associate and full professor positions, the interviews can be supplemented by lectures and presentations.

### **GENDER STRUCTURE**

The gender equality work at SDU is rooted in the Development Contract for 2012-14 signed with the Ministry of Science, Innovation and Higher Education and the Gender Equality (Consolidation) Act No. 1678 of December 19<sup>th</sup> 2013<sup>1</sup> from the Ministry of Gender Equality and Ecclesiastical Affairs. The gender equality work is defined and elaborated in activities to meet the targets in the Gender Equality Action Plan 2014-2015.

The EB is responsible for the overall development and implementation of work on gender equality at SDU. The Vice-Chancellor's Central Gender Equality Board (GEB) has the operational responsibility and initiates appropriate actions following the Executive Board's approval.

In addition to the defined goals with the Ministry of Gender Equality and Ecclesiastical Affairs and the approved action plans for the GEB, SDU's EB decided in 2013 that each faculty must have their own gender equality board in order to carry out the gender initiatives at the faculties and meet the targets set by the Ministry of Higher Education and Science in the University Contract.

Due to the Act to amend the Gender Equality (Consolidation) Act No. 1288 of December 19<sup>th</sup> 2012, SDU – as all other Danish universities – has to set targets in order to ensure a balanced gender distribution among the upper collective governing body of the university (at SDU the

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<sup>1</sup> The Equality Act, Consolidation Act No. 1678 of 19.12.2013

The Act on equality between women and men is intended to promote equality between women and men, including equal integration, equal influence and equal opportunities in every aspect of society on the basis of women's and men's equal worth. This law is also intended to prevent direct and indirect discrimination on grounds of gender and to prevent harassment and sexual harassment. According to the law, the university has to work for equality and incorporate gender equality in all planning and management. Since 2013, the university has to prepare a report on gender equality every two years by September 1<sup>st</sup>. The report must include information on whether the university has formulated a policy of equal opportunities and, where applicable, the details of this policy. Moreover, the report must include the gender distribution in relation to the different job categories and other factors relevant to assessing the university's corporate action on equality. The Minister for Higher Education and Science processes the submitted reports and submit by November 1<sup>st</sup> of the year in which such reports are prepared, a comprehensive report attached to the individual submissions to the Minister for Gender Equality. The Minister for Gender Equality writes each year before March 1<sup>st</sup> write a report and a perspective and action plan for gender equality to the Danish parliament.

upper collective governing body is the UB) and develop policies to increase the number of the underrepresented sex on the other levels of management. This part of the amendment took effect on April 1<sup>st</sup> 2013. The overall objective of the gender distribution of the UB at SDU is 40/60.

The targets prioritized by the Ministry for Higher Education and Science for a given period must be evaluated and target fulfillment reviewed each year and the focus is therefore on annual quantitative and qualitative evaluations. The faculty equality boards and the GEB have to report their activities to the EB once a year. Moreover, SDU has to report their activities and numbers to the Ministry of Gender Equality and Ecclesiastical Affairs once a year and for the first time in the spring 2014. This reporting includes, among others, statistics on gender distribution and recruitment.

According to GEB's most recent action plan, approved by the EB in December 2013, working with gender equality as SDU is important for reasons such as

- SDU aims to recruit and retain the top of the talent pool – regardless of gender;
- developing talent is crucial for the university's development and is part of the university strategy;
- a mixed gender composition among teachers and administrative staff who meet the students must reflect the gender composition of our students;
- researchers and leaders of both genders secure a broader academic focus in teaching and research;
- SDU must comply with the legislation to increase the number of the under-represented gender among leaders.

The GEB has carried out different initiatives:

- Internal supplementary maternity rights for staff categories post-doc, assistant professor, associate professor and professor approved by the EB and the Liaison Committee for the entire university; these rights consist of a period of three months without teaching commitment per six months p/maternity leave.
- Since 2010 annual career programmes for young scientists have been facilitated by the HR-unit. The programmes are intensive seven month programmes and include individual coaching sessions, two facilitated two-day seminars (with topics such as strategic career planning, competences, networking strategies, negotiation skills, communication, conflict resolution, and gender awareness, personality profile tests), and a number of shorter network- and follow-up meetings.
- Since 2011, annual management trainee programmes have been facilitated; in 2013 the programme enrolled 20 participants of which 50% were women in leadership positions at SDU.

- The Vice-Chancellor is ambassador for a national programme for more women in management and has signed the “Charter for more women in management and Science”. As part of working with this, SDU has been engaged in a mentoring programme for female leaders. The programme includes both private companies and public institutions. The programme is for female leaders from scientific as well as administrative backgrounds.
- The GEB at SDU has conducted a survey of correlations between assessment committees used in the evaluation of scientific staff consisting only of men and assessment committees with mixed gender composition and whether the gender composition of these assessment committees has implications for how men versus women are assessed qualified. It is the job of the assessment committee to assess whether an applicant is qualified for a position or not. At the Faculty of Science at SDU 50% of the assessment committees with three or more members are all-male. The GEB found that male applicants are assessed qualified with the same frequency no matter what the gender composition of the assessment committees is. That is not the case for women. If an assessment committee consists of men only, only 46% of women applicants are assessed to be qualified. However, with a mixed gender assessment committee, 67 % of the women are assessed as being qualified. This indicates that the gender composition has significant impact on women’s chances of being employed. For this reason, the EB has decided that all assessment committees with three or more members must have a mixed gender composition. Dispensation from this rule can only be given by the respective Dean.
- Based on data from 2011 regarding annual wage negotiations, the GEB has analyzed whether there are differences in how men and women are taken into account in the allocation of pay rises. No gender differences were indicated in the data, but the numbers may be too small to be significant.

Faculty of Science initiatives apart from FESTA-engagement:

- Two appointments on the basis of open job-advertisements and attractive start-up grants with the express objective to attract women. However, both appointments proved unsuccessful – the people hired under these conditions were never fully integrated into the established research groups and contexts – indeed there are indications that they were effectively excluded, and they left prematurely.
- Inclusive processes in formulating scientific and educational strategies.
- The idea-group – a counseling group for the Dean with female representatives from each of the four departments, which was in existence from 2008-2011 and whose task it was to advise on how to improve working environment and present ideas for initiatives to foster more women in science. The group also initiated an informal

women's mentoring network, which is still in existence, as well as an annual network-lunch for women scientists at the faculty.

- A faculty fund to avoid c/overt (and illegal) pressure on young women to not become pregnant, by relieving departments and research groups/units of the extra expense in financing maternity leave imposed by the specific refund-practices of the government. This arrangement ensures that the entire expense is refunded the department – three fourths by the state and municipality, one fourth by the faculty. In cases where external funds allow for this extra financing, the departments may keep both the faculty compensation and the external funding. This practice has been adopted by the other faculties of SDU.



## INSTITUTIONAL CONTEXT RWTH AACHEN UNIVERSITY (RWTH)

### National context

Gender Equality Policy in Germany has become of growing importance over the last years. This is caused especially by the discourses about the incipient demographic change and a resulting (possible) skilled worker shortage. The OECD stated that ‘in Germany young women have higher educational attainment than young men, but gender gaps in labour market outcomes persist’ (OECD 2012: 1). The proportion of employed women is 68%, but many women, especially mothers, work part-time. At median earnings, the gender pay gap is the third largest with 22% across OECD countries; half of this pay gap is due to gender differences in working hours. Part-time employment also often curtails career progression: gender pay gaps for workers who are over 40 years of age are three times as high as for younger workers. Shorter work histories, fewer working hours and lower earnings also contribute to relatively low pensions for women. The average pension payment to women is about half of what is paid to men. This "pension gap" is the largest in the OECD (OECD 2012).

In all federal states of Germany there is a Federal States Equality Act (LGG). This law obliges all public facilities including universities to the equalisation of men and women as well as to the fostering of an active advancement of women. The implementation of this law takes place in gender equality plans, in the appointment of equal opportunity officers, and in case of an underrepresentation also in the commitment to privilege a female applicant opposed to a male applicant if the qualifications are equivalent. Beyond that, the General Equal Treatment Act (AGG) is meant to prevent any discrimination or disadvantage out of reasons of race, ethnicity, gender, religion, worldview, age or sexual identity. Therefore, persons concerned are also protected of disadvantages in non-governmental facilities and can take legal actions if necessary. Nevertheless, the increase of women on leadership positions at universities remains slow. Over the last decade the increase was about 10 percent at professorship level (from 11.9% in 2002 to 19.9% in 2011<sup>2</sup>). The proportion of female academic staff on grade A was only 15% in comparison to 20% on EU-27 level in 2010, whereas the proportion of female PhD graduates was 44 % (EU-27: 46%). (EC 2013) However, scrutinizing the broad fields of science, mathematics & computing and engineering, manufacturing & construction, then the proportions of female PhD graduates were 38% and 15% respectively.

### Excellence Discourse

With the launch of the German Excellence Initiative in 2007 by the Ministry of Education and Research and the Science Council the proportion of fixed term contracts has risen at universities which were successful in this competition that comprised three funding lines: Graduate Schools, Clusters of Excellence, Institutional Strategies.<sup>3</sup>

<sup>2</sup> cf. [http://www.gesis.org/cews/fileadmin/cews/www/statistiken/18\\_t.gif](http://www.gesis.org/cews/fileadmin/cews/www/statistiken/18_t.gif) [16.09.2013]

<sup>3</sup> cf. [http://www.dfg.de/en/research\\_funding/programmes/excellence\\_initiative/](http://www.dfg.de/en/research_funding/programmes/excellence_initiative/) [13.11.2013]

RWTH Aachen University is one of twelve universities in Germany that was successful in all funding lines and is therefore labelled as Excellence University. The goal of the Excellence Initiative was to foster international cutting edge research by identifying the “pikes” and make them internationally visible. Behind this concept lies a pyramid model of selecting and promoting the “best” and based on the idea of meritocratic elite: performance is to be the sole selective factor. This also based on the belief that there are objective criteria for judging performance in science. Equal opportunities are seen as formal criteria of the performance principle. Quality is to be proved in competition. This model of excellence has influenced the self understanding and culture at RWTH Aachen University.

#### **Institutional Context – FESTA Project**

The FESTA project team at the RWTH is situated at the Rectorate Staff Unit “Integration Team – Human Resources, Gender and Diversity Management” (IGaD). Establishing the Gender and Diversity Management staff unit in 2007, RWTH was the first University of Technology nationally that has created a structural framework that provides a basis for the development and implementation of a gender and diversity management strategy. IGaD supports RWTH in integrating gender and diversity aspects at different level of the university. It coordinates processes pertaining to gender and diversity and brings together relevant actors.

The central tasks of IGaD include:

- Strategy Development: IGaD defines goals and develops strategies that help to establish gender and diversity in teaching and learning as well as in central bodies and committees of the university.
- Controlling: IGaD also has the task of making visible and integrating into the university’s controlling instruments the gender and diversity-related awareness, knowledge and competencies that exist in teaching and learning, in the administration, and in the various bodies of the university.
- Consulting: With its gender and diversity expertise, IGaD is the first point of contact for all RWTH members who have questions pertaining to gender and diversity-relevant issues.
- Mentoring: Offering mentoring programs for diverse target groups, IGaD supports early career researchers and helps them with their career planning under consideration of gender and diversity aspects.
- Awareness-raising: IGaD raises awareness of gender and diversity-relevant questions and issues through conferences, events, lectures, publications, and public relations activities.
- In this way, IGaD contributes to achieving equal opportunities and diversity in the university’s organizational units and their fields of activity.
- The FESTA Team is presented by:

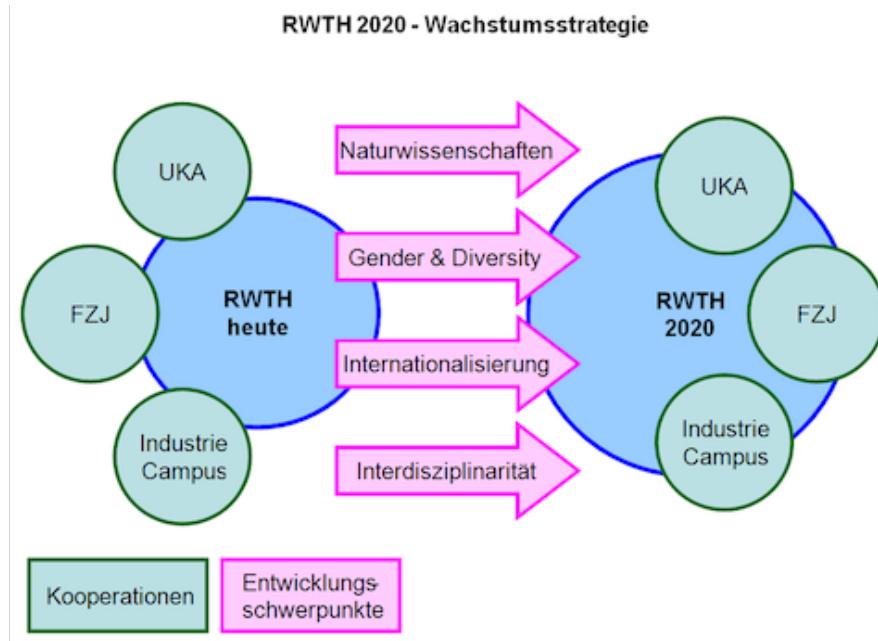
- Project Leader: Dr. Andrea Wolfram, Deputy Head
- Project Coordinator: Manuela Aye, Social Scientist

### **Institutional Strategy RWTH 2020**

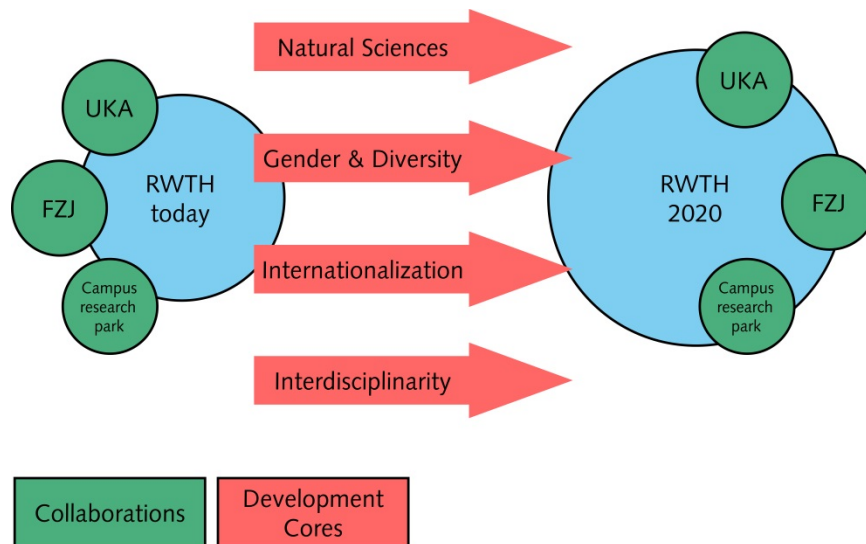
In 2007, RWTH Aachen began to pursue a new strategic orientation, after having been granted funding in the first approval phase of the Excellence Initiative of the federal and state governments. The third funding line of the institutional strategy RWTH 2020: Meeting Global Challenges was created for the Excellence proposal. The strategy is primarily tailored to the area of research. After a successful start to the strategic reorientation, RWTH Aachen declared, independent from the Excellence Initiative, that it was crucial to apply this update and further development work to all areas of the university, in order to sustainably strengthen the competitive ability of the university as well as to broaden the developed goals and demands in the area of teaching.

The focus during the development of an RWTH Aachen university-internal strategy was that this strategy would be carried and lived out by the entire university, so that a uniform conviction for the future could be created and high identification with the repositioning could be attained. The Rectorate developed a draft paper that was discussed, worked out, and finally passed in 2009 through an open communication culture between the University Board of Governors, the Senate, the Strategy Board, the Deans, and a discussion process with various players.

The paper, designed to be fully integrative, focuses on measurable achievements in quality in teaching and qualitative growth in research. Through the respective measures, the seven following goals should be attained by 2020: answers for the great research questions of our time, growing attractively for the best minds in the world, support and funding at all levels, an increase in the quality of teaching, improvement of scientific performance indicators, leading positions in major interdisciplinary research projects and external funding.



RWTH Aachen Growth Strategy



In order to reach this goal an intensification of collaborations with the Aachen University Hospital (UKA), *Forschungszentrum Jülich (FZJ)*<sup>4</sup>, and the RWTH Aachen Campus research park

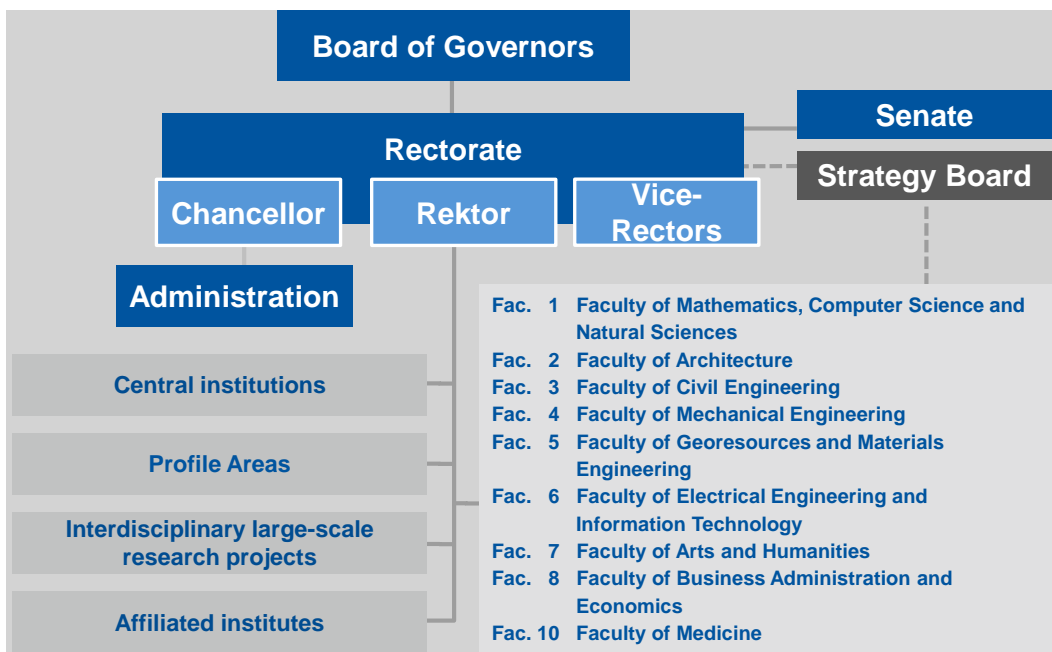
<sup>4</sup> Forschungszentrum Jülich (research center, member of the Helmholtz Association) has nine research institutes with 53 subinstitutes working in the areas of energy and climate research, bio- and geosciences, medicine and neuroscience, complex systems, simulation science, and nanotechnology.

was pursued and a focus was being placed on four areas, where developmental needs were identified: the natural sciences, gender and diversity, internationalization, and interdisciplinarity.

For the second time in a row, RWTH Aachen has succeeded in the Excellence Initiative by the German federal and state governments, thus being able to consolidate its position within the German research landscape in the years between 2012 and 2017. In June 2012, its new Institutional Strategy, titled “RWTH 2020: Meeting Global Challenges. The Integrated Interdisciplinary University of Technology,” was confirmed by the authorization committee. This decision in Germany’s excellence initiative strengthens the leading position of RWTH Aachen University in Germany and enhances its international competitiveness.

One of the long-term goals of RWTH Aachen University is to sharpen its scientific profile as an integrated, interdisciplinary, and international university of technology. This will be achieved with the help of a fundamental restructuring process which focuses on the university's core competences in the natural sciences and engineering, involving all faculties.

The Institutional Strategy II aims to achieve two major objectives: making a substantial contribution to top-level research in Germany and participating in the global competition of universities. The in 2007 launched Gender and Diversity Structures (among them the Integration Team – Human Resources, Gender and Diversity Management) became fixed structures of the university.



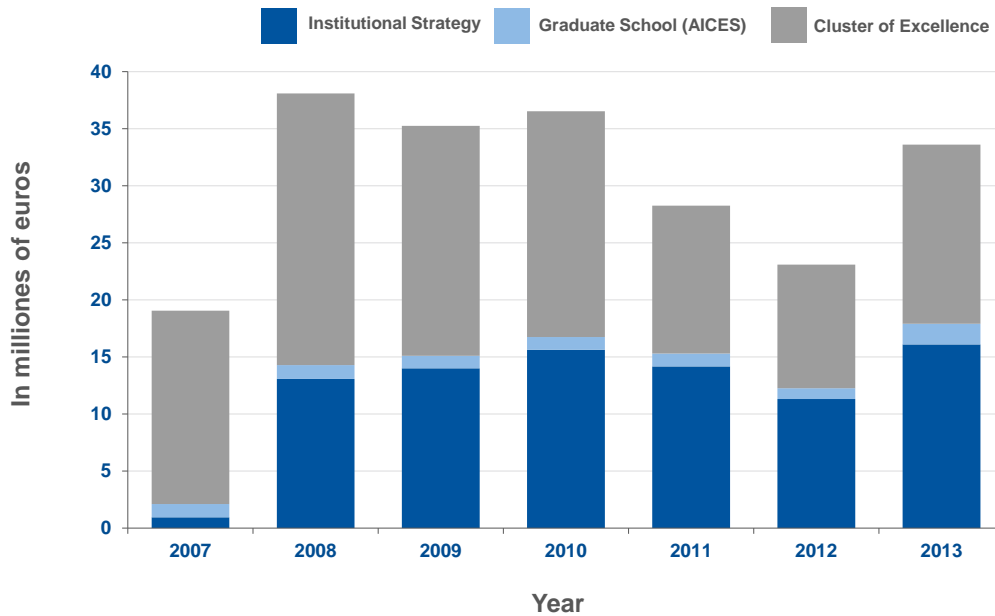
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RWTH Aachen University is headed by the Rectorate. In addition to the Rectorate and the Rector, as its head, the Board of Governors and Senate are the central university governing bodies. The Strategy Board is also a part of the RWTH Aachen's management structure and advises the university on its future plans.

**Funding**

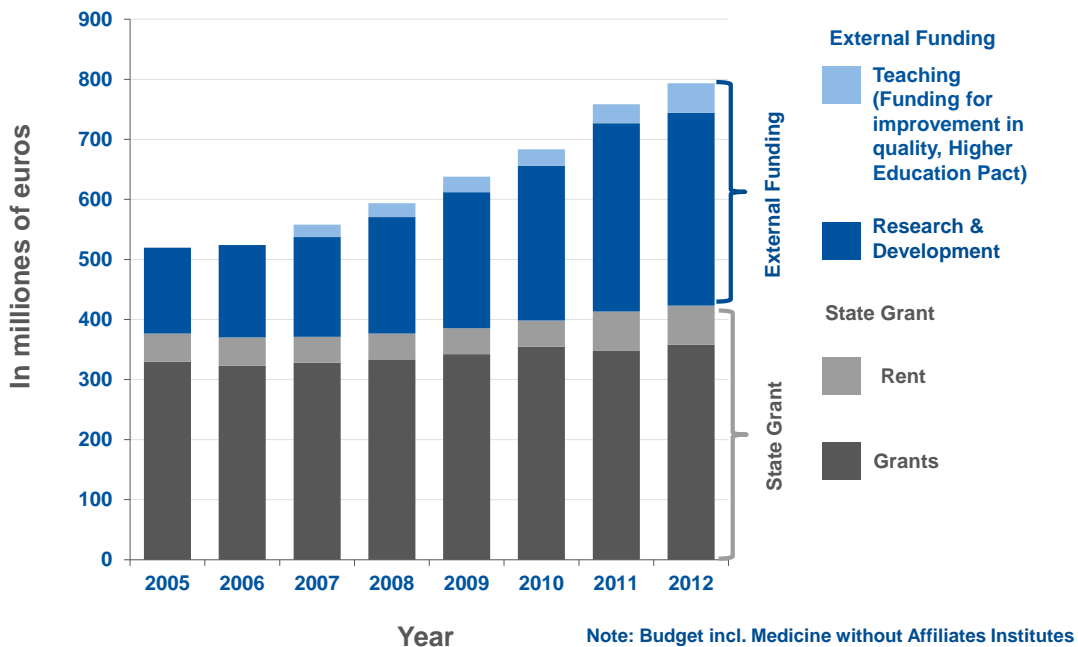
The German state governments have to ensure basic funding of the universities. All in all, almost 90% of funding for the universities comes from the public authorities, however most of the means (80%) are from the states governments. The federal government have a share in financing research projects, specific programmes (such as the Excellence Initiative) as well as in financing research-sector structures at universities, including large research apparatus (approx. 10%). Ca. 10% of funding come from private resources which contain mainly contract research.<sup>5</sup> However, also most of the public funding is distributed through performance-related resource allocation or on the base of project and program applications at the *Deutsche Forschungsgemeinschaft* and the *Bundesministerium für Bildung und Forschung* as well as at some other federal ministries. Finally, public research financing enters in the national research organisation such as *Max-Planck-Gesellschaft (MPG)*, *Helmholtz-Gesellschaft deutscher Forschungszentren (HGF)*, *Fraunhofer Gesellschaft*. The Annual Budget for the year 2012 was 794 Million Euros at the RWTH Aachen, including 321 Million Euros for external funding.

**Excellence Initiative – Total Volume of Funding (Granted Funds)**

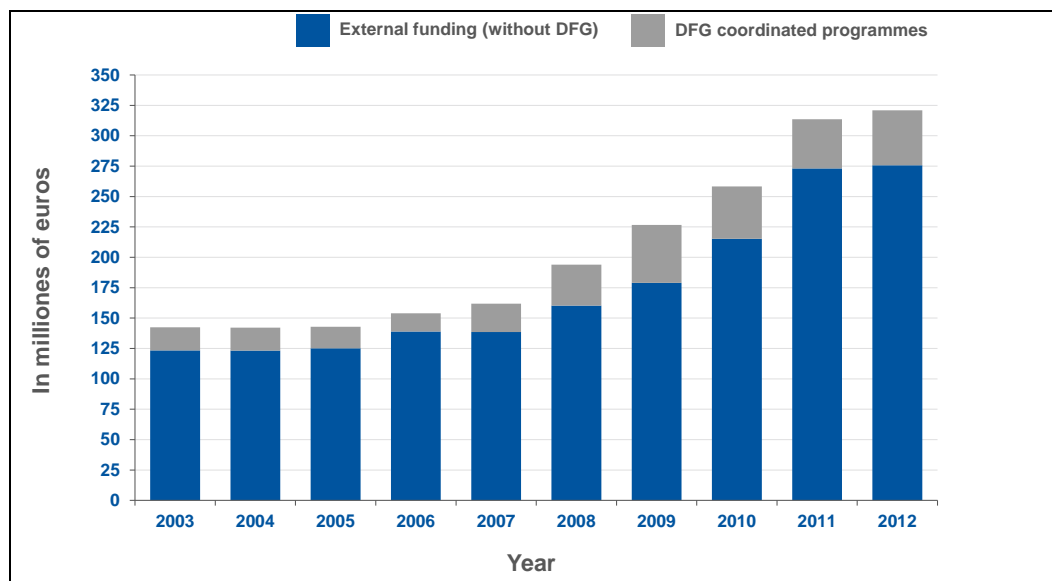


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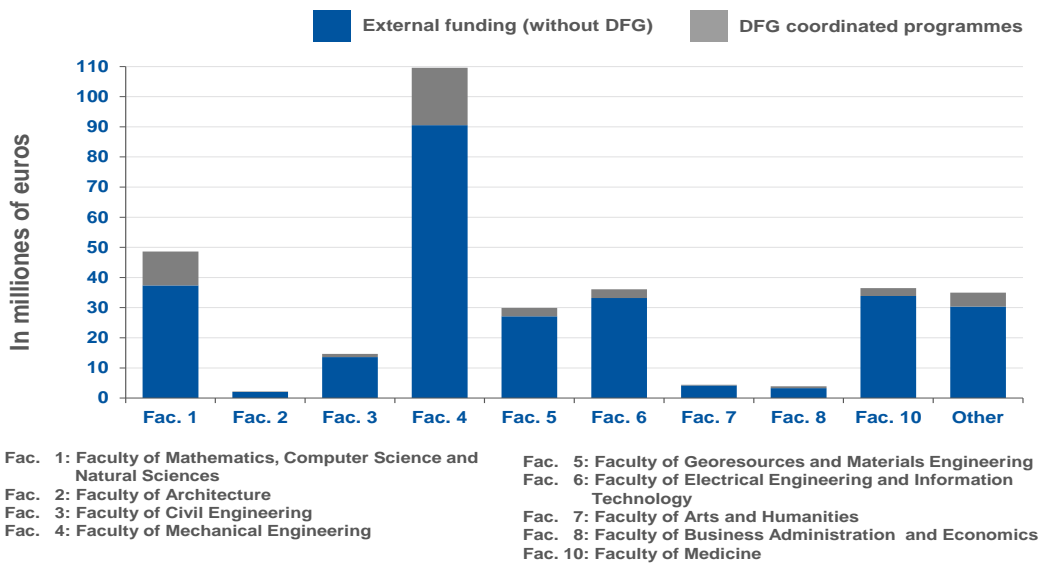
### Development of the Faculties' Budget



### Development of External Funding



**External Funding by Faculties 2012**



Source of all graphs: RWTH – Department for Planning, Development and Controlling

**Teaching and Research**

Most of the teaching has to be done by the professors (normally 4 lectures in a term at universities) and also by the senior scientists who hold permanent positions. However, also the young researchers who are employed on non third-party funded fixed term positions often have a small teaching load of one lecture that is fixed in their contracts. Most of them support the professors also in the management task around teaching and research. And finally, there seems to be also a practice that some of the third-party funded young researchers are involved in teaching, too. In 2012 the rate of degrees was 6116 (share of women: 37,3%), of which 2444 were first degrees (share of women: 35%). Moreover, there were 773 doctor degrees (share of women: 34,4%) and 32 habilitations (share of women: 40,6%) in 2012.

**Quality Management in Teaching**

In October 2009, RWTH Aachen was recognized in the Excellent Teaching competition for its institutional strategy "Students in Focus". It is one of six universities, whose concepts for improving basic teaching in German university development were funded with prize money of one million Euros by the Stifterverband für die Deutsche Wissenschaft<sup>6</sup> and the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in Federal Republic

<sup>6</sup> Stifterverband is the business community's innovation agency for the German science system.



of Germany (KMK). The prize money should be used for the optimization of information that prepares students for studies, for better support in the beginning of one's studies, and for the development of innovative projects in teaching<sup>7</sup>. For this reason various activities arose to support excellent teaching at RWTH. One of the activities is the “Logbuch Lehre” (Logbook Teaching). It started in June 26, 2013. The Logbook is a blog-based web portal for all news and developments around the topic of teaching and learning at our university. The blog is designed to be a forum for instructors, students, and university institutions who want to present and discuss news, concepts, ideas, and experiences in the arena of teaching and learning. The blog seeks to be a showcase for teaching innovations, a multiplier, and a portal for discussion and exchange.

Another activity is the “Teaching Talk” which started in 2011 and was initiated at the request of teachers and student representatives. The annual event informs teachers in particular, but also students and other interested university staff members about the implementation of the “Excellent Teaching Institutional Strategy”. It also enables dialogue about teaching related topics on a larger platform. Finally, RWTH established the project CiL (Center for Innovative Learning Technologies) which sustainably integrates ‘blended learning’ concepts. As heart of the matter acts the platform L<sup>2</sup>P. L<sup>2</sup>P offers various features and functions including virtual classrooms, course-related material, self-testing, discussion forums, etc.

### **Employment, Hiring and Promotion**

#### **Positions at the universities in Germany**

- Professors: The post of a Professor is mostly a fixed-term, education position.
- Associate Professors: An Associate Professor is the title given to habilitated scientists with teaching qualification at a university or other higher education institution which holds no regular professorship.
- Junior Professors: Junior Professor is a title which should help young scientists with outstanding promotion without the previously used Habilitation to enable directly independent research and teaching at universities and to qualify for appointment to a lifetime professorship.
- Adjunct Professors: The award of an Adjunct Professorship is a judgment of the faculty.
- Honorary Professors: Honorary titles in academia may be conferred on persons in recognition of contributions by a non-employee or by an employee beyond regular duties.

<sup>7</sup> cf. [http://www.rwth-aachen.de/cms/main/root/Die\\_RWTH/Profil/Lehre/~ccbd/Exzellente\\_Lehre/?lidx=1](http://www.rwth-aachen.de/cms/main/root/Die_RWTH/Profil/Lehre/~ccbd/Exzellente_Lehre/?lidx=1) [13.01.2014]

- Lecturers: A lecturer is a person who holds a university courses without being sure in an employment relationship with this college. The lecturer will be paid on a fee basis or carries out his activity free of charge.
- Other academic staff (2022 at 2012): Civil servants and employees, who perform academic services in research and teaching in academic departments and academic university institutions, are grouped into academic staff. The academic institutions are headed by professors.
- Non-academic staff (1879 at 2012): Non-academic staff includes employees in the university administration and employees in individual research institutions, who support researchers. This includes administrative assistants, system administrators, technical employees, technicians, foremen, or mechanics.

#### **Description of working conditions of the scientific staff**

Working conditions at German Universities are framed by the law “*Wissenschaftszeitvertragsgesetz*” (*WissZeitVG*) which was launched in 2007. The law regulates fixed term contracts in the sciences and research at German higher education institutions. It contains rules for temporary employment of scientific and artistic staff at universities and non-university research institutions and includes rules for the qualification phase and for the case that the job is financed by third-party funds. The *WissZeitVG* does not allow employment at universities and non-university research institutions for more than twelve years. This period is divided into a qualification phase consisting of six years and further six years of a post-doc phase. Within this time, a dissertation should be written and further qualifications, such as gaining a professorship, should be achieved. The law was originally supposed to simplify scientists’ work on research projects at universities and non-university research institutions by means of third-party funds and thus to create more legal certainty. It does, however, lead to the problem that post-docs might have to leave the academic institution if they could not manage to gain a professorship or any equivalent qualification. A possibility for a temporary employment beyond the qualification phase is the collaboration in a temporary fixed and mostly third-party funded project or a permanent employment.<sup>8</sup> One consequence was that scientists, who do not want to leave science, work in third-party funded projects with temporary employments after the twelve years and try to reach one of the rare permanent positions that are mainly professorship positions. Either they have applied for an announced position in a research project that most often a professor has organised or they have submitted a successful proposal. These proposals, which were submitted at national funding organisations or within the funding possibilities of scientists of the European Union, refer mainly to research projects or an own post or research group. Next to the high prestigious funding possibilities such as the ERC starting grants or comparable national models which give the funding holder

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<http://www.kisswin.de/en/career-paths/legal-information/wisszeitvg.html> [13.11.2013]

bigger independence at the university most of the post with own funding are located at a department under the responsibility of a professor.

Accordingly, the personnel structure at German universities in 2009 shows that 68% of the scientific personnel have fixed term contracts. Below the level of independent university lecturers (professors) who comprise only 15% of the whole scientific personnel, only 17% of the dependent scientific personnel have permanent positions. Within the group of dependent scientific personnel an increase of fixed term contracts can be observed (from 79% 2000 to 90% in 2010) and also an increase of part time employment (from 38% to 45%) as well as an increase of third-party funded financing of the employments (from 36 to 43%). (cf. Konsortium Bundesbericht Wissenschaftlicher Nachwuchs 2013: 15). Furthermore, almost half of them have contracts with less than one year duration.<sup>9</sup> Nevertheless, motivation and working atmosphere is often seen as very good and above-average among the academics (Schmidt 2010).

### **Appointment/Hiring Processes at RWTH**

The following criteria are usually relevant for the judgment of scientific achievements in the context of selection procedures in Germany which consists of two selection steps (cf. Färber/Spangenberg 2008: 177). The first selection is relevant to get invited to an interview and to a lecture (shortlisting of candidates) and the second one is to select from the invited candidates:

1. Selection step: Selection by numerable criteria such as number of publications (impact-factor), volume of external funds (reputation of external funds), teaching experience (yes/no), habilitation (post-doctoral lecturing qualification) (yes/no).
2. Selection step: Discussion about the quality of publications (articles in high-caliber journals; contribution to the knowledge base of the discipline), projects, lectures, cooperations/collaborations, supervision of young researcher, habilitation, teaching achievements.

The formal appointment procedure for professorships at RWTH consists of ten steps. After the allocation of the position in the faculty and its advertisement, the first step begins with pre-selecting the candidates after the application deadline (first selection step). The selected candidates are invited to a lecture and an interview with the selection committee (2). Afterwards, three candidates are selected (3; second selection step) and external reviews of the written applications of these candidates are requested from two or three independent reviewers. (4) The reviewers suggest a ranking of the candidates (5). Then the appointment committee and afterwards the faculty council discuss this ranking and make a final ranking which is presented to the rectorate (6). At the end, the commission has to obtain approval from the rectorate. If they all agree to the list the Dean starts negotiation with the candidate (8) and secondly the candidate has negotiation with the Chancellor (8). Finally, the administration controls the

<sup>9</sup> cf. <http://www.zeit.de/2011/50/C-Hochschule-Wissenschaftler> [13.11.2013]

feasibility of the negotiations (9). In the last phase of the process the candidate accepts or declines the appointment (10).

The process governing the way an appointment procedure has to be conducted is determined in an official appointment regulation. In this regulation, criteria are listed for the evaluation of the applicants from which the selection committee can choose: scientific qualification, didactical competence, pedagogical qualification, competence to apply gender and diversity issues in the specific field of science, competence to give new impulses for research and teaching at RWTH Aachen university, engagement in teaching and experience in developing curricula; management competence and especially human resource management, experiences in applying for funding, experience abroad, willingness and aptitude for interdisciplinary cooperation and assumption of responsibility within collaborative research projects, and finally the degree of meeting these criteria. The criteria are not mandatory and can be amended, and weighting among the criteria is not required.

### **Gender Structure**

The aspect of Gender and Diversity Management at RWTH includes several facilities. In 2007, a focal reference authority was created with the executive department IGaD, which works closely with the Equal Opportunity Officer, three professorships with gender-denomination and a Vice-Rector for Human Resources Management and Development. Together, they define the parameters for the realization of the 'People Policy', which is orientated on gender equality and was part of the first institutional strategy of the university. The IGaD coordinates all the strategic processes and connects the different actors and fields of action.

Within the framework provided by the so-called Aachen Gender Triangle, consisting of the Equal Opportunities Officer, the Gender Studies professorships, and IGaD, the staff unit seeks to integrate the experience of the Equal Opportunities Office and the scientific contributions from Gender Studies research to develop hands-on guidelines for the equal treatment of men and women at RWTH. Several years of work in equal opportunities initiatives provides the staff unit with a broad range of approaches that make it possible to achieve synergies and to transfer the experience gained in other diversity contexts.

The integration of gender and diversity perspectives thus means

- to develop, continuously enhance and implement a coherent human resources and organizational development strategy under consideration of gender and diversity aspects;
- to implement gender and diversity policies across the University, in collaboration with all relevant protagonists within and partners outside the University (Gender and Diversity Management as a cross-functional task) .

To support the central and scientific institutions of RWTH in the development of suitable projects and initiatives in order to

- actively and fairly implement the change management processes;
- be open to innovative ideas and approaches;
- develop the ability to recognize the potential of people, and to be able to inspire and motivate them.

All in all, Gender and Diversity Management is considered an indispensable part of the reorganization process underway at RWTH Aachen, which is based on the appreciation of diversity and the achievement of equal opportunities in all areas of the university.

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## INSTITUTIONAL CONTEXT FONDAZIONE BRUNO KESSLER (FBK)

In FBK the FESTA project team is situated at the General Secretariat and this collocation allows us to have access to all FBK research centers. Nonetheless, we concentrate on the research centers that operate in the scientific-technological areas, i.e., the Center for Information Technology (CIT) and the Center for Material and Microsystem.

The team FESTA in FBK is represented by:

- Scientific responsible person: Andrea Simoni, General Secretary
- FBK FESTA Steering Committee:
  - Alessandro Dalla Torre , Head of Human Resources
  - Lorenza Ferrario, senior researcher of the CMM
  - Ornella Mich, senior researcher of the CIT
  - Anna Perini, senior researcher of the CIT
  - George Pucker, senior researcher of the CMM
- Project Manager: Ornella Mich, senior researcher of the CIT;
- Task members: Tatiana Arrigoni (WP2), Barbara Poggio (WP3.2, WP5.1), Valentina Chizzola (WP5.1), Mario Conci (WP7), Alessandro Rossi (WP4.2), Liria Veronesi (WP3.2, WP4.1 + 4.2), Marco Zamarian (WP4.2)

## ORGANIZATIONAL STRUCTURE AND GOVERNANCE OF FBK

### FBK AIMS

According to the FBK statute, its main aims are the following:

- “cultural activities, scientific research, technological development both in terms of advancement of knowledge and of service to the local community;
- exploration of innovative frontiers of knowledge, with special focus on interdisciplinary approaches and on application methods, thus defining the outline of the scientific activities typical of universities;
- internationalization of Trentino, by promoting cooperation and exchange activities with national and international research institutes so as to increase competitiveness and the capability of attracting human resources and materials from the research system of the province, promoting the involvement of the University of Trento and of the other Italian public and private bodies concerned;
- promotion of the widespread capacity for innovation, commonly intended as being the processing of new developments and cultural, civil, instrumental syntheses involving the local community and economy so as to boost, through the circulation of knowledge and the technologies, the growth of Trentino as the land in which the Fondazione Bruno Kessler has its roots;

- transfer of research results: the supporting of new entrepreneurial abilities, of the growth of new professional skills, as well as of the qualification of the structures of local authorities, aware of the foundation’s role and responsibilities within the sphere of local development dynamics;
- in all of the activities that the foundation may choose to perform autonomously and freely in pursuance of its object as described above, respect of human beings and of the environment as protected and promoted by history, by tradition and by the identity embodied by Trentino”.

Teaching is not part of FBK activities; hence there are no undergraduate students. FBK, though, in agreement with the University of Trento, funds some PhD grants on specific projects so that in 2012 about 90 PhD students have actively taken part in the FBK research activities.

#### **ORGANISATIONAL STRUCTURE AND DECISION MAKING**

The “Fondazione Bruno Kessler” is a non-profit organization – with legal entity of private law – that operates in the field of research both in technological scientific and humanistic domains. Created in 2007, in a context of local institutional transformation of the system of research and innovation, FBK inherits the activities of the Istituto Trentino di Cultura instituted in 1962. Among the aspects of major changes there are the stipulation of collective contract for researchers (first in Italy), new procedures of recruitment and of promotion, evaluation procedures of research results, and a renewed institutional mission, new logo.

Research and knowledge and/or technology transfer are carried out by:

- Seven research centers:
  - CMM, Center for Material and Microsystem, that comprises eleven Research Units
  - CIT, Center for Information Technology that comprises fifteen Research Units and four Joint Research Project.
  - ECT\*, European Center for Theoretical Studies in Nuclear Physics and related areas
  - CIRM, International Center for Mathematics Research
  - ISR, Center for Religious Studies
  - ISIG, Italian-German Historical Institute
  - IRVAPP, Research Institute for the Evaluation of Public Policies
- Three explorative projects:
  - CeRPIC, Research Project on International Politics and Conflicts Resolution
  - HICR
  - LabSSAH
- Spin-off and Start-up



Research and technology transfer is supported also by services that embrace administrative units, research support units, communication units, research assessment units, innovation and local relations units.

The governance of the FBK comprises the following organs:

#### *Board of Directors (BoD)*

This is made up of nine members, including the Chairperson, all of who are elected among candidates of high and renowned scientific education or of high and proven managerial experience. Members of BoD hold office for four years and can be re-appointed only once. The Board of Directors is the policy-making body that sets the general policies of the foundation, availing itself of the advice of the Scientific Committee; it passes resolutions concerning the policy guidelines, the general objectives of the scientific programme, and the general management directives of the foundation. The BoD also sets out the criteria and procedures for evaluating the organization and the results achieved. It is responsible for the approval and amendment of the foundation's internal regulations; for the approval of the annual financial statements and the budget; for the definition of the FBK organizational units and the appointment of the relevant managers; for the appointment or dismissal of the General Secretary.

#### *Chairperson*

He/she is the Foundation's legal representative before third parties and in court and is appointed for a term of four-years; he/she can be re-appointed only once. The chairperson convenes and chairs the Board of Directors; leads and coordinates the functions of the Board of Directors; supervises the enactment of the resulting resolutions and the Foundation's overall performance. Subject to the favourable opinion of the Board of Directors, he/she may also delegate, permanently and even for specific actions, the Foundation's representation to Board members, executives, employees or third parties.

#### *Scientific Committee*

This committee supervises the FBK scientific activities and acts as consultant for the Chairperson and the Board of Directors by providing opinions and proposals. The opinion of the Scientific Committee is mandatory on the occasion of long-term programming actions and actions addressing scientific activities. The Scientific Committee comprises at least seven members who shall hold office for a term of four years and may be re-nominated. They shall be elected from among highly renowned and competent scientist's experts in the fields mainly treated by the foundation.

#### *Board of Auditors*

This consists of three statutory auditors and two alternate auditors. All members, both statutory and alternate, shall hold office for four years and may be re-appointed only once. The Board of Auditors fulfills the duties and exercises the powers indicated in articles 2403 and

2403 *bis* of the Italian Civil Code. Liability of the auditors is that envisaged in Art. 2407 of the Italian Civil Code.

#### *Panel of Founders and Supporters*

Its aim is to maintain vital relations with the institutions representing the social and economic scenario in Trentino. The panel consists of members who are foundation Founders and Supporters.

#### *General Secretary*

He/she oversees the unitary approach of the guidelines and objectives set out by the Board of Directors and is accountable for their overall implementation. To this purpose, the General Secretary assures the enhanced efficiency, cost-effectiveness and efficacy of the resources employed in connection with the activities carried out by the foundation. The term of office of the Secretary General is four years, after which he/she can be re-appointed.

The *research boards* of Center for Information Technology and Center for Material and Microsystem are advisory groups to the directors of the Centers and consist of the Heads of the Research Units. The boards support the Directors in carrying out the following functions:

- define scientific strategies, for technology transfer and for regional impact;
- collect input on matters related to the operation and management of the center;
- collect information regarding activities of the Research Units;
- promote a uniform and correct communication towards the center personnel

#### **FUNDING**

Sources for the funding of the foundation's activities are the following:

- founding granted by the province and by other founding and supporting members;
- contributions, donations, estates, bequests, legacies and grants in general by other public or private subjects not expressly destined to increase the FBK total assets;
- proceeds, considerations and other income deriving from the FBK activities;
- operating surplus destined for the funding of the FBK activities.

In order to carry out its activities, the FBK shall use, in addition to the tangibles and intangibles granted by the province, by other founding and supporting members and by other public and private subjects, also the assets placed at its disposal and the assets instrumental to the activities purchased or made by the foundation. The province may place the foregoing assets at the disposal of the foundation also through its own firms.

#### **EMPLOYMENT, HIRING AND PROMOTION**

The (contractual) positions in the FBK research area comprises: researchers and technologists. They can be employed with long-term or fixed-term contracts, either full-time or part-time, or with temporary project-based contracts.

Researchers conduct research activities, technological experimentations and development; they are classified according to the following levels:

*Researcher, 1° level:* he/she contributes to the development of scientific issues and programs. He/she is supposed to: work in great autonomy towards the objectives and strategies of FBK; manage the budget and personnel aspects independently; have a research manager role; be recognized for his/her excellence by the scientific community.

*Requisites:* thirteen years of experiences in FBK or other research institutes, nationally or internationally accredited; PhD or equivalent professional experiences; written and spoken knowledge of at least one foreign language. In the absence of the requirements of the previous letters, possession of proven and recognized experience and expertise in the international arena are considered on the basis of the scientific contributions made, the results obtained and the awards achieved.

*Researcher, 2° level:* he/she has autonomous responsibility and takes actions within the committed activities. He/she is supposed to own such a (high) level of knowledge and expertise to actively and significantly contribute to his/her area. He/she can be responsible of projects and/or research groups contributing to identify the strategies of the organization.

*Requisites:* eight years of experiences in FBK or other research institutes, nationally or internationally accredited; PhD or equivalent professional experiences; written and spoken knowledge of at least one foreign language.

*Researcher, 3° level:* he/she collaborates on the research activities, participating to their definition and to their methodologies. He/she is coordinated and supervised by researcher at higher levels.

*Requisites:* PhD or three years of experiences in FBK or other research institute, nationally or internationally accredited; written and spoken knowledge of at least one foreign language.

*Researcher, 4° level:* collaborates on the research activities of the unit under the supervision of a researcher in the higher level. After three year he/she is tested to evaluate the shift to the third level.

*Requisites:* four years degree; written and spoken knowledge of at least one foreign language.

Technologists conduct activities of technical collaboration related to the scientific-technological researches; they are classified as follows:

*Technologist, 1° level:* he/she performs independently technological activities of high complexity and coordinates and manages of technical-scientific units.

He/she is supposed to: operate with a high degree of autonomy in complex structures, contribute to the identification of the objectives and strategies of the foundation, may be responsible for the coordination of scientific-technical complex structures with autonomous management of budget and personnel assigned.

*Requisites:* thirteen years of experiences (ten in case of PhD qualification) in FBK or other research institutes, nationally or internationally accredited; PhD or equivalent professional experiences; written and spoken knowledge of at least one foreign language.

Technologist, 2° level: under the supervision of the head of the unit, he/she is supposed to help to determine the strategies and objectives of the structure; may be charged with the responsibility and self-management with regard to assistance and technical advice.

*Requisites:* eight years of experiences (five in case of PhD qualification) in FBK or other research institutes, nationally or internationally accredited; Masters degree; written and spoken knowledge of at least a foreign language.

Technologist, 3° level: he/she carries out technical-professional activities and participates on the related activities with limited autonomy under the direction of the head, also with regard to assistance and technical advice.

*Requisites:* three years of professional experiences; Masters degree; written and spoken knowledge of at least one foreign language.

Technologist, 4° level: he/she carries out technical-professional activities under the supervision of a technologist or researcher of higher level.

*Requisites:* Bachelor degree; written and spoken knowledge of at least one foreign language.

Project collaborators, with temporary project-based contracts, carry out activities of scientific research and technological development, favor the transfer of scientific results and innovation. The collaborator is supposed to work autonomously without predetermined constraint of time and attendance and to use the FBK structures only for the accomplishment of the task. His/her contractual position does not articulate into levels.

PhD fellow is a fixed-term education position.

#### **Appointment/selection processes at FBK**

Research positions under permanent and fixed-term employment contracts (*tenure track positions*) and temporary project-based contracts with similar remuneration are determined through open and international calls. The Human Resource Service prepares the Recruitment Notice, which, subject to the prior authorization of the Process Initiator, is then posted on the FBK website. The Recruitment Notice must be posted on the website for at least two weeks;

this deadline, however, may be extended on the Process Initiator's request, and advertised according to the same conditions as the Notice.

After the deadline for submitting applications has passed, an Application Assessment Panel is set up comprising the following members:

- the Requesting Manager;
- the Process Initiator;
- the Head of the People Innovation Service, or his/her representative;
- at least two experts in the relevant field, appointed by the Process Initiator.

If special circumstances so require, the Process Initiator may decide a different composition of the Panel, which must be specified in the Staff Recruitment Request. The Panel decides with a majority of at least 4 to 5.

After the closing date set out in the Selection Notice, HR Service identifies the maximum number of applications as specified in the Notice, strictly in order of receipt, and delivers them to the Panel, which then shortlists the ones it seems most deserving. The Panel, at its discretion, shortlists no less than 5 and no more than 20 applicants, obviously based on the actual number of applications received. The applications are shortlisted by the Panel according to the criteria set out in the Selection Notice and according to the CV screening results, at the Panel's sole discretion. The Panel members are not required to specify and give any reasons for their decisions. The applicants' CVs may also be screened by the Panel members remotely. The applicants not shortlisted for interview are notified of their exclusion by email. For research positions, the shortlisted applicants are interviewed by the Panel and a number of them are required to present papers at a seminar, which, preferably, is held on the same day as the interview. Based on the outcome of the seminar, the Panel, meeting collectively, prepares an assessment document identifying the applicants deemed to be qualified for the relevant position, notifying their decision in this respect. The Process Initiator, having verified that the process by the Panel and the Requesting Manager conforms to the applicable rules, shall approve the conclusion of the employment contract(s), without the power to reconsider the application assessments made or decisions taken.

Position are described in a gender neutral term in advertisement and if two candidates have equal merit the one representing the minority gender is to be selected.

Since January 2014 a new hiring procedure has been adopted. The main changes from the previous have been made both to speed up and simplify the process and to increase its transparency.

## GENDER STRUCTURE

There is no specific units/office dealing with gender related topics, neither in the administration and management area nor in the research area. Furthermore, there is no specific permanent board/committee on gender equality. We consider these absences quite relevant and influential in explaining the actual gender-related situation in FBK. Nonetheless, during the last years there have been initiatives/projects, transversal to the research centers, with the aim to contribute to foster gender equality in the FBK working environment:

- [2000 – 2002] The “Gender and Sciences” group was informally created in ITC-IRST; it was made up of a group of female senior researchers who aimed at increasing awareness on gender issues in scientific working environments.
- [2002 – 2008] Formal recognition of the “Commission for the promotion of women’s presence in the scientific and technological research”, made up of a group of female researchers of ITC-IRST. Activities promoted and supported comprised the organization of seminars aimed at the increase of gender awareness and the promotion of mentoring measures for women. A first collection of quantitative data on women’s presence in ITC-IRST started within this context.
- [2008 – 2010] “Gender and Sciences” initiative: it was guided by a group of FBK researchers belonging to different research units and their aim was to create debates and dialogues on women’s positions in research. Several seminars on gender and science were organized and relevant international expertises were invited to have talks.
- [2009 – 2012] “GOSH – Gender cOnstruction between Sciences and Humanities”: this was a research project supported by the General Secretariat with scope to study the ways in which both humanistic and techno-scientific disciplines contribute to the construction of gender. Adopting a theoretical and comparative approach, it aimed at investigating differences and similarities among the various definitions of gender and the implications that the use of gender categories has on the disciplines themselves, their methods, purposes, language, topics and interpretations of results.
- “SuiGeneris Lunches” [2008 – in progress] are informal meetings organized during the lunch break by the “Gender and Science” staff, dealing with gender-related aspects in the FBK: gender statistics, gender awareness, organizational well-being. The invitation is open to all FBK personnel.
- [2009 – in progress] “Family audit”: the projects is headed by the Human Resources Unit and comprises several actions: tele-working, summer and winter activities for employees’ children, flexi-time, car-sharing, special agreement with the public

transport service). In 2009 FBK obtained the certificate Family Audit for its actions aimed at supporting the work/family balance.

- [2012 – in progress] FESTA EU project represents the first self-financed gender-related project in FBK (with employed staff) and is considered a very relevant occasion to actually pinpoint and implement gender-related policies and actions aimed at structural changes in favor of gender equality. It is supported by FBK top management (General Secretary and head of Human Resources).
- [2013] “Towards a gender inclusive language” is a project financed by the Equal Opportunity Department of the Autonomous Province of Trento that aims at promoting the use of a gender-sensitive language in FBK. Two seminars are organized with experts and they are directed to the administrative and research personnel, separately.





## APPENDIX 2 – DIMENSIONS AND INDICATORS

Dimensions describe what it is we are trying to measure. They are not directly observable but define how to categorize and understand indicators. Dimensions also allow us to see if indicators validly and reliably show what they intend to point out. Indicators become measurable through variables. Thus, variables are observable facts which may say something about the dimensions via indicators. Dimensions may have more than one indicator and indicators may have more than one variable, and thus there may be more than one variable that show aspects of the same dimension. This is the case when a dimension is multidimensional. Typologies, indices, scales and tests are examples of the combination of several single indicators.

The tables below include dimensions, indicators and variables as well as the sources from which they will be drawn.

## UU – DIMENSIONS AND INDICATORS

DIMENSION	INDICATOR	VARIABLE	SOURCE
Work and study conditions (including parenting)	Form of employment	Permanent contracts < 50 percent Permanent contracts ≥ 50 percent Permanent contracts 100 percent Fixed-term contracts < 50 percent Fixed-term contracts ≥ 50 percent Fixed-term contracts 100 percent	Uppsala University's payroll and personnel administration system, Primula
	Parental leave	Parental leave (parental benefit) Temporary parental benefit for care of sick children Unpaid leave	Primula
	Sick leave	Short term sick leave (< 60 days) Long term sick leave (≥ 60 days)	Primula
	Doctoral candidate's degree of (research) activity	10-40 percent 41-60 percent 61- 80 percent 81-100 percent	Uppdok, which is Uppsala University's part of the national system for student administration, Ladok
	Doctoral candidate's financing	Doctoral employment Doctoral candidate who is employed by a company (and gets salary from the company) and pursues research studies within the employment Employment as a doctor with scope to conduct research studies within the employment Other employment outside the university (than at company or as a doctor), which means that research studies can be conducted within the employment Other employment (than as doctoral candidate) in own or other university, which means that research studies can be conducted within the employment Study grant Scholarship No financing or occupation not related to research studies	Uppdok
	Third-cycle degree	Doctoral degree Licentiate degree	Uppdok

<b>DIMENSION</b>	<b>INDICATOR</b>	<b>VARIABLE</b>	<b>SOURCE</b>
Recruitment	Success rates of appointments to senior lecturer, professor and postdoctoral research fellow positions	No. of applicants by gender No. of selected candidates by gender	Faculty Office for Science and Technology (electronic application system)
	Positions	Professor Research group leader/equivalent Senior lecturer Researcher /equivalent Postdoctoral research fellow Doctoral candidate Lecturer Senior research engineer/equivalent Teaching assistant Assistant research work Laboratory research work	Primula
Leadership positions, investigative and decision-making bodies	Leadership positions	Academic leaders Professors Other leaders	Primula
	Investigative and decision-making bodies	No. of members by gender	Departments
Salary	Salaries per position and age	Average salary by gender Median salary by gender Salary dispersion by gender	Primula

## SDU – DIMENSIONS AND INDICATORS

DIMENSION	INDICATOR	VARIABLE	SOURCE
Gender equality in career development	Patterns in hiring	Gender Age Position Department	Financial Services
	Councils, Committees, boards	Membership in internal councils, committees and board	Four institutes at the Faculty of Science
	Leadership and Management	Head of PhD School Head of PhD Centre Head of Study Board Head of Studies Head of Department Head of Centre Research Leader	Four institutes at the Faculty of Science
Gender equality in research	Scientific production	Organization or participation in conference Participation in workshops, seminars or courses Acting as peer reviewer Participation in media Stays abroad Prizes, scholarships and appointments Acting as editor on journals Other activities Peer reviewed published journal articles Conference material Other material	PU:RE
	Patterns of fund application	Applicant Number of granted funds Head applicant Place of work for the head applicant Cooperation with public institutions Cooperation with private institutions	PANDA
Work/Life balance	Parental leave	Absence due to children's illness Absence due to maternity Absence due to paternity	Financial services
	Job satisfaction and motivation		SDU's triannual job satisfaction survey

## RWTH – DIMENSIONS AND INDICATORS

DIMENSION	INDICATOR	VARIABLE	SOURCE
<b>Degree of gender aspects in research</b>	Funded projects with gender aspects	Number of projects with gender aspects in the head line	Department of third party funding / national research databases
<b>Position of women in science</b>	Share of projects led by women	Number of projects led by women relative to all projects	Department of third party funding / Finance department
	Female share of publications	Numbers of publications of women/of men	Library
	Prizes / Awards / Honours held by women in relation to all prizes etc.	Number of prizes / awards /honours of women / of men	Department of academic affairs
<b>Degree of gender competence of teaching staff</b>	Courses with gender aspects in the head line of the course in relation to all courses	Number of courses with gender aspects in the head line	Department of academic affairs
	Courses with gender aspects in the announcement description in relation to all courses	Number of courses with gender aspects in the announcement	Department of academic affairs
<b>Degree of gender equality in career development</b>	Contract conditions	Duration in month / Volume in hours by gender	HR department
	Success rate of applications for professorships of men and women	Number of Applications / number of invitations/ number of appointments by gender (in relation to cascade model)	HR department
	Age at first appointment on professorship	Age of appointed professors by gender	HR department
	Status of professorship (short-term / long-term)	Numbers of short-term / long-term appointed professors by gender	HR department
	Share of women in boards and committees	Number of women and men in boards and committees	Department of academic affairs

DIMENSION	INDICATOR	VARIABLE	SOURCE
<b>Degree of gender equality in budgeting</b>	Salary including bonus of scientific staff	Wage classification + level of bonus by gender	HR department
	Financing of projects led by women and men	Number and level of financing of projects led by women in comparison to projects led by men	Department of third party funding / Finance department
	Expenses for Gender Equality Measures		
<b>Work (Science) / Life Balance</b>	Maternity leave and Parental leave	Number of women in maternity leave	HR department
<b>Institutionalization of gender equality and gender mainstreaming</b>	Gender structures	Description of the structure	IGaD
	Gender experts	Number of experts	HR department; IGaD
	Gender concepts	Number and Quality of Concepts	IGaD
	Gender aspects in the institutional strategies	Quality of Gender Mainstreaming in Strategies	IGaD

## FBK – DIMENSIONS AND INDICATORS

DIMENSION	INDICATOR	VARIABLE	SOURCE
Gender equality in working condition	Female presence	Researchers by research center and gender Researchers by research unit and gender	Human Resource Unit (HR) database
	Terms of employment	N° of employees by gender; N° of collaborator (self-employed) by gender; N° of researchers with permanent and restricted time contract by gender N° of R1 (highest level), R2, R3, R4 (lowest level) by gender N° of researchers with full-time and part-time by gender N° of PhD students by gender	Human Resource Unit (HR) database
	Salary	Amount of male/female salary (€): gross fixed variable component	COGE Unit database
	Sick leave	N° days of sick leave (by gender)	HR database
Gender equality in career development	Promotion (both horizontal and vertical) Turn-over	N° of vertical promotion (by gender) N° of horizontal promotion (by gender) N° of exits (by gender) N° of entrances (by gender)	HR database
	Recruitment	N° of applicants (by gender) N° of selected candidates (by gender) N° of the evaluators (members of selection committee) (by gender)	HR database
	Leadership	Gender composition of heads of research units Presence of women in FBK leadership boards and committees	HR database
Gender equality in research	Network	N° of participation in conference/meeting (by gender) Place of conference: Italy or abroad (by gender)	COGE Unit database
	Publications	N° of publications (by gender) Types of publication (by gender): proceedings and journal articles	Research Evaluation Unit
Work/Life balance	Absence for care	Maternity/parental leave – N days (by gender) Absence due to children’s sickness – N days (by gender) Absence due to family care (Care-for-dependent leave) – N days (by gender)	HR database
	Tele-working	N° of researcher using TW (by gender) Period of TW (in days, by gender)	HR database





## APPENDIX 3 – HYPOTHESES

Where dimensions describe what we are trying to measure, hypotheses point to what we think or know the indicators will display. The hypotheses we have each formulated are different and in this way reflect our different organizational context and position as agents within our respective organizations and the overarching strategic objectives stemming from these positions.

## UU – HYPOTHESES

Strategic goals are not included in the table below. The departments will set their own detailed and specific goals grounded in the goals for gender equality work at Uppsala University and the Faculty of Science and Technology. In the case of salaries per position and age, the strategic goals will be based on the latest pay survey and analysis including action plan for equal pay.

INDICATOR	HYPOTHESIS
Leadership positions	Gender imbalance at all three departments, which has decreased since 2009
Positions	Gender imbalance at all three departments
Form of employment	Gender balance at one department Gender imbalance at two departments If an organization has an overrepresentation of one gender in secure contractual arrangements as permanent and full-time employment it indicates a bias in terms of power and influence
Parental leave	Gender imbalance at all three departments Gender-specific difference in parental leave and temporary care of sick children may indicate that there are different expectations for men and women within the organization
Sick leave	Gender balance at one department Gender imbalance at two departments Gender-specific differences in sick leave may indicate gender-specific differences in the physical or psychosocial work environment
Doctoral candidate's degree of (research) activity	Gender balance at all three departments
Doctoral candidate's financing	Gender balance at all three departments
Third-cycle (doctoral and licentiate) degrees	Gender imbalance at the Faculty of Science and Technology. Gender-specific differences in terms of the distribution of the licentiate and doctoral degrees and in the number of degrees may indicate differences in study conditions and who are encouraged to remain within the organization

INDICATOR	HYPOTHESIS
Salaries per position and age	Men higher average salaries than women Men higher median salaries than women Higher male wage dispersion Pay differentials between women and men performing work to be regarded as the same and gender differences in wage dispersion may indicate unwarranted differences in salaries and the potential for wage growth
Success rates of appointments to senior lecturer, professor and postdoctoral research fellow positions	Women are more often ranked as the first proposal for a lectureship Men more often succeed in their applications for professorship Men and women have equal success rates of appointments to postdoctoral research fellow positions Gender-specific differences in success rates of appointments may indicate unwarranted differences in career opportunities (gender bias in evaluation of scientific qualification)
Investigative and decision-making bodies	At one department gender imbalance At two departments gender balance

## SDU – HYPOTHESES

Strategic objectives of the work with our various indicators will be formally approved by the steering committee and Heads of Department in March/April 2014, and are therefore not included here.

INDICATOR	HYPOTHESIS
Patterns in hiring	<p><u>Gender:</u>            The gender imbalance is due to:            The leaking pipeline            The leaking pipeline mostly takes place after the PhD or Postdoc level            Less women than men continue their career in academia after PhD-level</p> <ul style="list-style-type: none"> <li>- at SDU, Faculty of Science</li> <li>- outside SDU</li> </ul> <p>Less women than men finish their PhD's            Reasons for a leaking pipeline:</p> <ul style="list-style-type: none"> <li>- The work conditions do not harmonize with and appeal to the life conditions and wishes of women</li> </ul> <p><u>Retention and recruitment</u>            Lack of retention strategies at the faculties            Lack of "staff care" at the departments            Lack of attractive conditions for transitions between positions            Lack of career guidance and career planning            Lack of economic resources            Laws with respect to:            Job structure at the university            Foreign scientific employees            The Danish organization of academic positions is inflexible and does not harmonize with and appeal to the life conditions of women</p> <p><u>Age:</u>            We focus on academic age.            Women who have been on maternity leave during their PhD or Post doc take longer to finish their degree and longer to advance to a higher position than men and women, who have not been on maternity leave – even when the focus is on academic age</p> <p><u>Position:</u>            A higher percentage of women in permanent position are leaving an academic position for a job in the industry (– there is a high risk academia is left for good)            Permanent positions: more women than men leave the university and their academic career            Only by adhering to the academic it is possible to ensure an academic career</p>

INDICATOR	HYPOTHESIS
	<u>Department:</u> The Faculty has a gender policy The Faculty has a strategy for recruitment and retention The Faculty has a culture which promotes recruitment and retention The Faculty has a contingency plan
Leadership and Management	More men than women hold leadership positions More women than men hold educational/study related leader positions that are necessary but not required or salaried
Parental leave	More women than men take maternity leave Men tend to shorten their paternity leave as much as possible
Councils, Committees and Boards	More men than women are represented in research related councils, committees and boards More women than men in the educational/study related councils, committees and boards
Patterns of fund application	More men than women are represented in research related councils, committees and boards More women than men in the educational/study related councils, committees and boards
Scientific production	Men publish more than women with respect to: Peer reviewed published journal articles Conference material Other material Men network more than women and more strategically with objectives Men are more active than women with respect to: Organization or participation in conference Participation in workshops, seminars or courses Acting as peer reviewer Participation in media Stays abroad Prizes, scholarships and appointments Acting as editor on journals Other activities
Job satisfaction and motivation	Retention increases with job satisfaction and motivation More men than women are satisfied and motivated

## RWTH – HYPOTHESES

### 1) Gender Mainstreaming in Research

DIMENSION	HYPOTHESIS	STRATEGIC GOAL
<b>Integration of Gender Aspects in Research</b>	<ul style="list-style-type: none"> <li>It is necessary to build up gender expertise within the group of researchers to ensure that gender aspects are incorporated in Research.</li> <li>Gender expertise at RWTH University is insufficient.</li> </ul>	<ul style="list-style-type: none"> <li>Gender Studies and Gender expertise ought to be obligatory for every faculty.</li> </ul>
<b>Position of Women in Science</b>	<ul style="list-style-type: none"> <li>The assumption is that there are fewer women who are project leaders and they have less presentations, publications and prizes.</li> </ul>	<ul style="list-style-type: none"> <li>Increase of proportion of women who lead projects, given that project funding and coordination is a success driver in academia.</li> <li>Increase the visualization of academic performance of women.</li> </ul>

### 2) Gender Mainstreaming in Education

DIMENSION	HYPOTHESIS	STRATEGIC GOAL
<b>Degree of gender competence of teaching staff</b>	<ul style="list-style-type: none"> <li>Gender Mainstreaming in Teaching requires gender competence of scientific teachers.</li> <li>Gender expertise at RWTH University is insufficient.</li> </ul>	<ul style="list-style-type: none"> <li>The gender competence of teaching staff should raise the awareness in gender topics at faculties and of students and teachers.</li> </ul>
<b>Gender sensitive distribution of education work load</b>	<ul style="list-style-type: none"> <li>Women's involvement in teaching is significantly stronger than men's, which can lead to disadvantages in individual careers.</li> </ul>	<ul style="list-style-type: none"> <li>Equal distribution of teaching load</li> </ul>

### 3) Gender equality in Human Resources Development

DIMENSION	HYPOTHESIS	STRATEGIC GOAL
<b>Degree of gender equality in career development</b>	It is assumed that women still have not the same career opportunities as men.	<ul style="list-style-type: none"> <li>• 20% until 2020 – women in professorships (Institutional Strategy of the RWTH)</li> <li>• 30% until 2030 – women in professorships (Institutional Strategy of the RWTH)</li> <li>• Early provision of career perspectives for women and men.</li> <li>• Equal distribution of job opportunities.</li> <li>• Increase proportion of women in committees to foster their interests and influence in the university's constitution</li> <li>• Systematically fostering of re-entries in science.</li> </ul>

### 4) Non-discriminating organization

DIMENSION	HYPOTHESIS	STRATEGIC GOAL
<b>Degree of Gender Equality in budgeting</b>	<ul style="list-style-type: none"> <li>• Women are discriminated in budgeting and the job infrastructure (rooms, personnel, money)</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing appointment negotiations with female professors/candidates</li> <li>• Gender equal pay</li> <li>• Equal budgeting opportunities for female and male professors</li> <li>• Adequate budgeting of gender measures</li> </ul>
<b>Work (Science) Life Balance</b>	<ul style="list-style-type: none"> <li>• Work (Science) Life Balance issues are not gender neutral. Womens more often go into parental leave and reduces working hours. Motherhood and fatherhood are not issues of human resources development at universities.</li> </ul>	<ul style="list-style-type: none"> <li>• Career development by preserving contact to the university.</li> <li>• Family-orientated culture of the university</li> </ul>
<b>Institutionalization of Gender Equality and Gender Mainstreaming</b>	<ul style="list-style-type: none"> <li>• A high level of institutionalization of Gender Equality is the fundament for structural and cultural transformation processes.</li> </ul>	<ul style="list-style-type: none"> <li>• Institutionalization of Gender Mainstreaming empowers actual transformations.</li> <li>• Increase of gender expertise</li> <li>• Update and strategic enhancement of gender equality measures mainstreaming</li> </ul>

## FBK – HYPOTHESES

INDICATOR	HYPOTHESIS	STRATEGIC GOAL
Female presence	Imbalance between the genders in FBK technological-scientific research centers	Increase the percentage of female researchers in the considered research centers (% increase to be established).
Employment terms	Different terms of employment that advantage men; in particular, men more than women are present in the highest contractual level positions	Equal term of employment for men and women. Increase the presence of women within the category of researchers with the highest contractual level positions
Salary	Men gain more than women. Gender exercises an influence on the amount of the variable component of the salary, that is the result of individual negotiations	Reduce the gender pay gap. Verify whether the differences are mainly due to private, personal negotiations. Particular attention will be paid to this complex indicator as it is made up of and influenced by many aspects (evaluation of research work, individual negotiation, bonus productivity..); our aim is to verify on which of them gender exercises stronger effects.
Sick leave	Women register more absences from work for sickness than men do.	Considering absence for sickness as a proxy of working environment, the goal is the improvement of working well-being for women, in particular.
Leadership (formal responsibility)	Hierarchical imbalance between the men and women researchers, i.e., more men than women are represented in the leadership roles	Present and promote different types of leadership styles through open calls for higher position too and training courses directed at improving the leadership competences of women.
Recruitment	More male candidates than female ones win the calls for research positions (% incidence on total male and female candidates). The presence of at least a woman in the selection/evaluation committee increases the probability that the selected candidate is a woman.	Reduce the percentage difference between the incidence of winners candidates within women and within men. Increase the number of women in the selection/evaluation Committees.
Promotion (both horizontal and vertical)	Women more than men stay longer in the lower contractual positions. We expect that absences due to maternity leave and/or child and family care influence negatively the career trajectories and that gender bias in techno-scientific research is not only due to the scarce applications of women at the early stages but to obstacles	Fasten the career progression for women preventing from unwarranted differences in the career trajectories



INDICATOR	HYPOTHESIS	STRATEGIC GOAL
	during the career development	
Turn over	Higher turn-over rate for women researchers	Prevent from unwarranted exit of women from the research career path
Scientific production	Men have a higher scientific production than women	Verify whether this hypothesized evidence is influenced by other factors (eg: presence at work, contractual position.)
Network	Women attend less conferences than men	Identify and support incentives for participating in conferences (eg: support for child care.)
Absence for care Tele-working	More than men, women are absent from work due to family care and use tele-working modes.	Increase the actions that support the work/life balance; promote a “shared work/life conciliation” that involved men too.

