

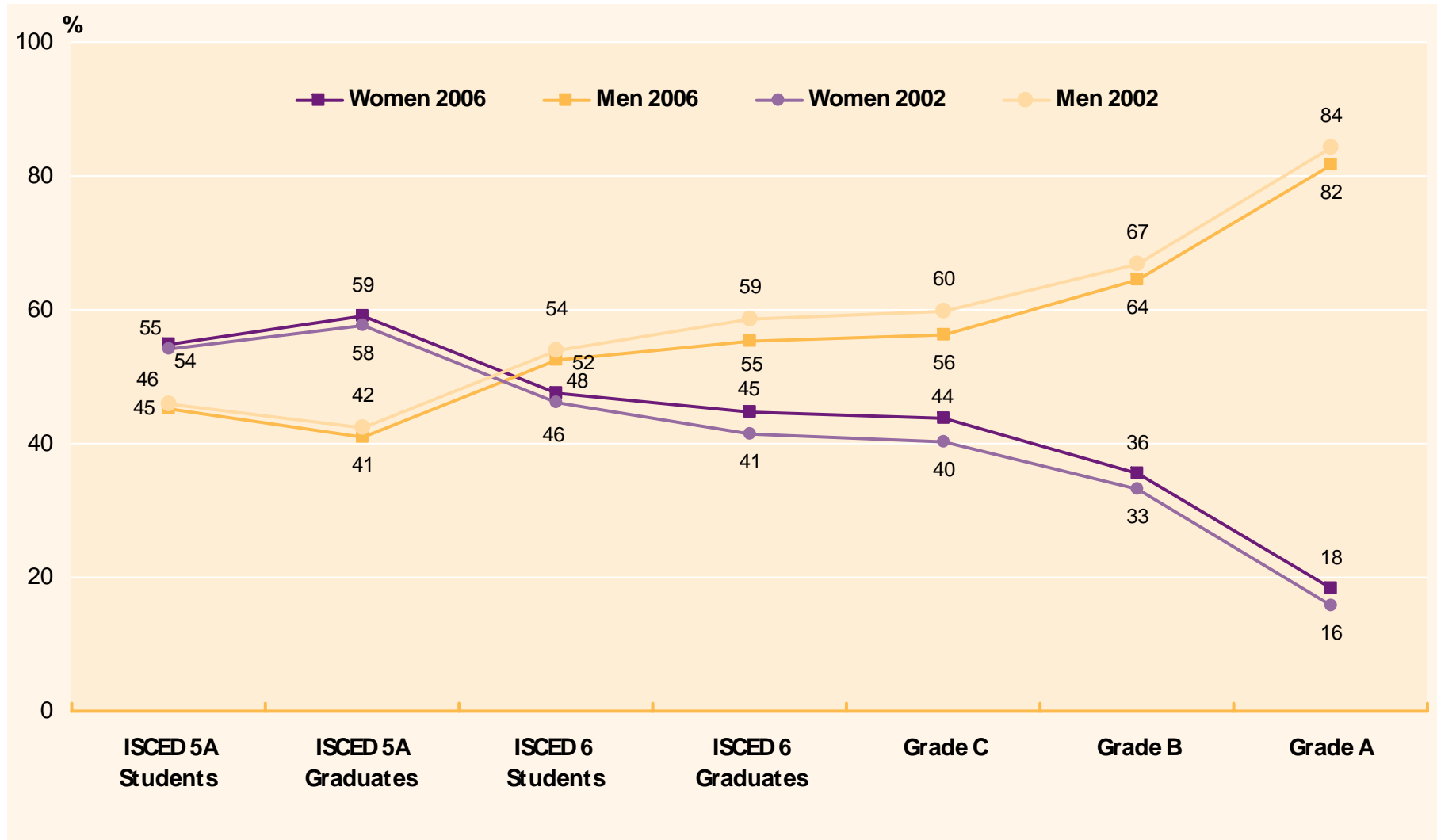


PRAGES Guidelines for Gender Equality Programmes in Science

Marina Cacace, ASDO

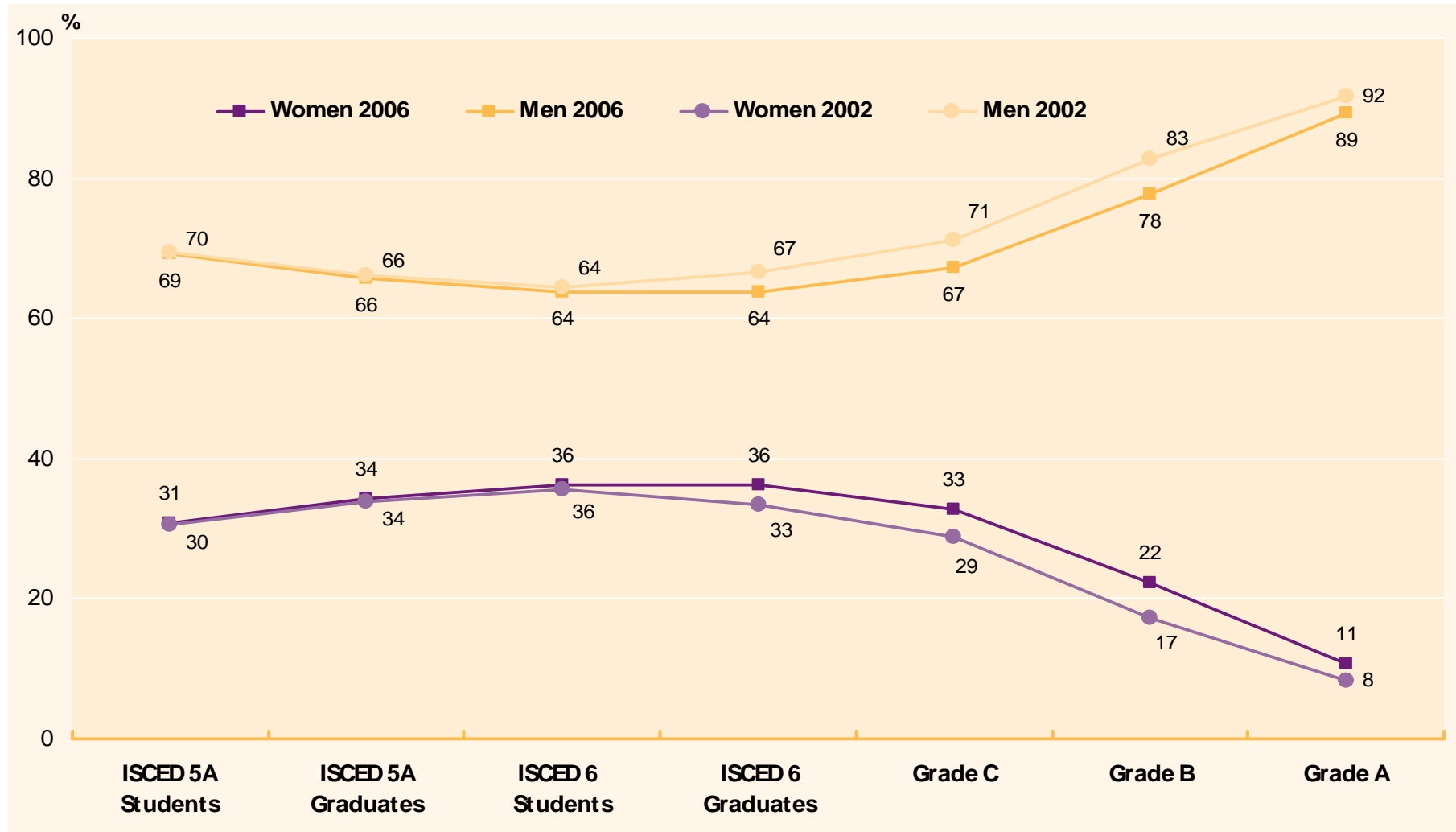
The starting point: women's progress is slow

(EC, She Figures, 2009)



Even slower in science and technology fields

(EC, She Figures, 2009)



Just a “generation effect”? The case of Italy

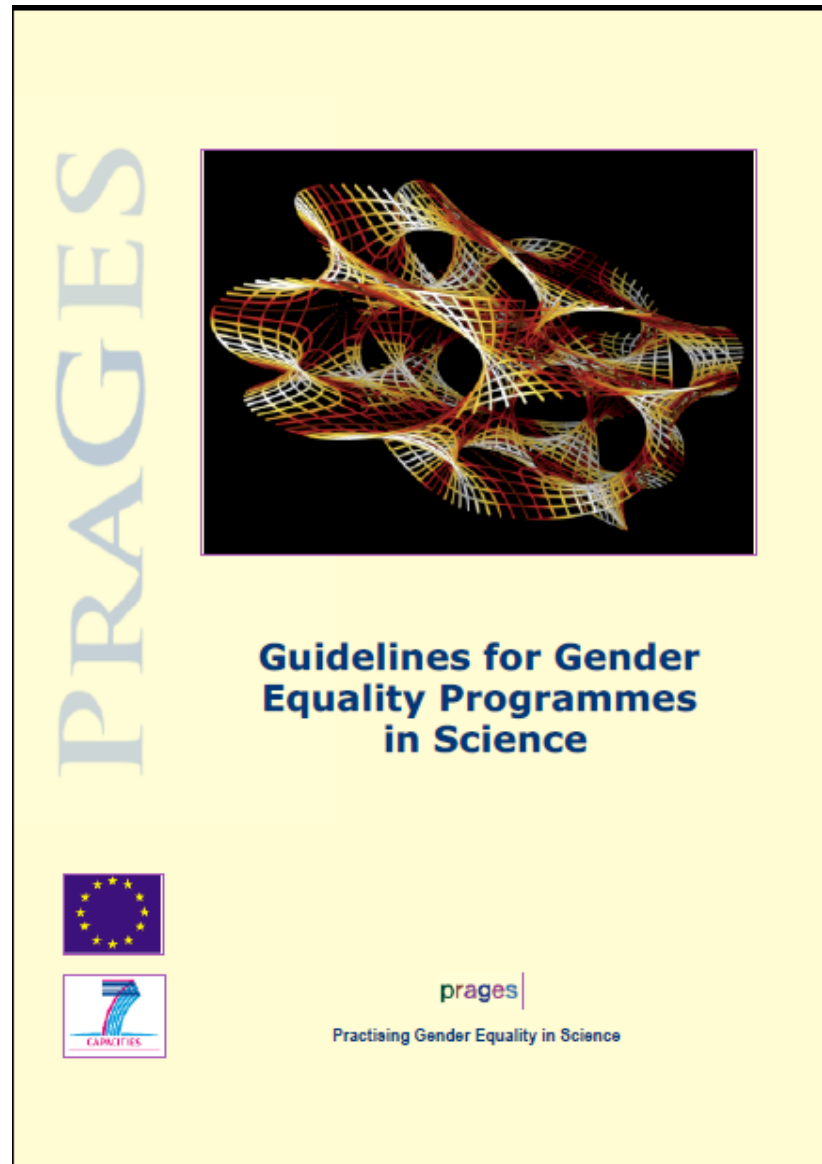


Table 1 – Women’s proportion among graduates and grade A academic staff by birth-year group (%)

Birth year groups	Women among graduates	Women among grade A academics
1935-1939	31.1	11.9
1940-1944	33.8	16.2
1945-1949	42.7	21.1
1950-1954	44.8	24.2
1955-1959	44.1	20.6
1960-1964	46.0	19.3
1965-1969	49.8	19.6

Source: ASDO estimate based on D’Aprile (1998); MUR (2008)

The need for supporting measures : PRAGES Guidelines...





Good Practices database

PRAGES
Practising Gender Equality in Science
(G.A. No. 217754)



Search for in field

Ex. To find "Institute" among promoters, insert "Institute" or "inst" (without quotes), select Promoters, and click Go button. Click Find all button to show all records

Symbols explanation

Golden benchmark



Programme of excellence

Silver benchmarks

Impacts on:



one area



two areas



three areas

The objectives of the PRAGES Project and Guidelines



OBJECTIVES

- In a knowledge management perspective, taking stock of the programmes implemented so far in Europe, Australia, Canada and the US
- Providing different players within universities, departments, research institutes/groups with relevant examples of successful programmes and tips for implementation
- Guaranteeing for **quality and impact** of the programmes used as examples

But... Three questions



- Only some kinds or parts of programmes can exhibit direct measurable impacts. In addition, it is often difficult to identify the component directly linked with impact in integrated programmes. **What is essential to success?**
- Impact may depend on local circumstances. **Can we transfer successful programmes?**
- How do we (and can we) answer the classical question **“Which types of programme work better?”**

“What is essential to success?”



- The Guidelines start from the assumption that it is important to distinguish **internal motivations and cultural prerequisites** for programme impact from **programme management requirements**, on which actual success ultimately depends
- In this perspective, the Guidelines were organised on two approaches:
 - A **strategic approach**, devoted at assessing the promoters' ability to fully grasp and deal with the meaning and multifaceted nature of women's difficult equality in science and technology (S&T) settings, and therefore at highlighting their strategic choices (Parts B,C,D)
 - An **analytic approach**, devoted at showing management tools and action patterns the programmes adopt to deal with their specific situations, highlighting important elements for replication and transferability (Part E)

Strategic approach



- The starting point has therefore been **a broad interpretative framework** of the key issues underlying gender equality in S&T, **against which programmes have been analysed and assessed**, both for their **awareness**, and for their **action**
- Issues at stake, identified through the review of the relevant scientific literature, were categorised into **three risk areas**:
 - Science as an unfriendly environment for women
 - Science as gender-insensitive
 - Scientific leadership missing women
- Actions and programmes were likewise organised into **three correspondent strategic areas**, aimed at promoting:
 - A friendly environment for women
 - Gender-aware science
 - Women's leadership of science in a changing society

Strategic area 1: Fighting the “chilly climate”



- **Friendliness of the environment to women in S&T settings**
- Awareness of the gender dimension in S&T in the making
- Support to women’s leadership in the new social context for S&T

- Actions promoting change in **organisational culture** and formal/informal **behaviours**
- Actions promoting **work-life balance**
- Actions supporting early-stage **career-development**

Strategic area 2: Fighting gender-blind science



- Friendliness of the environment to women in S&T settings
- **Awareness of the gender dimension in S&T in the making**
- Support to women's leadership in the new social context for S&T
- Actions challenging gender **stereotypes**
- Actions fighting **horizontal segregation**
- Actions aimed at gendering **S&T contents and methods**

Strategic area 3: Fighting women under-representation in leadership positions



- Friendliness of the environment to women in S&T settings
- Awareness of the gender dimension in S&T in the making
- **Support to women's leadership in the new social context for S&T**
- Actions promoting women's leadership in the **practice** of research
- Actions promoting women's leadership in the **management** of research
- Actions promoting women's leadership in **scientific communication**
- Actions promoting women's leadership in **innovation** processes and **science-society relationships**

STRATEGIC AND ANALYTIC APPROACHES: The processing of the programmes



- Programmes have been included as examples of action for each strategic area (see the *Methodological note* in Appendix 1):
 - when explicitly and competently devised to tackle one or more of the issues identified in that strategic area through the **actual implementation of consistent measures** to that end, AND
 - when assessed as programmes of sufficient **quality** from the point of view of project management (according to the dimensions of relevance, effectiveness, efficiency and sustainability).
 - What have been assessed, as regards internal prerequisites, are thus **“conditions for impact”**

- Actual impacts resulting from self-assessment activities have of course been recorded; it was anyway considered that a programme may fail to reach its foreseen impact due to contingent situations which do not affect the potentiality of its strategic setup

Analytic approach



- Contingent situations lead us from the strategic to **the analytic approach**: how to analyse, assess the weight of, and describe internal and external circumstances, also in view of programme transfer to **other** circumstances
- There exists a tool specifically devoted at facilitating the identification and transfer of successful practices from one context to another, i.e., **benchmarking**

“Can we transfer successful programmes?”



- The **benchmarking methodology** was chosen to deal with transferability issues, allowing for the identification and dissemination of effective social technologies.
- Definition: “A permanent process of learning and continuous quality improvement through the identification, understanding and adaptation of practices of other organisations”
- Three kinds of information are structurally necessary to the benchmarking process, and namely:
 - Information on the elements of excellence to be found in the programme (**benchmarks**);
 - Information on the factors that enabled the programme to acquire the quality of excellence (**enablers**);
 - Information on the programme’s **potential transferability** to other settings (social, institutional, national).

ANALYTIC APPROACH: The processing of the programmes in the database



- In the **Database**, for each programme structural and process **enabling factors**, as well as **obstacles** faced and **promoters' tips** for implementation are provided; information is also reported about previous replication of the programme and the **promoters' attitude** at sharing their experiences and providing tools and resources to support the adoption of the programme elsewhere
- Moreover, **quality and impact assessment details** are there to show how programmes managed their resources and faced their constraints to optimise their results

Transferability issues – an example



Transferability

INFORMATION DISCLOSURE: MEDIUM

Information about the programme is easily accessible online, and different resources are available for download, even if obviously not all the material is translated in English. On the other hand, reflection about critical factors strengthening or weakening programme achievements is not much developed.

ALREADY REPLICATED? YES

The programme is reported to have been successful in introducing parts of its Equality Plan in the equality agenda of other Finnish universities.

ENABLERS/structural factors

- Cultural and social context. Implementation of gender equality plans in the university since the early 1990s.

ENABLERS/process factors

- Gender studies promotion as part of gender equality promotion. Gender equality agenda strongly informed by gender research.

- Drafting of guidelines. Existence of detailed guidelines drafted on the basis of research and approved by the university senate.

- Inclusive notion of diversity. Diversity plan concerning other discrimination grounds than gender: ethnicity, age, disability, etc.

- Creation of the Equality Committee where both men and women serve. Equality Committee acting as an infrastructure for monitoring and promoting equality; male members very active in the committee.

- Active involvement of students.

OBSTACLES

- Financial, human and technical resources availability. Funding for equality initiatives has to be negotiated each year, with negative consequences also in terms of staff stability and stable access to technical equipment.

Quality profile – an example



Assessment

Hide



[Back](#)

Quality profile **EXCELLENT**

Aggregate quality index results from excellent results as for relevance and sustainability, and medium results in the other two quality dimensions considered.

RELEVANCE: EXCELLENT

The relevance of the equality plan derives from its being constantly updated, the first one dating back to 1991. Current plan takes into account all forms of discrimination, not just the one based on gender, and has been adopted after assessing the results of the one in force for the previous three years. Moreover, new needs are regularly identified and addressed, leading to the implementation of new activities in the framework of the evolving plan.

EFFECTIVENESS: GOOD

Under the plan, more than 29 projects are operating in different faculties and departments in the university, related to administration, research and teaching.

EFFICIENCY: MEDIUM

Economic resources come from university funds and are reported as not always sufficient to sustain all on-going activities.

SUSTAINABILITY: EXCELLENT

Given that the first plan is in place since 1991, programme sustainability is practically demonstrated, even if funds have to be renewed each year.

Impact profile – an example



Impact profile GOOD

The most significant impact of the programme is that reported on the genderisation processes of science and technology.

CREATING AN ENABLING ENVIRONMENT FOR WOMEN'S CAREERS: GOOD

The programme brought about the introduction of new organisational approaches in all sectors of university life, inevitably producing challenges to customary behaviours as regards gender and diversity in general. Awareness raising about gender issues has also been remarkable, with involved women joining gender-oriented associations or networks. The university also succeeded in introducing new issues on the Equality Agenda for all Finnish universities, and in consolidating both national and international networking for gender equality.

PROMOTING WOMEN IN KEY ROLES IN S&T AND SCIENCE-SOCIETY RELATIONSHIP: MEDIUM

Overall, the programme is reported as increasing women's visibility and authority in research groups and research management.

GENDERING S&T CONTENTS, METHODS AND REPRESENTATIONS: EXCELLENT

The plan has been strongly informed by gender research, so that gender studies promotion has become part of gender equality promotion. Both the gendered dynamics of knowledge production and the mechanisms of women's segregation in scientific tasks have been put under scrutiny.

CONSENSUS: MEDIUM

No internal group is opposing the plan, while external recognition at the national level is strong and led, as mentioned, other universities to follow this model.

ANALYTIC APPROACH:

The processing of database information in the guidelines



- These material is processed in the **Guidelines** to draw cross-cutting indications about:
 - **Tools** used in the programmes, with selected examples, to pursue objectives related to the different strategies (*map of tools*)
 - How to increase programme's **relevance** to local and institutional circumstances, **effectiveness**, **efficiency** and **sustainability** (*quality Action patterns*)
 - General *Methodological suggestions*

The results of the two approaches in the Guidelines' setup



- **PART A – Women and science: Problems and issues at stake**
 - From figures to risks
 - Looking at the numbers
 - Three areas of risk
 - From risks to strategies
 - Finding solutions
 - Three strategies: An overview
- **PART B – A friendly environment for women**
- **PART C – Gender-aware science**
- **PART D – Women's leadership of science in a changing society**
- **PART E – Tools for action**
 - A map of tools
 - Action patterns
 - Some conclusions: Methodological suggestions

Structure of parts B, C and D



- Each part is devoted to one of the **strategies** (3)
 - Each strategy comprises a variable number of **objectives** (9 in all)
 - Each objective is broken down in **recommendations** (31)
 - For each recommendation concrete **lines of actions** are reported (62)
 - » Lines of actions are illustrated by **examples** from the database (219)

“Which types of programmes work better?”



- **Benchmarks identify programmes more strategically structured to impact on one or more of the three risk areas identified**
- **Quality assessments identify more relevant, effective, efficient and sustainable programmes**

BUT...

- The very nature of the Guidelines, aimed at providing examples of programmes to be transferred, makes it difficult to identify “better” programmes in general
- Quality and impacts depend on local circumstances: as for any benchmarking effort, the first task is identifying one’s specific needs in terms of strategic orientation, objectives, as well as internal/ external resources and constraints, to assess suggested actions against this whole picture
- To support this process, the guidelines provide strategic and analytic tools to set up consistent programmes to one’s own situation and needs

General methodological suggestions



- Linking actions to knowledge
- Creating institutional space for gender issues
- Looking for alliances and support
- Adopting an integrated approach
- Connecting gender and diversity issues to science development
- Promoting a community of practices
- Protecting programme vitality

- **Part B:** A friendly environment for women
 - **Objective 1:** Changing culture and behaviours
 - **Recommendation # 5:** Promoting women's integration in the research environment
 - **Line of action:** Fight women's isolation
 - » **Example:** Learning Community - promoted by the Center for Study of Women, Science and Technology (WST) at the Georgia Institute of Technology

./ Example 1 – WST Learning Community, USA



To help undergraduate women students in their approach to S&T faculties, a **learning community**, offering **housing facilities**, has been established by the Center for Study of Women, Science and Technology (WST) at the Georgia Institute of Technology. Under the programme, **networking and mentoring initiatives** addressing personal and professional issues for women students entering scientific and technological fields are organised. These initiatives are focused on topics such as women's studies in the natural sciences, leadership opportunities offered under the programme, measuring individual success, and monitoring female self-esteem in a mostly male environment. Finally, women students are also encouraged to attend informal lunch discussions with various faculty and staff members, intended to inform them about campus resources, opportunities, professional development, as well as to establish student-faculty relationships.

<http://www.wst.gatech.edu>

▪ **Part C:** Gender-aware science

– **Objective 2:** Gendering scientific contents and methods

• **Recommendation # 16:** Incorporating gender awareness in S&T education

– **Line of action:** Innovate S&T teaching methodologies and contents

» **Example:** Guide to teach ICT in a gender perspective - promoted by the Spanish association Donestech

./ Example 2 – Guide to teach ICT in a gender perspective, Spain



A **guide to teach ICTs in a gender perspective** has been drafted by Donestech, a Spanish association engaged in promoting a better relation between women and technologies. The guide addresses issues such as: applying the gender perspective to ICTs; women, ICTs, and the knowledge society; main obstacles and facilitating factors in women's access to ICTs; methodology and work organisation to support and train women in their relationship with ICTs. A collection of relevant best practices is also included. Obstacles, facilitating factors and methodologies are organised according to the following categories: motivation, access, learning process, use, contents.

http://www.donestech.net/ca/guia_didactica

- **Part D:** Women's leadership of science in a changing society
 - **Objective 4:** Increasing women's influence in innovation and science-society relationships
 - **Recommendation # 30:** Strengthening women's orientation and skills connected with innovation and the social management of technology
 - **Line of action:** Promote new research environments linking innovation and diversity
 - » **Example:** Laura Bassi Centres of Expertise – promoted by the Austrian Research Promotion Agency

./. Example 3 – Laura Bassi Centres of Expertise, Austria



- The publicly-funded “w-fForte – Laura Bassi **Centres of Expertise**” programme, promoted by the Austrian Research Promotion Agency, established **new innovation-oriented research centres**. The core strategy is that of pursuing innovation through diversity, emphasising trans-disciplinarity, advanced forms of knowledge transfer, public-private partnership, cultural and gender diversity of the work environment and project-oriented management. All the research centres (six in all) are led by women and their research teams have a gender balanced composition. The programme is conceived as a “learning initiative”, to be subjected to transparent evaluation procedures, the results of which should provide important information on how to better link innovation and gender equality.

<http://www.w-fforte.at/index.php?id=220&L=1>

The Guidelines in conclusion



- Practical aim: not a scientific report, but addressing scientists
- Not discussing theory, but using theory to frame practice and help understand its significance
- Extensive vs. Intensive: A lot of ideas in short examples, but linkage to tools allowing to go more in depth (database and specific links)
- Not to be read from cover to cover: organised by problems to address, both strategic and practical

Where to find the guidelines and the database



<http://www.retepariopportunita/prages>

Thank you...