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International WIR-conference

Women in industrial research - Speeding up changes in Europe

Berlin, Dresdner Bank, 10-11 October, 2003

Results and Recommendations

More than 350 experts from over 40 countries, mainly from industry, but also from research institutions and organisations, academia, national governments, international organisations and statistical offices met in Berlin to discuss how to enrich European research and competitiveness by recruiting, retaining and promoting more women in industrial R&D. There was a clear consensus that there is an urgent business need to improve gender diversity in European research.

Discussions on good practice and effective strategies drew upon around the WIR-report: *Women in industrial research. A wake up call for European industry*, which presented data for Europe for the first time, introduced by Prof. Dr. Helga RübSamen-Waigmann (Bayer AG), who chaired the expert group and the rapporteur, Prof. Dr. Teresa Rees (University of Cardiff). This information has been supplemented by the WIR-study: *Women in industrial research. Analysis of statistical data and good practices of companies*, presented by Prof. Dr. Danièle Meulders (Université Libre de Bruxelles), who headed this international research project, and the publication: *Women in industrial research. Good practice in companies in Europe*, which presents firm-level data, examples of good practice, and role models from 20 companies and private non-profit research institutions from 12 different European countries.

Europe needs more women in industrial research – and more women studying science and engineering:

In his opening speech Commissioner Philippe Busquin, DG Research, stressed that Europe will need 700.000 additional researchers within the next few years to realise the 3% R&D target set by the European Council in Barcelona, Spring 2002. Industry already employs the majority of EU-based researchers and there has been a major increase in the employment of women researchers and engineers in industrial R&D in recent years (33% from 1995 to 2000). But still the proportion of women researchers in industry is only 15% in the EU (ranging from 9% in Austria to 28% in Ireland and for the associated countries from 16/17% in Switzerland and Czech Republic to 55% in Latvia).

Wolf-Michael Catenhusen, Under Secretary of State of the German Federal Research Ministry, urged the companies to recruit more female researchers. He also underlined the necessity of improving child-care provision, especially in Germany.

CEOs take the lead: The urgency of the business case!

Andrew Gould, CEO of Schlumberger presented the changes that his company has already implemented and launched a “*Wake up call from CEOs*”, which is the commitment of a group of companies who spearhead international R&D to enlarge the reservoir of talent in Europe, to double the number of women in science and engineering, and to ensure that their skills are used by industry to the best advantage. These companies share a vision in which women play a much more important role in decision-making in industrial R&D. They have committed themselves to co-operate by putting this issue on the public agenda.

The CEO and top management of each signatory company will

- (1) take a stand and demonstrate their company’s approach at public events
- (2) sponsor a women professor in science/engineering as a role model to promote strategic partnerships with the education sector to encourage women in science and engineering
- (3) promote change within their companies and through co-operation with other companies and universities
- (4) make use of existing national and international programmes to support women in industrial research
- (5) analyse the business case to strengthen internal and public communication.

The CEOs of *AIRBUS*, *AIR LIQUIDE*, *EADS*, *HEWLETT PACKARD*, *ROLLS ROYCE*, *SCHLUMBERGER* and *SIEMENS* have already signed this commitment. Several other companies and research institutions have expressed their intention to join. This group will put forward examples of best practice and set standards. In the final session of the conference, Susan Bowick (Executive Vice President Personnel, Hewlett-Packard), Gill Gordon (Director Personnel, Schlumberger) and Dr. Peter Ramm (Vice President Policies and Legal Issues for Global Personnel, Siemens AG) explained the business case for gender diversity and why their companies take actions.

In five workshops and plenary sessions recent studies and good practices have been presented and discussed in order to recommend key activities and further steps. All workshops were chaired by high level executives of R&D based companies and members of international R&D advisory boards and organisations. The rapporteurs and the majority of speakers were representatives from industrial research.

The main conclusion was that promoting women in industrial R&D is central to the business case and needs firm commitment from the top.

This endorsed the CEOs signing of the position paper has shown.

In order to further promote the case it is necessary to:

- stimulate debate on international, national, regional, and institutional level,
- agree on targets for future development,
- identify good practices and learn from the best,
- combine quantitative and qualitative analysis,
- develop clear benchmarking indicators and measure progress,
- implement strategies and adopt good practices,
- concentrate activities on cross-institutional and international level,
- establish a European information gateway on the internet, and
- organise a follow-up conference.

Workshop 1 *Young Scientists – How to motivate more young women to pursue careers in industrial research? What can companies, schools, universities do?*

- Motivate more girls to become interested in science and engineering, in a similar way to the German initiative: “*Girls Day*”, where this year more than 100,000 girls aged 12-16 visited nearly 4,000 companies, research institutions, and universities. This model could be usefully transferred to an international or European level.
- Some universities have been very successful in raising the proportion of women students, especially in electronic engineering, machinery, computer sciences and physics to about 40%, while others only reach 3%. These successful examples should be made more visible by an international ranking of the most successful institutions.
- The lack of women professors means that there is a dearth of role models for young women in these disciplines. The percentage of female professors should therefore be monitored and published at institutional level.
- Exchange experiences, strengthen international networking, and train ambassadors for women in engineering and ICT: the International Summer University of Women in Engineering (IIWE, Paris, including role models from 50 countries) is an excellent example which others should join.
- Transfer successful mentoring and internship-schemes for female students in science and engineering like the YOLANTE network of Siemens, such examples should become more visible and their adoption by others should be promoted.

Workshop 2 *Careers for women in industrial research and good practices of companies. What can companies do to promote women, to change the culture of research, the framework conditions and to have more women at the top levels?*

- The *Diversity Champions Network* of the Diversity and HR Managers of R&D companies should be established at European level to promote and monitor change.
- Alternative career patterns should be supported: time limitations should be assigned to management roles, job rotation would allow researchers to go back into research after a period of management task. Career breaks should be accepted and encouraged not only for child care but also e.g. for further training; changing the levels of acceptance of the culture of flexible working hours and part-time work,
- to promote work-life-balance and dual careers, successful initiatives like Partnerjob.com should be transferred to international and inter-sectoral level and extended also to public research organisations and academia,
- to promote change and increase transparency and visibility of successful strategies, a European award “Best place to work for women in R&D” should be developed and implemented.

Workshop 3 *Enhancing the participation of women in innovation and entrepreneurship. What can be done to increase the number and participation of women in the innovation process?*

- Widen the debate on Women in industrial research by innovation, entrepreneurship and ICT,
- start early, with information and training of girls and female students on women entrepreneurship. Management skills should be part of the curricula in science and engineering courses,
- promote realistic role models, specifically success stories of innovative/high-tech women entrepreneurs and foster mentoring for women entrepreneurs,

- pay attention to the issue of access to finance for growth oriented women entrepreneurs and women entrepreneurs in innovative and high growth sectors, matching private funds with public money,
- organise a yearly conference with special focus on women and intellectual property in co-operation with the European Patent Office,
- provide statistical data and analysis on women entrepreneurs in innovative and high-tech sectors,
- create a European office of women's business ownership with regional/national offices, which coordinates, assembles and distributes information on national activities, programmes, role models, develops a marketing strategy to promote the visibility of (innovative) women entrepreneurs, and commissions research in case of lack of knowledge.

Workshop 4 *Improving the knowledge base on women in industrial research – What are the facts and figures? What needs to be done to have more gender-differentiated comparable data on firm level, sectors, countries? How can qualitative research be improved?*

- Combine data collection with qualitative analysis and strategies to implement change,
- stimulate a debate on target-setting at institutional, national and international level,
- develop clear benchmarking indicators and measure progress,
- specify the needs of gender differentiated data with respect to the benefits for enterprises.

Workshop 5 *Top women in industrial research – The relevance of role models, networking and mentoring. What can be done to make women in industrial research more visible, more powerful and to change the public image of industrial research?*

- Organise cross-company, cross institutional and international career training for women scientists and engineers (improve information, networking, negotiating skills; examples are “fast tracks” in industry, or “springboards” such as senior positions-training in Germany and the US),
- develop mentoring schemes on cross-institutional and international level,
- change the public image of women in industrial research and to increase visibility of women researchers in media,
- initiate the publication of a top 50-list of women scientists in Europe,
- co-operate with media and women's organisations,
- include indicators on women in senior positions in private and public research in national and international benchmarking on women in decision making as well as the proportion of women in science and engineering studies.

Political perspectives and final conclusions

The representatives of the European Commission, DG Research (Dr. Rainer Gerold, Director), the German Ministry of Education and Research (Hartmut Grübel, MinDirig), the Italian EU-Presidency (Prof. Dr. Francesca Cantu) and the French Ministry of Research and New Technologies (Michèle Baron-Bradshaw) concluded the conference taking care for placing this topic on top of the political agenda to put into action the Lisbon and Barcelona objectives and to invite national governments, companies, universities and private research institutions to take actions.

All presentations of the conference will soon be available on the WIR-website: www.europa.eu.int/comm/research/wir .

