



TANDEMplusIDEA is a project funded by the Community's Sixth Framework Programme for Research and Technological Development.



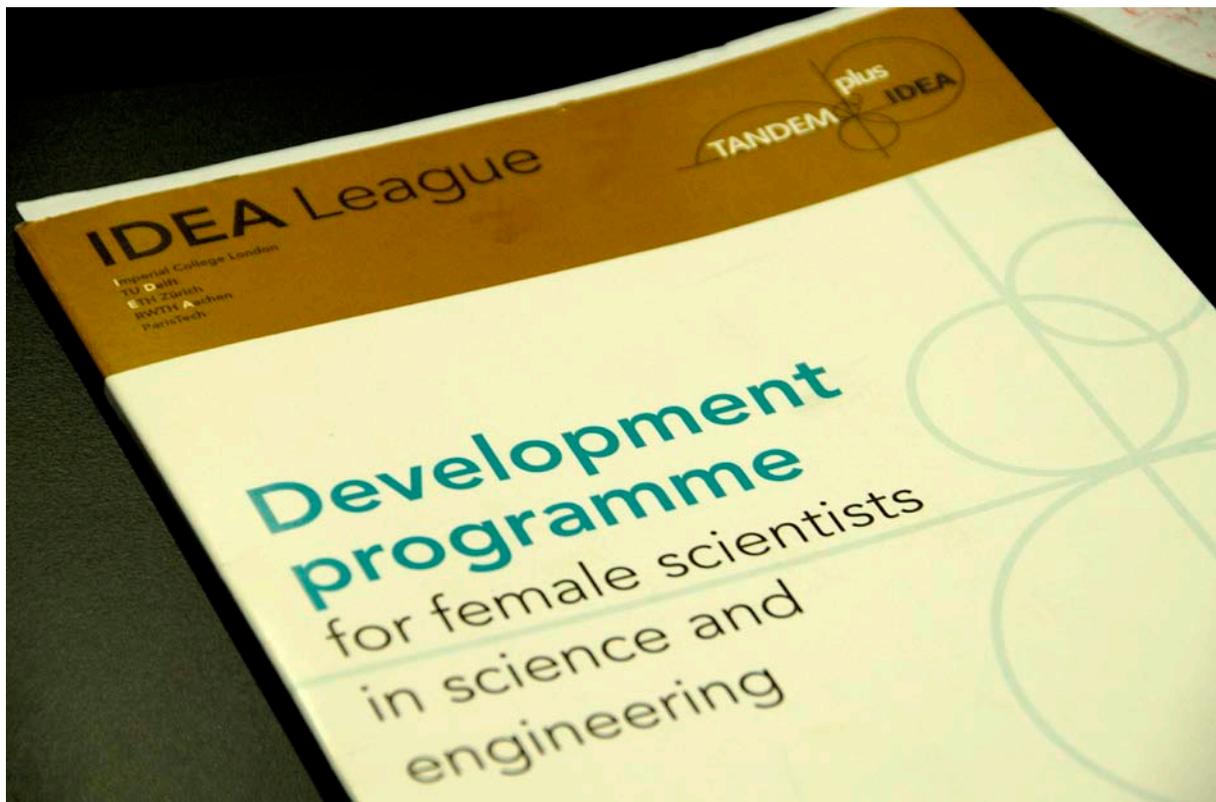
Project

Establishment of an International Strategic Development between Leading European Technical Universities with the Aim of Increasing the Number of Female Professors in natural science and engineering

TANDEMplusIDEA

Project no.: 36688

Final Report



Project coordinator:

RWTH Aachen University
Dr. Carmen Leicht-Scholten
Team: Elke Breuer, Nathalie Callies

Project period:

April 2007 to March 2010

Table of contents

| | | |
|----------|--|-----------|
| 1 | Executive summary | 3 |
| 2 | Overview | 4 |
| 2.1 | Starting point | 4 |
| 2.2 | Project objectives | 5 |
| 2.3 | Project partners | 6 |
| 3 | Work and achievements | 7 |
| 3.1 | Work package 1: Strategic Planning | 7 |
| 3.2 | Work package 2: Development of a PR and Marketing Concept | 8 |
| 3.3 | Work package 3: Website | 9 |
| 3.4 | Work package 4: Public Relations/Marketing | 10 |
| 3.5 | Work package 5: Process Evaluation and Scientific Support | 11 |
| 3.6 | Work package 6: Presentation and Discussion of the Scheme and the Results at Conferences on National and International Level | 16 |
| 3.7 | Work package 7: Conception of the Trainings | 17 |
| 3.8 | Work package 8: Networking | 19 |
| 3.9 | Work package 9: Selection of the Mentees | 21 |
| 3.10 | Work package 10: Selection of the Mentors and Matching Mentees/Mentors | 22 |
| 3.11 | Work package 11: Summer/Winter School | 24 |
| 3.12 | Work package 12: International Conference | 26 |
| 3.13 | Work package 13: Publication and Presentations of the Results | 30 |
| 4 | Dissemination of knowledge | 33 |
| 5 | Conclusion: Impact and results of the project TANDEMplusIDEA | 34 |
| | Bibliography | 37 |

1 Executive summary

The project TANDEMplusIDEA, financed in the 6th Framework Programme between 2007 and 2010, contained the conception, realisation and evaluation of an international mentoring programme for female scientists. Project partners were Imperial College London, TU Delft, ETH Zurich and RWTH Aachen as the project coordinator. Together with ParisTech they form the IDEA League, a network of leading technical universities in Europe. TANDEMplusIDEA was the first EU project of the IDEA League and the first mentoring programme conducted in such an international cooperation.

Based on the observation of a continuing under-representation of women in science and technology and in academic leadership positions, and on structural and systematic disadvantages for female scientists in male-dominated scientific cultures, the project analysed the situation in four European countries and developed a target-oriented programme for female post docs. Using mentoring as an instrument of gender-oriented human resources development, it supported high qualified female scientists from the partner universities to prepare for an international career in science and for an academic leadership position. Between 2008 and 2009 sixteen female post docs from London, Delft, Zurich and Aachen participated in a programme based on the three modules mentoring, training and networking. In the mentoring part, they were paired with an international mentor of high academic reputation who supported them personally and professionally in their development. Training seminars on career-related topics prepared the participants for the requirements of international careers, while the networking events with international speakers and guests offered the opportunity to socialise and consolidate their networks. The four project events took place alternately at the four partner universities, thus each time offering new stimuli and insights into different scientific cultures. The three modules served to foster a network of female scientists and to encourage the participants for a career in science. Ultimately, it also aimed at increasing the number of female professors on European and international level and in general at ensuring more gender equality in science. That, in turn, will not only mean more female role models for future generations of students, but also the possibility to integrate more diverse perspectives into research and teaching in science and engineering.

As a pilot project for international mentoring, TANDEMplusIDEA was evaluated scientifically. The evaluation served to adapt the programme to the needs of its participants, but also to further develop the concept mentoring on an international basis. Because of its positive evaluation results, TANDEMplusIDEA can be seen as a model of best practice for an international mentoring programme, and will continue to the discussion on mentoring and scientific career development in the future. The programme was presented on various conferences and in numerous articles and publications, most prominently at the final conference of the project entitled “Going Diverse: Innovative Answers to Future Challenges – International Conference on Gender and Diversity in Science, Technology and Business” in October 2009, that also concluded the mentoring scheme. At this occasion the results were presented to an international audience and discussed in the context of human resources and organisational development. Selected contributions from this event were collected in the final publication of the project, appearing in summer 2010.

2 Overview

2.1 Starting point

TANDEMplusIDEA is based on the observation of a continuing under-representation of women in leadership positions in science and technology. Although in Europe around 30% of all graduates in science, engineering and technology are female, the number of women in top positions drops to 14% (European Commission 2005). Even though the number of female graduates has constantly risen over the last years, the problem of the so-called “leaky pipeline” – the drop-out of women in the progression of the hierarchy – is still a phenomenon observable throughout Europe. It can also be seen in the data from the TANDEMplusIDEA partner universities: In 2008 the percentage of female students at Imperial College London, ETH Zurich and RWTH Aachen was between 30-37%, but the number of female professors was only between 12.5% (Imperial College) and 8.3% (RWTH Aachen). This discrepancy needs to be tackled, especially against the prospect of demographic changes and a foreseeable shortage of qualified staff in the future. These perspectives make it necessary for universities to intensify their efforts to attract and retain qualified personnel, in particular women and other hitherto under-represented groups. More gender diversity among the staff makes a major contribution to the creativity and quality of research, and enriches the competences that are necessary to solve complex problems.

Numerous studies have in the last years analysed the causes for the female under-representation in science (see e.g. Lind 2006, Allmendinger et al. 2000, Krimmer/Zimmer 2004, McKinsey & Company 2007). They have especially pointed out how important networks and support structures for scientific careers are. At the same time many female scientists do not feel sufficiently integrated into the scientific community, and less supported and encouraged than their male colleagues. Additionally, they hardly find female role models in science. Systematic mentoring programmes for female scientists can balance these systemic inequalities. According to the definition by Löther (2003) mentoring means the relationship between a more experienced person (the mentor) and a less experienced person (the mentee) with the aim to support the latter’s personal and professional development and career. In recent years mentoring schemes have been established in many European countries, supporting women at various academic levels. They have proven to be an effective career planning tool, especially when they are integrated into the organisation of the university and its human resources development strategy.

Based on this background, TANDEMplusIDEA was established at the technical universities RWTH Aachen, Imperial College London, TU Delft and ETH Zurich to support female scientists, especially taking into account the international dimension of scientific careers. For the first time, the project partners developed internationally comparable selection criteria for the participants of mentoring programmes, and on this basis identified and selected their target group. The mentoring programme was addressed to high qualified female post docs of natural science and engineering, and aimed at supporting individual scientists as well as at increasing the number of women in academic top positions. Furthermore, the project served to further develop the instrument of mentoring in its international dimension. The best

practice example of TANDEMplusIDEA was discussed in the international scientific community in publications and at conferences and in particular at the project's own final conference in October 2009.

2.2 Project objectives

The project TANDEMplusIDEA had three key objectives. The overall aim was to achieve more gender equality in science and engineering through a change of organisational and scientific cultures. The project worked towards increasing the number of female professors on European and international level through supporting individual high qualified female research staff in their career development. To this end, in the course of the project an international mentoring scheme was developed, implemented and scientifically evaluated.

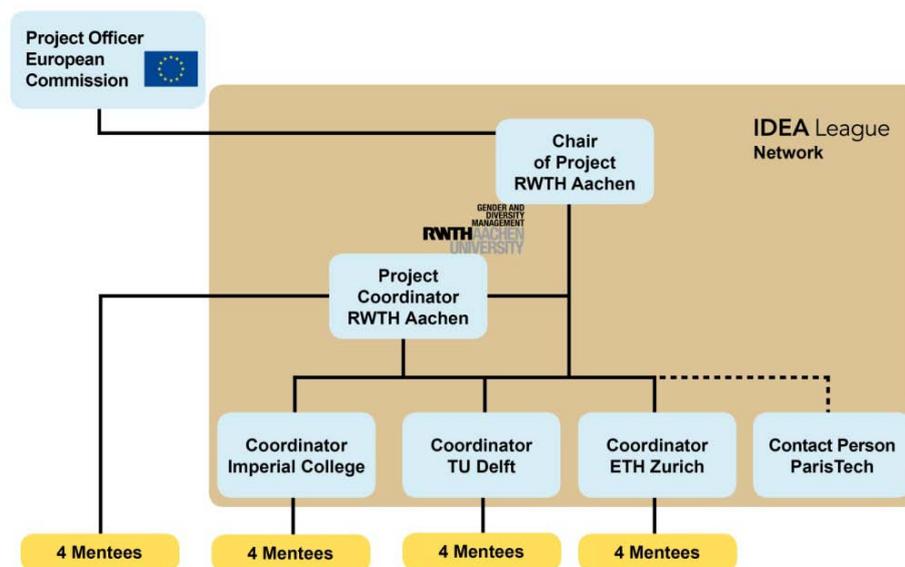
The project incorporated expert experiences and knowledge on gender politics from universities of four European countries and helped to benchmark policies and data at a European level. In particular, it compared for the first time the academic systems of the four partner countries and developed criteria for international mentoring programmes. Through their international cooperation, the project partners exchanged best practices and increased the knowledge of the European higher education area. The project results were incorporated into the development of the partner universities and used to develop a model of best practice for other European universities. The scientific evaluation of the project therefore also contributed to the discussion of the development of quality standards for the instrument of mentoring. That, in turn, enables the further development of international human resources and mentoring programmes in academia, as it was discussed at the final conference of the project, "Going Diverse: Innovative Answers to Future Challenges", in October 2009.

On the level of the mentoring programme, the project fostered international networking among female scientists and further collaborative working in Europe. While there are numerous mentoring programmes at universities TANDEMplusIDEA offered a very special opportunity through its international dimension. It prepared its participants for the demands of worldwide careers and provided the possibility for international exchange and networking among scientists. As networks are very important in each scientific career, this will hopefully contribute to encourage the TANDEMplusIDEA participants to stay in academia. Thereby the project also aimed at building a chain of reaction: If the number of female professors in science and engineering increases, following generations of female students will experience more female scientists as positive role models and ultimately, more potential female scientists will be attracted for a career in science. But more female professors will also facilitate the possibility to take the gender dimension and diverse perspectives into scientific research. Against a background of a foreseeable shortage of excellent staff in the future, the mentoring programme thus served as an important instrument of human resources development. It served the participating universities because of increased employee retention among the project's participants and potential scientific collaborations. In general, TANDEMplusIDEA contributed to an increased political awareness of gender equality among the mentees, mentors, their colleagues and senior university managers.

2.3 Project partners

The project consortium was composed of the partner universities of the IDEA League, a network of leading technical universities in Europe, consisting of Imperial College London, TU Delft, ETH Zurich, RWTH Aachen University and ParisTech¹. Responsible for the realisation of the project was the IDEA League's Working Group for Equality and Diversity; its members formed the project's steering committee and were the contact persons for all proceedings at the respective partner universities. The overall project had been conceptualised by Dr. Carmen Leicht-Scholten and was chaired by her. It was coordinated at the scientific department Integration Team – Human Resources, Gender and Diversity Management (IGaD) at RWTH Aachen University with two scientific assistants. While Elke Breuer realised the mentoring programme, evaluated it and presented the results, Nathalie Callies was in particular responsible for the public relations work of the project and for the organisation of the international conference. As the coordinator, RWTH Aachen University fulfilled an important interface function in the consortium.

An important success factor of the programme was the strong structural affiliation of the programme at all partner universities: All steering committee members were based in human resources or equality divisions and had the support and commitment of their university boards. At the coordinator RWTH Aachen University, for example, the project was part of a

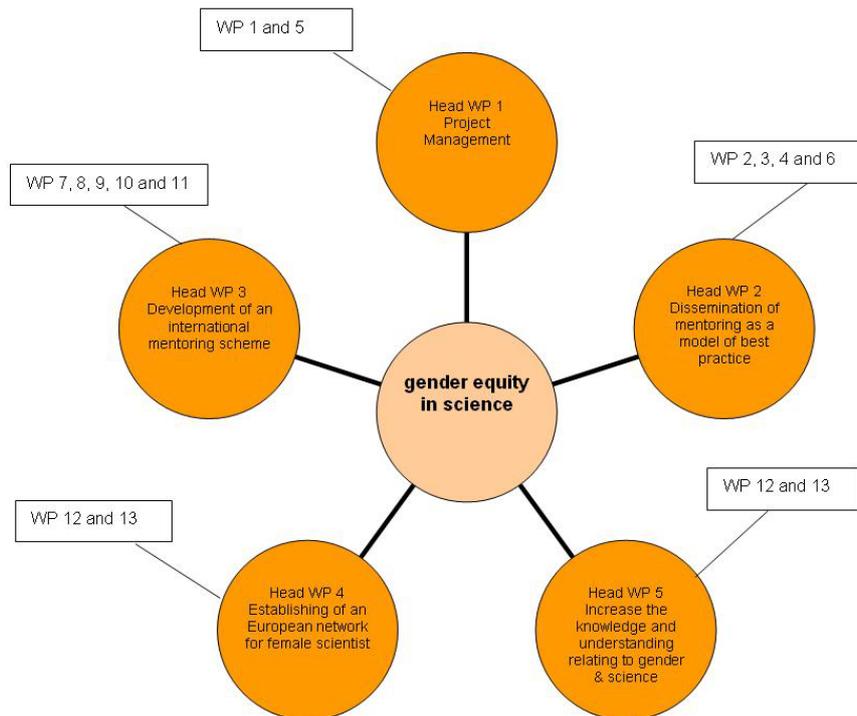


coherent strategy of gender- and diversity-oriented human resources development that sees mentoring programmes as a tool to attract and promote high potential female scientists on different career levels and is implemented by the scientific unit IGaD, which is directly based at the Rectorate. The applied cooperation structure with an overall project coordination and individual contact persons at the partner universities very much contributed to the successful realisation of the programme because that way the mentees could be attended to on an individual basis and events could be easily organised on-site. The expertise of the project partners also greatly contributed to the further development of the instrument of mentoring.

¹ ParisTech was an associated member in the project as the university joined the network after TANDEMplusIDEA had been conceptualised.

3 Work and achievements

TANDEMplusIDEA consisted of thirteen work packages altogether, gathered in five head work packages: 1) Project management; 2) Dissemination of mentoring as a model of best practice; 3) Development of an international mentoring scheme; 4) Establishment of a European network for female scientists and 5) Increase of the knowledge and understanding relating to gender and science. They all work together for the overall objective to achieve more gender equity in science (see below). More information on the individual project tasks are given in the following paragraphs.



3.1 Work package 1: Strategic Planning

The major task of this work package was the overall development, organisation and management of the project. This included the drafting and realising of the project and of the timetable, as well as the formulation of goals for the project and the individual project events, i.e. the seminars, networking events and the final conference. TANDEMplusIDEA aimed at supporting and enabling female scientists in natural sciences and engineering to apply for, and secure academic posts and promotions, thus ultimately leading to an increase in the number of female professors at European universities and beyond. At the four programme events these objectives were met through individual, target group-oriented offers for the participants, while the final conference presented the project results to an international audience.

Other tasks for the project coordinator were concept development, controlling and quality management. Based on their extensive experience with mentoring programmes (cf. e.g. Leicht-Scholten 2007), the coordinator RWTH Aachen University was responsible for the strategic planning of TANDEMplusIDEA and in particular monitored the concept's extension

to the international dimension. It was also the main contact to the European Commission and responsible for the management of the consortium. The project partners Imperial College London, TU Delft and ETH Zurich handled all tasks and events at their universities; they were in charge of the selection of their mentees, the organisation of their seminars and their finance management.

The project's steering group consisted of one contact person from each partner university, who were at the same time the representatives for the IDEA League's Equality and Diversity Group. Additionally from RWTH Aachen University the TANDEMplusIDEA team members participated in the meetings, prepared and post-processed all material. The steering group had nine meetings in the course of the project duration with an additional encounter at the final conference. Topics of these meetings were the conceptualisation of the project and its concrete realisation. For example, important issues were the comparison of the different career tracks in the four countries, the development of participation criteria and selection of mentees, the content of the seminars, and the quality monitoring of the project. Meetings took place alternately at the four partner universities, mainly at the occasion of other project meetings.

3.2 Work package 2: Development of a PR and Marketing Concept

In the beginning of the project this work package was important to create the project's corporate identity. The logo was in its colours and layout oriented at the IDEA League



design. It was used on all material throughout the project duration and modified according to its application area. Part of this relatively small work package was also the conception of a coherent concept to present and advertise the project to a broad audience. As an overall strategy it was planned that posters and

leaflets were produced at the very beginning of the project to make it known at the four partner universities and among potential mentors, and to invite applications from mentees. Another important tool was the edition and production of a mentoring brochure. It provided information on the project and the concept of mentoring and was distributed to all participants, but also to a very interested audience at external conferences. In the second and third project years the focus of the public relations work shifted more towards a presentation of the realisation of the mentoring scheme and the evaluation results. For this purpose, new posters and leaflets were necessary that reflected the current status of the project. Another main task of the third period was the preparation of public relations material for the final project conference "Going Diverse: Innovative Answers to Future Challenges".

In general, the development of a public relations and marketing concept was essential to be able to present the scheme, its progress and results, and to show it as a model of best practice of an international mentoring programme.

3.3 Work package 3: Website

Through the establishment of a website the scheme was presented to an international audience in science and society. It reached a wide target group independent from the traditional print media and served to inform programme participants, the interested public and journalists on the proceedings of the project. It was particularly important during the preparation of the final conference that attracted around international 170 participants and



many more interested parties. The website was planned and realised by the project coordination on the server of ETH Zurich in the framework of the IDEA League website. Under the URL <http://www.idealeague.org/tandemplus> the final version of the website had six major headings. While in the very first draft the focus had been more on the information of potential participants, which was for example reflected in a column named “Conditions of participation”, it later shifted towards a more general overview on the project and its different aspects.

Besides an insight in the EU project, this later version gave information on the mentoring programme TANDEMplusIDEA, its modules and events. The column “Network” informed on the participants of the programme until the evaluation results were published and names were deleted from the website for reasons of data protection. Nevertheless, it served to strengthen the networking idea of the project and informed not only on the TANDEMplusIDEA group, but also on the project’s cooperation with other national and international programmes. These cooperations provide an important contribution to the further development of the mentoring concept.

The website was completed by information on the press coverage of the project, contact information of all partners, and, since November 2008, extensive information on the conference “Going Diverse”. The URL <http://www.idealeague.org/tandemplus/conference> was easy enough to be distributed on all conference material, but also kept the link to the project obvious. The conference website gave information on all aspects of the event, from the main ideas and the call for papers to the programme, the conference venue and accommodation in Aachen. It also facilitated direct registration though an interactive link (http://www.idealeague.org/tandemplus/pdf_folder/RegistrationForm2009inclFee_de_en) that could be filled in and sent to the organisers online. Contact information and the conference email address conference2009@idealeague.org made direct interaction possible. Various links to external websites (e.g. to the German Federal Foreign Office for visa regulations) provided additional information.

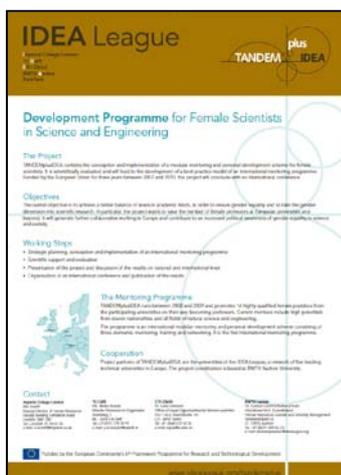


Throughout the project duration, the website was updated regularly, for example in the columns “News” and “Presentations and Publications” (under the heading “EU Project”), but also of course with regard to the proceeding of the project and the conference planning.

3.4 Work package 4: Public Relations/Marketing

Public relations and marketing work is essential for the success of the project, in order to inform participants and the scientific community on its progress, and to disseminate knowledge on the best practice model of an international mentoring programme. The publicity and marketing material was used to generate wider interest on national and European level, in the various scientific institutes and in industrial and research-based companies, thus presenting the scheme in science and society.

In the beginning of the project public relations mainly served to attract a wide pool of applicants from the four universities and to recruit female research staff that would benefit most from the project. Means for this were the posters mentioned before, flyers and the mentoring brochure. In the course of the project the objective of the work package moved towards generally enhancing knowledge on the project and its results among the four partner universities and in general among the national and international scientific communities working in the field of gender in science. This included the production of postcards for distribution at conferences, but also the revision of the poster and leaflets for which the target audience had changed: While in the first year they had contained information on application procedures and deadlines, at later stages of the project they were shown and distributed at conferences to present the realisation and evaluation of the programme.



The general project poster, produced in the middle of 2008, provided information on the project and its objectives, listed the working steps and explained the international mentoring programme that was conducted in the course of the project. It also gave information on the funding, contact details and the website address for further information. Another poster was produced in spring 2009 to be presented at the conference “Managing Gender and Diversity – Engendering Reflexivity and Change?” in St. Gallen that discussed the mentoring programme TANDEMplusIDEA as an instrument to support European careers and change scientific cultures.

The PR material, also including note paper and business cards, was used and distributed at conferences throughout the project duration. In the third period another main aspect was the preparation of the final conference to disseminate knowledge on the event and to attract speakers and guests. A logo was designed that was oriented at the TANDEMplusIDEA design and used on all material. Among the material were an advertising poster with the key facts of the conference that was displayed at all partner universities and a leaflet with the conference programme with an accompanying reply card. Folders, note pads, bags and key-holder name tags were produced with the conference logo and strengthened its brand awareness. The book of abstracts, that collected all conference contributions and featured a final article on the mentoring programme TANDEMplusIDEA, was another means to present the project and its results.



Besides this graphical representation of the project, public relations included the writing of press releases and media work. Coverage was particularly high at the time of the project events (February 2008, June 2008, September 2008 and March 2009), at the publication of the call for papers (December 2009) and around the time of the conference (September – November 2009). During the years 2009 and 2010 various articles appeared in national and international magazines, in conference proceedings, on websites and in newsletters, distributing information on the project's results. The project coordination is a member in various mentoring and gender networks, including German "Forum Mentoring", "Netzwerk Mentoring NRW" and "Netzwerk Frauenforschung", and Europe-wide "eument.net". Cooperation partners from these networks also participated in the conference "Going Diverse" and contributed valuable exchange to the further development of mentoring.

3.5 Work package 5: Process Evaluation and Scientific Support

Number 5 was a central work package to guarantee the project's successful realisation and the achievement of its aim to develop a model of best practice for an international mentoring programme. It supplied information about the extent to which the project proved to be a valuable instrument for creating equal opportunities in science, and used the results as a practical example of gender-oriented human resources development for high qualified female scientists. In the evaluation, the international dimension of the project was a particular focus. The evaluation was based on Carmen Leicht-Scholten's prior work experience and research on the effectiveness of mentoring (cf. Leicht-Scholten 2008) and mainly involved three elements:

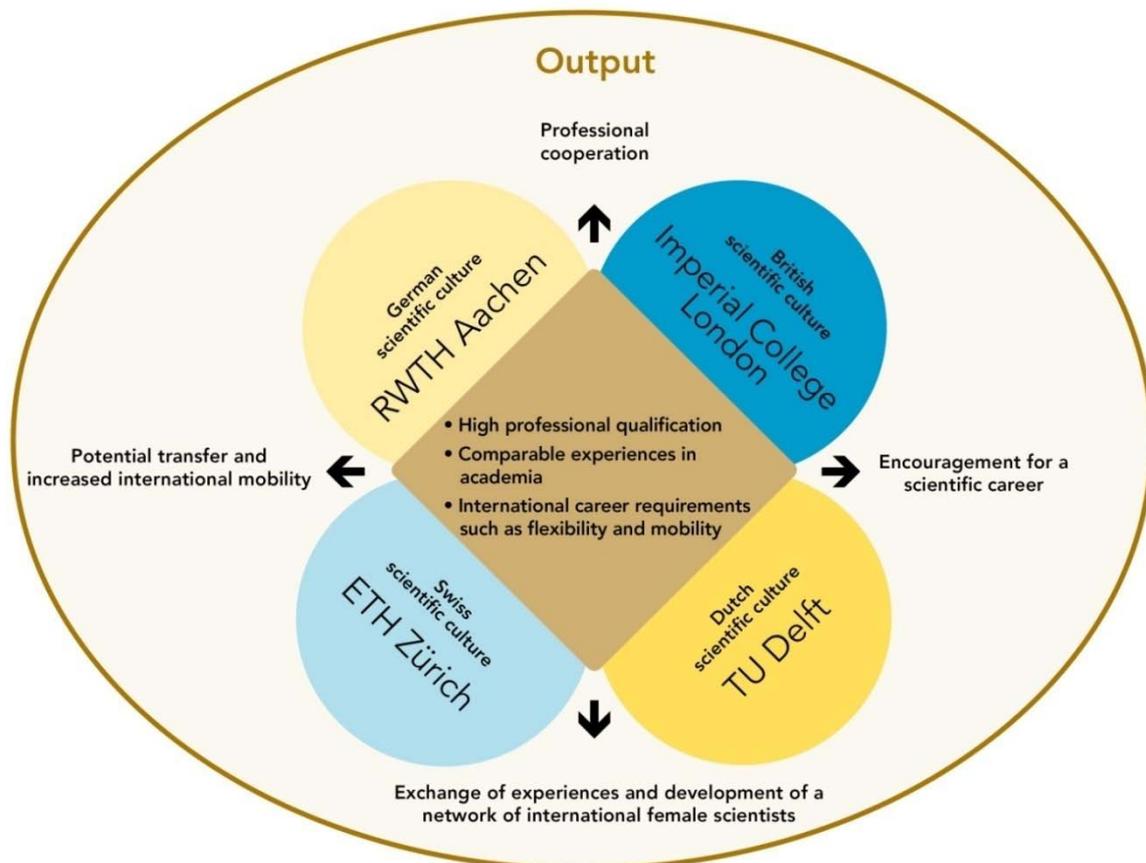
- The analysis of the mentees' feedback on each training and networking module that was used for the adaptation of the programme custom-fit to the participants' needs.
- The theoretical discussion and contextualisation of the programme.
- The evaluation of the overall programme based on three written questionnaires, filled in by the mentees at the beginning, in the middle and after the end of the programme.

The evaluation of the programme events involved feedback on the content, structure, atmosphere and organisational aspects of the course, as well as an assessment of the trainer(s). In general, the feedback of all four events was very positive, and individual comments always stressed the appreciation of the mentees for the programme. Only the Networking Event in London was considered a bit weaker than the other events. The mentees mainly criticised that with two days it was too short, and that they regretted the speakers had not been available for individual discussions. These suggestions were taken up by the project coordination for the second Networking Event in Zurich. It was not only extended to three days, but it was also made sure that speakers and other guests were present during the networking dinner in the evening.

The second aspect, the contextualisation of the programme in the framework of literature on gender and science, was an important step in the evaluation process. The theoretical occupation with aspects of mentoring and human resources development in academia served as a preparation of the own programme analysis. It was also a basis for the different

presentations of TANDEMplusIDEA on national and international conferences that were held in the last project year. For the “1st European Conference on Gender and Diversity in Engineering and Science” in September 2009, for example, the project organisation elaborated five key criteria for mentoring programmes referring to their structural affiliation, introduction, implementation, evaluation and the benefits for the participants. In the following, they proved the accordance of TANDEMplusIDEA with these factors (Breuer / Leicht-Scholten 2009a): TANDEMplusIDEA was based on a strong institutional structure, as all coordinators held influential positions in HR and/or gender mainstreaming, and because the programme had the support and commitment of the top executives of all four partner universities. Also the applied management structure was very efficient. The programme was very well introduced by personal conversations and written information material, although the mentoring module could have been made even clearer. In the implementation phase, the programme events were successfully conducted and evaluated positively. An important asset was here the international dimension of the programme. The evaluation and quality management was guaranteed and showed, lastly, the profit and satisfaction of the participants.

At another conference at the University St. Gallen in May 2009 the coordinators presented the project to an audience of diversity experts and presented the project from a systemic point of view. For this session, they developed a poster that graphically showed the interrelation of the four scientific cultures involved in TANDEMplusIDEA (Breuer / Leicht-Scholten 2009b):



The third aspect, the evaluation of the overall programme, was conducted by three standardised questionnaires that were completed by the mentees in the course of the project. The first questionnaire was distributed before the start of the project and collected around the time of the Winter School in February 2008. It asked for the motivation of the participants, their expectations towards the mentoring process and the programme in general, as well as their personal commitment. The second questionnaire was due by the end of October 2008. It traced the development of the mentees, their current personal and professional situation, and their intermediate satisfaction with the programme and the modules mentoring, training and networking. The third and final questionnaire was handed out in June 2009. Three months after the end of the programme the mentees were asked to reflect on their experiences and answer questions on their overall satisfaction with the programme. After all questionnaires had been received back, the evaluation was completed in August/September 2009 by the project coordinator with the support of a student assistant. The results gave an insight into the success of this mentoring cycle, made suggestions for further improvements of the programme in the future and were the basis for the development of a best practice model for international mentoring. The evaluation focused on the following aspects:

- Sociodemographic data (e.g. scientific field, age, children...)
- Professional situation (current position, status)
- Expectations of the mentees towards the programme
- Satisfaction and profit of the mentees (e.g. nature of the mentoring relationship, satisfaction with own performance in this process and with the three programme modules, and the influence of the programme on personal and professional developments)
- Feedback on the project coordination
- Further suggestions

As the involvement in the evaluation had been a prerequisite for the participation in the programme, the return rate of the questionnaires was 100%. All data was evaluated with the statistics programme SPSS. The results were presented at the final conference of TANDEMplusIDEA in October 2009 and in a shorter version published in the book of abstracts (Breuer / Leicht-Scholten 2009c). A revised version will also appear in the anthology "Going Diverse: Innovative Answers to Future Challenges. Gender and Diversity Perspectives in Science, Technology and Business" (Breuer / Leicht-Scholten 2010). These articles give an overview on the results of the evaluation and complement them with chapters on the general background of the topic, a description of the programme and a conclusion.

Among the key results were the following points: It was very interesting to see that despite the international and diverse composition of the group the mentees had very much in common, facing similar situations and problems in academia. This indicates that female experiences in science are mainly based on structural determinants, rather than on individual perceptions. These common grounds facilitated a good and beneficial exchange within the group. The peer mentoring was a strong success factor of the programme, as the participants reported that it had been a great support for them to exchange with other female scientists in similar situations – often for the first time. Their appreciation of this element was

often repeated in the course of the programme. Another striking observation was the increase of the rate of mothers during the course of the programme: The number of children more than doubled to seven in total, but none of the mothers left academia; all started working again after a short period of maternity leave. These numbers were seen by the project coordination as a sign that the combination of work and family life is possible – if the circumstances (like day-care facilities and a shared responsibility with the partner) support it. Also in this regard the participants benefited from their exchange of experiences and mutual support. In the course of the programme, a majority of mentees underwent a change in their professional situation; several also received important grants and awards. Inquired in how far the programme had contributed to that development, they mentioned for example networking effects that had resulted in invitations to give a seminar and in collaborations with an external university, as well as invitations and encouragement by mentors to present papers at conferences or to publish internationally. These results show that the programme had indeed concrete effects on the career planning and development of the mentees.

With regard to the mentees' profit from the programme, the evaluation explicitly asked for their satisfaction with the three modules mentoring, training and networking, the overall programme and its coordination. All mentees – 100% - were either satisfied or even very satisfied with the programme in general. They reported they had profited most from a "strengthening of personal and strategic skills", a "support of career planning", "motivation for professional advancement" and the "insights into the different scientific cultures". Through the seminars, they felt especially supported in their self-confidence, career planning and conflict management skills. In the networking module, they particularly appreciated the insights into scientific cultures and the exchange of information and experiences. Also in informal conversations the mentees had always stressed their huge benefit from the networking effects of the programme and peer-mentoring within the group of mentees. Finally, in the mentoring relationship, the mentees mainly valued the development of strategies together with their mentor and the individual career advice they received. Their overall satisfaction with the module was also reflected in the fact that almost all mentees were still in touch with their mentor after the programme had ended. When comparing the satisfaction of participants from the different universities, there were no significant statistical differences.² In general, it is normal that not all participants profit the same from all three modules. As Carmen Leicht-Scholten (2008) points out in her comparative study on mentoring programmes with disciplinary focus, those mentees who are not as satisfied with one of the instruments take much more advantage of one or the two others.

The evaluation also identified other important results. One was the particular appreciation of the international dimension of TANDEMplusIDEA. It was mentioned very often throughout the programme. Furthermore, the project coordination was happy to see the effects on the career planning and development of the participants and starting scientific collaborations. Hence, a strong network of female scientists has been created that will continue on its own in

² It also has to be kept in mind that the evaluation focuses on 16 interviewees only. Findings can therefore only refer to the project and observe general tendencies, but are not representative for the mentees' universities, faculties, or age groups as a whole.

the future. A sign for that is the establishment of an internal weblog to facilitate future exchange among the participants, and the idea to submit a joint project proposal.³ These successes of the programme indicate that through TANDEMplusIDEA individual women have been encouraged for an international academic career and a leadership position in natural science and engineering. They also promise long-term effects on organisational and scientific cultures in the participating universities. The institutions will profit from more gender diversity in their staff and correspondingly new research perspectives, but also from increased employee retention and potentially more scientific collaborations. As the third party involved, also the mentors profited from the programme through insights into the work of young colleagues, the enlargement of their own networks and a strengthening of their advisory skills. The main benefits can be summed up as follows:

Benefits for the mentees:

- Particular appreciation of the international dimension of the programme
- Concrete effects on career planning and development
- Establishment of a network of female scientists and professional collaborations
- Encouragement for a career in science

... for the mentors:

- Insights into work of young colleagues and enlargement of own networks

... for the universities:

- Increased employee retention and potential collaborations
- Long-term effects on organisational and scientific cultures

In the evaluation the mentees were also asked for recommendations for future international mentoring programmes. They mentioned three key issues:

- More information would have been appreciated on the role and function of the mentor *before* the programme started.
- With regard to the trainings and networking events, there should be enough time for the reflection of the current problems of the group members, less theoretical input and more case studies.
- The two-day event in London was too short considering the effort needed for travel.

Finally, the mentees were asked for their estimation what they thought made the success of the programme. Some exemplary answers were:

- “The combination of mentoring, trainings and networking. The networking in the female group with the same ‘education standard’ and comparable aims.”
- “The TANDEMplusIDEA programme embraces several different life aspects. It puts a stress on the work-life-balance which is not done in many other training programmes.

³ It is also a particular pleasure for the coordinators to see that the mentees are on their own initiative planning to present the project at an international symposium and in a renowned journal.

Moreover, from my point of view the international networking and trainings increase the value of the programme a lot.”

- “First of all the relationship between [the] girls within the group was great. (...) Second, the programme was very well organised and tailored to the mentees’ needs (mentoring, training and networking parts). During the whole programme there was a very pleasant atmosphere and all people involved in the programme were very nice.”
- “The people! We had a great group of female researchers & were a very open and supportive group which worked well together. Also the great organisation!”

The evaluation was thus a very good tool to scientifically monitor the project. More information on the use of the results for the further development of the mentoring concept is given in the conclusion below.

3.6 Work package 6: Presentation and Discussion of the Scheme and the Results at Conferences on National and International Level

The scheme and its results were presented on conferences on national and international level to make women scientists in academic fields visible, to disseminate best practices in supporting women in scientific careers and spread knowledge on the programme TANDEMplusIDEA. The discussion of the scheme and the evaluation results with experts in the scientific fields enlarged the research area concerning mentoring schemes in general. The dissemination of learning points gained during and after the project to other institutions within the four participating and other European and non-European countries, allowed demonstrating mentoring – especially TANDEMplusIDEA – as a model of best practice, and consequently fostered mentoring as a means of human resources development to promote gender equity in science.

During the project duration, TANDEMplusIDEA was presented at various occasions. While in the first year the topic had been a general introduction into the project and the mentoring scheme, in the second year talks centred more on aspects of the realisation and implementation of the programme, while in the third year the evaluation results were presented extensively. During this period, the conference organisation spoke at so varied events like the symposium “Managing Gender and Diversity – Engendering Reflexivity and Change” at the University of St. Gallen (May 2009), the “7th European Feminist Research Conference” in Utrecht (June 2009), the “6th European Conference on Gender Equality in Higher Education” in Stockholm (August 2009) and the “1st European Conference on Gender and Diversity in Engineering and Science” in Düsseldorf (September 2009). These presentations focused on different aspects of the evaluation results of TANDEMplusIDEA and their implications for human resources and organisational development. In the previous periods the project had already been presented for example at the 5th European Conference on Gender Equality in Higher Education (August 2007) and at the Women’s Worlds Conference in Madrid (July 2008), where the project was presented in a session on “Perspectives on technology and the construction of gender”.

At other events, Carmen Leicht-Scholten and Elke Breuer gave presentations that did not deal with TANDEMplusIDEA exclusively, but rather presented the project in the bigger picture of organisational and personnel development, e.g. at a mentoring workshop at the Karlsruhe Institute of Technology (KIT) in the context of gender-fair human resources development (April 2008) and at the conference “Women in Academia – Barriers and Good Practice” in Aarhus (May 2009). Carmen Leicht-Scholten was also invited to speak at the EU conference “Changing Research Landscapes to make the most of human potential. 10 years of activities in ‘Women in Science’, and BEYOND” in Prague in May 2009. Besides these presentations, the coordinator and her staff were involved in conferences as an expert and/or moderator and as such indirectly distributed information on the project, for instance at the workshop “Excellent Cooperation of Science and Economy for Female Junior Executives“, that was organised by the competence centre “Technik-Diversity-Chancengleichheit e.V, Bielefeld” (December 2008), and at the workshop “Supporting women's inroads into scientific organisations – Promoting change through experimentation: Mentoring as a tool to overcome obstacles for women in scientific careers” at the University of Aarhus (February 2010). Additionally, the coordinator and her staff attended several conferences where the project was not presented explicitly, but where it was nevertheless the topic of informal conversations and networking. Such exchange also took place in the various networks in which the project coordination participated. The cooperation in eument.net, Ada-Lovelace Mentoring e.V. (where Carmen Leicht-Scholten served on the Board of Directors until 2008), Forum Mentoring e.V. and Netzwerk Mentoring e.V. disseminated knowledge on the existence of the first international mentoring programme (e.g. at the “International Workshop on Mentor Training and Coaching”, organised by eument-net in February 2010). At the same time, it also contributed to the further development of the HR-instrument mentoring in general. As a member of EU’s working group “Women in Science & Technology” (WiST 2), Carmen Leicht-Scholten also represented the project on the European level and discussed with other international experts on gender and science.

Lastly, the presentation of the project results was a major objective of the final conference “Going Diverse”. Referring back to the context of gender-oriented human resources development and the peculiarity of its European cooperation, TANDEMplusIDEA was shown as a best practice model for international mentoring in a key note lecture, the book of abstracts and the subsequent publication (cf. Leicht-Scholten / Breuer / Callies / Wolfram 2010).

3.7 Work package 7: Conception of the Trainings

The objective of the work package was to realise trainings for the mentees according to their aim becoming professors. It was due in the very beginning of the project. Conceptual deliberations were based on the coordinator’s previous experience with the realisation and evaluation of mentoring programmes and discussed at different meetings of the TANDEMplusIDEA steering group in 2007 and the beginning of 2008. The project partners planned a one-day-kick-off event at the beginning of the programme, plus a Summer and a Winter School of three days each. As also the Networking Events included training elements,

the module overall summed up to eight days of seminars. It was agreed that each programme event should take place at a different partner institution; the seminars in Aachen and Delft and the Networking Events in London and Zurich. For this decision the partners had compared prices and different training offers. There was also agreement that the seminar should be led by professional trainers, and if possible, from different origins.

| | |
|---|--|
| <p><u>Winter School in Aachen</u> (20 - 22 February 2008)</p> <p>Welcome and introduction, career planning</p> <p>Welcome speech by Prof. Dr. Burkhard Rauhut, Rector of RWTH Aachen</p>  | <p><u>Summer School in Delft</u> (10 - 12 September 2008)</p> <p>Developing leadership skills</p> <p>Welcome speech by D.J. van den Berg, President of the Executive Board, TU Delft</p>  |
| <p><u>First Networking Event in London</u> (05 - 06 June 2008)</p> <p>Invited speakers on the topic "My Personal Journey" (panel of research staff with varied experience)</p> <p><i>Additional training:</i> Intercultural communication</p> <p>Welcome speech by Prof. Mary Ritter, Pro-Rector International and Postgraduate Affairs, Imperial College London</p>  | <p><u>Second Networking Event in Zürich</u> (11 - 13 March 2009)</p> <p>Invited Speakers for a World Café with different topics (External Funding, Leadership, International Careers, Dual Career Couples, Mentoring)</p> <p><i>Additional training:</i> Negotiations skills and conflict management</p> <p>Welcome speech by Prof. Dr. Heidi Wunderli-Allenspach, Rector of ETH Zürich</p>  |

Each project partner was responsible for the realisation of the event at her university, with the assistance of the project coordination at RWTH Aachen University. The timetable of the trainings was discussed and finally agreed upon in the beginning of 2008.

The topics for the trainings were oriented at existing experiences with the organisation of mentoring programmes on a national basis, and adapted to the needs of this international group. The first event, the Winter School, provided an introduction into the programme in general and into the mentoring aspect in particular. Its other focus was career planning for female scientists that enabled the mentees to a first determination of their current situation, their strengths, strategies and goals for the future. Another aspect was work-life-balance. In the evaluation of this as well as of all other programme events the participants were asked for suggestions for further topics. It turned out that among the issues they considered as important for international careers were leadership, conflict management and negotiation skills. These ideas were taken up at the Summer School in Delft and at the training sessions that accompanied the TANDEMplusIDEA Networking Events in London and Zurich.

3.8 Work package 8: Networking

The objective of this work package was the development of a network of excellent female scientists who participated in the mentoring programme TANDEMplusIDEA, and an enlargement of their individual professional networks. This aim is pursued through the overall coordination of the programme and the support of its participants, and in particular through the organisation of Networking Events at the participating universities. They were realised in addition to the trainings in the time between the Summer and Winter School, in order to facilitate the exchange of information between the mentees. Through the diverse composition of the group they offered networking among scientists from different disciplines, but also with scientists from related fields. In the course of TANDEMplusIDEA this group composition facilitated interesting contacts and potential scientific collaborations. By the invitation of prominent speakers who gave input for discussion, the events also provided new insights into scientific career planning and enabled new contacts on national and international level. Also all mentors were invited to both Networking Events, and it was a pleasure to welcome two of them at each meeting. However, experience with other mentoring programmes has shown that it is very usual that most mentors are not able to attend such meetings, due to other obligations and a busy time schedule. The Networking Events therefore focused more on the group of mentees, while the individual exchange with a personal mentor provided an extra opportunity for networking in a different context.



The first Networking Event of TANDEMplusIDEA was held at Imperial College London on 5-6 June 2008. The responsible coordinator for this event was the British project partner who was supported by all project partners in the conceptualisation of the event and in particular assisted by the project coordination at RWTH Aachen in general organisational aspects. Under the headline “My personal journey”, the Networking Event focused on male and female career paths and individual experiences. After lunch and welcoming words by Prof. Mary Ritter, Pro-Rector International and Postgraduate Affairs at Imperial College London, Prof Andrea E. Abele-Brehm, Chair of Social Psychology at the University Erlangen-



Nurnberg, gave an introductory lecture into the subject. Her presentation was complemented by personal statements of around ten minutes by the four experts Prof. Dr. Maria Belvisi (Imperial College London), Prof. Dr. Monica Gotta (University of Geneva), Prof. Dr. Lina Sarro (TU Delft) and Prof. Dr. Richard Templer, (Imperial College London). They gave short introductions to

themselves and their career paths. Their diverse experiences reflected the multiple ways careers in academia can take. The following discussion was moderated by Kim Everitt and provided the opportunity to ask questions and reflect individual decisions. The day closed with a Networking Dinner. On the second day, the mentees participated in a seminar on intercultural communication. It was held by Alexia Petersen, an experienced trainer and renowned expert in that field. She explained the theory and practice of intercultural communication, and the mentees worked on individual case studies. In general, the event

was evaluated very positively, but some mentees remarked that a two-day-event was too short.

This suggestion was taken up for the second Networking Event at ETH Zurich on 11-13 March 2009. Again, it was conceptualised with suggestions and ideas from all partners and especially supported by the project coordination at RWTH Aachen; but the main responsibility lay with the host of the event. After welcoming words by the rector of ETH Zurich, Prof. Dr. Heidi Wunderli-Allenspach, the moderator Prof. Dr. Christine Färber introduced the experts for the afternoon, during which a World Café was organised in order to enable personal information and conversations on various topics:



- Prof. Dr. Ralph Müller, Associate Professor, Director of the Institute for Biomechanics at ETH Zürich (topic: external funding)
- Prof. Dr. Julia Vorholt, Associate Professor at the Institute of Microbiology, ETH Zürich (topic: leadership)
- Prof. Dr. Viola Vogel, Full professor, Head of the Laboratory for Biologically Oriented Materials, ETH Zürich (topic: international careers)
- Prof. Marloes Maathuis PhD, Assistant Professor of Applied Mathematics, ETH Zurich (topic: dual career couples)
- Dr. Carmen Leicht-Scholten, Head of Integration Team - Human Resources, Gender and Diversity Management (IGaD), RWTH Aachen and chair of project TANDEMplusIDEA (topic: mentoring)



For 2½ hours the participants then had the opportunity for individual questions and answers with the experts. It was very much appreciated by the mentees, who especially remarked the openness and supportiveness of the speakers. The day closed with a Networking Dinner at ETH Zurich, for which additional guests were invited. On the following two days the mentees participated in a seminar on the topics negotiation skills and conflict

management, led by Prof. Dr. Christine Färber. She provided techniques, examples, and case studies, and in particular referred to conflict situations in science. The evaluation of the seminar was – as the evaluation of the overall Networking Event – extremely positive.

In review, the topics of the two Networking Events have implemented the concept of the mentoring programme TANDEMplusIDEA and reflected the particular wishes of the mentees. By discussing individual careers paths, intercultural communication, external funding, leadership, international careers, dual career couples, mentoring, negotiation skills and conflict management, they have addressed various issues that are important for (international) careers and therefore useful for the mentees. The Networking Events were also successful in establishing a network of female scientists. Through regular meetings and constant exchange the mentees have formed a “group of friends” (one mentee) and a professional network that they are planning to keep up.

3.9 Work package 9: Selection of the Mentees

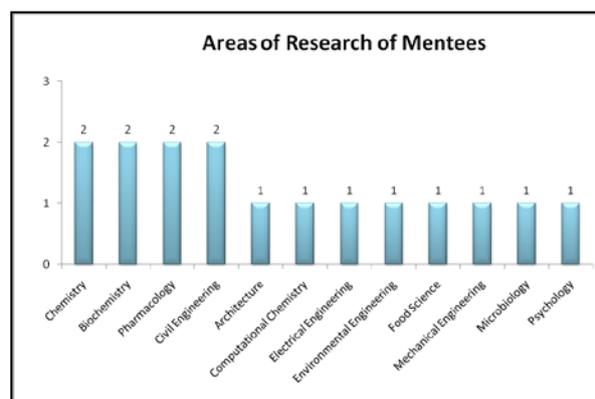
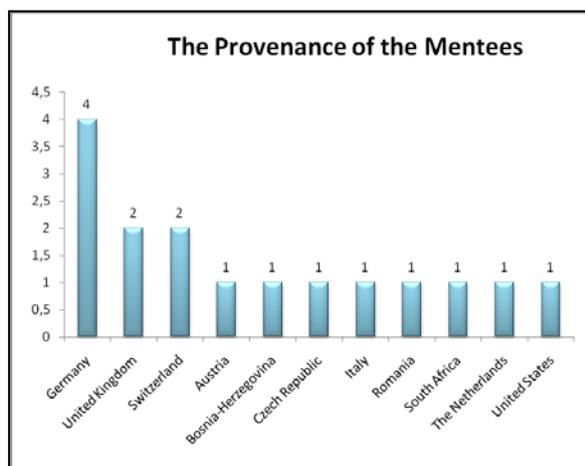
The main task of this workpackage was the development and implementation of a fair, transparent and comparable selection process that would lead to the selection of those 16 female postdocs that would benefit most from the participation in TANDEMplusIDEA. Several steps were implemented by the partner universities:

- Agreement on selection criteria, including a compilation of an interview guideline
- Assembling of a selection committee
- Written application by the mentee
- Screening of the applications according to an agreed pattern
- Interviews with the most promising applicants, with a standard set of questions
- Decision of the committee and announcement of the selection

The international mentoring scheme TANDEMplusIDEA was addressed to excellent female scientists. For the definition of the target group it was first of all necessary to define the career steps between PhD and full professor position at the four participating universities Imperial College London, TU Delft, ETH Zurich and RWTH Aachen, and to make them comparable for the first time. This comparison was not only important for the implementation of TANDEMplusIDEA, but also for the development of quality standards and future mentoring programmes in an international context. The selection criteria were discussed in the steering committee in the beginning of the project and determined as follows: Addressees of TANDEMplusIDEA should have completed their PhD at least a year ago and should be pursuing an academic career. Required was proven experience in research and teaching as well as leadership and management skills, and further qualifications like e.g. analytical, communicative and social competences. The application procedure was two-fold, with the first step containing a written letter of motivation, a curriculum vitae and a short description of the mentee's current research projects. For the second step each partner brought together a selection committee, consisting of consisting of the national project coordinator and two experts, including a professor of natural science or engineering. Members of the selection committees were for example Prof. Dr. Heike Emmerich, Professor of Materials Science (RWTH Aachen), Prof. Martin Loessner, Professor of Food Microbiology (ETH Zurich), Prof. Julia Buckingham, Pro-Rector for Education (Imperial College London) and Prof. dr. ir. P.M. Sarro, Head of the Electronic Components, Technology and Materials Laboratory (TU Delft).

Following the advertisement of the project at the four partner universities in September and October 2009, the project partners received applications from interested scientists and prepared profiles of each applicant for better comparability. Based on that profile and on the letters of motivation, the selection committee at each university then made a first choice of the applications and invited the most interesting candidates to an interview. These were based on a guideline developed by RWTH Aachen University that included aspects like the presentation of the candidate, her motivation for the programme and her determination to pursue a career in science. The latter was a very important aspect for the decision as the profit a mentee has from her participation in a mentoring programme very much depends on her ability to clearly define her own aims and wishes. In a second part of the 30 minutes conversation, the mentees were informed about the project. A final decision on the

applications was made by the national coordinators in cooperation with her selection committee and all project partners. The mentees finally chosen came from a wide range of science and engineering subjects and (originally) from eleven different countries. At the same time, the group was homogenous with regard to age, experiences and expectations which later proved to be an important success factor for the mentoring scheme.

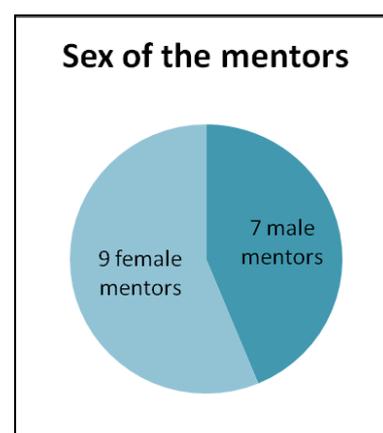
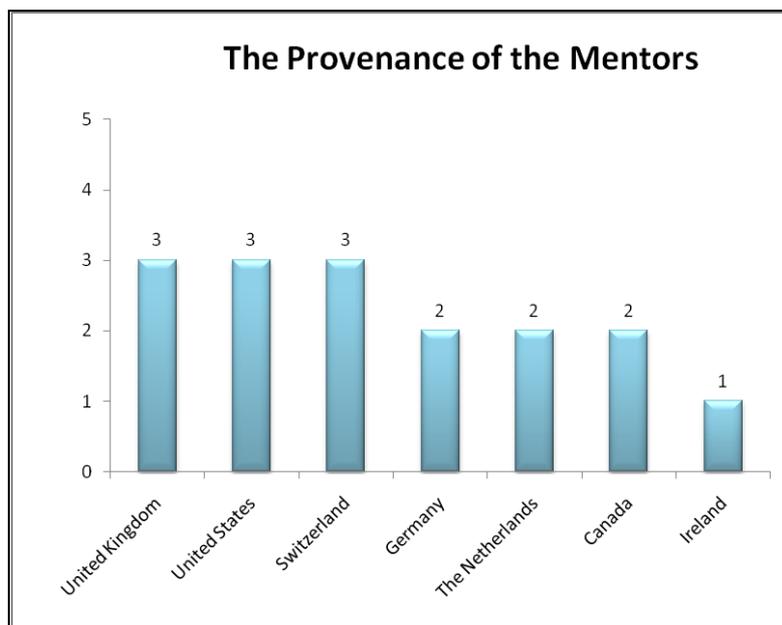


3.10 Work package 10: Selection of the Mentors and Matching Mentees/ Mentors

The objective of the mentoring element in the programme was that a young scientist is supported in her career and in her personnel development by an experienced mentor, who provides advice and insider knowledge of the scientific community. To be able to successfully do this, it is important that the mentor is really interested in the mentee and well informed about and convinced of the concept mentoring. At the same time, also the mentor profits from the relationship through an insight into recent developments and an enlargement of his or her own network. The mentor for each mentee was therefore carefully selected, in order to provide the best possible profit for both.

Based on the studies on mentoring and women in science (e.g. Allmendinger et al. 2000), as well as on own experiences and the concept of mentoring developed at RWTH Aachen University, the project's steering group decided on two different strategies of mentoring. In the one-to-one-relationship with a more experienced mentor the mentees should be supported in an exclusive relationship and on a personal level, while in the group of mentees an additional peer mentoring took place through the exchange of experiences among scientists in comparable situations. In the first project period the steering group decided on certain criteria for the selection of the one-to-one mentors. They should usually be professors and not come from the mentee's own department as each mentoring relationship should be non-hierarchical, voluntary, transparent, and based on confidence. Mentoring is successful when the mentor can provide feedback and advice from an external point of view. In some cases, however, it can also make sense that he or she comes from a different department at the same institution as the mentee; namely in such cases where an insight into internal rules and politics is desired. Mentors could be both male and female as their selection depended

very much on the particular needs and wishes of the mentees. Accordingly, in the beginning of the project the mentees were asked to provide two names of potential mentors and give reasons for their choice. This way it was made sure that they cooperated with a mentor really suitable for their needs, and that they were actively involved in the project from the start. The selection of the mentors at the four partner universities took place between January and April 2008. On the basis of the written explanations, each coordinator addressed the mentors for “her” mentees either by phone or by mail, with the support by the other project coordinators where necessary. Most mentors answered very promptly and positively. Those interested in the programme then received a copy of the mentee’s application, in order to make sure they are convinced of her excellence. They could then decide for or against a mentoring relationship. At that stage, none of them declined. In the first half of 2008, all sixteen mentees were matched to their mentors. Seven of them were male, nine female, and the evaluation results showed that the sex of the mentors was no criteria for the success of the mentoring relationship. Almost all mentors were internationally renowned professors. In two cases exceptions were made with regard to their status because of the mentee’s special wish. The mentors again represented the international range of the project.



After the mentor’s approval had been gained, the mentee was informed and addressed her mentor to kick off the cooperation. At the same time, the mentors received a welcome letter by the project coordination, together with the information brochure. As mentioned above, this package included information on the project in general, on the instrument of mentoring and also practical material. In the “guidelines for mentors” they were informed about premises for successful mentoring (like forthrightness, maintaining confidences and confidentiality, reliability and regularity) and the tasks of the mentors (guidance and knowledge transfer, passing on strategies, support, networking). Requirements towards the mentors include personal capabilities such as

- Communication skills,
- Empathy and interest in others, in particular in the situation of young scientists,
- A strong position in the scientific community,

- Analytical skills to recognise the mentee's competences and problems,
- Self-reflection.

They should be ready to professionally support the mentee through advice, help and encouragement on personal and professional topics; an insight into one's own situation and development; the sharing of knowledge, without manipulating the mentee towards own attitudes, and through an introduction of the mentee into his or her own networks.

Equipped with these guidelines, the mentees and mentors started into their individual one-to-one mentoring relationship that was arranged according to their own needs and wishes. Although it was desired by the project coordination that at least the first meeting should be on a personal basis, both partners were free to choose the frequency and content of their contact. The coordinators accompanied the mentoring tandems with support and information and invited the mentors to the Networking Events, thus enlarging the network of TANDEMplusIDEA. At the end of the project duration the mentors were awarded with a certificate that made their commitment for the programme visible, and that expressed the appreciation of the project coordination. As could be seen from the evaluation of the project, most mentoring relationships were successful, and are lasting even beyond the programme.

3.11 Work package 11: Summer/Winter School

The work package for the organisation of the training module was a very important element of the project. In the Summer and Winter School two training sessions were realised that supported the female scientists in their career planning and development. The seminars had been conceptualised in cooperation of all partners and with the particular support by the project coordination. Responsible for the on-site organisation was the hosting project partner. As the project coordination was based at RWTH Aachen University, the programme started there with an official kick-off event and the subsequent Winter School on 20-22 February 2008. The main topic of the seminar was career planning, with an additional introduction into the programme and especially into the mentoring module. Further topics were:

- Individual career goals
- Profiling for an academic career, becoming aware of individual strengths
- Timed perspectives for the mentee's next career steps
- Work-Life-Balance in a scientific career
- Introduction into the programme and into the mentoring guidelines

The school started on Wednesday with lunch and an informal get-together, before the mentees were welcomed by Dr. Carmen Leicht-Scholten, the chair of the project, and the Rector of RWTH Aachen, Prof. Dr. Burkhard Rauhut who also presented the mentees with the mentoring brochure. There were training sessions between Wednesday afternoon and Friday midday, leaving enough time for networking and exchanging experiences. Following the comparison of proposals from different trainers by the coordinators, the training was led by Prof. Dr.



Christine Färber who had extensive experience in the organisation and teaching of courses for women scientists with a focus on career planning and self management. Seminar material, i.e. work sheets on career planning, the mentoring relationship and work-life-



balance, were provided by the trainer and designed in the TANDEMplusIDEA-layout by RWTH Aachen. Other tasks of the coordination included the invitation of the mentees, press work, reserving rooms, catering and accommodation. While project partners slept in a hotel in Aachen city, all mentees (except the four women from Aachen) were accommodated in RWTH Aachen's Guest

House where the training took place. That way, a close contact and peer mentoring between the mentees became possible. Another way to foster the networking and introduce all project members to each other were joint meals with all coordinators, mentees and the trainer, and a wine tasting as a cultural framework programme at the evening of the first training day.

The seminar was evaluated very positively by the mentees. They were especially satisfied with the structure and atmosphere of the seminar. In individual statements, many of them also expressed – and repeated it very often during the course of the project – how pleased they had been to meet so many interesting women in similar situations, and how much they appreciated the time to exchange experiences and network. The mentees were also asked for suggestions for future topics which were already included in the planning of the next TANDEMplusIDEA events.



These suggestions were also taken up for the second training seminar, the TANDEMplusIDEA Summer School at TU Delft on 11-13 September 2008. As the topic the project partners had defined “Authentic Leadership for Women in Science” because they were convinced that this would be an important career tool for the participants. Also at TU Delft the event was opened by a high-ranking university official. The welcoming words by D.J. van den Berg, President of the Executive Board, showed once more the importance of the programme for the senior management of the partner universities. An introductory round



was held by the project coordination, before the mentees were left with the trainers for the first session. During the three days, the Dutch trainers Sandra Doelman and Annemarie van Iren introduced diverse methods and tools, among them the Life Style Inventory Questionnaire, excerpts from DVDs and the opportunity to practice different styles of influence with professional actors. Here the mentees could apply their own case study. Another session focused on gender in organisations, recognising gender patterns and sharing knowledge and experiences based on international research. For

many mentees, this was the first theoretical engagement with the issue. The seminar closed with a facilitated discussion about women in science and female leadership with professors from TU Delft.

The national coordinator from TU Delft was responsible for all organisational aspects in the Netherlands, supporting in the concept development by all partners and in the production of material by the project coordination at RWTH Aachen University. Besides the input on the topics, the seminar again left enough time for networking and exchanging experiences. The evaluation was positive; particularly the case studies, role plays and actor feedback were regarded as very useful. Although the trainers were not evaluated so well, there was an overall satisfaction with the event. In particular, the mentees again stressed the positive group dynamics. As one mentee stated on the evaluation sheet: “I am very positively surprised about the great atmosphere within the group. There is room for everybody; and everybody accepts everybody! This is extremely important for the learning process.”



3.12 Work package 12: International Conference

The objective of this work package was the realisation of an international conference as the final event of the TANDEMplusIDEA programme. Here, the project and its results were presented and cooperation and networks on national and international level were extended.

Important steps during the preparatory phase were:

the conceptualisation of the conference, its topics and title

- the design of a conference logo and corporate identity
- the set-up of the website, the development and publication of the call for papers
- the planning of the programme with key note speakers, presenters, moderators, posters and the preparation of the TANDEMplusIDEA sessions
- the registration modalities and conditions for participation
- the organisation of the framework programme (welcome reception, restaurants, child care, etc.)
- the preparation of conference material (leaflets, posters, bags, maps, etc.)
- the editing of the conference book of abstracts
- the press work before and after the conference
- the payment of bills and post-processing of the conference

The planning of the conference had started in summer 2008 with its conceptualisation and layout design. Regarding the topic of the conference the project group had decided on the title “Going Diverse: Innovative Answers to Future Challenges – International Conference on Gender and Diversity in Science, Technology and Business”. The presentation and discussion of the evaluation results of the international mentoring programme TANDEMplusIDEA was embedded in the framework of human resources and organisational development. The topic of the conference was thus extended from the mere perspective on women in science to a broader dimension of gender and diversity aspects in academia and companies. This decision was taken against the background that gender is only one category of diversity and closely interrelated with other dimensions such as ethnicity, age, sexual orientation or social status. Diversity is an upcoming topic in academia while it has been an important issue in (predominantly American) companies for some time. The conception of the

conference was therefore to exchange ideas and good practice examples among both fields. At the same time, gender remained a key focus of the conference (as also emphasised through its explicit mention in the title). In this context mentoring was presented as an important instrument of gender- and diversity-oriented human resources development that helps to tackle the underrepresentation of women and minorities in academia and the business world.

Accordingly, the call for papers announced two themes with key questions:

1. Instruments of Gender and Diversity-oriented Human Resources Development

- What instruments are there in HR to attract and retain a diverse workforce?
- In particular, what is the role of human resources development programmes, for example mentoring, dual career and work-life-balance concepts?
- What are the risks and constraints of gender and diversity-oriented human resources development?
- Are there differences in the day-to-day practice of human resources of universities, non-governmental organisations and the corporate world?

2. Institutionalisation of Gender and Diversity Concepts, Organisational Development and Cultural Change

- What are the benefits of gender and diversity-oriented policies for an organisation, the staff and individuals? Are there changes in performance, motivation or employees' satisfaction after the implementation of those concepts?
- How can gender and diversity concepts be institutionalised in science, technology and business? How can they be established at all levels of decision-making?
- What is the business case for gender and diversity at academic institutions?
- How can best practice examples be identified and compared, and how can cooperation work between universities and the corporate world?

Interested speakers were supposed to pick up these issues in their presentations, and facilitate in particular an exchange between academia and companies on the one hand, and between gender studies and diversity management on the other hand. The project coordination addressed certain experts for key note lectures, and published a call for papers in the national and international media in December 2008/January 2009. A decision on the



proposals was reached in April 2009; after which the programme was finalised with regard to the key note speakers, moderators and welcome addresses. The public registration phase started in May 2009. Eventually, around 170 people from academia, companies, administration and international organisations participated in the conference.

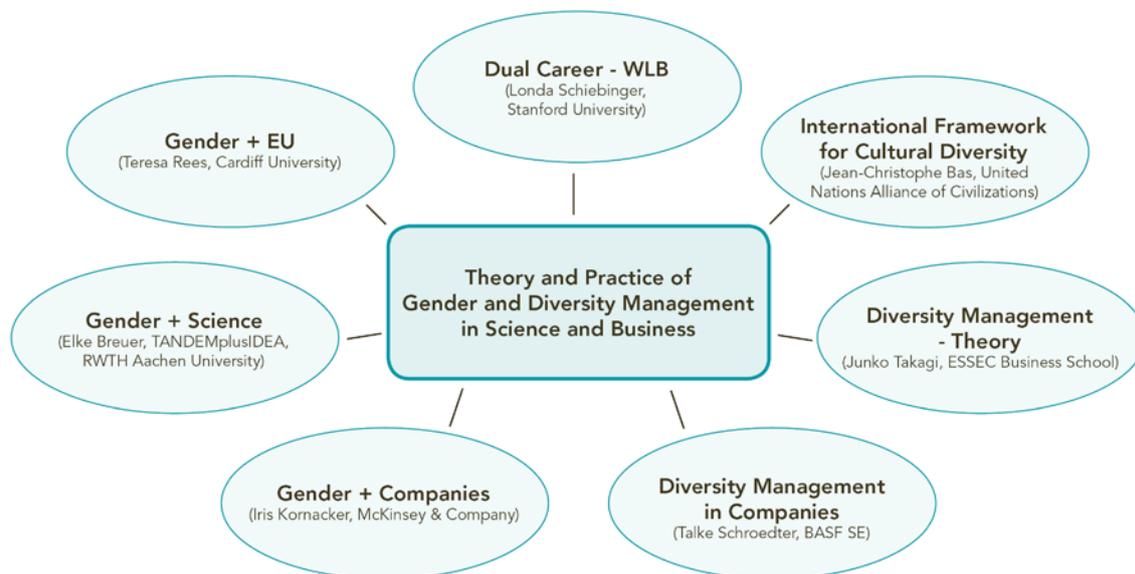
The final programme listed experts from the UK, Germany, the Netherlands, Switzerland, France, Austria and the USA. There were three kinds of sessions: Key note lectures for all participants; sessions with three presentations of 15-20 minutes each and subsequent time for questions and answers, and discussion groups with presentations of 10 minutes each and

afterwards time for exchange among all presenters. In the whole programme, there were six parallel sessions à 90 minutes with 2-3 presentations; four discussion groups à 60 minutes with 2-3 presentations, and seven key notes, incl. the one on TANDEMplusIDEA.

The presentation sessions ran under the following headings:

- Panel Discussion - International Mentoring
- Equal Opportunities in Companies: Internal and External Factors
- Perspectives on Gender and Diversity in Academic Careers
- Gender-equal Human Resources Development – Achievements and Challenges
- Institutionalisation of Gender Equality in Higher Education
- Diversity Management in the Context of Organisational Change
- Work Life Balance in Academia
- Gender and Diversity Policies in Academia and Business
- Diversity Management in Practice – Potentials and Restraints
- The Potential of Heterogeneous Cultures in Organisations
- Intercultural Competence
- Conclusion of the project TANDEMplusIDEA - Internal session with awarding of certificates

The key notes addressed the topics of the conference from different perspectives and complemented one another, so that in total they provided a comprehensive insight into gender and diversity management in academia and companies (see below).



These issues were also again taken up and supplemented by the presentations held in the course of the conference.

The conference “Going Diverse” started on 29 October 2009 with a reception and get-together at the conference venue Eurogress Aachen. Welcome addresses commenced at 10:00 a.m. and were spoken by Prof. Dr. Aloys Krieg, Vice-Rector for Education of RWTH Aachen University for the hosting institution; Dr. Waltraud Kreuz-Gers, Head of Department at the Ministry of Innovation, Science, Research and Technology of North Rhine-Westphalia,

Dr. Carmen Leicht-Scholten, Head of department IGaD at RWTH Aachen University and chair of the project TANDEMplusIDEA, and Luisa Prista, Head of Unit “Scientific Culture and Gender Issues” of the European Commission. Her speech, that was very much appreciated, provided the framework for the contextualisation of the project and the conference. The welcome addresses were followed by the first key note lectures, who highlighted different perspectives on the conference topics and provided first stimuli for discussions. After a short coffee break the conference then continued with a high-profile key note about dual career academic couples. The subsequent lunch break was coupled with a poster presentation in the foyer that showed 20 posters accompanying or supplementing the oral presentations. During finger food and refreshments participants had the opportunity for examination and interaction with the presenters.

Starting from Thursday afternoon, there were parallel sessions to give the conference participants the opportunity to choose the topic they were interested in most. Sessions were chaired by renowned experts from the respective fields who had been approached for this role by the project coordination. The first parallel session was reserved for the presentation of results of the programme TANDEMplusIDEA. During the first 20 minutes Elke Breuer, project coordinator at RWTH Aachen University, gave an overview on the project realisation and its evaluation results which were later discussed by two mentees from the project as well as two mentoring and human resources development experts, among them Carmen Leicht-Scholten as the developer of the TANDEMplusIDEA concept. The discussion was moderated by the British project partner Kim Everitt, and allowed questions and interactions with the audience and all four panel members.



In between sessions there were several breaks to further facilitate discussions and networking. Another highlight on Thursday afternoon was the key note by a representative from BASF, who presented the diversity and inclusion project of the company and thereby added yet another aspect to the conference topics. After the conference programme on Thursday all participants were invited to a reception at Aachen City Hall. The newly elected Mayor Dr. Margrethe Schmeer welcomed the guests and underlined the importance of equality from the perspective of the city of Aachen. She also offered an informal guided tour through the city hall that was accepted with great interest. Afterwards participants had the possibility to attend a cultural programme that consisted of a tour through the city of Aachen. Two groups (one English- and one German-speaking) met close to the city hall and enjoyed a walk through the historic Old Town. For the evening, seats were reserved in four different restaurants in Aachen. This informal dinner provided another good opportunity to exchange and network.

The conference continued on Friday with two key note lectures, who focused on theories and studies from the business perspective of gender and diversity management. Both presentations were discussed with great interest. In the subsequent parallel sessions scientists and company representatives had the possibility to present their work, and again, coffee and lunch breaks were important times for socialising. The very last session of the conference on Friday afternoon was the internal one for the participants of the mentoring programme TANDEMplusIDEA. In this meeting the mentees had the opportunity for a personal review on the programme and outlook on their professional future. The mentoring scheme was then officially concluded with the awarding of certificates to the mentees. The conference ended with a farewell by Carmen Leicht-Scholten, and closed on early Friday afternoon.

3.13 Work package 13: Publication and Presentations of the Results

Last steps within the finalising phase of TANDEMplusIDEA were the publication and presentation of the results of the project and of the international conference to disseminate knowledge on TANDEMplusIDEA and the topic women in science. Through the publication of the results they can be incorporated into the development of the participating universities and contribute to the existing discussion of quality standards in mentoring. Furthermore, the publication of the conference results adds important input to the international discussion about gender and science and diversity aspects in academia and society.

Throughout the course of the project TANDEMplusIDEA, mainly in the last period, the coordinators presented the project and its results at various conferences on national and international level and disseminated knowledge through diverse articles in scientific publications. However, the major event for the finalisation of the project and the presentation of its results was the international conference “Going Diverse: Innovative Answers to Future Challenges – International Conference on Gender and Diversity in Science, Technology and Business” on 29-30 October 2009.

In the context of the conference the results of the project were published in different ways: There were different types of presentations on the subject in the course of the event, and on the other hand the project coordination compiled two printed publications. Within the conference programme the project and its results were introduced to a broad audience of experts from academia and the corporate world in two different styles of presentation:

- 1) A key note speech by the RWTH Aachen project coordinator and
- 2) a panel discussion with mentees of TANDEMplusIDEA and mentoring/HR experts.

Elke Breuer’s key note entitled “Gender-oriented Human Resources Development in international Cooperation – The Mentoring Programme TANDEMplusIDEA as a model of Best Practice” gave an overview of the implementation of the mentoring programme and its evaluation results regarding personal data, the professional situation of the mentees, their satisfaction and profit, and success factors for international mentoring. In the framework of a subsequent panel discussion with two mentees of the project and two experts, results and personal experiences were discussed. The national coordinator from Imperial College

London was the moderator of this session, which offered both the audience and participants on the podium a platform for an interactive exchange, questions and a discussion on the topic international mentoring.

On the other hand the project results were published in different publications edited by the project coordination. During the preparation of the conference a book of abstracts was compiled with the conference contributions. Participants wrote short articles based on the proposals they had submitted following the call for papers. The book of abstracts contained 26 articles and 14 poster descriptions as well as short biographies of the authors. Its objective was to summarise the presentations of the conference and to inform the conference participants on the proceedings. Thereby it gave participants, presenters and speakers an insight into recent theoretical developments and practical examples of how diversity can benefit employees, employers and organisations alike.



The structure of this publication followed the timetable of the conference; papers by key note speakers and conference participants appeared in order of their scheduled presentation. Among them was also the summary on the scientific evaluation of TANDEMplusIDEA written by Elke Breuer and Carmen Leicht-Scholten. The book of abstract was finalised and printed in October 2009 with a circulation of 250 pieces. Around 170 copies were handed out to the conference participants; additional exemplars were required after the event at the conference organisation by e.g. colleagues of delegates. The book of abstracts was thus distributed well among the audience and target group of the conference “Going Diverse”.

In the aftermath of the conference the project coordination realised an anthology consisting of selected conference contributions as the final publication of the project. The focus of this book was on the *scientific* discussion of mentoring, gender mainstreaming, diversity management and human resources development, so the articles came from international scientists. Although they were very interesting, contributions from experts from companies were at this stage not considered. The coordinators were particularly happy to be able to include a preface by Luisa Prista, Head of Unit “Scientific Culture and Gender” at the European Commission that was based on her welcoming words at the conference “Going Diverse”.

In contrast to the book of abstracts, the target group of the anthology are not only the conference guests, and it does not primarily inform meticulously on the conference programme. This publication wants to reach a broad international audience of scientists, human resources managers and gender and diversity experts from academia and companies. It picks up the major topics and lines of arguments of the conference, and discusses them from different scientific perspectives. The objective is to contribute to the discussion of gender and diversity management in human resources and organisational development, and to show the mentoring programme TANDEMplusIDEA as a model of best practice of gender-oriented HR. The guiding questions are:

- What are the benefits of gender and diversity-oriented policies for an organisation and its staff?
- What is the role of human resources development programmes, for example mentoring, dual career and work-life-balance concepts, regarding the creation and use of more diversity in the workforce in organisations?
- How can gender and diversity concepts be institutionalised in science, technology and business?

The starting point of the publication is that these questions are considered to be very important for organisations and institutions of higher education: They are facing challenges of current economic, social and political conditions, like demographic change, globalisation or skilled labour shortage. In addition, universities and companies alike have to compete for the most qualified staff. In order to produce more innovative solutions and to perform better, it is essential to integrate gender and diversity perspectives as important elements of organisational and human resources development. The anthology picks up these issues and contributes to some of the above mentioned questions. In doing so, it pursues the topics presented at the conference “Going Diverse” and gives experts the opportunity to discuss recent theoretical research and practical approaches. The title reads accordingly: “Going Diverse: Innovative Answers to Future Challenges. Gender and Diversity Perspectives in Science, Technology and Business.”

The publication is structured into six chapters with the following headings:

- Framework
- Organisational and cultural change
- Diversity perspectives
- Female careers in academia
- Work life balance
- Practical Approaches (among them the article on TANDEMplusIDEA)

The articles for this publication have been selected accordingly. The authors represent a mixture of renowned and young scientists, different countries and regions. They approach the questions of the publication from different perspectives. Altogether, the anthology contains 17 articles. To guarantee their quality, all articles were peer-reviewed. After the peer-review process the project coordinators corrected and formatted the papers. The manuscript then went to the publishing company for proofreading and the finalisation of the editorial work. The anthology will hopefully be released in late summer 2010 and be available in international book stores for around 30 Euro. It will thus be the very last accomplished milestone of the project TANDEMplusIDEA.

4 Dissemination of knowledge

Throughout the duration of the project it was important to raise awareness for the female underrepresentation in science and in academic leadership positions, to spread knowledge on the concept of mentoring, and present the project TANDEMplusIDEA to a wide international audience. The target group were not only the four participating universities but also the international scientific community on gender and science as well as the interested public. In the course of the project the activities shifted in focus. In the first year they concentrated on the presentation of the programme at the partner universities and on its advertisement to attract potential mentees. This included the production of leaflets, posters and brochures, but also the writing of personal letters and emails and an extensive press work. The website was established as an important medium to distribute information on the programme. The focus of the second project year was on the initiation and realisation of the mentoring programme for female scientists. Public relations work during this time accordingly concentrated on the announcement of the programme events and the presentation of the project implementation. Again, this included the writing of invitations, press releases and articles; the production of public relations material and the update of the project website. One important aspect in this regard was the first announcement of the final conference of the project. On the website, through mailing lists and press releases the call for papers was distributed and made the event known to a wide audience. During this period, the project was frequently presented at conferences and symposia, here with a special focus on the realisation of the current programme and – towards the end of the reporting period – its first results.

In the third project year the mentoring programme had been successfully concluded, and dissemination activities concentrated on the presentation of the project results and on the announcement of the final conference “Going Diverse”. This event with around 170 participants was prepared by press work, the production of information material (e.g. leaflets, posters and registration cards) and personal correspondence. The website was still an important means for the distribution of knowledge. Another major task was the organisation and preparation of promotion material that was used to emphasize the corporate identity of the conference and increase the visibility of the project. Folders, note pads and key holders will also in the future continue to remind all participants of this event. At the own final conference of TANDEMplusIDEA, as well as at several other international occasions throughout the year the programme and its evaluation results were presented to a very diverse audience, such as EU policy makers, gender researchers, human resources experts and company representatives. TANDEMplusIDEA was shown as an effective tool of gender-oriented human resources development, and the evaluation results proved that it can be seen as a model of best practice of an international mentoring programme. The project results were also published: In articles and conference proceedings throughout the year 2009 (e.g. Truss 2009); in the book of abstracts of the conference “Going Diverse”; and in an anthology consisting of selected contributions of the final conference. This peer-reviewed publication will reach a wide audience of gender and diversity experts. It will have effects on the scientific discussion long beyond the project period and continue to raise awareness for women in science and the importance of mentoring programmes.

5 Conclusion: Impact and results of the project TANDEMplusIDEA

During the project evaluation it became clear that TANDEMplusIDEA has been successful in its immediate objectives: It had concrete effects on the career planning and development of 16 high potential female scientists, and encouraged them for an international career in academia. It also enlarged the mentees' contacts and established a functioning network of female scientists who will in the future continue to collaborate and support each other. The mentees' activities in their own web log, their plans to start a joint scientific project and write an article on the project together are significant enough. Another success was the increased awareness of gender and equality issues among the programme participants. Mentees and mentors, some of whom had never been aware of the structural conditions women in academic leadership positions face, were sensitised for these factors and stimulated to consider them in their own action. It was a clear aim of the project that gendered and, in general, more diverse perspectives will in the future be integrated into scientific research, and TANDEMplusIDEA made a first step towards this.

Other objectives are long-term and still need to be observed in the future. Only then will be visible in how far the number of female professors in science could be increased and more gender equality reached. The desired chain of reaction of more female role models who inspire more women to study and pursue a career in engineering and natural sciences will only be possible with this increase in the number of female professors. Nevertheless, TANDEMplusIDEA has made a first step towards the implementation of gender mainstreaming into natural and technical sciences, and it has shown that mentoring can be a valuable instrument for creating equal opportunities in science. In view of the existing quality standards for mentoring programmes (see Ada Lovelace et al. 2008) TANDEMplusIDEA contributed to the further development of the instrument. The quality standards list the various factors for successful mentoring regarding 1) its prerequisites (e.g. concept, financial and institutional resources, public relations), 2) the mentoring relationship in itself (e.g. conditions, methods, content and topics) and 3) the realisation of the structural frame (referring for example to the selection criteria, the matching, a thorough information of all participants and the quality management). TANDEMplusIDEA has shown which elements are particularly important in the international context.

- The quantitative and qualitative **appraisal of the situation** at the partner universities needs to be conducted carefully and in view of the particular conditions in the different academic systems.
- Related to this aspect is that the **goals** of the programme and the **target group** must be defined for all partners. The questions are: Who is our target group? What do they have in common? Do they all have the same demands? How can we support them and thus, what is the particular objective of our programme? What benefit do we expect from the international dimension?
- A minor, but notwithstanding central, issue is the **financing** of the programme. In the conceptualisation phase, the project partners need to calculate an adequate budget regarding the number of participants, the concept and duration of the programme.

The international dimension here poses special requirements on the budget because of travel and accommodation necessities.

- The **institutional location** of the programme at the partner universities, its integration into the institution's structure and the commitment of the executive board are particularly important in an international mentoring programme. Even more than national programmes, it depends on the cooperation among all partners and a good infrastructure is indispensable for that.
- TANDEMplusIDEA has also strengthened how essential it is that all participants are **well informed of the programme** and its modules. This is especially relevant in an international context, in which the coordinators do not have regular face-to-face contact with all participants and where questions can usually not be answered occasionally. Even more important are good written information material and an introductory seminar for mentees that informs on all details. If no such session for the mentors is possible because they are spread worldwide, it is at least desirable that the (same) coordinator talks to each of them personally on the phone. Through this explanation the coordinator will be sure the mentors know the programme and their own tasks. He or she will also be able to answer questions and establish a personal contact.

TANDEMplusIDEA took these aspects and the other issues mentioned in the quality standards into account and found out that they were valid in all four academic systems involved. While there are certain peculiarities to be considered (e.g. the different career paths in research and teaching in the United Kingdom), mentoring can be an effective tool of human resources development in all settings. To be beneficial for all participants and to do their individual backgrounds and career plans justice, an international mentoring programme must evaluate their demands and pick up reflections and feedback in the course of the programme. It must also be honest with them. A mentoring programme cannot offer jobs or guarantee a particular career step, but it can support the participants in their own development. To be successful in this, conditions, wishes and plans must be as transparent as possible from both sides.

As a summary, six key success factors for mentoring programmes are given that were developed in the course of the evaluation by the project coordination:

1. A strong structural affiliation
2. A clear programme structure and dedicated programme coordination
3. A very good introduction of the concept and information, especially on mentoring
4. An excellent framework programme, targeted to the needs of the mentees
5. A good selection of participants

The 6th success factor in TANDEMplusIDEA was the international dimension. The cooperation between the four European partner universities worked very well and had extra benefits for the programme participants. It would be desirable to continue the scheme to offer further female scientists the possibility for an individual career development and to fortify the influence on organisational cultures of science and engineering. However, at this stage a continuation is not very likely. Only two partner universities (RWTH Aachen University and

Imperial College London) have so far provided the means for a follow-up; the other two universities (TU Delft and ETH Zurich) cannot provide the necessary funding. Nevertheless, the pilot scheme TANDEMplusIDEA can be considered as a model of best practice of an international mentoring programme. It has shown the strengths of the concept and possibilities for further improvement. The project coordinators will certainly continue working on it, track the mentees' developments and long-term effects of the programme, and further develop mentoring in an international context.

Bibliography

Ada Lovelace Mentoring e. V. / Arbeitgeberverband Gesamtmetall / Forum Mentoring e.V. / Siemens AG (2008): Qualitätsmanagement im Mentoring. Kriterien, Mindeststandards und Messmethoden zur objektiven Beurteilung von Mentoring-Programmen. Available from http://www.forum-mentoring.de/download/2007_Kriterien_Mindeststandards_Messmethoden_de.pdf.

Allmendinger, Jutta et al. (2000): Should I stay or should I go? Mentoring, Verankerung und Verbleib in der Wissenschaft. Empirische Ergebnisse einer Studie zu Karriereverläufen von Frauen und Männern in Instituten der Max Planck Gesellschaft. In: Page, Julie / Leemann, Regula Julia (Eds.): Karriere von Akademikerinnen. Bedeutung des Mentoring als Instrument der Nachwuchsförderung. Bern, pp. 33-48.

Breuer, Elke / Leicht-Scholten, Carmen (2009a): International Mentoring – A Model of Best Practice of Gender-Equal Human Resources Development. In: VDI – The Association of German Engineers (Ed.): Gender and Diversity in Engineering and Science, Report 39, Düsseldorf, pp. 149-160.

Breuer, Elke / Leicht-Scholten, Carmen (2009b): Unterstützung europäischer Karrieren – Wissenschaftskulturen begreifen und verändern. Presentation at the conference “Managing Gender and Diversity – Engendering Reflexivity and Change? University St. Gallen, 28-30 May 2009.

Breuer, Elke / Leicht-Scholten, Carmen (2009c): Gender-Oriented Human Resources Development in International Cooperation – The Mentoring Programme TANDEMplusIDEA as a model of Best Practice. In: Going Diverse: Innovative Answers to Future Challenges, Book of Abstracts, Aachen, pp. 21-32.

Breuer, Elke / Leicht-Scholten, Carmen (2010): Gender-Oriented Human Resources Development in International Cooperation – The Mentoring Programme TANDEMplusIDEA as a model of Best Practice. In: Leicht-Scholten, Carmen / Breuer, Elke / Callies, Nathalie / Wolfram, Andrea (Eds.): Going Diverse: Innovative Answers to Future Challenges. Gender and Diversity Perspectives in Science, Technology and Business. Opladen (forthcoming).

European Commission (2005): Women and Science. Excellence and Innovation – Gender Equality in Science. Working Document. Brussels.

Leicht-Scholten, Carmen (2007): Challenging the leaky pipeline: Cooperation scheme between technical universities and research institutions for excellent female researchers. First results. In: Welpel, Ingelore et al. (Eds.): Gender and Engineering: Strategies and Possibilities, Frankfurt am Main, pp. 175-189.

Leicht-Scholten, Carmen (2008): Where is the Key to Success? A Comparative Evaluation of Mentoring Programmes for Outstanding Female Scientists in Natural Science, Engineering, Social Sciences and Medicine. In: Grenz, Sabine et al. (Eds.): Gender Equality Programmes in Higher Education. International Perspectives. Wiesbaden, pp. 163-178.

Leicht-Scholten, Carmen / Breuer, Elke / Callies, Nathalie / Wolfram, Andrea (Eds., 2010): Going Diverse: Innovative Answers to Future Challenges. Gender and Diversity Perspectives in Science, Technology and Business. Opladen (forthcoming).

Lind, Inken (2006): Wissenschaftlerinnen an Hochschulen. Analyse der aktuellen Situation. In: Dahlhoff, Jutta (Ed.): Anstoß zum Aufstieg – Karrieretraining für Wissenschaftlerinnen auf dem Prüfstand. Bielefeld, pp. 142-189.

Löther, Andrea (Ed., 2003): Mentoring-Programme für Frauen in der Wissenschaft. Bielefeld.

Krimmer, Holger / Zimmer, Annette (2004): Karrierewege von Professorinnen an Hochschulen in Deutschland. Zeitschrift für Frauen und Geschlechterforschung, 21 (4), pp. 18-33.

McKinsey & Company (2007): Women Matter. Gender diversity, a corporate performance driver. Available from:

http://www.mckinsey.com/locations/paris/home/womenmatter/pdfs/Women_matter_oct2007_english.pdf.

Patrick Truss (2009): Mentoring for women in science and engineering. In: British Publishers (Ed.): Projects – Science, Technology and Innovation, pp. 116-117. Available from:

<http://viewer.zmags.com/publication/cc00a33c#/cc00a33c/119>.