

BEST PRACTICES FOR EVEN GENDER DISTRIBUTION IN THE 25 MEMBER STATES IN THE DOMAIN OF INFORMATION SOCIETY

Study Final Report

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Foreword

Development in the Information and Communication Technologies (ICT) domain in the past decade have provided us with new tools that have become an integral part of our everyday life. These include mobile phones, navigators and electronic payments, to name but a few. These developments have made a significant contribution to Europe's economic growth and have been made possible by the contribution of trained specialists in the various technical areas.

However, a worrying decrease in the number of skilled engineers entering the ICT profession has been observed in recent years. At the same time many of those who are working in the field, especially women, are leaving to move to other professions, a phenomenon known as the "leaky pipeline".

This study highlights the successful practices of a number of European organisations to attract talented young people to the ICT domain. By providing a working environment conducive to efficiency, creativity, and ultimately greater productivity these organisations have also been successful in encouraging their existing personnel to stay.

I hope that the best practices identified in this study will give the reader some ideas and the encouragement to implement them.

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1 EXECUTIVE SUMMARY

This is the final report of the study launched by the European Commission, Information Society and Media Directorate G, Components and Systems on ***Best practices for Even Gender Distribution in the 25 MS in the domain of Information Society Technologies.***

The objective of this study on best practices of even gender distribution in Europe 25 is to foster the participation of women in the ICT domain and to provide relevant input for further European policy developments and their implementation in the area. This has been done by identifying, selecting and analysing different best practices cases in major public and private European ICT organisations.

Existing statistics demonstrate the low participation of women in the ICT sector, and particularly in decision making roles. **It is precisely for this reason that the study gives an overview of some of the best European strategies and measures in the area of gender equality in ICT with the expectation that they will be transferred and applied to other organisations and companies with the same constructive and positive commitment.**

The research undertaken was based on the following hypotheses:

1. Certain working conditions contribute to increase the number of women (in every position): Characteristics of work (attractiveness), organisation of work, characteristics of careers, social and cultural behaviour, working time, possibility of training, security of jobs, contract types, human resource management strategies.
2. Certain policies and practices contribute to increase the number of women in top positions: employee progression policies, human resource management strategies, organisation of work.
3. One way to encourage ICT companies to adopt gender practices is the dissemination of successful "stories" implemented by leading organisations.

To start the investigation responding and confirming these three hypotheses by giving them a concrete content to follow, a literature and press review on "Women and ICT" was realised on relevant studies and theoretical discourses. A great variety of different books, articles, investigation papers exists on the theme, which can be categorised in two main areas: Women and ICT access (access of women to new technologies at work (or at home), and women working in the ICT sector (studies on the situation of women working in the ICT sector). The second category has been considered as most appropriate for the purpose of the study, and a selection of the most relevant documents has been summarized following a thematical structure:

- **Definition of concepts and indicators:** Gender is not synonym to women, and gender does not mean solely biological differences of women and men. The concept of gender is highly complex and expresses on the one hand that different roles are attributed to women and men in society through power relations between them and on the other, that these roles are culturally determined. The ICT sector and ICT professions can be viewed as "gendered" and must be studied as such. The relation between gender and technology, too, is more complex than that of simple participation or exclusion.
- **ICT professions:** In order to study women working in the ICT sector, a classification system has been developed. ICT job titles are classified following the ICT field (Software developer, analyst, programmer), or the level of responsibility (Project manager, Director) or both, the ICT field and the level of responsibility (Senior support analyst, IT Manager)
- **Employment conditions in ICT:** The conditions for working in the ICT sector seem very unattractive to women, as they have the image of being extremely harsh and competitive: long working hours with time work, no spare time, no holidays and individualised labour relations. Work life balance is therefore a key issue.

- **Women's progression in ICT jobs:** Although a lot of employers think that women are more comfortable in management position than men (because they have better soft skills), women remain significantly underrepresented in managerial and particularly in executives positions in the ICT sector. Informal progression and promotion systems (old-boys network) sustain discriminatory practices.
- **Situation of women in the ICT sector:** Imbalance starts already in education. Stereotypes of women's "technical incompetence" still exist and lack of role models and motivation drivers do the rest.
- **Research Frameworks and fields:** Relevant research fields for women in the ICT sector are, among others, the workplace, competences, career and labour market, social and institutional arrangements and background, family sphere, training, education and the learning environment.
- **Existing Case studies and best practices in major European ICT companies:** Several European ICT organisations committed to gender equality have already been studied throughout similar best practice analyses. Measures analysed concern gender equality objectives and their monitoring, awareness raising, networks, childcare, flexible work, career planning, etc. A key issue is the potential career route for women, which has to be closely studied and monitored.

Even though the literature highlights a variety of obstacles and barriers to women's progression in the ICT sector, it has also shown that this sector is one of the most potential one for realizing gender equality, as it is based on new and emerging labour relations (non-traditional sector) and in urgent need for highly qualified personnel.

A second and parallel step to the literature review, the best practice study has started with the identification and selection process of relevant ICT organisations and companies all over Europe.

This mapping exercise selected both, IT services provision and ICT product based manufacturing companies as well as ICT research organisations and universities. Research tools were mainly internet based (Cordis, EICTA, OMA, KOMPASS, etc.). Important selection criterias were the size of the company (more than 250 employees and 50M euros annual turnover) the activity area (NACE code) and the representativity related to the national/regional ICT Market (GDP, ICT expenditure, number of ICT companies, etc).

A total of 462 organisations were selected as major European ICT public and private organisation. For each of these organisations, different information and indicators were collected (internet and telephone enquiries) such as type and short description, contact details, gender disaggregated statistics, etc.

From 462 organisations, 324 were invited to participate in an email survey, and 40 completed questionnaires were received and analysed. The email survey included a very detailed questionnaire, enquiring on the different gender equality measures in the organisation and the degree of commitment with which they were implemented. It resulted that as from this very first field work stage, the best and most committed companies stood out and were easy to highlight. Indeed, a lot of companies and organisations which seemed, at a first glance, to do quite a lot in the area of an even gender distribution in their work organisation, did not have the time or the capacity to participate in the study.

Finally, 18 companies were selected for an in-depth telephone interview. The interview had the objective to find out how, when, what and to which degree gender policies and best practices were implemented in the company or organisation. It was conducted on the basis of three main indicators: indicator 1 tackled the gender approach and goals, indicator 2 the way gender mechanism are designed, implemented and monitored and indicator 3 discussed the main characteristics of the best practice. The telephone interviews analysis resulted in an integrated approach for the evaluation and impact assessment of gender equality strategies: **The gender account score and the professional life cycle analysis**. Both of these tools have been the main reference for analysis in this study and can be used for further investigation or other similar studies.

The gender account score measures the degree to which gender equality is considered as important and to what extent it is actually implemented in an organisation. Category 0 are organisations that do not consider gender as an issue, in Category 1, one can find organisations that have gender oriented measures in place however not conceived, applied and measured in a systematic way. These are generally based on one or more highly motivated employees, but they are not supported by the organisational structure with clear resources such as budget. In category 2, there are only organisations which can show a well developed and implemented gender strategy that is part of the resource system of the organisation and which has staff allocated to its implementation.

The Professional life cycle is an integrated approach to the analysis of a women's professional career. It indicates the focus and the goal of the gender strategy or the gender oriented measures. There are 6 main phases:

- **Phase 1 Education:** There is a very low number of women studying computer science and technology, all over Europe. Some companies have difficulties in finding women engineers. Measures introduced to cope with this situation are mentoring programmes in secondary schools and university. Role models are highly important in this phase.
- **Phase 2 Recruitment:** ICT jobs have an unattractive image to women, and numbers of women appointing to technical jobs need to be increased. Favourable instruments for this phase are attractive employer image, transparent recruitment policies and women networks
- **Phase 3 Career development:** This phase covers junior and senior engineering positions. Measures ensure that talented women are retained in business and research. Effective instruments in the area are coaching, career planning, self-assessment and cross mentoring.
- **Phase 4 Management:** The gender gap is particularly high in managerial and executive positions. This is mainly due to discriminatory promotion and progression procedures, but also to working conditions that are not compatible with family duties.
- **Phase 5 Uptakes after leaves:** Maternity leaves vary from 3 months to 3 years and more. Working in the ICT sector, this can be particularly problematic. Knowledge on new technological developments and innovations in the sector and ICT research undertaken so far is just one of the obstacles women are frequently confronted with. Uptakes can be made easier for women if they do not lose a complete contact to the professional world. Punctual mentoring and training sessions before the uptake are an example of effective measures for this phase.
- **Phase 6 Maturity:** Women in a certain senior age, without any possibility to get promoted within her position should consider options like self employment.

Interviews by telephone have shown that gender equality is very often linked to diversity strategy in a company. Diversity is considered as a **MUST to achieve innovation, creativity and growth**. Also, all the companies and organisations which implemented an integrated approach for gender equality, taking into account almost all the phases of the life cycle analysis, were located in a very favourable national regulatory framework for gender equality (Finland and Germany). Most of the organisations and companies think that the imbalance between men and women is caused by the nature of the market (availability of women engineers), which is characterised by a very low number of women. Whereas some of them take an active position, others are "waiting for the situation to change".

For the direct observation approach, in-situ visits and face to face interviews were realised all over Europe. This last step and most in-depth investigation and field work was only done with those companies and organisations which were considered as the most committed and the best in Europe for creating gender equality in the ICT sector. All of them can show an integrated and systematic approach to gender equality in their organisation. Also, all of them have shown very high motivation to participate and have largely supported the different phases of this study with their time and availability, with documents, dossiers and the organisation of the visits. The following is a summary of the main results:

Telia Sonera Finland benefits from a highly gender favourable legal framework established in Finland. Working conditions in this company are extremely family friendly for women as for men (46% father leaves) and the company has taken a lot of measures to have an excellent employer image. Women and men are fundamentally considered as equal. The gender equality strategy focuses on career development and a more general approach of "learning by doing". Concrete actions for gender equality include leadership programmes and training for women.

The Hannover University has established a Gender equality office, directed by a gender commissioner, which is entirely devoted to gender equality within and outside of the University. Focus of its strategy is to attract more female students into the technical departments of the University and to create networks that foster women into academic careers or other careers after the university studies. The Commissioner implements and manages mentoring programmes in schools, with the objective to create more interest in ICT areas, and coaching/training/networking activities for students in study termination phase. Key elements of the strategy are: creation of interest in ICT, breaking down stereotypes and improving knowledge and skills.

RTE is the national television and radio in Ireland. It is one of the most attractive employers in its country, as from its vocation but also working conditions. The organisation pays a great attention to work life balance as it has implemented flexible work arrangements into sectors like the newsrooms, where this is particularly difficult (night work is solved by job sharing mechanism for example). Gender equality projects have been implemented in the organisation fostering career development for women by reviewing their necessities and giving recommendations to the executive boards. A database and recruitment pool for women has been developed. Commitment to gender equality in RTE is very feminine and would have more impact if male employees became dedicated to the issue.

Key success factor of the **General Electrics** France gender equality strategy is the fact that it is linked to the diversity concept. Diversity is synonym to business, prosperity, growth. Diversity is seen as an instrument for production growth. The women network of General Electrics is one of the biggest women lobbies in France. Although it promotes mutual support, awareness raising, knowledge transfer and networking among women working in GE, it does not want to stand as an exclusive and closed society to men. It meets the needs of women however addresses both, women and men.

The Motorola Poland struggle is the very traditional and stereotyped Polish culture on women vs ICT. Although the situation is changing and more women attend technical studies, the main problem is the low number of women available on the job market in the ICT sector. It is precisely for this reason that the company has developed and implemented the diversity project, with the ambitious objective to attract more women to the ICT sector. The project involves an award where secondary pupils learn how to create and design web pages.

The Fraunhofer Gesellschaft is number 1 reference for ICT research in Europe. Although numbers of women working in the organisation is low, and this particularly in executive positions, the organisation has one of the most integrated approaches to gender equality. Indeed, activities range from mentoring in schools, to training and mentoring for women within the organisation to cross mentoring, doctoral programs, girls days and human resource marketing. Main arguments given to their high commitment is that more women in research means better quality research. One of the main priorities is therefore awareness raising and dissemination of projects illustrating this.

Malta University has been highlighted in this study through the work of the gender issues committee of the University. The work of this committee ranges from mentoring to dissemination of relevant gender projects and programmes. It focuses on the creation of role models within and outside the University and the establishment of women networks.

Reassembling the results of the desk-based research and the different field work the study has shown that quite a high number of ICT companies and organisations in Europe propose effective solutions to overcome their negative image, as well as the barriers and difficulties of women working in the ICT sector.

On the one hand side, the best practices are very much linked to the cultural and socio-economic context of the country and the vocation and profile of the organisation. On the other, the study also shows that best practices can be transferred and effectively adapted to other context. The degree of commitment is always determined by the world view which lies behind the best practice. Most of the organisations promote gender in a very positive and optimistic way and some link gender to a more general concept in order to avoid radicalisation of views.

One of the key recommendations of this study is to start the development of a gender equality strategy with a thorough overview of the culture and the world views directing the company or organisation. This can be done by a context analysis which takes into account the ICT sector, its marketplace and main characteristics, the key indicators of the women's positions, trends, motives, main barriers of women in the ICT sector and the company/organisation and features of the institutional framework. The analysis should also assess existing mechanism for gender equality.

The development of the gender equality strategy should follow an integrative approach, taking into account all of the professional life cycle phases. With regard to the implementation of the gender equality strategy, it is recommended to mobilise and involve a team responsible for its implementation and monitoring.

2 PART I SYNTHESIS OF THE STUDY

2.1 Introduction

In order to achieve its objectives, the study has followed 3 main steps:



- **Definition of an analytical Framework** and a thorough literature review on the topic “Women and ICT” has been made focusing on women studying and working in the EU ICT sector.
- **Identification of best practices in EU 25:** A survey has been realised and a pre-analysis of public and private organisations on the basis of the selection criteria previously defined.
- **Investigation and assessment of selected best practices:** Realization of telephone interviews and in-depth case studies (in situ visits) which have been the main input for the conclusions and recommendations.

The final report is separated into 4 PARTS.

PART I of the report tackles the methodological framework applied to the study and its different phases. It explains the selection of field work tools (email, telephone and in-situ visits) and summarizes the theoretical setting and contextualisation of the study. The latter has been elaborated throughout a literature review on the topic “Women and ICT” and has been presented in a thematical structure covering relevant concepts and indicators, research questions and fields.

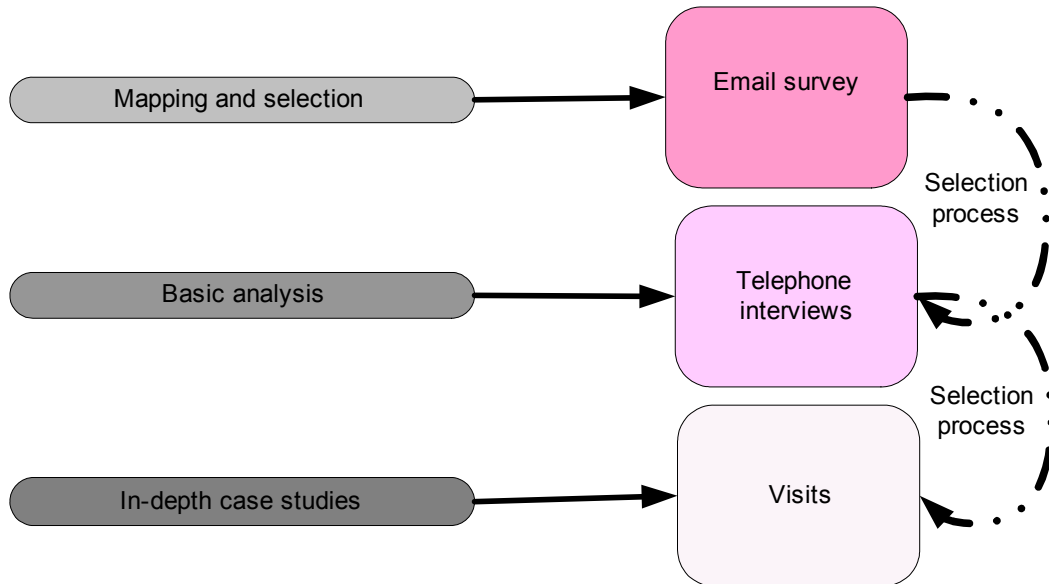
PART II of the report discusses the identification and selection of the best practices. This includes the results of a mapping exercise which lead to a list of the major European ICT organisations and companies and the results of an email survey which identified those organisations and companies actively involved for more gender equality within and/or outside of their organisation. The second part also describes results of telephone interviews, which conclusions lead to two highly relevant analysis tools: the Gender account score (GAS), measuring the intensity with which gender is integrated in the organisations/companies and the Professional Life cycle (PLC), which identifies and describes the intervention area of best practices.

PART III tackles the analysis of the best practices identified. It gives a detailed overview of the context (socio-economic context, culture etc) of the best practice, its intervention logic and main lessons learned. It is the result of different visits around Europe in which field work has been done in the most committed European ICT companies and organisations for gender equality.

In **PART IV** of the report are the conclusions and recommendations of the study. A key recommendation of this study concerns the overall structure of gender equality measures: Successful gender measures start up with a context analysis before the development of a strategy, and the implementation of the latter must be closely monitored. Specific recommendations are summarized by means of the professional life cycle phases, which concern: Education, Recruitment, Career development, Management, Uptakes after leaves and Maturity.

2.2 Methodological Framework

The following section shows a short summary of the methodology that has been applied to the study. It included three main phases: Selection of companies, data collection and analysis. Phases have been realized in parallel. The process can be illustrated as follows:



The first phase of the study focused on identifying and selecting major ICT organisations in EU 25. This **mapping exercise** was mainly based on internet research, establishing a list of organisations and companies and taking into account their country, annual turnover, number of workers, type of organisation (private/public/semi-public), activity area, % of women workers, % of women in technical/scientific activities.

The **identification/selection process** of the best practices all over Europe followed a 2-step procedure. All of the identified companies received an **email survey** and most of them were contacted by telephone (In order to identify the relevant contact person or to enquire on incomplete information.) The email contained a number of questions¹ focusing on eventual gender equality measures implemented by the companies/organisations.

The results of the email survey were the basis for the selection of companies to be **interviewed by telephone**². The telephone interview process included contacting the company/organisation, gathering the necessary information via a desk-based research, sending a general questionnaire by email and carrying out 2 telephone interviews within the same organisation.



For the **direct observation approach**, the team proceeded with in-site visits, direct observation and face to face interviews. In-situ visits in the selected best practice organisations have been made throughout September, October and November 2006. For each visit, 2-3 days of interviewing and meetings were organised (face-to face interviews, group interviews, meetings, presentations). The profile of interviewees depended on the type of the organisations and on the type/area of best practice selected.

¹ The questionnaires of the email survey is attached in the annexes of this document.

² Please consult annexes for questionnaires

However, some profiles were all interviewed: Presidents, Directors, Managers that could give a general overview of the gender equality strategy within the organisation and above all, on the world view which lies behind the commitment. Also, gender equality commissioners were interviewed or the persons that have designed/developed the gender strategy as well as those carrying out and supervising the actions with regard to gender equality: Human Resource Managers, Sociologues, etc. In addition to the interviews tackling the best practice itself, biographical interviews were realized with women in different ICT positions. Several group- interviews took place.

The questions of the interviews were specific to each organisation and interviewee. Interviews were interactive and not predetermined. A questionnaire template helped to initiate the discussion. General questions in that template were: Identification, role and daily task of the interviewee in the organisation. Role in implementation of the gender equality strategy, biographical questions on career and success factors, factors that promote the recruitment of women (attraction?) and the acceding of high positions (Conditions, culture, context), success factors of a career in the organisation/company, specific difficulties for women and how are they tackled, female specific sectors and reasons for that, influence of national laws and national culture to gender equality in the company/organisation, changes since new laws have been implemented, Contextualization of gender equality with regard to the ICT sector, culture and philosophy behind the great commitment for gender equality, best practices and how they fit into the reality (to which need they correspond and how do they respond to the need?), main success factors (recommendations) with regard to cultural elements (eg how to convince? How make it the norm?) and practical elements (budget, resources, organisation), results of the best practice and views/opinions on those results, impact of the best practices, principal future visions for gender equality.

2.3 Theoretical setting and contextualisation

The theoretical basis for the study was elaborated by a **detailed literature review**. Many studies exist on the theme “women and ICT”, whether they directly treat identification and analysis of best practices or they treat the situation of women working in the ICT sector, they are of great importance and have constituted an important reference guide for the study. The literature review supported:

- The identification and definition of concepts and indicators
- The data collection phase by the identification of research questions that have guided other studies
- The analysis phase through summaries of research fields, theories and methodological frameworks (e.g. comparability of case studies, analysis of context)

Most important, the literature review gave a **detailed view on the inclusion strategies that already exist** for the promotion of women in the ICT sector: Elaborating and implementing gender strategies, action tools, targets and type of actions, outcomes.

With regard to the definition of concepts and methodologies, the literature review has been highly relevant. The concept of gender is very complex. Gender is not synonym to women, and gender does not mean solely biological differences of women and men. The concept gender expresses on the one hand, that different roles are attributed to women and men in society through power relations between them, and on the other, that these power relations are culturally determined. Implemented in a specific culture or sub-culture, the concept enquires on the differences between women and men taking into account that these are part and depending on this specific culture. **ICT professions can be viewed as “gendered” and must be studied as such.**

Even though the employment conditions in the ICT sector seems to contain a variety of different obstacles to women, many and in the future more and more women will hopefully be making career in an ICT organisation.

The current employment situation cannot be qualified as ideal, for practical and psychological/cultural reasons. Stereotypes are still strong and organisational options implemented by ICT companies can discourage even the most passionate. Job announcements are not always neutral and even though most positions are accompanied by the title M/F, the job descriptions contain clear indications for addressing a male profile. Once the job is acquired, other obstacles, such as the working environments which are very masculine are to be surmounted: frequent evaluations of their capacities, exclusion of informal circles and therefore exclusion from crucial information networks and knowledge share, and sometimes even sexual harassment. The promotion and access to higher levels and positions still seem very difficult and again, due to stereotypes and organisational reasons.

There are multiple and diverse examples of masculine organisational and social cultures and behaviour, some of which implicitly or explicitly served to exclude or marginalise women.

Neither 'technology' nor 'gender' are fixed or immutable, but are dynamic and socially located. The gender/technology relation, too, is more complex than that of simple participation or exclusion.

All studies recognise women who are interested or put off working with computers, but who actively engage with technology, enjoy technical work, and want to remain in it.

Leaving aside for the moment questions of whether the project of attracting and retaining women in IT is a valid and a valuable one, it is quite clear from the consulted studies that more than twenty years of public and private policy interventions appear to have had little impact on the rate of women's participation in the profession (although it is arguable that they may have had some positive impact on the *nature* of women's jobs in IT)

Almost all literature consulted present recommendations which can be summarized as follows:

1. **Change management and gender equality:** the process of establishing gender equality in the workplace implies complex change that is affected by various internal and external factors, representing both opportunities and constraints. Different strategic options are available to foster and bring about equality, for example, an incremental approach, where existing practices are improved, or a more radical approach requiring change on a broader scale.
2. **The following critical elements are "a must" for gender equality:**
 - a) Monitoring (important for organisational learning).
 - b) Embedding equality in an innovative HRM approach so that all activities and areas of the organisation are covered.
 - c) Addressing organisational culture and behaviour.
 - d) Through social partnership, involving all the actors in the organisation.
 - e) Embedding equality in other organisational change strategies.
3. **Proactive Measures.** Lessons learnt from several studies on Gender and ICT around the world tell: *Women do not benefit equitably from development projects unless special efforts are made to identify their situation and needs and effective action is taken to incorporate their participation....As women do not enter the world of the project on an equal basis, special efforts are needed both to ensure their entry and the possibility of receiving equitable benefits from the project. This is essentially the outcome of the socio-cultural context, in which women are frequently disadvantaged by culture and concomitantly by inequitable access to all kinds of resources*³. As a consequence

³ See Nancy J. Hafkin "Are ICTs gender neutral? A gender analysis of six case studies of multi-donor ICT projects" (Washington DC; InfoDev, 2002)

proactive measures to ensure gender-balanced participation are particularly needed for IT projects. Which measures are undertaken must be drawn from a gender context analysis, in which needs are defined.

4. **Gender Awareness** Experience highlighted in gender studies show that women-only participation in project design and implementation is not guarantee of effective and meaningful incorporation of gender aspects of the particular issue or area. Thus, it is important to ensure that such people, whether they are women or men, are gender aware.
5. **Decision Making** According to the studies women's equal and active participation in the formulation of the strategies ensures that policies address the priorities and needs of women. Therefore, more projects should promote women's participation in the drafting and implementation of ICT policies. Women should significantly participate in project planning, implementation and evaluation for all levels of decision-making. Women's participation in project teams does not necessarily ensure gender consideration.
6. **Goals and objectives:** As a result of the analysis of the impact of the different ICT projects, it is clear that without setting specific gender-aware goals and objectives, project outputs of equal participation and benefit for both women and men cannot be expected. For all projects in which goals were gender-neutral, the planned activities, outputs and proposed indicators in the project evaluation were gender-blind. Setting objectives and goals in a gender-aware manner is key to increase women's participation but to identify men's needs, and therefore to highlight the need to target men too.
7. **Access to ICT:** There are different levels of maturity among the regions in Europe. Women's access to ICTs is the most common gender and ICT issue tackled in the National/Regional Projects of the new accession countries. Studies on gender equality highlight that including activities for developing local, online content reflecting women's realities, enhances access to ICTs in all its forms (training, education, infrastructure). *"The truth is rather that ICT initiatives will not be appropriated unless they also deliver information that is useful and relevant for the end-users, and where the end-users have the capacity to act on it"*⁴ The studies on gender equality encourage the definition of proactive measures to strengthen women's interest and appreciation of ICTs, including through increased number of female trainers who can serve as models, delivering women-only courses, recruiting women through promotional initiatives and so on.

The literature review has followed a thematical structure, reassembling relevant and directly-linked input for the specific purpose and area of the study.

2.3.1 Defining gender equality in the ICT sector

Gender equality: *The concept that all human beings are free to develop their personal abilities and make choices without limitations set by strict gender roles; and that the different behaviours, aspirations and needs of women and men are considered, valued and favoured equally.*⁵

Gender equity: Fairness of treatment on the basis of gender, which could mean either equal treatment or treatment that is different but considered equivalent in terms of rights, benefits, obligations and opportunities.

⁴ See Primo, op.cit.

⁵ *Promoting Gender equality in the workplace.* European Foundation for the Improvement of Living and Working Conditions. 2002. (p. 2)

Equal opportunities for women and men: The absence of barriers to economic, political and social participation on grounds of sex.

Equal treatment for women and men: The absence of discrimination on grounds of sex, either directly or indirectly.

Gender mainstreaming : Not restricting efforts to promote equality to the implementation of specific measures to help women, but mobilising all general policies and measures specifically for the purpose of achieving equality by actively and openly taking into account at the planning stage their possible effects on the respective situation of men and women (having therefore a gender perspective). This means systematically examining measures and policies and taking into account such possible effects when defining and implementing them. The promotion of equality must not be confused with the simple objective of balancing the statistics: it is a question of promoting long-lasting changes in (various areas of life and whole society so to ensure) demography and pluralism⁶

Gendered ICT professions: ICT seen as a field of profession, the main actors of this field behave following certain gendered social codes, taking certain social positions and these positions are supported by institutional structures.⁷

- On an epistemological level of ICT as subject of knowledge production of Technology, the gendering of the sector privileges limited access and a certain image of technology that corresponds to certain actors.
- This again causes the development, elaboration of the same and new artefacts.

Nomadic career: The expressions “nomadic career” or “boundary less career” illustrate these new forms of professional trajectory, in which work relation is based on the development of employability as a counterpart of performance and flexibility, whereas the traditional work relation exchanges job security against loyalty.

Glass ceiling: “glass ceiling”, expression often used to characterise the obstacles faced by women when they reach a certain level in their career.

The leaky pipeline According to UNESCO’s 1996 “World Science Report”, the way women progress along the pathway of a scientific career is rather like the way water moves along a pipe with holes in it: simply pumping more women science graduates into the system will not lead to an even spread of women in scientific jobs. Having obtained their science degree, women frequently encounter obstacles in their career, and this results in women being seriously under-represented in scientific posts.”

Gender Ghettoisation: a process noted in a number of SIGIS case studies whereby women are tending to be undermined by a form of gender essentialism

2.3.2 ICT professions

The classification of ICT professions is represented by different criteria in the literature. In some cases, it is difficult to distinguish between being a “professional” or an “advanced user”, more in many emerging occupations in the information society, in which technical ICT skills and business skills are more and more required.⁸

⁶ European Commission’s Communication on mainstreaming

⁷ *Frauen- und Geschlechterforschung Informatik*. Author: Britta Schinzel. Institut für Informatik und Gesellschaft Freiburg. Manuscript unpublished.

⁸ *WWW-ICT - Widening Women's Work in Information and Communication Technology*

Women working in IT professions entered their work mainly through a computer science education, and this is still the main entry route for professional jobs, for example, in development, programming, design work, and project or business management.

Studies on Women in ICT professions show, that they are **generally very much attracted to technical work and enjoy performing it**, on the contrary of many existing stereotypes on women's "untechnical minds". Many women report that the use of problem-solving skills was one of the most satisfying aspects of their work because they see this as creative. For some, creative work means being engrossed in coding and programming; for others, it meant designing and developing a website or service, or developing an overview of a project through their project management work.

The following summarizes the existing categories of ICT professions encountered in the literature:

Job title related to ICT field	Job title related to level of responsibility	Job title related to ICT field and level of responsibility
Software developer, Programmers, Analyst, IT Consultant, System/sales engineers, Organisation, Content, Design, Programming, Technical, System Administrator, Operating systems developer, Applications developer, Analyst programmer, Info-broker, Web designer, ERP consultant, Help desk specialist, Call center consultant, ICT Development Work, Property Research/Network Support, IS Field Support Engineer, PC Support Analyst	Director, Top-management, Project Manager, Project Officer, Project Assistant, Students, Trainee, Project management, Business management	IT Support, Software Engineer, Project Manager, IT Manager, Web developer, Director, Process Manager, HR Manager, Research/Lecturing, Software project manager, Network manager, E-commerce project manager, ICT Manager, IT Operations Technicians, IT User Support Technicians, IT Support and training officer, ICT Help Desk Manager, PC & Networking Support Officer, Customer Services Supervisor, IT Trainer Assessor, Technical Director, IT Support Desk / Helpline, ICT Applications Tutor, Senior PC Support Analyst, IT Technician, Computer Support Officer, Community Education Team Leader.

2.3.3 Employment conditions in IT

IT professionals are typically male, young (in their mid twenties), and without domestic responsibilities. **The majority of women working in the sector are also most likely to be young and without children.**

Employment is predominantly on full-time permanent contracts. **Part-time employment and flexible working arrangements are very much an exception in this sector**, though they are more common among female employees. Full-time working often means long working hours. Project work can be unpredictable, involving tight deadlines, so evening and weekend working is not unusual. Working hours certainly often exceed those laid down in employment contracts. Indeed, long hours are often self-imposed by the employee. In practice, they can arrive at and leave work according to their own preferences, and this tends to translate into extended working hours. It is perhaps not surprising that, given these kinds of working patterns, the sector employs predominantly young men who seem able (and apparently willing) to provide the total availability needed by their employers.

In terms of employment and industrial relations, the IT sector is a world away from traditional companies. Even in countries with strong collective bargaining frameworks (for example, Belgium, France), **employment relations are highly individualised**. This has been described as a 'non-union human resource model'. At its centre is a lack of trade union membership and collective bargaining, underpinned by corporate antipathy or hostility to unions. Equally important is employee indifference to unions which are seen as irrelevant to their already relatively privileged circumstances. The fact that computer services employees are young, and highly skilled, and up to now operating in a tight labour market where unemployment and labour

market disadvantage are unknown, militates against trade unionism. Even in countries where union membership is high, membership figures for the sector (which are difficult to obtain) seem to be comparatively low. **Collective employee relations are replaced in computer services by individualised employee relations, personnel management by human resource management.** Pay and conditions are agreed bilaterally (and often kept confidential from other employees). Pay is based partly on performance assessed through individual appraisals carried out periodically by line managers. Training and development needs are usually assessed at the same time. Communication – not consultation - is carried out on a one-to-one basis between employers and employees.

The teams of IT professionals (development staff, project team leader or project manager...) may be temporary, operating only for the duration of the project, or semi-permanent, and they may also consist of interdependent workers with complementary skills, or individuals with the same skills working independently of one another but within a group known as a team. **Previous research has suggested that women are often under-valued in interdependent teams, where their technical skills are taken for granted relative to the interpersonal or team-working skills of their male counterparts**

The main issues highlighted in the literature on this specific theme:

- It is a sector with clearly differentiated characteristics: profile of the professionals, nature and characteristics of the offer, nature of the employment and the industrial relations.
- Worklife balance seems to be a key issue that affects not only women and but in general professionals with “family/domestic responsibilities”
- Non-technical skills, such as communication, interpersonal and team-working skills are essential to move forward within the sector. It seems they are skills where women are under-valued.
- Women are under-represented in senior positions in the ICT sector.
- The lack of formal and transparent progression policies and practices is a clear barrier for women to progress.
- Contradictory messages come from the sector: on one hand, it is a culture that awards performance but on the other hand, it is a culture of staying long working hours and a culture of “promotion through visibility”
- Training is a key issue within ICT. It is a key issue to progress (constant technology changes, constant product changes...) and it is key issue to enter the sector for people coming from non-ICT technologies. There are many people working on ICT with non-ICT degrees.

2.3.4 Situation and perception of women working in the ICT sector

Equality for women and men is generally not perceived as an ethical issue. Different studies have shown that the promotion of equality between women and men in the ICT sector shows and brings benefits to women, men and the company/organisation as a whole. **Organisational change has the potential of overcoming gender segregation if the ownership and responsibility for equality is part of ALL employees, concerning the company/organisation as a whole, and provided that gender equality is explicitly considered in planning and implementing change.**

Occupying less than 30% of ICT sector jobs across the EU, women are significantly under-represented in the sector. Despite in general terms, employment in the ICT sector has been growing very markedly across the EU in recent years, there has been a fall in women’s share in the taskforce.

More women are employed in ICT jobs in the non-ICT sector than within it. Indeed, the proportion of women in ICT occupations (all sectors) has actually fallen in recent years, down to 22% in 2000, compared to 25% in

1995. The percentage varies by occupation, from just 8% in software engineers to 54% in the lower skill level computer operator group. (Connor et al. 2001, p. 26).

This suggests that the occupational segregation of women within the IT sector persists: women have traditionally been clustered in data entry jobs and in hardware assembly work, and these data imply that this continues to be the case.

The same level of education than men and comparable qualifications are not enough to guarantee a woman's career in informatics.

Imbalances in education and training

Women are underrepresented in science, technology and engineering education. There are concerns that it is a growing rather than declining problem. Imbalance is observed both for ICT diplomas as for vocational training.

The image that students have of ICT professions is not very precise, it is made of stereotypes picked up in the media, images coming from the leisure use of computer, representations suggested by the parents and coming in particular from their professional context.

An aspect to mention is that while participation of women in Higher Education has been increasing, it has hardly changed in computer science or many technical disciplines.⁹

The main issues highlighted in the literature on this specific theme:

- Imbalance starts in the education. Stereotypes still exist and lack of models and motivation drivers do the rest.
- Organisational change is to be considered to ensure gender equality. It is not only the working conditions that affect both men and women but the organisational culture that is to be tackled to ensure proper gender mainstreaming. The so-called male organisational culture is to be revised.
- High degrees of flexibility, lack of clear priorities at work, lack of support from hierarchy and dependent working conditions are characteristics of the ICT companies.

2.3.5 Research fields

The following is a summary of the research fields relevant for gender research in the ICT sector:

1. Research field: the workplace

The analysis of this research field takes **into account factors as working hours, working place, focusing on new work models and impact of flexibility strategies, salary patterns and conditions**: are women satisfied with their salary; are there any inequalities with regard to salary conditions? What makes the Multimedia Company attractive for women workers?

Research tools for this field are: analysis of vacancy announcements in the multimedia sector, business analysis of the sector and its employment potential, quantitative analysis of women working in the multimedia sector, taking into account specific professions and sectors linked to certain qualification.

Work in ICT is based on projects. In web design, project teams include a variety of skills. In software development, teams reflect a well defined division of labour. Working time arrangements are in many cases

⁹ Balka E. and Smith R. (Eds.) (2000), *Women, work and computerisation: charting a course to the future*.

rather flexible, hence individualised. There is a tacit agreement to balance long hours versus flexible arrangements. The rhythm of work is dictated by project deadlines and completion of project tasks.

2. Research field: Qualifications/Competences and ICT Organisations

The digital era and the multimedia sector have determined new profiles of qualification and competence requirements. This research field has implied a great amount of different themes and subjects, studies and debate focusing on the meaning of “hard skills” and “soft skills”, discussing gender-specific determinations and consequences of one or the other: **A difference has to be made between the “competence of using technologies” and “developing or designing new technologies”, as well as the implications of these two related to new requirements and qualifications, modifications of work structures and the establishment of new jobs.**

Working conditions and working time not family friendly, therefore IT employment rejected or prematurely quitted. Few role models exist for women in senior ICT positions. Gender regimes in organisations signal “women’s jobs” and “men’s jobs”. Women over-represented in low-paid areas of ICT. Women’s skills undervalued when utilised in ICT projects. “Laddish” groups and networks exclude and deter women.

A mentor’s presence seems to influence women’s careers. Networking and role models are important ways of empowering women in ICT.

3. Research field: Career and labour market

For all professions in the multimedia sector the following applies: although women have progressed in IT qualifications, they are still highly underrepresented in Top positions. **Why is that so, and what can companies do to overcome this fact? Are there any women-specific careers?**

Women like the technical side of ICT. They describe it as being a challenging work, fascinating, they find valuable the possibility of working with customers, and represents an open world which offers jobs in a respectable area and status. Job security is a strong consideration as a “ticket to economic opportunity”. Although there are examples of women who drifted into computing by chance, women ICT professionals see the mix of technical, human and organisational skills as the most positive aspect of computing.

Within the software industry, inter-company mobility is seen primarily as a way of acquiring new knowledge and growing in one’s profession. In other cases going freelance offered the opportunity to have more flexibility and time for children and family.

Women more likely to be in ‘non-standard’ employment: part-time work, freelancing, teleworking from home. Benefits include increased ability to balance paid work with domestic responsibilities. Disadvantages include loss of training, learning, development & career opportunities. Labour market regulation affects extent and terms of non-standard employment. Women’s skills undervalued in general.

4. Research field: Social and institutional arrangements, cultural background

The societies and cultures determine the scope of the explicative variables defined under different clusters: Gender division of labour and cultures; welfare regimes; the structure, functions and institutions of education and training systems; labour markets and labour market regulation; gender equality environment; technological cultures; and interest in ICT and attitudes towards ICT.

5. Research field: Family sphere

Family structures and women’s roles vary across countries and welfare regimes, but overall women continue to take primary responsibility for domestic labour, including childcare and other caring functions. Socialisation of girls discourages interest in scientific and technical issues.

This resonates with research stressing the importance of the mother as a role model and source of encouragement for girls

6. Research field: Training and Education

Girls and women are under-represented on ICT courses in school & beyond. In the past, girls were discouraged from and reticent about participating in S&T subjects. Boys were encouraged to dominate the use of computers. Boys are channelled into exploratory interest in computing (games), girls into utilitarian approaches (including communication).

The great diversity of entry routes into computing confirms the need for innovative cross-disciplinary curricula.

Learning is an integral part of working in software development and web design. The lack of training opportunities has in some cases become a critical issue for women who interrupted their career.

Informal learning is part of 'domestication' processes in which ICTs become embedded in everyday life. In this sense, informal learning is also 'social learning': interest and competence in ICTs evolve within complex interactions between education, work and leisure.

6. Research field: Learning environment

Several studies have analysed the impact of women-center learning environment in enhancing career opportunities for women technicians. Only women training environment offer better results than mixed environment. Results were measured in terms of: number of women that went on to pass the final examination process associated to the training and in terms of increase confidence in work and in relationship with colleagues

Support measures are essential to ensure access of women to training sessions: open access to study time, use of practice network, help with exam preparation, mentoring, travel expenses, leaves...

2.3.6 Process of elaborating and implementing gender strategies

The organisational culture is often defined as being a strong lever for change for the achievement of gender equality in the ICT sector: gender equality is very often based on a organisational framework in which the ethical goes hand in hand with business cases.

In summary, what can companies do?¹⁰

1. A commitment from the top to gender equality, diversity policies and dignity at work – integrated into strategy, reporting mechanisms and performance review systems;
2. Monitoring, evaluation, auditing, statistics, surveys, staff consultation, and analysis of policies;
3. An attractive work environment, which encourages innovation, offers career development opportunities, values output rather than presence and brain hours rather than body hours;
4. A high degree of transparency and two-way communications, merit-based open recruitment, promotion and staff review procedures;

¹⁰“Women in Industrial Research. Good practices in companies across Europe”. European Commission. 2003.

5. Flexible work schedules, opportunities for distance working if appropriate, alternatives to excessive travelling at certain times in the life cycle, through use of new technologies or reassessment of essential job features;
6. Sound work/life balance policies: maternity and paternity leave, childcare facilities or subsidised care, emergency leave to care for sick dependents (if not adequately covered by legislation);
7. Partnerships arrangements to encourage young women into science with local schools, colleges and universities, offering internships, fellowships, role models, mentors, speakers and work experience and;
8. Modern role models, networking and mentoring schemes.

3 PART II: IDENTIFICATION AND SELECTION OF THE BEST PRACTICES

The following chapter retraces the results of the field studies and the desk based research. It summarizes the different steps undertaken to select the final best practices with have been analysed in detail by means of the in- situ visits:

1. Identification and mapping
2. Pre-selection email survey
3. Selection by means of telephone interviews

3.1 Identification and selection of the Best practices

3.1.1 Mapping

3.1.2 Selection procedure

Both "IT services provision" and "ICT product based manufacturing" companies have been selected for the study. At a first stage, only large companies were selected for further analysis. Following the common European Union criteria, large companies are those with more than 250 employees and 50M euros of annual turnover. In some countries, the average size of the ICT companies is far from those figures and it was therefore decided to perform an analysis of the size and characteristics of the ICT sector within each EU Country. With the results of this analysis in mind, the initial selection list per country was completed with some companies below 250 and/or below 250M Euros but within the average size of the country.

From the OECD definition of the ICT sector and the statistical classification of economic activities realized for the selection of ICT organisations based on its **main activity area** follows the OECD definition as "manufacturing and services industries that capture, transmit and display data and information electronically". This definition is applied specifically within the European Union by the EUROSTAT common statistical classification of economic activities, the NACE code.

On the basis of those two classifications, the mapping process consisted in the identification of the **major European ICT public and private organisations**. Several sources of information have been used to select representative ICT organisations in EU25, with special attention to the New Member States because of the difficulties in identifying large ICT companies in these regions of Europe. Among others, special importance has been put on:

- EU projects: CORDIS
 - By participation lists of contracted projects of IST calls on areas such as: Applied IST Research addressing major societal and economic challenges; Communication, computing and software technologies; Components and Microsystems; Knowledge and Interface Technologies; Future and emerging Technologies; Research Networking Test-beds and General Accompanying Actions.
- EICTA: European Information & Communications Technology Industry Association

- ECTA: European Competitive Telecommunications Association
- Wireless World Research Forum
- OMA: Open Mobile Alliance
- KOMPASS Database
- Europages web: www.europages.com/
- Chambers of Commerce
- National Contact Points
- Innovation Relay Centre Contacts
- ICT and Women Associations
- Investor pages
- CARSA knowledge and contacts in ICT companies

The **size** of the company has been measured by its overall turnover and the number of workforce. To identify leading organisations of the European ICT sector, more than 250 employees, and the annual turnover exceeding 50 million EUR, were considered as most relevant. However, after analysing the size and characteristics of the sector in the different countries, corrective measures were applied. The average size of the ICT sector was used as reference and the concept of "large" was redefined taking into account the context of each country.

One important consideration for the selection of organisations **per country** was the size of the ICT market, reflected in the following table, which included population, Gross Develop Product, ICT expenditure, number of ICT companies and number of person employed in the ICT sector (manufacturing and services) per country¹¹.

	POPULATION 2005	GDP per capita in PPS 2005	ICT expenditure (% of GDP)	Number of enterprises (units)	Number of persons employed (thousands)
Belgium	10.445.900	118,4	6,4	14031	162,5
Czech Republic	10.220.600	72,7	7,1	23434	97,922
Denmark	5.411.400	122,8	6,7	9741	128,3
Germany	82.500.800	108,4	6,2	67062	931
Estonia	1.347.000	55	8,6	1021	12,887
Greece	11.075.700	83	5,1		
Spain	43.038.000	98	5,2	40290	427,2
France	60.561.200	109	6	68007	812,5
Ireland	4.109.200	138	5,4	2859	68,1
Italy	58.462.400	101	5,3	112416	714,5
Cyprus	749.200	85	0		
Latvia	2.306.400	46	7,6	1178	11,145
Lithuania	3.425.300	51	5,8	904	14,055
Luxembourg	455.000	231	0	1547	9
Hungary	10.097.500	61,8	7,1	1608	104,243
Malta	402.700	69	0	668	7,316

¹¹ Data obtained from EUROSTAT.
http://epp.eurostat.ec.eu.int/portal/page?_pageid=1090,30070682,1090_33076576&_dad=portal&_schema=PORTAL

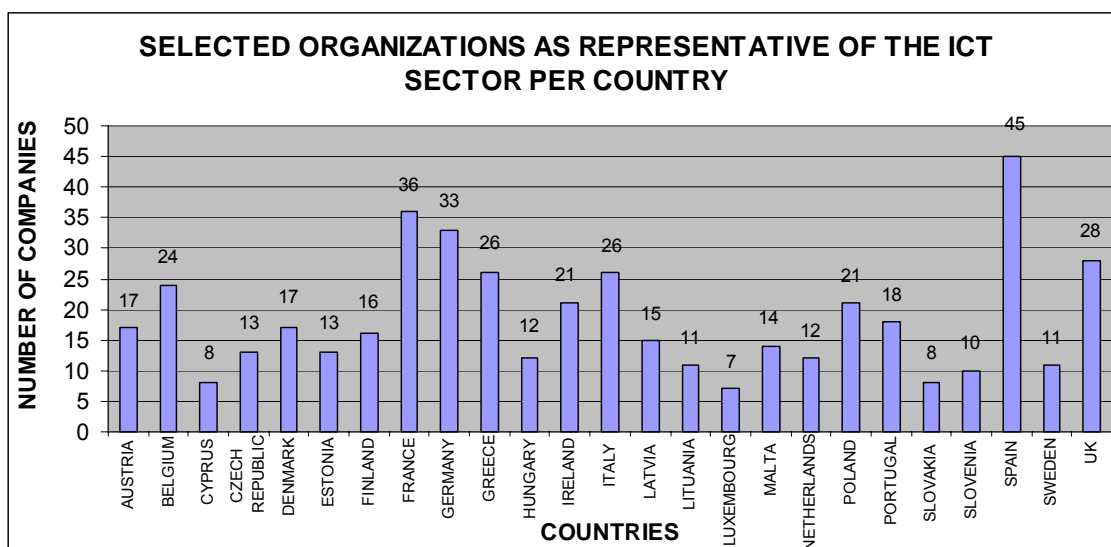
Netherlands	16.305.500	123	7,5	22330	247,6
Austria	8.206.500	122,6	6,4	12267	137,4
Poland	38.173.800	50	7,2	30793	125,761
Portugal	10.529.300	71	7,1	7486	94,4
Slovenia	1.997.600	81	5,2	2040	9,745
Slovakia	5.384.800	54	6	1608	39,951
Finland	5.236.600	113	7,1	8388	144,3
Sweden	9.011.400	119	8,7	34532	290,5
United Kingdom	60.034.500	116	7,9	160606	1386,2

And finally, the **representativeness** of the organisation in the country was considered based on the activity, the image and presence across more than one country.

462 organisations were selected as **major European ICT public and private organisations.**

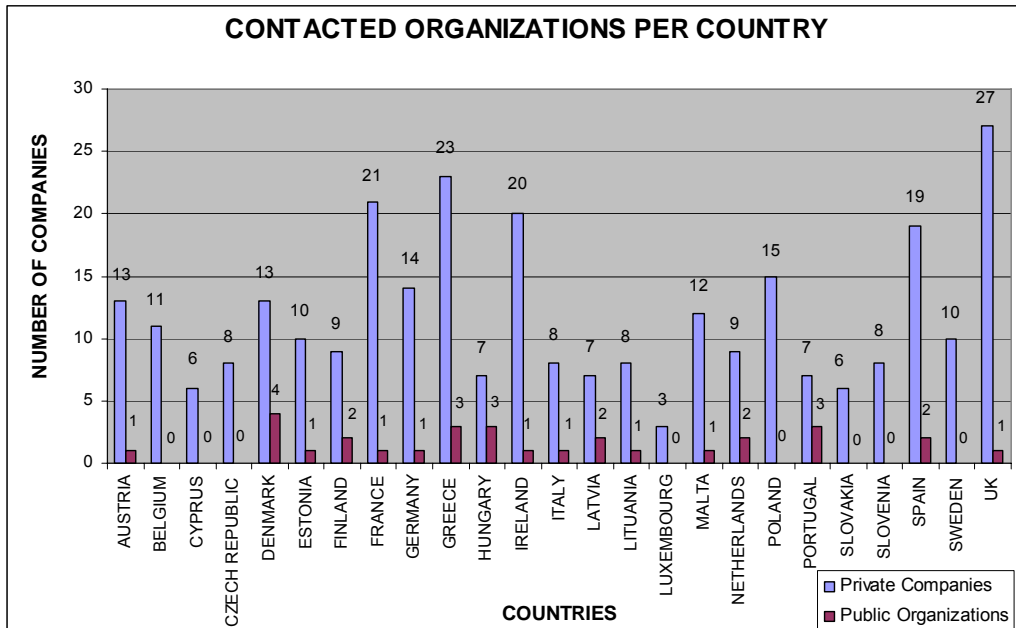
For each company, the following data was collected and assessed: profile (public/private), overall turnover, total workforce (if available % of female workers and % of female workers in scientific/technical positions), Company structure, organisation of work, areas of intervention and employment status of workforce (full time/part time, permanent/ temporal).

The distribution of the organisations selected per country is reflected in the following graphic.



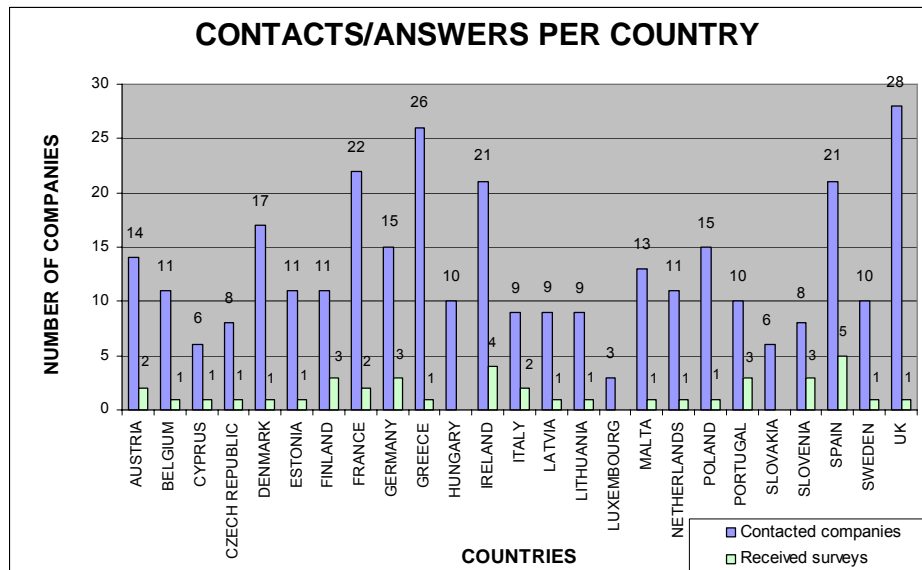
One of the most time-taking tasks was to identify the relevant contact person, generally the Human Resources representative for Diversity and Equal Opportunities. This was done by telephone enquiries. The personal information collected included phone number, position, location and email address. For multinational companies implemented in more than one of the 25 MS, the selection of the right contact required further investigation on the structure of the organisation, which was realized through desk-based research, telephone interviews and email.

After this first data collection process, the initial list of 462 companies was reduced to 324. Low availability to actively participate in the study on behalf of the company and the impossibility to find the appropriate contact person were the major causes for such reduction. The distribution of organisations per country is reflected in the following graphic.



3.1.3 Email survey

From the 324 organisations and companies which were invited to participate in the email survey and to complete a questionnaire with information on their gender policies, 40 complete answers including refinement of answers by phone have been obtained. The comparison per country among organisations contacted and answers received is reflected in the following graphic.



The questionnaire prepared for the email survey was designed to collect both qualitative and quantitative information on each organisation.

The qualitative part of the survey includes a set of open questions to get a deep view on the “gender strategy” in the organisation:

- Whether a defined Gender Action Plan exists and whether it is systematically implemented or not,
- If there are specific measures on work-life balance, training, promotion, recruitment and communication that the organisation has in place

The survey has also collected quantitative information on women participation in different positions and levels within the organisation. The survey was sent by email first, and it was then reinforced by telephone calls when information given was incomplete.

The analysis of the answers received indicated that for some of the companies, additional information was needed to completely understand the scope of the measures. Apparently, gender as a concept is not homogeneously treated. In some cases responses highlighted apparent inconsistencies as even though specific gender measures were not identified and there was no gender policy in place, the participation of women in the different positions was well balanced. Investigation on this issue indicated that measures exist but they are not conceived as gender relevant or gender related. For example, a company had indicated that no gender strategies are needed as women are fully integrated in the company. The ratio of women was very similar to men's ratio. A further analysis had shown that working conditions are including measures (part-time, flexible working hours, training leaves,...) that favour integration. Nevertheless these measures were not conceived as gender relevant by management. In many cases, these are young companies with young and very competitive staff.

To tackle the above mentioned challenges, a second short survey using closed questions, *refinement survey*, was sent, addressing companies and organisations with no concrete and/or official gender or diversity action plan, with the objective to investigate into measures that are favourable for an even gender distribution. This survey helped the company to detect measures in the areas of Work Life Balance, Training, Recruitment and Communication. In order to identify innovation, an open question has been formulated "What makes your company attractive to women?"

Both surveys are attached to the Annexes.

3.1.4 Selection process and criteria

The objective was to identify, from the results of the survey and the information from the mapping activity, mayor European ICT public and private organisation which show original and effective measures for an even gender distribution, equal numbers of women and men working at all levels, in all ICT professions and in every position of the organisation.

The final selection list of organisations fulfilled the following selection pattern:

- Gender policy vs ad-hoc measures balance
- Thematic coverage of the measures
- Geographic distribution coverage
- Sectorial balance
- Balance in the nature of the organisations

The selection focused on organisations implementing a number of positive discrimination measures, as means of achieving a more even gender distribution. The selection process gave priority to organisations which **declare** the application of **defined gender policies** in the organisation's strategy. This gender policy was, in some cases, implemented as part of a general Gender Action Plan, while in other cases, it was implemented as an independent procedure.

Geographic distribution: The selection criteria focused on obtaining the widest possible representation regarding geographic area, paying a particular attention to relevant organisations located in the New Member

States, where the application of new Human Resources management methodologies and practices is not yet always the norm.

Organisation activity: The selection process focused on collecting best practices experiences in organisations developing a wide spectrum of activities in the ICT sector, so that organisations in IT Services, IT Software Development, IT Consultancy, Telecommunications, Hardware and Electronics Manufacturing, and Research and Development, among others, **are represented in a balanced way.**

Nature of organisation: The selection process has also considered the different nature of organisations, like public organisations, private companies or mixed organisations.

A selection grid has been defined based on the selection criteria and the results of the survey. The following are the main criteria guiding the selection, ordered by priority:

1. **Organisation's commitment to an even gender distribution:** The organisation declares the implementation of specific measures, internal policies, positive discrimination measures, gender policies in order to reduce the gap women/men under different perspectives: participation in management and technical activities, the use of non-sexist language, equal payment, company child care, economic facilities for dependent people, among others.
2. **Workforce:** Overall % of female workers and % of female workers in managerial positions. Organisations should have an increasing workforce gender distribution at all levels and positions, although specific characteristic of the organisations like country or activity must be considered.
3. **Country:** The selection process pays particular attention to the identification of relevant organisations in NMS.
4. **Novelty of the best practices:** Importance will be given to get good practices and information from organisations that are not yet known or recognised as "gender friendly", because no studies, publicity or publications exist on them.
5. **Company structure and organisation of work:** The organisation implements advanced human resources management strategies in order to make their organisation "an attractive place to work", with the corresponding annual budget and resources, and favourable internal policies and practices directly or indirectly promoting gender equality.
6. **Company Profile:** The size of the company will be measured by its overall turnover and the number of workforce. Large organisations and companies tend to present clearer and more visible working structures, internal policies and management procedures. But as a result of the survey and the literature review, the study will also consider companies with lower turnover and number of employees in some exceptional cases (priority on the best practice and not on the size of the company, particularly in the case of some NMS), in which flexible and relevant innovative measures can be found. This is due to the fact that the criteria of "large" actually depends on the size of the ICT sector in the region or country.

The selection grid included the following information:

- Organisation Name
- Organisation Activity
- Type of Organisation: Public, Private or Mixed
- Country
- NMS: Yes/No

- Number of employees: 0-250, 250-500, 500-1000, >1000
- Annual Turnover (M€): 0-50, 50-100, 100-500, >500
- % of women workers over total workers
- % of women director over total director
- % of women head of sector/department over total head of sector/department
- % of women Team Leader/Executive/Manager over total Team Leader/Executive/Manager
- Gender Measures: the organisation declares the implementation of specific gender measures.
- Gender Perspective: Organisations' point of view from gender perspective.
- Gender Parity Benefits: Declaration of benefits brought to the organisation by the implementation of gender policies.

The results of the email survey and the comparative study, under the defined selection criteria, had selected the following ICT organisations for further investigation (telephone interviews):

Organisation Name	Oracle Belgium & Luxemburg	TeliaSonera Finland Oyj	Fraunhofer-Gesellschaft	Hannover University	Celestica Valencia S.A.	CORITEL	Motorola Polska Electronics	ERICSSON ESPAÑA, S.A.	Univ of Malta (UoM)
Organisation Activity	IT Software	Telecommunication	Applied research	Research and Studies	Manufacturing Services Provider	Information Technology Services	IT, Software Center	Telecommunications	Higher Educ and research
Type of Organisation	Private	Private	Mixed	Public	Private	Private	Private	Private	Public
Country	Belgium & Luxemburg	Finland	Germany	Germany	Spain	Spain	Poland	Spain	Malta
NMS	No	No	No	No	No	No	Yes	No	Yes
Number of employees	250-500	>1000	>1000	>1000	500-1000	>1000	500-1000	>1000	500-1000
Annual Turnover (M€)	100-500	>500	-	100-500	100-500	>500	-	>500	0-50
% of women workers	23,57%	-	30,58%	39,96%	41,30%	-	8,45%	27,34%	-
% of women director	9,52%	-	1,39%	0%	0%	-	0%	0%	-
% of women head of sector/department	15,79%	28,4%	7,34%	40%	0%	-	28,57%	10,53%	-
% of women Team Leader/Executive/Manager	18,18%	-	-	16,42%	13,04%	-	33,33%	15,79%	-
Gender Measures	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gender Perspective	No discrimination based on gender	Our aim is to favour women in recruitment cases Get and retain good candidates to challenging tasks	Respect for the needs of dual-career couples	Support for the equal representative, providing the Gender Action Plan (called "Frauenförderplan")	Company believes and promotes equal opportunities		We are trying to struggle with the stereotype, that software engineer must be a man.	Elimination of Discrimination Employees with the same qualifications, experience and performance receive equal pay for equal work with respect to their relevant comparators.	Promote Balance
Gender Parity Benefits	Employee Satisfaction	28,4 % of our managers are	A balanced mix of men	With a percentage share of 33%	Provide a good balanced		Great reputation	Equal opportunities perceived by all	More

	with flexible work schedule	women	and women in the research teams, a proactive culture of equal opportunities as well as mentoring programs	female professors in new appointments we have once again exceeded the target mark of 25%.	team		among young people, as a company offering equal chances for everybody Small rotation which prove the fact of our company as a great employer.	employees	awareness
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Organisation Name	Webmedia AS	Tekla Corporation	Iskra Avtoelektrika d.d.	Iskratele	INESC PORTO	SerCom Solutions	VA TECH EZ a.s. (Siemens)	Radio Telefís Éireann (RTÉ)
Organisation Activity	Software development and consultancy	ICT (Software) business	Electronic controllers for automotive industry	Telecommunication	Research and Development	Outsourcing Services	Control systems design and implementation	Public Service Broadcasting
Type of Organisation	Private	Private	Mixed	Mixed	Private	Private	Private	Public
Country	Estonia	Finland	Slovenia	Slovenia	Portugal	Ireland	Czech Republic	Ireland
NMS	Yes	No	Yes	Yes	No	No	Yes	No
Number of employees	0-250	0-250	>1000	500-1000	250-500	250-500	250-500	>1000
Annual Turnover (M€)	50-100	0-50	100-500	100-500	0-50	-	50-100	100-500
% of women workers	14,29%	29,83%	37,16%	24,39%	23,4%	34,95%	19,58%	46,83%
% of women director	12,50%	11,11%	0%	0%	0%	16,67%	0%	16,67%
% of women head of sector/department	0%	25%	0%	15,38%	10%	25%	0%	20%
% of women Team	0%	33,33%	7,63%	15,38%	10,53%	53,33	14,29%	42,98%

Leader/Executive/Manager								
Gender Measures	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Gender Perspective	In IT sector the labour market is so tight that we cannot implement any restrictions or give any benefits to certain segments. But we definitely don't discriminate anybody based on their gender.	Women have a lot of unused potential in our organisation	Our industry is based on technical knowledge, so the majority of workforce is masculine.	Because it is not important what kind of gender you are, you just need to have appropriate qualification.	A defined gender policy has never appeared as necessary because we always repudiated any kind of subordination or special treatment, assuring that no collaborator would receive a less favourable treatment.		"We did not consider the implementation due to specific activity of the organisation"	Significant improvements in gender balance have been achieved in recent years and it is anticipated that further improvements will take place in the coming years.
Gender Parity Benefits	All employees are eligible to all benefits and we motivate female students to apply to our organisation.	Youthful, dynamic, successful, international company	Nevertheless we employ also females but the rate is lower		Flexible work schedule as well as the possibility of tele-working, which have been put in place with successful results.	Women have progressed here and there are two women on the Senior Management Team as well as two women on the Board of Directors.	International company, stable, with long-time tradition	All obstacles working against women being promoted have been removed. The success of this can be seen at middle management and in time will be seen at senior management.

3.1.5 Basic analysis: Telephone interviews

A total of 18 companies have been interviewed by phone and the information collected with regard to those companies has been analysed. The interviewing process has followed a general template questionnaire that was sent by e-mail to the selected companies beforehand.

This general template questionnaire (enclosed in Annex), has been constructed with the idea of collecting more in-depth information (qualitative and quantitative) of a group of high level indicators. These high level indicators were:

- Indicator 1: Gender approach and goals
- Indicator 2: The way gender mechanisms are designed, implemented and monitored
- Indicator 3: Characteristics of the best practices

In summary, the idea was to collect information on how, when, what and to what extent the gender policies and best practices are implemented in the company. The degree of acceptance/support/valorisation and degree of systematisation in the formulation of the policies and practices was also considered in the questionnaire.

Each indicator was characterised by a group of questions. In order not to predetermine answers, open questions were asked. As the objective of this phase was not to perform a statistical analysis but to identify best practices and “the most suitable” companies to visit, open questions were more appropriate.

The questionnaire was sent by e-mail. The process designed was based on receiving the answers by e-mail and on the basis of an analysis of the responses, the telephone interviews were elaborated and organised. The telephone interviews focus on widening and getting more information on specific issues that were detected.

None of the organisations fulfilled the questionnaire by e-mail. After several requests it was decided to arrange dates for telephone interview. The result of this change has been less accurate information.

The information collected on the phone was evaluated and clarification questions were solved in a second telephone interview.

In addition to the interview, desk research had been carried out and the project team had collected information on the way the company is promoting gender equality within the organisation:

- Image offered by the company on the Website
- Degree of participation of the companies and their employees in gender events
- Promotion of events and/or programmes on behalf of the companies
- Participation of the companies in National and European programmes designed to support women in ICT

On the basis of the information collected, each company was classified with regards to:

- GAS: Gender Account Score
- PLC: Personal/Professional Life Cycle

The GAS, indicated the degree of integration of the gender policy into the company strategy. The levels established were:

GAS	Explanation
0	Gender is not considered an issue.
1	Gender oriented measures are in place but they are not conceived, applied and measured in a systematic way. There is no gender strategy, but only isolated measures.
2	A gender strategy has been developed and it is been implemented. The company has got resources in place to implement the strategy.

The **PLC** is an indication of the focus and goal of the gender strategy and/or the gender oriented measures. According to literature, the professional life-cycle of the “person” and in particular, la professional life-cycle of a woman goes through the following relevant phases:

Phase	Gender Challenges
Phase 1: Education	Currently, there is a big difference between the number of men and women studying computer science and technology. Some companies are having difficulties in finding women engineers. To increase the number of women studying computer science and technology. To increase the number of women entering the academic and research careers.
Phase 2: Recruitment	It seems women dislike technical jobs. To increase the number of women appointing for engineering jobs.
Phase 3: Career Development	It may apply to both Junior and Senior Engineering development. Junior Engineering Even though at this stage, the gender gap is not so evident, measures to ensure talented women are retained in business are essential to avoid drops further on. Senior Engineering The gender gap at this stage is usually very big. There are quite a good range of reasons for this gap to exist. Measures to avoid this gap are required.
Phase 4: Management	It seems it is difficult for women to get to high management positions. Measures to avoid these difficulties and to motivate women are required.
Phase 5: Uptakes after Leaves	To facilitate the re-incorporation of employees into the engineering field after long leaves. This is especially relevant to women.
Phase 6: Maturity	It is an issue that (in most cases women) when a person gets to a certain age without any possibility to be promoted within his/her position, options like self-employment are considered. Measures to help people to assume this risk are required.

As a result of the interviewing process, for each company the following information has been elaborated.

Theme	Scope
Basic Information on the Company	Brief description of the activities and history of the company and basic data on the number of employees per profile.
Information for Indicators 1, 2 and 3	Summary of the information collected for each indicator.
Information on External presence of the companies in gender related activities	Information on the interaction of the company with external entities.
GAS and PLC	Result of the assessment as performed by the Project Team.

Several major difficulties were encountered throughout the telephone interviews:

1.- Lack of gender strategies in the companies. In every organisation, measures to support employees' career development do exist. Nevertheless, "gender distribution" is not considered as issue when formulating and implementing measures and policies.

2.- Lack of availability and written information. Except for very few cases, it has been very difficult to get information: lack of availability, lack of written documentation, lack of awareness and interest are some of the problems encountered.

3.- Telephone interviews, as the ONLY MECHANISM, are not the best way to get information. The major difficulty was to arrange telephone interviews with relevant contact persons in the organisation. None of the organisations had answered the questionnaire in written form. The objective of realizing a pre-analysis of the information received before making the telephone interview has not been successful.

In 3/18 of the companies, gender strategy is linked to the diversity strategy of the company. These companies consider achieving diversity **is a MUST to achieve innovation, creativity and growth**. Retaining talented women and making them grow constitutes the core of their strategy.

There was one company, **Motorola Poland** that has as a major challenge to increase the number of women in the organisation. Motorola strategy is clearly focused on increasing diversity in education and specifically in increasing the number of women selecting technical studies. According to the information provided, it is very difficult to incorporate women to the ICT sector due to two major reasons: lack of trained women in Poland and existing stereotypes in society that link women to childcare. Moreover, poor support is received from Government to activate change in society.

If in the case of Poland, Government is not implementing active mechanisms to activate the change, this is not the case of the other countries. In case of Germany the legislation has been and is been the motor of change. The gender policies of the University of Hannover have been pushed forward by, among other efforts, the financial support of the Government. Moreover, the inclusion of a "Gender Commissioner" figure in the German Law, was fundamental to reduce/eliminate negative perceptions to gender policies established by the University.

National Laws, like the Gender Equality Act in Finland or the Swedish Act, establish gender equality requirements that companies have to fulfil by obligation. In Telia Sonera Sweden, the plan on the Equal Opportunities Program was updated in March 2005 to meet the gender equality requirements in the Swedish Act of 1991.

One issue that has been mentioned by several companies is the fact that it is relatively easy for women to get to low management and senior positions. However, it is more difficult for women to get to high management positions. The approaches to career development, perceptions and reasons of this challenge vary from one company to the other. Nevertheless, it is a general perception that women have to be motivated in order to succeed into these positions.

IRTE from Ireland has got an adaptive approach to gender oriented measures definition. Ireland has evolved from having a low rate of women in the ICT sector only a few years ago to a reasonable balance between men and women nowadays. The company has suffered the same evolution. In RTE the number of women performing technical tasks is very high and the time has also allowed more women to be qualified to occupy senior positions in the company. Currently there is already quite a significant presence of women in high positions. The company monitors periodically balance in the number of women and men in the different positions in the company. When imbalance exists, the appropriate measures are implemented.

The perception that women are not attracted by the technical field is mentioned by several organisations. It is a fact that the percentage of women attending technical studies is low but also that there are great differences between countries. It is also a fact that when active measures are taken to encourage the

participation of women in technical fields, the results are visible. Good best practices can be found in Ireland and the results Motorola is obtaining with Diversity projects are quite effective. In case of Ireland, the mechanisms were launched by the Government and in case of Poland it is a private company that is obtaining relevant results in the number of women entering technical fields.

Several companies mentioned that the imbalance between men and women is caused by the nature of the market, which is characterised by the low number of women. Whereas some of them take an active position, others are “waiting for the situation to change” to take an active role.

There is a significant difference between gender awareness in different sites of a company. A good example is ERICSSON. ERICSSON promotes the Award on European level – “Ericsson Equal Opportunities Award” for the achievements in implementation and promotion of the empowerment of women and gender mainstreaming. Whereas ERICSSON Yugoslavia has been awarded such award for its well thought equality strategy, in ERICSSON Spain there is no strategy yet. According to the information collected, it is not been designed at corporate level. The Project Team will approach ERICSSON Yugoslavia to get an in-depth understanding of the scope of the strategy. If, differentiated features are encountered it will be selected for in-depth analysis.

Companies in Eastern Countries have adopted an active position in relation to gender mainstreaming.

Several companies mention that they are following an Equal Opportunities Policy. The way Equal Opportunities is conceived is not always the same. For several companies Equal Opportunities means Equal Treatment and that the same measures are applied in the same way to everybody. In these cases, having an Equal Opportunities Policy implies “not having a gender policy”. In other cases, Equal Opportunities means Equal Treatment but it also implies to take into account the differences when designing the measures. In this last cases, measures are “tolerance for differences” so discrimination is avoided.

In quite a relevant number of companies, “gender” is perceived and presented as opposed to “promotion on merits”. It is also the case, for young companies, that gender oriented measures are not considered of necessity.

In 2/18 cases, the introduction of gender in the research content is mentioned. For these two organisations (Univ. Hannover and Fraunhofer Institute), it constitutes a challenge to have a proper integration of gender in the research content.

With regards to the measures and practices in place, work-life balance measures and continuous training are present in most of the companies.

In the largest organisations, General Electric or Fraunhofer Institute, measures oriented to actively promote and support women’s career development are in place. In case of General Electric, it is interesting to see how “networking” is promoted as a key instrument for women to move forward. According to literature, networking is one of the weak points of women. General Electric recognises its importance and is obtaining very good results.

On the basis of the information collected, the challenges that the companies are facing are:

- To achieve the right balance between the implementation of even gender policies and the merit-based recruitment and treatment.
- Women don’t feel attracted to the IT industry
- Motivation of all employees
- Retaining of best resources
- Gender policies are linked to our Employer image which reflects to our customers and how well they accept us as their service provider.
- Women should be better encouraged to will to accept managerial positions.
- Women are not as ambitious as men.

- There are a great number of engineers and their clients are also engineers (MEN)
- Easy for women to proceed to the lower level manager or senior positions but to get into the board
- The main challenge is to achieve the right balance between the implementation of even gender policies and the merit-based recruitment and treatment.
- Measures such as imposing minimum quotes for women would not be very well accepted.

The following is an overview of the Gender account score and Professional life cycle per company interviewed:

Organisation Name	Country	Type of Organisation	GAS	PLC
Oracle Belgium & Luxemburg	Belgium & Luxemburg	Private	NC/0	None
TeliaSonera Finland Oyj	Finland	Private	2	Career Development
Fraunhofer-Gesellschaft	Germany	Mixed	2	Career Development Recruitment
Hannover University	Germany	Public	2	Education Career Development
Celestica Valencia S.A.	Spain	Private	0	Career Development Management
CORITEL	Spain	Private	July 1006 / ACCENTURE	
Motorola Polska Electronics	Poland	Private	1	Recruitment
ERICSSON ESPAÑA, S.A.	Spain	Private	0	Career Development
Univ of Malta (UoM)	Malta	Public	2	Education
Webmedia AS	Estonia	Private	1	Career Development
Tekla Corporation	Finland	Private	2	Career development Recruitment
Iskra Avtoelektrika d.d.	Slovenia	Mixed	1	Career Development
Iskratele	Slovenia	Mixed	July 1006	
INESC PORTO	Portugal	Private	0	Career Development
SerCom Solutions	Ireland	Private	0	NC
VA TECH EZ a.s. (Siemens)	Czech Republic	Private	0	NC
Radio Telefís Éireann (RTÉ)	Ireland	Public	1	Recruitment Management
OCE	The Netherlands	Private	0	NC

Dati	Latvia	Private	0	Career development
General Electric	France	Private	2	Career Development

4 PART III: ANALYSIS OF BEST PRACTICES

4.1 Telia sonera

4.1.1 Background

In 1906, Finnish women were the first women in Europe to receive universal and equal franchise, and the first women in the world to become eligible for parliamentary elections. The Finnish best practice selected for the study has to be entirely linked to the cultural context of its country, origin and specific sector. It shows the powerfulness and influence of national laws and policies, not only capable of changing working conditions but also mentality and culture for equal opportunities for women and men at work.



Telia Sonera is a leading telecommunications company in Finland with a wide range of services within mobile, fixed voice, data communications and broadband. The company offers communication services and broadband access to businesses and consumers across the country and has a strong presence with a complete selection of fixed services in the northern, eastern and southwestern areas of Finland. The company provides wholesale services in both mobile and fixed communications.

More general characteristics and historical elements of the country and company have been taken into account throughout the analysis of the Telia Sonera best practice. The most determinant elements were:

- TeliaSonera is a result of the merger of the Swedish Telia and the Finnish Sonera in December 2002. The share of the company is listed on the Stockholm and Helsinki stock exchanges. Policies and laws on gender equality are very much developed in both countries, however Swedish laws on gender equality which mainly count for the Finnish Telia Sonera are even more detailed, strict and closely monitored.
- Before merging, Sonera, as well as Telia, were both state-owned companies, with specific rights and rules for its workers, applying public employment laws, and specifically those concerning gender equality as public organisations very often have a pioneer role to play and a good image to give to others.

The situation of women workers in general, in the ICT sector in Finland and more specifically in the telecom sector is the following:

- To give a general view, **a majority of women work today** in Finland. There are hardly any younger women that do not work. In 1920, 10% of married women worked; in 2005, the figure had risen up to 66%¹². Women are mainly employed full time, and they do not leave their jobs when they get married or have children. Among mothers with one or two children, more than 80% work outside the home. This figure includes mothers with children below school age. In recent years, part-time employment has increased in Finland. Among women, 17.5% do part-time work. Among men, the figure is 8%. High numbers of women workers are due to good quality and very accessible children care facilities, which can be public, private or even company owned.

¹² EUROSTAT, Labour Force survey 2005.

- Although the situation has improved in recent years, the ICT sector does not count great numbers of women workers, with the main reason that Finland's technical universities still have dominant male classes in ICT (average of 10-15% women depending on the subject)¹³. Although there is an overall equal level of education, with 26% women holding an academic degree and 22% men holding an academic degree for all education sectors.¹⁴
- In the Telecom sector, and more specifically in TeliaSonera, there is almost an even distribution of women and men workers (out of 6,369 workers, 3,092 are women)¹⁵, although men still dominate the engineering and more technical jobs, whereas women work as a majority in the service-oriented, legal and human resource departments of the company. Gender distribution by Unit in Telia Sonera is the following: In support functions (HR, Communication, Law, Finance...) there are 72% women, in the Consumer Customer there are 69%, in Business Customer there are 34% women, in Large Corporate Customers 36%, the Product & Services Unit counts 28% women, Carrier 24%, Networks and Technologies 39% and Sonera mobile networks 15%. Taking the latter into account, top positions in all areas are almost equally distributed. In the Board of Directors of the company, which counts 11 persons, 4 are women.

4.1.2 Research approach

Telia Sonera was visited in Helsinki, Finland from the 11th to the 12th of September 2006. Different kind of documents and information were collected (annual reports, presentations, studies) and a total of 8 Interviews were realized, specifically with: The Vice president of TSF Legal and regulatory affairs, the Vice President of Human resources of the TSF Business Partner Unit, the Director of Human Resources of TSF Competence and Leadership, the director of Customer Service and Systems of the TSF CS Efficiency Office, a HRD Manager responsible for Competence and Leadership, the Head of B20 deliveries of Customer service and systems, the department director of Human Resources in TSF Compensation and Benefit.

Questions that were asked depended on the profile of the interviewee and thematic directions of the interviews. Nevertheless, some general questions guided all of the interviews:

- Role, position and main tasks of the interviewee in Telia Sonera.
- How do you implement gender equality in the company in relation to this role?
- Biographical questions on career and success factors
- What are the factors that promote the recruitment of women (attraction?) and the ascending of high positions (Conditions, culture, context)
- Success factors of a career in the company ? Specific difficulties for women? How are they tackled?
- Are there any female specific sectors and why is that so?
- What influence have national laws and national culture to gender equality in your company/organisation? Have you noticed any changes since new laws have been implemented?

¹³ Statistics Finland http://www.stat.fi/index_en.html

¹⁴ Statistics Finland http://www.stat.fi/index_en.html

¹⁵ TeliaSonera Annual report 2005

In order to keep the focus on the ICT topic a great amount of questions tackled the specific culture and mentality linked to engineering, technical and R&D jobs and working culture, as well as **the how and the why** women are specifically promoted in those areas.

4.1.3 The Telia Sonera case

4.1.3.1 Starting point

The gender equality strategy in Telia Sonera is based on three main pillars: laws and rules originating in the public background of the company, legal acts in Sweden and Finland on gender equality, image and publicity strategy of the company. Those three pillars are at the origin and create the culture which supports the best practice. The company implements gender policies since 1997 and measures and gender strategies have changed throughout the years. Today, TeliaSonera follows a more general priority approach which is learning by doing, and the ratio between men and women is increasing considerably year by year. 33% of supervisors are now women, ten years ago there were only 19%.

TeliaSonera Finland aims to promote equality between men and women by:

1. **Placing men and women equally in different positions and providing equal career advancement opportunities**
2. **Offering equal terms of employment, particularly with regard to pay**
3. **Facilitating reconciliation of work and family life**
4. **Preventing gender discrimination and sexual harassment.**

In order to define the gender oriented mechanisms/instruments, the company presents them to the employee representatives for approval. All departments and business units of TeliaSonera cooperate to define the gender oriented mechanisms, based on identified needs of employees (e.g. employee surveys, personal interviews).

The gender equality plan is prepared in cooperation with personnel representatives and must include (following the legal act section 6a&2 of finish law):

- An assessment of the gender equality situation in the workplace, including statistics and other indicators of the employment of women and men in different jobs and a survey concerning different grade of jobs and performances by men and women, the pay for those jobs and the differences in pay.
- Necessary measures planned for introduction or implementation of gender equality measures and instruments with the purpose of promoting gender equality and achieving equality in pay; and
- A review of the extent to which measures previously included in the gender equality plan have been implemented and the results achieved.

Telia Sonera board of directors including the President monitors the results. They collect statistics through an atmosphere survey and they interview their employees concerning needs and requirements taking into account gender. They define actions to reach their gender equality goals.

4.1.3.2 Professional Life Cycle in TeliaSonera

Telia Sonera addresses in many different ways the phases of the professional life cycle of women. Indeed, TeliaSonera fosters even gender distribution in the following phases:

- **Phase 2 Recruitment:** Measures in this area correspond to the second phase of the Professional Life Cycle, recruitment, tackling the fact that women seem to dislike technical jobs and do not accede to the same rewarding and more important top positions as men do. Objective of the measures is to increase the number of women appointing for engineering jobs, to motivate women to apply for all kind of job openings and to create equal opportunities to participate in training. This

is done through ensuring gender neutral advertisements (choose **men and a women** in photos and images of company for example), mandatory discussions on equality in employment training, selection of training candidates in proportion to their overall number. In addition, recruitment policies and procedures are highly transparent and frequently rechecked.

- **Phase 3 Career development:** Telia Sonera intends to increase the number of women applying for engineering jobs (Junior and Senior Engineering development). Instruments support equal appointment of positions in Telia Sonera Finland, ensured by a **equality task force**, equal opportunities for both, women and men to advance in their career and enquiries and studies on how employees feel with regard to gender equality (within employee questionnaires).
- **Pay and bonuses:** These measures fit in all phases of the Professional Life Cycle as equal pay is one of **the basic elements** for gender equality. Measures imply awareness raising on equality matters, improvement of pay equality through supervisor training and close monitoring of pay statistics.
- **Prevention of sexual harassment:** This area also corresponds to all PLC phases, as it is the basis for gender equality. TeliaSonera puts everything in place that there is no sexual harassment in the company though **an action plan preventing harassment**, monitoring the reported amount of cases. The company also directly intervenes in sexual harassment cases, following procedures laid down in the action plan and making sure that this is followed.
- **Phase 5: Uptakes after leaves, reconciliation of family and working life.** Telia Sonera implements the promotion of **gender –neutral use of family leaves**, particularly communicating the opportunity for fathers to take family leaves. This has functioned very well as 46% of leaves are taken by fathers. It also promotes gender neutral absences for sick leaves, and free in-house service for caring for sick children (nanny coming home and caring for the child).

All the above mentioned areas are closely monitored through statistics and documents, and procedures, action plans and instruments are ensured through training the responsible(s) of each area. Statistics are published in newspaper articles (press relations), in internal and external reports of the company.

4.1.3.3 Best practices for Career Development, Management and maternity leave.

The objective of the gender equality strategy in TeliaSonera Finland stresses on career development and women **increase in managerial jobs**, particularly in engineering areas. As the general philosophy of the company lies on “**learning by doing**” main instruments are training measures. TeliaSonera proposes different training schedules for its employees, women and men equally, which are particularly effective to boost careers of women in the company. The analysis of the best practice has tackled three different training programmes: Top-Talent programme, the GO-programme and the Telia Sonera Business School.

GO-program

The GO-program is organised twice a year since 2003. One of the general objectives of the GO- program is to create transparency in career development, and to guarantee that the best and most competent employees accede to Manager positions in Telia Sonera Finland. This counts for all departments and sectors of the company, from the most technical engineer and research posts, up to Human resource management and post in sales business units. The programme fosters particularly women to become Managers as a great attention is paid on equal participation, and results have clearly shown a raise of women as Managers in technical as well as more service-oriented departments.

The GO-program creates a situation for **learning, assessment, career planning** and **coaching**. Its main objective is to support employees to discover more about themselves as an individual and professional, as well as a team member and a leader of a team. The content of the courses is designed for junior managers and professionals who have already some years of experience in TeliaSonera and who have shown the potential and willingness to grow into more demanding professional and managerial positions. Candidates for the programme are generally proposed by their Managers.

Biographical example

Head of sector, female, 31 years.

The employee started her career in Telia Sonera as Analyst in 1998, became Manager in 2000 and Head of sector in 2005, shortly after her second maternity leave (2x12month). It was mainly the GO-program that boosted her career to the position of Head of sector (Managing today a team of 80 persons). Her explanation for this is the following: *"I participated in the first round of the GO-program which completely changed my professional life. Coming back from my first maternity leave, I had mixed feelings about my future. The programme gave me the opportunity to stand on a stone, make a stop, and think about what I really want. We received a very experienced mentor, who guided and explained me different career possibilities, and how to succeed them. Concerning the psychological assessment I really learned how I was functioning and how I was able to tackle and solve problems. At the end of the programme we received the results of all we had done and they surprisingly supported the decisions I had already taken. Its due to the GO program that my present boss identified me as the best candidate for the position as Head of sector.. He contacted the Human Resource department, which gave him a list of potential candidates, elaborated through the GO program. The most important consequence of the GO program was the inner vision I received of myself: I like to lead people and frankly speaking, I am doing my 'dream job' for the moment".*

Once the candidate is selected, they start with a half day kick off meeting, where each candidate received a mentor (e.g. director) and begins the assessment of their current career situation. There are around 4

Kick off phase

mentors for 16 candidates. The assessment & feedback from mentors and other participants to the candidates is continuous throughout the programme. A workbook is handed out to candidates which supports them to draw up their current situation and life span expectations: socio-economic plan, how do they see themselves, how do they personally and professionally take care of themselves, what are their weaknesses, strengths, how do they approach new work, how do they develop projects. The results of this phase is the "Me Inc-work book" which is discussed with the mentor.

Professional growth phase

In addition, a psychological assessment is done by an external consultant. The psychological assessment is the most 'objective' assessment and it is done by very experienced psychologists, who advise and activate the candidates to think and plan about the future and also to act accordingly.

Leadership assessment centre

In the Leadership assessment centre, participants work within interchanging groups, each individual receiving a task (e.g. present TeliaSonera to a Lawyer company), which is discussed within the groups. The objective is to receive instructions and feed back from the mentor and from the other participants for personal behaviour, work approach, etc.

At the end of the programme each participant receives a career development plan based on the results of the different assessments. Effectiveness of the programme and improvements of employees are monitored through post- enquiries tackling the main changes that occurred after having participated in the programme.

There is a clear link between the increase of women managers in TeliaSonera Finland and the GO-program. This can be explained by several reasons:

- The programme permits women to gain more self confidence as they learn to assess and develop themselves as a person and as a professional.
- It provides women with clear methods to organise and view their career.
- It permits women to set more ambitious targets and objectives for their future based on the instructions of mentors and on the newly gained self confidence.
- From all the different feedback channels (trained mentors & professional assessment) the Human resource department receives quite objective data of the participants', competence, behaviour and motivations. This creates new opportunities for women which would like to accede higher posts and creates equal opportunities as the programme also "checks" if a person is in its right position (creating visibility of women competence).
- Through the program the HR and TSF management gets a greater insight into the key talent's needs and development potential. Its a matching process between women capacities and expectations versus growth opportunities provided by TeliaSonera.

Top Talent Initiative

The philosophy behind this international initiative of TeliaSonera (not only Finland) is : *"TeliaSonera is changing and our Vision & Values clearly state where we are going. To succeed we need to find the right people to work as the future leaders in the TeliaSonera Group. We are looking for our Top Talents, people who already have a proven track-record and want to further develop their competencies and skills with help of a focused personal and corporate development plan"*.



The objective is to identify and train managers with the potential to reach top management positions within TeliaSonera, and this is done by:

- Exploring and discussing critical Business challenges, work on them and achieve measurable results
- Further developing participants team effectiveness
- Providing a foundation for future individual development and action on individual development plans
- Strengthening the internal and external network

Any employee, women or man, junior or senior can participate in the initiative. The programme takes 9 month, consisting of **different training modules and interviews with Executive Management**. The programme is determined through the interviews with Executive Management members, addressing key business and leadership challenges. The initiative regroups 4 main modules and themes:

1. **Set up and strategy (4 days)**. Content: Sponsor's introduce business challenges, Outside-In interviews, Team set up, In practical: global trends, the industry, TeliaSonera. Discussions and Reflections.
2. **Execution and Leadership (4 days)**: Content: Team check-in and reporting, Business challenge work and interviews, what is an execution oriented culture?, How can this be achieved?, Discussion and Reflections.

3. **Delivery (4 days):** Content: Preparation, feed-back and dry runs, delivery to stakeholders, execution, values cross border work in TeliaSonera. How can we get there?. Discussions and reflections.
4. **Follow-up (4 days):** Content: Teams give their final follow up to the Executive Management, feedback in the teams, what have we achieved? Executive Management reports back to the teams, Discussion and Reflection.

As the general philosophy of TeliaSonera supports that women and men should receive the same chances to reach top management posts, a great attention is paid on identifying talented women for the initiative. Indeed, candidates are chosen based on an assessment phase where motivation and talent is measured. Here again, particularly women's visibility is fostered as the assessment permits them to show what they are really able to do. Once they are on the boat, the initiative fosters:

- **Knowledge** on successful leadership and execution.
- **Networking** with internal Management and external Sponsors
- **Motivation** and Believe: shows them what is important for Telia Sonera
- Better knowledge and understanding of the future executive leaders.

TSBS : TeliaSonera Business School

The TeliaSonera Business School is a competence development program for TeliaSonera's key people - managers and specialists. The goal is to bring key people together to discuss and learn about strategic business management, businesses and ways of working, the strategic challenges of telecom industry and TeliaSonera. The learning process combines workshops and lectures, business readings and business project assignments.

The process is about up-to-date challenges in the telecommunications, strategic business management and leadership concepts and mind-provoking business project assignments. Targets are managers and key specialists, women and men, who have at least two to three years' experience working at TeliaSonera Group and who have shown high potential and desire to grow for more demanding managerial and professional role. Although this programme is not only designed for women, organisers pay particular attention to have an **equal representation of women and men**, and create appropriate conditions for an equal participation (combination family/work).

The process is spread over a period of 7 months and consists of:

1. Six workshops of 2 - 3 days focusing on strategic issues:
 - o New challenges in telecommunications & project kick-off
 - o Business finance and accounting
 - o Business strategy
 - o Customer driven marketing
 - o Business leadership and change
 - o Business simulation & evaluation of strategic business projects
2. Business readings and pre-work assignments
3. Strategic business projects

Strategic business project assignments are chosen on the basis of TeliaSonera's business needs and objectives. They are worked in teams of 5 – 6 participants and the results will be reported to TeliaSonera's top management. Each project has an internal mentor and an external facilitator.

The Business school forms the future top positions of the company (e.g. directors).

High transparency in the selection procedure and particular attention of the selection Committee to have an even distribution of women and men participating in the programme guarantees in many ways equal numbers of women and men in top positions. Firstly, conditions and procedures of entry are extremely selective and difficult to pass, the participation in TSBS leads to high recognition and great credits, which on their turn lead to a high possibility of acceding a director position. Whether woman or men is therefore not an issue for a director position. Secondly, the content of the courses, business and leadership strategies, gives particularly women the possibility to complement their high competence with often lacking behind directing abilities.

Many studies on women in the ICT sector show that there are two main reasons, why women have sometimes less important positions than men:

- Women sometimes have difficulties to manage, lead and direct companies because of character (lack of self-confidence) or ability (lack of knowledge in statistical planning and organisation). *The content of the courses go against this fact and bring self confidence as well as leadership abilities to women.*
- Women sometimes have difficulties in "selling their image" and in showing their competence. A lot of sociological studies have shown for example that men spent more time than women in demonstrating and disseminating the success of their work. *The high recognition women (- and men) receive after having participated in TSBS, vanishes away the invisibility of certain highly competent women.*

In summary, the TSBS is a perfect tool to go against the fact that top positions of ICT companies are very often selected by the "old boys network".

4.1.4 World views and Company Culture

The company culture and the world views guiding the management of the company is very much influenced by the general favourable working conditions for women in Finland, and the state-owned background of the company. A part of the law concerning gender equality and equal opportunities, the general situation of private and public child care services for example functions extremely well. Also, father family duties have become equal to mother family duties.

Most important features of Telia Sonera working culture are:

- **Women and men are fundamentally considered as equal.** The culture supports that men are equally responsible for family duties as women. Fathers for example often work from home when one of their children is sick.
- Maternity/Paternity leaves are considered as absolutely "normal" and internal policies give particular advantages to mothers and fathers. **Paternity leaves have taken the same importance as maternity leaves.**

- Commitment and actions for gender equality also come from men, and not only from women.

Measures and instruments for gender equality are **very positively** perceived in the company. Although they mainly create more favourable conditions for women, **men are equally included in all objectives and as a target**. The latter is certainly one of the most important reasons why gender equality is socially and culturally very well accepted as priority. It is a way of committing and involving all employees, and acquiring acceptance of the matter.

The image of the company to the external world is a very important element of the gender friendly culture. TeliaSonera is convinced that **end users and customers** make a difference between companies being gender friendly and those not when choosing a product. This is also due to the fact, that TeliaSonera itself, pays attention to this as a customer of external services, e.g. choosing law firms or consultancies working for TeliaSonera that have equal distribution of women and men. A part from this, employees working in TeliaSonera think that women and men are different and have different needs from a point of view of products. In order to have the whole picture, women engineers are absolutely needed.

Also, TeliaSonera is paying a great attention to being a **first-class employer**, which includes gender friendly working conditions. The objective is to attract the best and talented workers, women and men, by creating the most favourable working conditions for them.

When young women become pregnant, they generally feel guilty towards their boss. This is not the case in Telia Sonera, as **internal festivities** like parties and presents (flowers, cards, etc) are organised for future moms and future dads, when pregnancy is declared. All women interviewed in TeliaSonera were surprised about the positive reaction of their boss. This very positive philosophy towards maternity/paternity leaves, is also underlined by the fact that job promotions linked to time (employees are promoted at least once a year) is applicable even if maternity or paternity leave count more than 12 month (The average leave in Finland is 9 month).

High number of women in service oriented jobs are in many ways due to salary variations. Salary depends on the position and the sector. TeliaSonera noticed that there is a link between high number of women working in service and marketing orientated departments/ low number of women in **technical areas and salary**. A lot of engineer women are actually working in service and marketing departments as their salary expectations are generally less demanding than the ones of men. More jobs are available in this sector, as men are generally not interested in the working conditions of services and sales departments. For this reason, Telia Sonera pays a great attention to the revalorisation of the service and sale sector to men and the more technical areas to women (through publicity, role models and also salary rebalance).

This is also happening since the notion of “quality” has been transferred to all sectors. Before TeliaSonera was as private company (before 2003), **quality management and procedures** mainly concerned engineering, research and development. Today, quality measures are applied to Human Resource Management, Customer services, Reporting etc. In line with this, those sectors have been valorised and receive more attention with regard to importance/salary/ decision power. They become therefore more attractive to men.

4.1.5 Main lessons learned

The following are the main reasons of low number of women in technical jobs in TeliaSonera and solutions proposed by the company

- Low numbers of women are *mainly* due to low numbers of women studying technical fields in University. In external communications, such as new articles, publicity, etc, TeliaSonera pays attention to break down stereotypes and STOP linking technology to masculinity. Images and photos representing new technological advancement show more women for example.

- Even though gender friendly working environments apply to all departments, there are more women engineers working in service and administrative oriented departments. TeliaSonera tries to revalorise the technical sectors for women and the service oriented sectors for men by breaking stereotypes and by rebalancing salaries.
- Although the number of women in top positions is quite high compared to other European ICT companies, training for promotions in TeliaSonera are specifically adapted to women needs and requirements.

4.2 Hannover University

4.2.1 Background

Laws concerning gender equality and promoting equal opportunities as well as favourable employment conditions for women are fairly well developed in Germany. However numbers of women working in ICT areas is still very low. There is a clear distortion between law developments in the area and the lack of cultural features supporting those last. Indeed, a lot of mothers still have to choose between family and work, as working mothers are very often seen as “Crow mothers”¹⁶.

Added to this, kindergarden places are rare and childcare under the age of 3 is almost unavailable or very expensive. The reunification of Germany in 1989 and the negative image of living conditions of the former east Germany (DDR) has had a negative influence on childcare services in the reunified Germany. Indeed, childcare for even very young children was excellent and highly efficient in the former eastern Germany. However after the break of the wall, the whole DDR system was highly criticized and child care services were rather seen as “children expulsion programmes”.

There are still two main cultural obstacles for gender equality:

- The **combination of family and work is seen as unfeasible** (image of children suffering from being away from home, mothers overloaded with work, etc)
- **Family duties are seen as women duties** (e.g. only 2% of German man benefit of father leaves). The traditional role model of the women at home with her children is still very strong.

Low numbers of women in ICT jobs are mainly due to the fact that if a women chooses to study or to work, then it is probably in jobs considered as “**women and family friendly**” (e.g. primary teacher) whereas technical jobs are on the contrary perceived as very masculine (e.g also in-line with stereotype on women’s technical incapacity).

If on the one hand the situation of women working in the ICT sector seems quite discouraging in Germany, on the other hand, pressure coming from women movements and trade unions as well as the German government and its Länder to improve the situation has become high. In all of the Länders for example universities are obliged to incorporate a gender equality commissioner. In Lower Saxony, the law on the gender equality commissioner has been applied since June 1994, and the Leibniz Universität Hannover is an excellent example to show the effectiveness and high impact of the initiative.



Founded in 1831, the Leibniz Universität Hannover counts today more than 24,000 students in the natural sciences and engineering, the humanities and social sciences as well in law and economics. Nine faculties with more than 150 first-degree full-time and part-time degree courses make Leibniz Universität Hannover one of the largest higher education institutions in Lower Saxony. The University is united under the mutual goal of providing top quality in research and teaching. The joint goal the 1,300 academic employees and more than 350 professors is that of top quality in research and teaching.

Figures and number of women studying and working in the university are quite encouraging although some technical areas show very low number of women:

¹⁶ The word “Rabenmutter”, which means crow mother in German, expresses the fact that working mothers are seen as irreponsible and not committed to their duties as a mother.

- With regard to the positions of women working in the university (figures 2004)¹⁷: there 19,9% women in the highest posts in the university ("höherer Dienst"), such as directors, presidents and council members, 71% in high positions ("gehobener Dienst") such as researchers and other administrators, and 51% in administrative positions ("mittlerer Dienst") such as secretaries and assistants.
- There are a total of 33% women professors (target mark was at least 25%), in electronics and information technologies it is 17%, in machinery 17%, in engineering (construction and measurement) it is up to 25% and in informatics only 12%. Concerning Junior professors¹⁸, with 2 men there are no women yet in ICT areas.
- With regard to students, there are 12,1% women studying electronics and information technologies, machinery 12,8%, in engineering (construction and measurement) it is up to 29% and in informatics more than the half are women with 58%.
- With regard to Phd, there are 0% (out of 10 persons) in electronics and information technologies, machinery 6%, in engineering it is 11% and in informatics 0%.

4.2.2 Research approach

The Hannover university was visited for 2 days, respectively the 13th and 14th of September. A great amount of documentation was provided by the gender equality office within an information folder, including general descriptions of the equal opportunity work at the Leibniz University of Hannover, recapitulatory illustrations of the measures and programmes for equal opportunity at the University, press releases, brochures, handouts, Posters, Reports (Mentoring for female pupils, final report 2005, Mentoring in Science and economy, final report 2004, Report of the equal opportunity commissioner, 2001/2002, Report on gender equality plan). Individual and group interviews were made, with the gender equality commissioner and other employees working for the gender equality office, responsables for specific gender projects (FEET project, GO-pole, L3S), the Vice - President and the President of the University, researchers and professors from ICT departments. An overall group interview was organised with the gender correspondents officer of each university department. The key themes that guided the interviews:

- Contextualization of gender equality in Germany and in the Leibniz University of Hannover with regard to the ICT sector
- Culture and philosophy behind the great commitment for gender equality
- Best practices and how they fit into the reality (to which need they correspond and how do they respond to the need?)
- Main success factors (recommendations) with regard to cultural elements (eg how to convince? How make it the norm?) and practical elements (budget, resources, organisation).
- Results of the best practice and views/opinions on those results?
- Impact of the best practices
- What are the principal future visions for gender equality in the University?

¹⁷ *Bericht zum Frauenförderplan 2005, Gleichstellung von Fajen und Männern an der Universität Hannover, Hannover Dezember 2005.*

¹⁸ Based on a new law (2002), Professor careers of universities do not have to pass obligatorily by an habilitation program, but can start with a junior professor career after Phd.

4.2.3 The case of the Hannover University

4.2.3.1 Starting point



The Leibniz University of Hannover gives the promotion of the female scientific offspring (the new female scientific generation) in research and teaching the top priority. Having received already several prizes and awards (Total e-quality Award two times and Initi@tive D21 "Get the best-Women as a success factor for Universities") the main element of its success has been the establishment of the gender equality commissioner and its office for gender equality in the University.

The establishment for the position of gender equality commissioner is based on a law of June 1994 in Lower Saxony, which implies this position and its minimum tasks in all universities of this Land. In the Leibniz University of Hannover, the commissioner is supported by an office of 5 permanent members, another 5 persons responsible for projects running for the moment (this number is variable) and gender correspondence officers in each of the departments of the university. The numerous projects implementing measures for gender equality are generally coordinated by the gender equality commissioner and implemented by her or the correspondences in each of the departments, depending on the theme of the project. They mainly support the female scientific offspring, working against established restricted choice of profession by female pupils in schools, support the female science assistance, help female university alumnus with their career entry, provide female university employees and students with alternative childcare possibilities.

The equality work orients itself mainly on three focuses which constitute the basis of the above mentioned type of projects:

1. The **increase of female proportion in areas in which women are under represented** (Mainly ICT and natural sciences)
2. **Improvement of the working and studying** situation regarding equal working- and studying conditions.
3. **Integration of gender mainstreaming** into academic politics.

4.2.3.2 Professional Life cycle in the University of Hannover

Although the Leibniz University of Hannover has been selected for its innovative and well proven projects in the area of education (Phase 1 of the professional Life Cycle), there are other numerous bright projects targeting almost all phases of the PLC.

- **Phase 1 Education:**

- **In the field of junior development.** These projects tackle education but also career development (Phase 2) and maternity leave issues (Phase 3). There are postdoctoral lecture qualification programmes (promotion of female scientist for professorship- tackling education but also career development issues), the junior professorships (40% of the jobs shall be filled with women), the Dorothea-Erxleben Programme (qualification for a professorship), the Doctorate Graduation Promotion (tackling career development and maternity leaves, promotion of PHD studies for young mothers), the Maria-Goeppert-Mayer programme (female guest-lecturers for international women and gender research)and Mentoring for Women in Science.
- **School Supporting programmes including mentoring for female pupils** (for girls with a great interest in technical and engineering areas): which correspond to the most

important factor of change, that is to create interest in technical and engineering for girls in younger ages and increase the overall number of women in the ICT sector. The Autumn/Fall university on Science and Technology for School pupils, the Ada-lovelace Great Granddaughters Project (increase of the female proportion in the field of Informatics) are examples.

- **Projects for education and career development at University level** also enjoys high success, like for example the Join the top project (key qualifications for female university alumnus in the engineering and informatics faculties), Go for Pole Position!, Academical and Professional Excellency and many more.
- **Phase 3 Career development: Internal post-doctorat programme** In order to increase the number of women professors and researchers, the university has installed its own post-doc programme (condition for being a professor) for women where half of the resources have to be paid by the department receiving the post-doc, half by the equality programme.
- **Phase 5: Uptakes after leaves.** There are several possibilities in the field of child care and promotion: Targeting issues of career development and maternity leave. The children Leibniz University Hannover (KUH-lecture course for 8-12 years old), child-care during the Easter and autumn half-term holidays (for 6-10 years) and many others diverse day care offers.

Biographical example

Junior professor in the informatics department, female.

This junior professor has studied maths and informatics in the Leibniz University of Hannover. After finalising her Phd, she was confronted with difficulties finding an employment in the area. The gender equality office proposed her to participate in the post-doc programme for "habilitation" (way of becoming a Prof. in German universities) in the area of electro-mechanics and informatics. During 3 years she started her programme, which is equal to a full-time job (hours+ salary). With the new German law on "junior professors" (Condition for becoming a professor: habilitation programme or start with junior professor position) she was awarded the position of junior professor in her department. As she explained in the interview *"Although I am not sure to receive a position as a professor in the future in the university, I have a challenging job for the moment. The difference between being a researcher and a junior professor is that in this last position you have much more responsibilities, but also more time for family. I have to work a lot but I can cope with family and work. Academic careers in Germany are very complicated and even more for women. The gender equality office has pushed and encouraged me to start and continue my academic career, which has permitted me to work in the area I really wanted."*

Some other examples of concrete projects and actions are:

Kamingespräche¹⁹ (Discussion groups in the evening) : The Gender equality commissioner organises once a month meetings in the evening which tackle different themes concerning women lives and their professional career. Example of a discussion theme: *The art of networking, success strategy for women*. Authors of relevant books or studies on the theme are invited and introduce an interactive discussion.

Ada Lovelace Great Granddaughters: This is an internal award given to actions that have specifically promoted women in the university. The last award of 5000 euros was given to the researchers working for graphical data management and informatics in the applied systems and informatics department of the university. The researchers had been visiting different schools in the region in order to bring more interest to girls and demonstrate the advantages of studying in the area of Informatics. Also, they had been inviting female pupils to come to the university and participate in an introduction workshop on informatics.

¹⁹ The translation of this Word is "Fire-place discussion".

Girls days: The university frequently organises girls days, for which they invite 10 to 15 female pupils to participate in workshops that wake interest in technical fields.

Autumn University: Every October, the university organises one- week training courses for girls in the area of engineering, electronics, machinery, informatics and physics.

The gender equality office frequently organises seminars for students, researchers and professors, with different kind of objectives such as networking, training, discussions, coaching tackling for example: negotiation strategies, project management, personal creativity, development and self-confidence, career planning, self- marketing, role models, leadership, time management, conflict management, etc.

The amount of projects and actions fostering gender equality in the ICT area is very high. Even though not all of them are directly organised or implemented by the gender equality commissioner, probably none of them would exist without its presence and its support.

The **importance of the work of the commissioner and its office** lies in the ability to coordinate the overall objectives and give guidelines as well as motivation (awards, obligations, commitments) to the gender correspondents and departments of the university. It also lies in the fact that the commissioner and its team is full-time dedicated to their work and has therefore sufficient time and resources to implement and coordinate specific projects for gender equality in and outside the university.

4.2.3.3 *Best practice in the area of Education*

For the purpose of this best practice study, three very innovative and effective equality projects in the area of Education (Professional Life Cycle phase 1) have been analysed. The main objective of these projects is to increase the number of women studying technical and engineering subjects, by creating interest and motivating girls at an earlier stage before deciding for their future.

Feet

The number of the women studying electro-technology and mechanical engineering at the University of Hannover has grown up to 12% and 13%. In order to continue increase and respond to the future need of competent personal in the area, the university has developed the FEET project - "women discover and experience technology".



Feet targets particularly high school female student and tries to foster and to support their interest in electro-technology and mechanical engineering.

Generally, there are 10 female students participating in the programme which are around 16 to 17 years old. The Programme starts every year in January and finishes in December. Different high schools are contacted and visited. During the visits the Feet project is introduced to female students which have selected natural sciences as one of their selection subjects (Selection subjects concern a part from the general courses non-obligatory courses such as Informatics, some languages, arts, etc). Through several years of experience, it has been considered as more effective to directly target girls that have already shown some interest for the subject previously.

The Feet project is solely addressed to girls and its main objectives are:

- To develop interest in the field electro-technology and mechanical engineering
- To give a clear and understanding picture of the professions in those ICT areas
- To prepare female pupils for studies in the field of electro-technology and mechanical engineering

The advantages of excluding boys from the programme is that the **girls are able to better benefit from the training without coping with cultural barriers**. Indeed, comparison between similar projects for both, boys and girls, and the Feet project has shown that:

- If boys participate in the programme (similar projects exist for “mixed” groups), girls generally don't touch and play with the machines during testing and experimentation phases. Girls stay very often in the back of the group and observe the boys fulfilling the testing. In homogenous girls groups, even the shyest are given an opportunity to get familiar with the technologies.
- As subjects as micro-technology are very often considered as “masculine subjects”, girls sometimes show a certain disinterest due to a social pressure within heterogeneous groups, where no-one would like to step out of the line. Sometimes very interested girls then laugh and do not listen, although they would like to.

In the Feet project, girls learn to consider those ICT sectors as neutral for women and men, and not as a “masculine topic”, and at the same time they are able to get in close contact with the subject. Several female students participating in Feet or former and similar projects are actually now studying one of the technical areas in the University.

The main activities of the Feet project are:

1. **Seminars on career orientation organised in schools, introducing the Feet project** (1 day). During this day, the Feet organisers visit the pupils and talk about the main objectives of the programme, and give a picture on how a career in ICT areas would look like.
2. **Mentoring between pupils and university students** (every pupil has 1 or more mentors throughout the whole project time which is 12 month) The mentors respond to questions and intents to play a role model for the pupils.
3. **Participation in selected courses of the University** (real-life simulation, 1 day). During that day, the pupils can meet professors and other university students, learn more about the content of the courses and see if they would like these studies.
4. **Seminars on key competences** (1 day): This is on-day training session to give in-sight knowledge in the area of electro-technology and mechanical engineering.
5. **In-site visits in companies and trips to interesting places.** (1 day) In 2006 the pupils visited the PHAeno, which is a technological centre and experimentation environment for pupils and students interested in new technologies.
6. **Lab day** (1 day) Training in the laboratory and creation of their image (through a photo) on a golden plate using new technologies.
7. **Seminar on communication** (1 day). Seminar on Communication strategies and career development.
8. **Conclusion event** (1 day) Conclusion, promotion and dissemination of the project.

Go! for Pole- Position

Go! for pole position is a qualification programme for students, women and men, studying engineering and computer science. It is targeted at students that would like to receive training on key qualifications linked to their future professional career: It aims to extend profession-relevant personal abilities and develop an early contact to industry and business. It is designed for a maximum of 20 students. Even gender distribution is a must.



Focus is put on career success factors and corresponding key qualifications (Team work, negotiation strategies, project management, etc) as well as networking with relevant partners, in order to increase the chances to rapidly enter the job market after the studies.

The programme's content is separated into three main phases which are implemented from October to June:

1. **Intensive seminar phase:** Those seminars take place during the winter period from October to January and only at weekends (fr/sa, sa/su), so that students are still able to attend their normal courses of engineering or computer sciences. Students learn here how to negotiate contracts, projects and ideas, how to give constructive critics and manage conflicts. Highly competent and experienced trainers coming from business and industry give courses on professional communication techniques and leadership, methodological frameworks for project management, presentation techniques and rhetoric.
2. **Practical phase:** During 6-8 weeks minimum²⁰, generally from February to April, taking place in one of the partner organisations of the project (Hochtief, Wabco, Starbag, Germanischer Loyd, DOK, Phillips, Volkswagen, Unilever, Siemens). Objective is to apply methods and techniques acquired in the intensive seminar phase. The students are directly working within the partner organisations teams, tackling specific tasks and interdisciplinary questions linked to research and development projects. Students have two kind of coaches during their traineeship, coaches from the university (researchers, professors) giving support on the content and coaches working within the partner organisation (Specialists and High level senior experts) that can give them a view on the areas of intervention and working environment, leadership requirements and methods. Very important in this phase is also the feedback of supervisors and colleagues and the networking possibilities.
3. **Final event:** During summer. Presentation of the results of the practical phase, using the presentation methods learned. The participation certificate of the programme is delivered. The event is also an opportunity for dissemination and networking

²⁰ The university system in Germany is divided into semesters and not similar to school years like in other European countries. Obligatory courses have to be fulfilled within a certain time limit, however students can choose to certain extent how many and which courses and exams they tackle in a certain semester. In between semesters they have vacations, which, among others, take place during February and April.

The former and very similar project “**Join the top**” was only targeted at women. This has been changed for two main reasons:

- **Isolation.** The programme is not enough reality-linked if there are only women. One of the objectives of the programme is to give to students the opportunity to learn more about the professional world and give them in-sight knowledge and practical experiences for their future profession. Courses and training on conflict management and negotiation techniques for example are much more effective when implemented in heterogeneous groups.
- **Exclusion:** The programme is specifically adapted to women needs. Nevertheless, if there are male students interested in the programme, they should not be excluded. Experiences have shown that exclusive programmes can be negatively perceived which would damage the networking and contact advantages for a future job.

The programme is 100% adapted to the needs of women. The content of the courses, business and leadership strategies, communication, presentation and negotiation gives particularly women the possibility to complement their knowledge with very important practical features for their professional career.

It is a great opportunity to find a job in the future. Chances are much higher because contacts are already made and established.

Mentoring

The Leibniz University Hannover runs simultaneously several mentoring projects specifically addressed to women through the gender equality office. They are build on three main axes:

- Tandem collaboration between mentor and mentee
- Seminars
- Participation in projects

There are two main targets:

- Students of the university that would like to precise and elaborate their professional career targets (career, networking, family/work issues, etc)
- Future school pupils interested in studying in the University



Example Student mentoring: “Mentoring in science and economics”

The objective of "Mentoring in science and economics", is to promote the new generation of female scientists at the University of Hannover. The 9-month programme offers graduate students and phd students of natural sciences and technical studies (computer sciences, engineering, machinery, etc) further training, coaching and guidance for their future professional life.

The objective is to give them an individual-based guidance and support through

- Tandem collaboration: Setting up of precise future objectives. The mentee receives one or more concrete tasks in line with those objectives. The mentor provides her with guidance, training and coaching taking example from the practical example of the task(s) received (eg. Feedback on approach, presentation and impact of the mentee’s work).
- Seminars: training of soft skills such as public presentation, self marketing, project management

- Project: participation and assistance in specific projects, learning and applying new methods and instruments of project management.

A very important feature of this programme is the **initial setting up of objectives** to be reached, as the relationship and work between mentor and mentee is quite flexible and open. Main advantages of the programme are :

- **Professional orientation**, guidance into a professional sector. Studies have tackled a lot of different subjects and it is important to analysis where and in what area the students would like to work.
- **Contact making and networking**. A lot of jobs are acquired through personal contacts and previous networking.
- An important aspect for the learning process is the **exchange of experiences** and knowledge with other Phd or graduate students.
- **In-situ visit and meetings with future employers**, visits in different companies in order to get to know the different sectors, industries and their working conditions and approaches.
- **Improvement of soft skills**

Mentoring for female pupils:



The main objective of the mentoring programme for pupils is to give **individual-based guidance**, support and interest to female pupils for technical studies. Focus is put on questions and interests of the female pupils: What are the main differences between school and university? What will I learn in electro-technology? How will I succeed studies in electro-technology?

Target of this programme are female students from the age of 16 to 20, however most of them are 16 years old. They have been directly contacted by their school or have found information on the internet, or through information events or flyers and have decided to participate in the programme. The equality office of the university and the responsible for the programme visited the different schools in order to give information sessions and distribute flyers on the programme. The mentoring programme takes place every year, from October to the end of February.

Each pupil participating receives a university student mentor, which gives responses to questions and doubt and intents to be a role model for the pupils. For this reason, mentors are always female students. They explain details when courses where pupils participate become too complicated, they describe their experiences and take them to their student apartments in order to give them a view on their whole student life. Mentors are students from the electro-technology department, physics, computer science, technical physics and machinery.

Main activities undertaken throughout the programme:

- **Meetings with the mentor:** Direct meeting or per telephone, in which aspirations, ambitions, interests and future professional objectives are discussed. These meetings are also an opportunity to get closer to the university life: drinking coffee, eating in the cafeteria, visiting the library, going to the university cinema, etc.
- **Direct participation in courses and seminars:** During 5 months the mentor takes the pupil to several courses and seminars. This is called the "tandem work", because mentor and mentee work together, like a tandem. The pupil assists the mentor in its courses and the mentor responds to doubts and questions (at least 4 times)

- **Visits in the university:** A part from the direct participation in courses, several visits through the different departments of the university are organised.
- **Advising sessions:** Direct advising is organised through the central information office of the university. The university has its own information service which gives advice and different kind of documentation to future pupils.
- **Techlab:** The pupils have the possibilities to test their knowledge acquired throughout experimentation in the laboratories (e.g. Construction of a robot).

The mentoring programme is based on the relationship mentor-mentee, as the mentor guides the pupils in its **professional aspirations and personal ambitions**. A lot of the mentors stay in contact with the pupils even after the finalisation of the programme. Project reports show very positive and encouraging results. Some of the pupils that have participated in the programme are now students at the university.

The age of the pupils has a great impact on the effectiveness of the programme. Indeed, too young pupils are not be able to entirely understand the courses and meetings and pupils in the last secondary class have very often already decided if and what they would like to study. The best age is therefore 16 to 17 years.

4.2.4 World views

The world view behind the great efforts made by the gender equality office, its collaborators and the university direction are very linked to the general situation in German universities and in the Leibniz University Hannover. The two main challenges of their work are:

- Comply with the **very demanding however also necessary laws and policies on gender equality** in German universities. Numbers of women studying and working in the ICT sector are still very low.
- Confront a generally very stereotyped way of thinking of mothers at home or working in very specific kind of jobs (nurse, school teacher, etc).

When the gender equality commissioner started his work in 1990, it was very difficult to justify and explain to the different departments, professors and researchers, why and how women should be promoted. Although the direction of the university supported and promoted the commissioners work, the objectives were mainly misunderstood, and reactions were similar to “ *We have to incorporate incompetent women in the ICT areas because there are not enough !?!*”

In the beginning, a lot of different promotion strategies for more understanding on the issue and encouragement did not succeed. Actually, justifications and explanations are very often misunderstood and counter-argued with negative consequences that might have the setting of quotas and positive discrimination.

Nowadays, gender equality work is well accepted and new initiatives have shown that there is commitment from both, women and men, to increase the number of women students, researchers and professors in ICT areas of the university and in the business world. This change has not only occurred within and because of time and general change in society. This change of mentality has been the fruit of a very specific and context-adapted work philosophy, which is based on two pillars: **Usefulness and budget**.

To the question: **Why should we promote women in the ICT sector?** If the response is: “Because there are not enough”, the counter answer generally is “this is not our fault and/or problem”. However there are two answers that are even accepted by the most critical opponents:

- **“Because the University demands us to do so”** or “because this is the law and it must be applied”. In this case, there is no justification given. This answer does not permit any doubt on the validity of the gender equality offices work. Example is the participation in European IST projects. Fact is that gender action plans and gender issues are to be implemented in Framework projects. The discussion on the value or validity of the issue is not relevant.
- **“Because this brings you extra-money and recognition”**. This second answers has brought many departments to take initiatives in the area of gender equality because benefits of their efforts are directly perceivable and tangible. Every year, the university awards the department that has shown the most effort with 5000 euros. Other example: departments receive extra-money for women Phd students. **With regard to recognition:** For the annual gender equality report the commissioner asks to all of the university departments a short description of efforts done and results obtained. The most successful departments are described in detail and as a best practice in the final report.

The result of those two modes of argumentation is that the doubt on the necessity of a gender equality plan has disappeared, and society starts to think that as from the beginning, measures undertaken were based on their own desire.

Also, the fact that the gender equality commissioner and its office has been awarded several prizes and projects with quite high amounts of budget has given **high recognition and respect to their work**.

Added to this, awareness raising is considered as one of the most important issues: **Create awareness on the benefits of taking more women on board!** Once the validity of gender equality issues are established, the promotion can focus on the more essential benefits of a gender balanced ICT society.

4.2.5 Main lessons learned

One of the main reasons for low number of women in the ICT sector are the cultural barriers integrated in each one of us, learned from small childhood to school, until university and after. The image of technology versus femininity is omnipresent in many cultures. **Education** is the most important element to break down stereotypes and give girls an opportunity to choose their fields of interest themselves. The Leibniz University of Hannover and **the work of the gender equality commissioner** is a brilliant example on how concretely and effectively include more women in technical studies. Main lessons learned from this case study are:

- Once women have finished secondary school, it is generally already too late to wake their interest in ICT. The target age of a gender equality project or programme is highly important. Projects with the objective to wake interest should target girls from 14 to 16 years old, as they generally do not know yet if and what they would like to study.
- The presence of role models is extremely effective. Indeed, mentoring programmes between female pupils and students have shown surprisingly positive results, at all ages.
- Whether to promote women in women exclusive programmes or create projects for both, women and men, taking into account the specific needs of women, depends on the nature, objective and

target of the project. Sometimes a homogenous group can be more effective; such as in the case of waking interest within young secondary pupils. Other times, heterogeneous groups are more effective because more reality-adapted.

With regard to projects in the area of **Education**, there are two main targets, with each 3 main objectives:

1. Pupils in secondary schools:
 - a. **Create interest** in ICT areas
 - b. **Break down stereotypes** and counteract social pressure
 - c. **Encourage and support** their choice
2. Women studying technical areas in University
 - a. Create **favourable conditions** for women studying in university (eg. childcare)
 - b. Provide them with **skills and knowledge** taking into account their specific needs.
 - c. Prepare them for their inclusion in the ICT job market by new **networking** opportunities.

4.3 RTE

4.3.1 Background

Ireland's progress towards a more inclusive society has been significant since the 1970s, and more particularly with regard to the **women's role in society and in economy**. Before these years, Ireland's regulatory framework had in place a series of very strong discriminatory practices against women preventing them from working, linking their status in society to family and household, as wives, mothers and daughters. There was the marriage bar (until 1973) and the marriage grant, as well as smaller insurance stamps for married women and the payment of adult dependant's allowance. Once they were married, women were denied employment. As from Ireland's accession to the European Union, the pressure toward a more equal society became higher. Since then, the Irish Government has banned acts and passed a series of Acts in that direction such as the Employment Equality Act (1998) and the Equality Status Act (2000).

With regard to women in the ICT sector, it seems that this sector will present a great opportunity for women in the future. After a boom of the Irish ICT sector in the 90's, the market has slowed down. Nevertheless, Ireland has one of the biggest ICT turnovers in Europe and foreign investments are high (eg because of low employers costs). Studies have shown (eg Study on " Future skill Needs" by the Irish Government expert group)²¹ that qualified ICT workers will be needed in the future and that women could become a main source of labour inflow.



RTE, Radio Telefís Éireann is the Irish National Public Service Broadcaster. The organisation provides three national television and four national radio stations and a range of other services including two national orchestras, a web site with live radio and video streams and a teletext service, RTE Aertel. RTE is divided into different business divisions which are the following: Television IBD, Radio IBD, News and Current affairs IBD, Performing groups IBD, Network IBD, Publishing IBD, Corporate HQ&Central shared services. There are 2,287 employees working in RTE today. Important contextual elements for the analysis of this best practice study were:

- Broadcasting in Ireland began in 1926 with 2RN in Dublin. From that date until June 1960 the broadcasting service (Radio Éireann) operated as a section of the Department of Post and Telegraphs, and those working for the service were directly employed by the government and regarded as civil servants. This background and the present public status have an **impact on the quite favourable working conditions in RTE**. Indeed, RTE as an employer, has set priority to corporate social responsibility, and is offering very modern and attractive work places.
- A general feature of the situation in Ireland is that gender equality in employment has had a **drastic progress since the 70's** given that married women were not able to work at all.

The situation of Irish women working in the ICT sector and more particularly in RTE is the following:

- Number of women studying ICT areas, such as computer sciences and engineering is low. Depending on the area it varies around 20% like for example 21% of women Phd graduates in computing²² and 24% in engineering. Number of graduates in those areas are lower (between 5-15% depending on the ICT area)²³. A recent report published by the Central Statistics Office lined

²¹For more information: <http://www.skillsireland.ie/>

²² *She Figures 2006, Women and Science Statistics and Indicators*, European Communities 2006.

²³ *Women and Men in Ireland 2005*. Central Statistics office.

out that **women are achieving an educational status above that of men**. The same report stipulates that depending on the sector, number of women working in the ICT area are only at 3,4%²⁴, and significant pay gaps still exist.

- The number of women and men working in RTE is more or less equal with a percentage of 46%²⁵ women. Number of women in Management levels is around 31% **although the higher the position, the more there are women**. Examples: The highest position in RTE, the chairman of the authority, is a woman. This high authority regroups 9 members, from which 5 are women. Numbers of women also depend on the departments and business divisions as well as the sectors within each division. Numbers of women in Human resources department of each of the divisions (Radio, Tv, publishing etc) are for example much higher than in specific technical sectors, such as camera teams in TV, sound-specialists in Radio. In general, there are more women in the Corporate, performing and publishing divisions.
- For the year 2005, 51% job applications for RTE came from women for all positions and divisions and 41% for managerial positions in all divisions. These figures could show an increase of women working in the organisation.

4.3.2 Research approach

RTE was visited in Dublin, Ireland, from the 18th to the 19th of September. Documents, such as annual reports and project reports were collected and five individual as well as two group interviews (3-5 persons) were made with employees, managers and directors women of each of the Business divisions and also with members of the trade union. The focus the RTE with regard to the Professional life cycle analysis phases was career development.

A part from the templates used for all the case studies, questions and discussions in the interview tackled the following topics:

- Laws and socio cultural situation of women employees in Ireland and more specifically in ICT sector and in RTE
- How gender equality policies are actually implemented in the organisation.
- Perception on gender equality measures within the organisation.
- Success factors of women ICT career development in RTE
- Results and Future
- Originality of RTE's best practice within the Irish cultural context

The interview approach slightly changed depending on the interviewees. There was a great contrast within some of the opinions and experiences lived in RTE: In fact, there were very little "moderate positions" on the topic and interviewees/groups were very much positive about the situation of women working in RTE, or on the contrary, very much pessimist and desperate. This was independent of the business unit and ICT or other kind of job or position.

²⁴ *Women and Men in Ireland 2005*. Central Statistics office.

²⁵ *RTE annual report and group financial statements 2005*. RTE 2005 Dublin

4.3.3 The RTE case

4.3.3.1 Starting point

RTE intends to ensure gender balanced recruitment and promotions. Training managers are given advice on gender issues (e.g. on harassment, bullying, etc.). HR Departments analyse on a regular basis the gender break downs in the various divisions of the organisation, looking for eventual imbalances.

Since the 1970s discrimination on grounds of gender are prohibited in Ireland. As a public organisation and therefore being an example for others, **RTE has monitored its workforce** since then and taken specific

measures where necessary to bring about a better balanced workforce. Difficulties have been encountered in “traditional” male areas of work, e.g. engineering, technical areas, etc where in the past most people have been male. Progress has been very good in terms of recruitment over the last two decades. With the **technological change and progress**, ICT jobs have become more accessible in RTE, eg. Size and usability of audiovisual material, such as the weight of cameras for example have allowed the existence of camera women.



New time arrangements and flexibility at work have allowed more women to go for the most senior positions in RTE. There has been considerable improvement in this area. For example

the Director of Communications, the Director of Television, the Head of the main Radio channel, the Director of Publishing, the Commercial Director of Television and the Head of IT are women.

4.3.3.2 Professional Life cycle in RTE

RTE fosters the participation of women throughout their professional career. These practices and activities are part of a whole approach, based on transparency and the promotion of equal opportunities:

- **Phase 2: Recruitment procedures:** RTE is a very attractive employer. This is because of its image and popularity and because of its favourable working conditions. Competition for job application is hard and potential new comers exist at high quantity. RTE has put different measures in place in order to guarantee equal opportunities: Ads appear on the main internet site and on the radio, sometimes also in Trade papers. They all specify the policy on equal opportunities in order to encourage women to apply. Different selection criteria are set up by the selection committee (the Manager who is recruiting and 2 other Managers or employees) and a specific questionnaire is developed for applicants²⁶. From the analysis of this questionnaire, there are 60 person selected and interviewed. Another selection of 20 applicants takes place, taking care of a good gender balance. Those 20 applicants participate in a training course and if they succeed the final examination, they are entered into a database of potential candidates. Positive discrimination occurs in areas and sectors where there are only very few number of women.
- **Phase 3 Career development:**
 - o **Spring Board** The spring board is an internal project that has already been organised 8 times since 1998 and is aimed at women that would like to feel more confident in their job.

²⁶ This is an important element as several gender studies have shown that men respond to specific job advertisements even though they do not fulfil all the criteria mentioned, and women generally only respond if they fulfil all of them. The questionnaire permits to see whether the persons really correspond to the profile RTE is looking for.

Trainings are organised 1 day per month during 4 months, and participants are given a work book as well as a questionnaire on how they see themselves and how others see them. Results are presented during group presentation sessions. The final objective is to give women more confidence to go for higher positions in RTE.

Biographical example

Human Resource Manager, Female.

This Human Resource Manager started as secretary in the newsroom for 2 years. After taking a year off, she restarted a secretarial position in the design department in which she stayed for five years with several promotions, taking from then on a Broadcasting assistant job for 5 years in the Radio Broadcasting.

Within this time period, she participated in the Spring Board, after which she applied as a Training officer for which she was awarded. After that position she became Human Resource Manager: *I was chosen for this job because I was the best and not because I am a woman. The Spring board really supported me in my career development as I did not expect to reach a Manager position after having started as a secretary. It gave me more self-confidence and I went for the top.*

- **Training:** RTE encourages both, women and men, for self development and improvement of their skills and knowledge. Objectives of the training are to improve performance in current positions and to accede to higher positions, increase motivation and morale, encourage flexibility and adaptability. The percentage of women participating in those trainings is quite high and content is adapted to specific needs of women employees.
- **New time arrangements:** Particular efforts have been made in some very demanding sectors of RTE such as the newsrooms for example or more journalistic positions. Working conditions have been very hard in the past years (night work, overwork) and also precarious (free lance contracts). This is not specific to RTE and it generally applies to the whole media sector in Europe. Due to the low number of women working in those sectors, new concepts such as jobs share (2 persons working in 1 job position part time), personal childcare and summer month holidays have appeared.
- **Phase 5 Uptakes after leave: The RTE Childcare Co-operative:** The RTE childcare started in 1987 and has expanded, improved and grown over the years to become a very attractive and well-working facility for parents working in RTE. It is a Co-operative of which the parents are the shareholders. The parents elect a Management Committee at the Annual General Meeting and a full time Manager runs the crèche on a day to day basis. It offers a five-year childcare plan with highly qualified caring workforce for: 4 to 12 months babies, 12 to 18 months tweenies, 18 to 24 months toddler, a play group for 24 to 40 months a Pre Monties for 30 to 36 months and a Montessori for 36 until entry to school. It works under a commercial basis, although subsidised by RTE in many ways, such as the premises, pays for heating, electricity and telephone costs and an annual grant. For the moment, RTE has obtained planning permission to construct a bigger crèche facility.

The following are additional gender equality measures and policies are promoted in RTE:

- **Anti harassment and bullying policy:** This policy has been designed to ensure awareness as to what constitutes harassment, sexual harassment and bullying and to providing a procedural framework for dealing with complaints. A panel of Designated Contact persons is available to provide confidential advice, assistance and guidance in an objective manner with a view to resolving complaints and to provide a safe work environment of dignity and respect.
- **Staff Opinion Survey:** RTE intends to find out the views and opinions of its staff and as indicators for this, a climate survey has been conducted in 2005 and will be conducted in the future. Objective is to help the organisation better understand the opinions of staff members and on a number of key

areas such as leadership, flexibility and communication, improve upwards communications and take appropriate action in response to the feedback.

- **Transparency:** Procedures, policies and working methods are handled as transparent as possible. This element is particularly important for recruitment and promotion procedures (eg Go against “old boys network”), but also for the general acceptance of gender equality measures in the company.

RTE can show a great amount of measures and favourable conditions to increase number of women in ICT jobs and to create a gender friendly environment. However, from the interviews has also been concluded that there are **still a lot of discriminatory elements against women** to be tackled in RTE. With regard to positions and responsibilities of women for example, **policies stipulate equality, but practices** are sometimes in favour of men: A lot of women have a secretary position whereas men with the same profile are clerical staff. Tasks are the same, but the salary is not.

4.3.3.3 *Best practice in Career development*

42% of senior managers in RTE are women. The organisation considers this as reasonable but not as good as it should be so RTE has developed a Career Development strategy which provides a series of recommendations for developing and enhancing the careers of women. These recommendations were a key outcome of RTE participation in *Women Active in Diversity Equality (WADE)*²⁷, a project called “Gender Balance on-air”.

Gender balance on-air is a project set up to increase the visibility of women on television and radio programmes and to enable more women attain positions of influence within RTE.



recommendations.

At European level, the European Broadcasting Union (EBU), recognising that gender equality is far from being achieved, drew up a charter for Equal Opportunities for Women in Broadcasting (1995). RTE was one of the 50 signatories. In order to comply with this charter, the Gender balance on-air has launched several initiatives and has come up with some very practical

Diversity Database- New faces, New voices of Women: In order to increase visibility of women, a diversity database has been created which contains entries for 750 women, outlining their particular areas of expertise and interest, qualifications, knowledge of languages and details of any previous media experience. These women, many of whom have never been on radio or television before, are from all parts of Ireland and represent different backgrounds, disciplines and perspectives. A wide range of women were spoken to by WADE researchers, and when considered suitable, additional information forms were sent out on the main topics on which they would be willing to speak on the television or radio.

The methodology for finding potential women for the database was:

- Personal contacts of professional researchers with have worked across all RTE programmes
- Research of newspapers, periodicals and other publications
- Internet research

²⁷ This Project was funded by the Irish Government department of Justice, Equality and Law reform under the Equality for Women Measure of the Regional Operational programmes National Development plan (2000-2006).

- Monitoring by researchers of radio and television programmes
- Attendances at seminars, conferences and launches
- Mail shots to top companies and organisations
- Recommendations from women already selected for the database
- Liaison with other groups compiling databases e.g. WITS (Women in technology and Science).

The database was tested by a group of ten radio producers within a pilot project of several weeks. They gave feedback on the transparency of information in this database, advantages and gaps as well as some very valuable recommendations for the final establishment of the database. The diversity database followed all legal requirements under the Protection Act of 1988.

The database is available via the RTE intranet to programme makers, producers, presenters, reporters, researchers, journalists, broadcast assistant along with a set of guidelines on the use of inclusive language and terminology. It is hoped that the use of a new groups of women with specialist knowledge will lead to better gender balance and more inclusive presentation.

Career Development strategy: Limitations in media content have often been linked to women's under-representation and lack of power within the media industry. The project provides a series of recommendations for developing and enhancing the careers of women within RTE. Arising out of the recommendations, a mentoring scheme has been set up to assist women in advancing their careers. This initiative has provided a prototype for future mentoring programmes in the organisation.



The design of a career development strategy started with a review on women career progression by an independent consultant. The reviews consisted of:

- **Focus groups:** A total of 7 focus groups with around 16 participants. There were 5 female-only groups (1 group with women who had recently left the organisation, 3 female only non-management groups, 1 female only manager group), 1 mixed gender non-management group, 1 male manager group. The objective was to collect information by enabling active participation and involvement.
- **One-to-one interviews with a number of Executive Board/Senior Management members:** A total of 10 interviews were realised with women and men.
- **Written submissions:** In order to ensure a wide range of information sources, staff was invited to submit written opinions on the issue.

Different documentation was analysed, such as guidelines, hand books, documents on relevant policies. Recommendations resulting from this review tackled selection/ promotion, interview boards, criteria for selection and promotion, feedback to unsuccessful candidates, procedures, work/personal life balance and career development, transparent criteria for equal pay and benefits, changing the working culture which was still considered as main barrier of women participation, and clear measurement system for gender equality measures.

With regard to career development, the review stipulated the introduction of a performance appraisal system, a precise and constructive succession planning, training on equality and for equality, promotion of women career paths, gender monitoring and mentoring. RTE has responded to these review results with a clear set of gender equality measures to be undertaken within the organisation.

The Mentoring Programme

As a result of the recommendations and the review, a first RTE pilot mentoring programme was started with a duration of 7 month. Mentees for the programme were selected from the Television division and paired with

mentors from all divisions- all senior positions. The objective of the mentoring is to assist women in advancing their careers providing them with a focused guidance in their career development.



6 participants were selected on the basis of an application procedure, for which 24 women had applied. Six senior managers were invited to become mentors based on their skill set to undertake the role, their position in the organisation and their willingness to give commitment required. Mentors were matched with mentees on the basis of a good personality fit and to ensure diversity of divisions participating.

An initial workshop and training was organised, in order to precise the concept of mentoring, roles, responsibilities and behaviour. Following this, mentors and mentees discuss the objectives and the schedule of meetings. There are three general meetings between mentoring team and participants, in the beginning, mid-term and end of the programme. As part of the programme, an evaluation methodology was designed and implemented. The evaluation tackles the experiences of mentors and mentees (questionnaires), perceptions and behavioural changes in mentees (observed by themselves and by mentors) and the outcomes delivered, skill advancements, process enhancement, etc.

The gender balance on the air Project has been very successful, and main recommendations are integrated in Appendix 4 of the RTE staff regulations. Very ambitious, it can actually be seen as **three interactive projects**, analysing and tackling the main difficulties of women working in different positions and sectors in RTE and aiming at a career development. Main benefits for women are:

- Give more visibility to women inside and outside of RTE media services
- Give a voice to women and pay attention to women needs
- Provide them with a network in the appropriate decision making areas of the organisation
- Involve them in their own career development and enhance their promotion potential, develop new skills
- Provide assistance and encouragements in critical times and increase job satisfaction
- Provide them with a better understanding of how to operate effectively in the corporate culture of the organisation.
- Bring clarity about career paths and career goals.

4.3.4 World views

There are great differences with regard to the working culture within the RTE organisation from a point of view of its different divisions and departments. Indeed, one can speak of a specific culture of the Television division, Radio, Corporate division, etc. For instance, the newsrooms works with very tight deadlines, and depending on the job, journalist or producer or technician for example, conditions can be very different. Ways and conditions of working (e.g.team work, independent) influence very much a organisation culture. Also, in some divisions, the number of women is far higher than in others. Firstly, this changes the approach to gender equality and secondly, the general culture and the world view. Division and departments with only a

few women are generally very masculine oriented (Old boys networks, little commitment to gender equality).²⁸

Nevertheless, even within the divisions, **opinions of women** on the situation of gender equality can be **completely opposite**. On the one hand side, there is a very positive movement, encouraging what has already been done and confident that conditions are favourable for a steady increase of women in technical jobs and in better positions. On the other hand, there exists great disappointment and some of the women working in RTE feel treated as a second-class employee.

- **Positive world-view on the situation:** This world view underlines that changes can't be made overnight but that efforts have been high and that working conditions are already quite gender friendly.
- **World view asking for a radical change of the situation:** Although gender equality policies have been elaborated, some women feel that most of the practices within RTE are discriminatory for women. They complain that there is a lack of transparency for selection and promotion procedures and that these procedures function from mouth to mouth propaganda of men (Old boys network system), throughout typical masculine social activities (golf, soccer). Women with same profile, competence and experience have lower positions and less salary than their men colleagues. Added to that, women continue to work in female roles, as secretaries even with engineering diplomas, subordinated to men. Following this world view, measures for gender equality implemented in RTE are supposed to keep women quite.

Commitment for gender equality in RTE is very feminine, and would have more impact if male employees become dedicated to the issue. And a good mixture balance of both world views, positive and negative, will probably support progress in the most effective way.

It is true that stereotypes and preconceptions of women's roles and abilities are strong. As the review of the Gender balance on-air project showed, **stereotypes** are identified by 66% of senior management women as the main barrier to women advancement, followed by a **lack of successful female role models**. One of the conclusions of this report was "*The culture needs to understand and accept that doing it differently does not mean doing it wrong*".¹

4.3.5 Main lessons learned

The case study on the RTE Ireland shows that within the same organisation, policies and practices can highly differ from another. Transparency combined with standard procedures and processes as well as their strict monitoring and evaluation can change this situation. With regard to the selection procedures in the recruitment process for instance, equal opportunities are guaranteed by a 3 step selection procedure and an in-house questionnaire as well as a training that permits to measure the capacities of each of the applicants. Other very effective elements identified in RTE are:

- Time arrangements and above all **job-sharing solutions** balancing the harsh working conditions of some of the division in RTE (e.g. newsroom)
- The staff survey, with the objective to **understand and respond to the specific needs** of employees, including women.

²⁸ This is not always the case in other organisations. If the pressure is high enough to comply with a minimum of gender friendly standards and to fulfil a certain quota, teams with only a few numbers of women can be highly gender friendly. In the case of RTE, this is not the case.

- The support of **self-initiatives**, as the childcare Co-operative which was launched by parents.

Most important, the Gender balance on-air project shows the **different steps of progress towards gender equality in one single project**. There are 3 main steps:

- It starts up with a review, studying the situation, needs, problems and challenges to be tackled
- On the basis of this, a strategy is developed.
- This strategy is tested within two pilots: one to augment the visibility of women and the other to augment the power of women.

4.4 General Electrics

4.4.1 Background

Against a background of growing demand for S&T professionals and despite the increase in the number and share of women among science and engineering graduates in France in the last years, women remain highly under-represented in scientific and technical careers. French laws, policies and practices with regard to working conditions in all employment sectors have improved and they generally encourage women to enter a professional career, and to cope with family and work. As living cost are high and salaries not always adapted, the majority of women work in France. Main challenge in France is the same as in many other European countries: give a more gender friendly image to ICT jobs and increase number of women entering ICT areas in universities.

The ICT industry is amongst the largest industrial sectors in France, and General Electrics is one of the leaders of the French ICT market. As a major American company and one of the largest and most diversified corporations in the world, its products include electrical and electronic equipment, plastics, aircraft engines, medical imaging equipment, and financial services. Since more than 50 years, the company focuses and ensures growth and development in three main sectors in France: energy, health and financial services. Turnover of GE France was for 2005 calculated at 3600 million euros, with 10 000 employees and 150 million euros for R&D.



General characteristics that have influenced the analysis of the best practices are the following:

- GE is an American multinational company located in France. Although working conditions are adapted to French laws and policies, the general organisational culture and philosophy has its origins in the United States. This culture is much more advanced in diversity and gender equality issues. Gender equality is a fact and seen as a normality in professional careers.
- As one of the biggest companies in the world, GE has very established internal policy framework, applicable to all locations. This concerns recruitment procedures, career development (different positions and posts), human resource policies, marketing policies, etc. Transparency, monitoring and evaluation of these procedures is therefore high.

The situation of women studying working in the French ICT sector and more particular in General Electrics can be described as follows:

- In university and third level school, women are represented with around 20 up to 30% depending on the ICT subject. In engineering



there are for example 23%²⁹, in computing 19% and a fairly good percentage of women studying physics with 34%³⁰.

- Numbers of women working in GE France are quite positive. There is a total of 35% women working in GE France, with 37% women employees, 27% Managers and 16% Directors. Not to forget, the recently selected president of GE France, Clara Gaymard, is a woman.

4.4.2 Research approach

General Electrics was visited on the 20th and 21st of September 2006 in Paris, France. Different kind of documents and information sheets were collected and individual face to face (5), group interviews(2) as well as telephone interviews (2) were realized. Interviews were realised with Human Resource Managers, Senior Managers responsible for the GE women network and/or for training and mentoring, Directors and the President.

Questions were adapted to the specific profile of the interviewee and to its function. However some general themes guided all the interviews:

- GE women network, its work, impact and image. Its overall strategy and specificities of hubs at regional level.
- Link between gender equality commitments and business objectives
- Impact of different instruments and practices for gender equality.
- Specific roles attributed and responsibilities with regard to gender equality
- Success factors
- Gender equality within the global vision
- Objectives and visions for the future

4.4.3 The General Electrics case

4.4.3.1 Starting point



The implementation of a gender policy was initiated in 1997 at corporate level and pushed by the chief executive of the company. The gender policy was and is included within the Diversity strategy of the organisation. The company stands as a strategy for growth, the "Diversity & Inclusive Leadership". A diverse workforce is considered by GE as a critical competitive asset and the basis for global growth.

The building blocks for this Diversity strategy are:

- Increase in the representation of minorities, non national employees and women in leadership roles across the company
- Ensure programmes & practices are contemporary and support GE as an employer of choice
- Position GE for appropriate external recognition: company and individual

²⁹ Association Française des Femmes Ingénieurs.

³⁰ *She Figures 2006, Women and Science Statistics and Indicators*, European Communities 2006.

Major instruments in place are: Leadership programs, training & development measures and specifically for women, the GE Women's Network. Almost all of the instruments exist internationally in all locations of GE, however adapted to the specific context of the country, region and sector.

Gender strategy, practice and instruments are conceived and applied at corporate level. Nevertheless, the hubs (at local or regional level) work independently and can organise additional activities/measures. It is widely considered that each hub is very different from each other in terms of style and culture so each hub has a different maturity level and a different set of gender oriented activities. Even though activities may differ, the same guidelines (fixed at corporate level) are to be followed.



The GE Women's Network is in charge of the definition and implementation of the gender policy. It is a Structured worldwide organisation: the Cabinet (Executive Women) is establishing network strategy, the Initiatives Leaders (Senior Women) are building and delivering initiative contents to hubs, the Region Leaders (High performing, mid-career women) are driving hub effectiveness, prioritizing & driving initiatives, setting agenda with hubs, coaching hub leaders, the Hub & Platform Leaders (Early & mid-career women) are aligning activities with company and network strategy.

There is one network at corporate level (GE worldwide HUB), one network per region (Europe HUB, US HUB, China HUB, etc) and one at local level (i.e. France). They are connected locally and globally. Delegations of the network meet monthly at local level and per each hub and yearly at corporate level. They perform many activities and the primary objective is to achieve women to be in the good position in the company and in general, to promote women in the scientific sector.

4.4.3.2 Professional Life cycle in General Electrics

General Electrics can show best practices in almost all of the professional life cycles, and the following is a short summary of the most important measures and instruments. Most of the instruments for gender equality have been initiated and organised by the GE women network.

- **Phase 1 Education: Visits in schools and university:** Some of the gender equality instruments are specific to the branch or GE women network hub, such as GE Energy women network located in Belfort, France, who has launched several educational projects for schools and universities. These projects consisted in visits to school and university classes, presenting and describing different careers in GE and giving a new image to women in ICT jobs. The objective is to show role models and to counterbalance the image of "inaccessible" engineering studies for women.
- **Phase 2 Recruitment:** Application and selection procedures ensure transparency and diversity (Age diversity, foster disabled, cultural diversity, gender equality). Gender equality is fostered by selecting a maximum of female candidates for positions and sectors where women are underrepresented. Human Resource Managers and other recruiting Managers are trained on specific issues such as language use, behavioural rules, themes that cannot be treated in interviews. For instance, selection interviews must strictly focus on competence and professional experiences.
- **Phase 3 Career development, the leadership programme :**GE promotes career development in many ways. This can be exclusively for women (informal and formal mentoring, networking events, training) or for both, men and women, taking specifically the needs of women into account. The leadership programme has a duration of 2 years and is targeted at women and men. The objective is to develop broad business skills via hands-on experience in 4 different areas, working 6 month for instance in human resources, finance, quality and business development. Its aims at the expansion of knowledge, critical problem-solving skills and at the building up of a professional network. The Leadership programme is often a way for women to get back on track after maternity or sabbatical leaves. It helps them to augment their visibility, set the priorities and build up a network

Biographical example

Human Resource Manager, Female.

One of the interviewed Human Resource Managers was very positively surprised about the effects that this programme had on her professional career. She started her career in GE with a Leadership in 3 different Information Technology departments and rotated then to an audit department. Shortly after this she became ebusiness Project Manager. Then she left GE for 3 years, working currently as a Human resource Manager. As she explained: *“For me, this programme was a unique opportunity to extend my professional background and to have the ability to move to different areas. I became more flexible, self confident and I am really multi-skilled now.”*

- **Phase 4 Management “Revue de Resource Humaines”:** It seems it is difficult for women to get to high management positions. In GE, there exist several measures to avoid these difficulties and to motivate women to get to the top. The yearly “Human resource review” brings more visibility to the performances and capacities of women, and particularly to those with the potential and the aspiration to access the top. The review has a bottom up approach, each year, every single employee, manager, director working for GE has to submit an auto-evaluation report, describing her/his performances, strong and weak points, needs, career visions at short term and long term etc. The submission goes one position up in the hierarchy, for instance employees submit to their Managers, who then retrace her/his point of view to this evaluation, consulting the employee and his colleagues on one or the other issue. The team summaries are realised by Managers, tackling questions such as; how many women work in the team, what performances have been done by the team. The Human resource review goes from each individual to the other, from team to team, area to area, from regional to national, up to European and to worldwide reports on the HR situation.
- **Phase 5 Uptakes after leaves, the “yes policy”, and the mentoring programme:** There are several practices which promote successful uptakes after leaves in GE. First of all, the general culture is very positive towards women going on a maternity leave (generally 6-9 month in France). It is seen as something normal and also father leaves are encouraged. Generally women receive a salary increase after their leave. During their leave and for the preparation of the return, GE France proposes a mentoring programme. 2 weeks before going on leave, the employee/manager is brought in contact with a mentor, who will be responsible of keeping her up to date during her maternity leave. The duo will have a permanent contact, the mentor explains to the mentee what has been going on, what has changed and what is expected in her work. In the beginning and at the end, a more intensive meeting is arranged, with the objective to analyse the necessities and professional aspirations of the mentee: continue in her job, change job sector, start with a part time job or with flexible working hours, etc. **The “yes policy”** concerns flexible work arrangements: If anybody asks for a flexible work arrangement, the answer is by default first of all “yes”. GE proposes 4 main adaptive work models: Part-time jobs (Reduces the workload and the salary), 4 days-week (workload and salary are the same), job sharing (Reduces the workload and the salary), teleworking workload and salary are the same). One of the interviewees said: **“Rather than looking at it as a handicap, maternity leave is seen as an opportunity!”**

4.4.3.3 Best practice in Career development

The focus of the GE best practice analysis has been put on the GE women’s network. Although objectives, benefits and impact of this network are multiple, it is mainly directed towards women career development. The network started in 1998, in Crotonville, United states. In 1999, GE had already launched 36 US and 6 European Hubs with around 3000 participants. Since then, different events, awards and a continuous development of new hubs has been taken place. Today, the GE network has more than 38 000 members and 130 regional, national and international hubs.

The main objective is to foster women’s professional development through tools and culture change, enabling growth. The main characteristics of the network are:

- One of the main objectives is that women support women excel
- The network is voluntary and open to all women
- It fosters mechanism for leaderships skills
- The network focuses on professional development initiatives
- Give an opportunity to network and share information with other women
- Engage/"Pulse" senior leadership
- Promote self-help and personal development

GE France Women Network is headed by 2 women, which have been proposed and have committed to their tasks on a voluntary basis. Their mandate is 2 years. For each of the different GE locations and divisions (Fleet, Moneybank, Healthcare, Energy, Adv Mtls), there are each 2 voluntary responsables. The GE network France fosters 3 main instruments:

- Personal and professional development of women working in GE (Development instrument)
- Give support and guide women to a better understanding and knowledge of General Electrics working culture and business objectives (Integration instrument)
- International, national and regional external actions to foster and promote diversity and gender equality.

There are five principal initiatives: Growth leadership traits, development and commitment, WiC (Women in Commercial), WIT (Women in Technology) and Metrics and Internal Communication, proposing different activities. There is a total of 500 permanent participants (no membership or inscriptions is needed) and events are generally attended by more than 2000 participants.

Biographical example

Senior Project Manager, Female.

Working since more than 10 years in GE, this interviewee started her GE career directly after her university studies. After 3 years she received the black belt: qualification for being a Project manager. Through an event, she came in contact with the GE women network. This helped her to make new contacts to other people and divisions in GE and to meet her current boss. Today she is herself active within the network, as she explains: *"The Network has nothing to do with feminism but a way of improving our career, because a lot of women have difficulties in doing so. We discuss and find solutions together."*

Workshops and other events

The network organises different kind of workshops, seminars, exchange ateliers and conferences. Main objectives of these events are:



- Inform and train in an effective way participants on a specific subject linked to a GE strategy or task.
- Build up a communication network with other women working for GE as well as with Managers.
- Training on different subjects such as: image management, image communication, how to progress from feedback, how to write my performance review (please see description of Human resource review in previous chapter).
- Ask elements that are generally not questioned.

Events can be organised on a local level, depending on the needs and ideas of each of the different hubs. Networking events can for example take place in the form of a Cocktail evening for 20 persons, Leadership meetings regroup up to 500 participants and are organised in conference halls. The Workshop **"Meet a leader"** for instance focuses on a better understanding of the company. It takes place during the lunch break. There are 20-40 participants and 1 Manager or Director. Generally, the meeting is organised in order to take

advantage of a particular visit eg GE Manager working in other country, in other sector. The Manager or Director then presents her/his work, her/his career, aspirations and point of views on GE. Objective is to open up the world, tackle career doubts, discuss with others, take the time to think about career and become curious. These kind of events take place very frequently.

An example for another kind of events are the "Working lunches", which have the objective to complement professional competence with a certain knowledge on soft skills, like "how to present myself", or even with the objective to practice a language. "Working lunches" are frequently organised in English. Generally there are 4-5 participants.

Forums

There are several forums organised, and the most important is certainly the annual forum, which always tackles a specific theme. In 2005, the forum was entitled "**Communicating effectively in a feminine way**" and was attended by the executive committee of GE France. Other themes in previous years tackled for instance the different business branches in GE. Generally, there are around 250 participants. The forum is organised around a general plenary session, and then there are specific ateliers around the general topic, for instance career management, human resources. The message of the forum is not only addressed to women, and speakers from very different background are invited, such as sociologists and engineers but also consultants and trainers. In 2006, the forum runs synchronised to the general annual meeting of GE, with the objective that some of the men colleagues stay. The women network does not want to be a closed society for women.

Networking to other women groups and to the outside world

One of the objectives of the network is to be the "Voice of the GE women", expressing points of views, needs, and aspirations and also have a internal and external lobbying function. Representatives from the network participate in different events, for instance in the French business council. GE network is also part of the Inter-elles group, created under the pulse of different ICT women leaders, regrouping France Télécom, IBM France, Schlumberger, GE Healthcare, Agence spatiale européenne (ESA), Air Liquide and EDF. Every year, this group organises an information and promotion event for more than 500 participants. Other activities are thematic workshops. The objective of Inter-elles is to foster women career development and propose actions for diversities in ICT companies. For instance, the 2006 general colloque of Inter-elles covered the following topics:



- Exchange results of each organisation, knowledge, experiences on key elements for women success in the ICT sector
- Result of the qualitative study on "The different behavioural codes in companies" with a presentation by a professor of anthropology of the university "La Sorbonne" on vestimentary codes.
- Discussion on the theme "Management of discontinuous careers" with recommendations of the working group linked to that theme, and exchange of testimonies and biographical experiences:
 - Teleworking and part time jobs
 - Management of uptakes after maternity leaves
 - Senior careers perspectives

The GE women network receives all the necessary infrastructure and budget from each of the divisions. There is no specific budget advanced or allocated to the activities, so that expenses are part of the general expenses of the company.

The GE women network is a very effective and mature women network, this is mainly due to the great support received by the leaders of the company. Indeed, the participants and responsables of the network receive enough time and also budget to comply all the objectives set. The executive committee of the company participates in many of the networks events. This gives recognition and value to the overall goals.

The network is **highly respected and this confers power and respect within GE**. The reason is simple to detect. Ideas, needs and initiatives come from the women themselves. Everything is based on voluntary work, at all hierarchical levels. The entire content of initiatives is based on their motivation and a lot of activities are parallel to programmes and activities organised within the HR departments. Frequent communication (eg. Publicity on intranet and internet, newsletter of the network) ensures the promotion.

The general philosophy of the network participants is therefore "TO GIVE" and not "to take". Women in network give their point of view, their experiences and they become a sort of notary for other women.

4.4.4 World views

The low number of women in technology engineering and IT jobs has to be solved by attracting more women into technical universities. For this reason, GE wants to **create role models and show attractiveness** of its careers. With regard to education, the main problem is considered to be the "high barrier" image of engineering studies, discouraging young women as from the beginning. Stereotypes are multiple and role models scarce.

The basis of the worldview and commitment for gender equality originates and is integral part of the diversity strategy of GE. For GE, diversity isn't merely a noble idea — it's the reflection of business: growth and success can be maximised if all characteristics and members of society are represented. Encompassed in that goal are age, ethnicity and gender, and more contemporary concepts like inclusiveness.

Key success factor of GE gender strategies and instruments are their link to the diversity concept, as it is defined in the USA. **Diversity is synonym to business, prosperity, growth. Diversity is seen as an instrument for production growth.**

Explanation: Firstly, in order to be productive, the company wants top talents, the best employees and the best managers that are on the market. Consequently, they have to be recruited from every horizon and background. **Selection based on other criteria than competence is counterproductive.** Secondly, in order to provide the society with the best products and services, the company needs the most multi-cultural and multi-functional teams as possible.

Universal, the concept of diversity has also been embraced by GE France, adapted to the specific context and conditions of the French culture and society.

As the chairman of GE explains very well during a meeting of the network "*The leaders of this company are responsible for making sure we have diversity in the leadership ranks. Diverse leadership is the critical X. It really is. I can't say it any clearer. It is the thing that when you change it, everything else falls into place*".

There are several elements why initiatives in the area of gender equality have been so effective in GE France:

- **Constructive promotion versus offensive feminism.** Gender equality is positively encouraged and it's not seen as a "women issue" or an annoying obligation. Linked to the concept of diversity, gender equality is part of the business objective of the company. When personal (women or men) from other GE locations visit GE France for instance, the GE women network is very frequently presented and meetings are arranged to present their goals. Commitment to gender equality is combined with a certain and very powerful pride.
- **Certain control and pressure to comply with gender equality.** Through monitoring and evaluation of performances of All employees, gender equality is permanently monitored. In the yearly Human Resource Review, Managers have to describe how they have promoted gender equality and what have been the results. A lack of commitment to the issue is seen as a lack of performance and achievement.
- **Decentralisation and depersonalisation.** The women network is result of the commitment of ALL GE employees. Every two years, the women network changes responsables. There is never one but always two women that lead its activities. This is to avoid people from thinking "Let them do", and to commit as much people as possible.

Another element lying behind the GE worldview is the philosophy "Only satisfied employees are performing employees". Indeed, GE invests and focuses more on services and facilities (salary, computers and internet at home, working conditions) for its employees rather than in the number of employees.

4.4.5 Main lessons learned

The best practice analysis of General Electrics illustrates the power of world views and working culture. Indeed, without this general supporting culture, the GE women network's activities would not be so very effective. Main lessons learned from this analysis can be summarized as follows:

- **Importance of role models:** Main obstacles for low numbers of women in engineering and ICT studies are the lack attractiveness of the studies (harsh and competitive conditions) and the image of the typical "men career". GE has set the priority on role models, that should give internally and outside of GE a more attractive image of Women ICT careers. Main activities of the GE women network are dissemination, training and promotion.
- **Power of cultural influence:** The American world view on diversity has been successfully transferred to the French GE working culture. This can be seen as a best practice experience. All the commitment and effectiveness of the GE France gender equality measures started up from this point.
- **Gender equality as a business objective:** A gender equal company is a more productive company. Focus is put on competence and on user/client needs (representation of the entire society).
- **Importance of working philosophy:** The amount of support that the GE women network receives is mainly due to its working philosophy. Entirely voluntary and based on common commitment of all employees, women and men, the fundamental objective is give and not to take.

4.5 Motorola

4.5.1 Background

The general situation of women in Poland can be analysed under two points of views: cultural and socio-economic. From a cultural point of view, Polish women have a very traditional role to play in society. As mother and nurse, teacher or sister, women are associated to family and house work. From a socio-economic view, a majority of Polish women are professionally active, however there is a great pay gap, and salaries are much lower in "typical women" jobs.



The ICT investment in Poland was at the highest growth in the EU during 2005 with 8,2%³¹ and it is expected to grow by 6,3% in 2006. Motorola's role as pioneer, innovator and visionary in mobile communications is well established in the Polish ICT sector. Originally founded as the Galvin Manufacturing Corporation in 1928, Motorola has come a long way since introducing its first product, the battery eliminator. For more than 75 years, Motorola is a global leader in wireless, broadband and automotive communications technologies and embedded electronic products.

Motorola established its Polish presence in 1992, when it opened an office in Warsaw with 10 employees. Six years later, Motorola opened its Kraków office with 12 employees, a first

step in establishing a substantial operation as part of the company's Global Software Group (GSG). Today, Motorola employs 280 people in Poland, including both the Warsaw and Kraków locations. The Motorola Polska Software Center launched in 1998 is one of the 19 centers within Motorola's Global Software Group. The Center, located in the Kraków Technological Park, develops software for Motorola's wireless devices, telecommunications and public safety systems, web networks, and software engineering tools. Motorola presently employs over 230 persons in Krakow and expects eventually to employ up to 500 software engineers. Motorola's total investment has been US\$ 10M. In January 2002 the Software Center was assessed at SEI Maturity Level 5, the highest possible maturity level of software development, as defined by the Software Engineering Institute (SEI). Motorola is the first company in Poland to achieve this prestigious rating.

There are several contextual factors that have been taken into account in the best practice analysis for Motorola:

- Motorola is a North American company, and the working culture, policies and organisation are very much influenced by this fact in the Polish location of the company. Although Motorola Poland follows Polish employment rules, workers rights and benefits are above the Polish working standards.
- Like in all locations of the Motorola Company, one focus set in Poland is the diversity of workers. However generally in Poland, there is a common belief that possibility of development of men's and women's ICT career is perfectly matched. Women scientists themselves share this belief and in their opinion any attempt to promote them could be understood as unreliability. Also, if the problem

³¹ "Benchmarking analysis on women entrepreneurs and workers in the ICT Industry". 2005 European Commission.

is recognised as such, the country as well as the Polish industry faces a great amount of socio-economic troubles and the role of women in ICT is not considered as urgent as it should.³²

Concerning the general situation of women in Poland, and more specifically women working in the ICT sector, the following has to be mentioned:

- There are two very important cultural elements to be taken into account: Strong Catholicism combined with post-communism. The Catholic Church has got a very strong cultural influence in Poland since centuries. The role of women in society have therefore been very traditional and largely associated to family, children, house work etc. Women themselves have largely adopted this image. Before World War II, few women were professionally active, and the role of "Housewife" was commonly accepted by women. Following World War II, the cultural and socio-economic role of women changed in the socialist system conditions. Emphasis was set on gender equality, and women were obliged to work, although in very "feminine" considered sectors, such as hospitals, schools, social services, etc. The result is that most of the Polish women work nowadays, although with very harsh living conditions as their role for family and house has not changed from the traditional view and association to mother and housewife. There is a urgent need to give responsibility to men and build up child caring as well as other facilities for mothers.
- Women unemployment (11,4%) in Poland is higher than the one of men (9,3%)³³ and the ICT sector in Poland presents a great opportunity for women. Figures show that up to 35% women work already in ICT job positions, 25% work as researcher in the Government sector in the area of Engineering and technology. Actually, recent figures of women in the ICT sector are quite encouraging. In University, 50% women are finalising a Phd in the area of science, mathematics and computing and 24% in Engineering, manufacturing and construction³⁴.
- No official numbers of women working in Motorola were available; however the number of women in technical jobs is quite low. Interviewees stated that there are not more than 5% of women working in technical ICT jobs of Motorola. However they also stated that the total percentage of women (around 25%) progressively goes higher with the grade of responsibility.

4.5.2 Research approach

Motorola Poland was visited from the 25th and the 26th of September in Krakow. Documents and reports were collected and face to face interview were done with persons responsible for gender equality and diversity, Human Resource Managers, Senior and junior software engineers and the Managing Director.

Questions in the interviews tackled:

- Specific situation of women in Poland and more particularly women working in the ICT sector in Poland.
- Laws and Polish cultural features in favour of women's career development in the ICT sector
- Specific culture of the ICT and engineering sector, main barriers for women to work in that culture and how can problems be solved

³² For more explanation on this issue: *Women and Science: Review of the situation in Poland*. Helsinki group on Women and Science. 2001

³³ *Labour Force survey* 2005. Eurostat

³⁴ *She Figures 2006, Women and Science Statistics and Indicators*, European Communities 2006.

- Originality of Motorola in Poland and employer image
- Objectives, implementation and impact of the Gender equality project
- Success factors
- Other elements which foster an equal distribution of women and men in Motorola Poland.

4.5.3 The Motorola case

4.5.3.1 Starting point

“As a truly global company, our policy is simple – we are committed to the full inclusion and participation of all people. At Motorola, diversity is the celebration of the unique differences of each individual and the understanding that these differences combine to make us strong. We strive to provide opportunities to people who have the talent, interest, integrity and desire to work within an organization that will value and contribute to them. A commitment to diversity is the right thing to do. It’s a business imperative as well: our company operates in more than 60 countries around the world, with products as diverse as the people who make and sell them”³⁵.



“Women” related issues are considered under the diversity section in Motorola. The company promotes diversity through a Global Diversity office. This global diversity office provides resources and tools to embed diversity into business practice and has oversight of different Business Councils. Led by senior executives and emerging leaders, the councils provide opportunities for employees to connect, develop professionally, advance Motorola products and extend a helping hand to their communities. One of the business councils is the Women’s Business Council: Initiated peer-to-peer employee mentoring program and online executive interviews that can enhance career development. In general, Motorola is making a great effort in diversity and workplace practises. Several sites from Motorola in the world have received “Equal Opportunity for women in workplace” awards.

Motorola Poland is increasing the number of women through two main elements:

- **Education:** Supporting diversity programmes oriented to attract women to engineering
- **Career development:** Defining work life balance instruments.



The polish site was created 8 years ago. The gender strategy started 6 years ago. Initially the Educational Diversity project supported by Motorola Poland involved 4 High Schools with a total of 300 pupils. Nowadays it has been extended to the whole Poland. This Project is followed by 2000 - 6000 people. It is oriented to achieve balance in the rate of women and men (50%) in the education. The Diversity project is designed to encourage young people and girls in particular, to consider pursuing computer studies and to show them the advantages of work in this field. Motorola has also donated modern laboratory equipment and grants to Polish universities including Warsaw, Gdańsk, Łódź, Wrocław and Kraków Universities of Technology, the University of Mining and Metallurgy (AGH), and the Jagiellonian University in Kraków.

Apart from the Diversity Projects, oriented to increase the number of women attending technical studies, the company has got additional measures oriented to retain women at work. With regard to these internal measures, the major beneficiaries are young women with children. Although there are other instruments:

- For instance, there is a special bonus to those employees who recruit more women.

³⁵ Statement on the website of Motorola accessible on:
<http://www.motorola.com/content.jsp?globalObjectId=2621-5209>

- Metrics are designed to measure and monitor the imbalance of men and women.
- Participation in National and International Programmes to promote Women in the ICT sector, focusing on improving leadership skills and ICT education of women.
- Participation in external events. Awards and distinctions received by Motorola Poland are for instance "A Company in Your STYLE", by Poland's No.1 women's lifestyle monthly "Twój STYL" ("Your STYLE"): The recognition was granted as part of the magazine's initiative to promote equal opportunity and was given to employers who appreciate and support equal opportunity for women in their companies

4.5.3.2 Professional Life cycle in Motorola

Although the general situation of women studying engineering and other technical studies is quite positive in Poland, the University of Krakow lacks behind of those numbers. The fact that less than 10% women studying engineering in Krakow is considered to be the main problem of women recruitment in Motorola. Nevertheless, the company implements a great variety of instruments which foster number and position of women and guarantee equal opportunities and treatment:

- **Phase 1 Recruitment:** Job announcements all mention that women are particularly invited to apply. Recruitment procedures are entirely transparent and do not permit any discrimination towards candidates. On the one hand sides, articles in newspapers, publicity in magazine, interviews with the press encourage women employees to apply. Employees that promoted an open Motorola position to a female friend receives a bonus. And recruitment Managers with high women recruitment numbers also receive a bonus. On the other hand, Motorola pays attention that positive discrimination is not seen equal to deteriorating quality and that women are firstly selected for their competence and not because female.
- **Phase 5 Uptakes after leaves:**
 - o **Maternity leaves:** The general working culture in Motorola Poland supports maternity and paternity leaves. This is seen as one of the great advantages of working for Motorola. In Poland, a lot of women do not declare maternity leave as such. Once pregnant they declare a medical leave as employees often see maternity leaves in a very negative way. Within this cultural context, Motorola Poland pays a particular attention to promote a culture of trust, ensuring a secure comeback to the company. All women on maternity leave receive a promotion when they come back. Also, women on maternity leave are not "replaced" by another employee. Generally the Manager involves 2-3 colleagues sharing the job during the leave. Concerning uptake after leave, flexible working hours, specific breaks for breast feeding and telework facilitate the situation. A lot of women actually become pregnant more than once during their employment in Motorola, which shows that the organisation is working quite well and with trust. Also, the average time of a maternity leave in Motorola is very short compared to other polish companies. Indeed, Polish women very often take 2 years off, whereas women working in Motorola come back after 4 month.
 - o **Work/life balance:** Flexible working hours (from 9h- 16h00), part-time jobs, teleworking and combinations of those are authorised and even promoted in Motorola. Working hours are very stable, there is no overtime working. Employees can refuse travelling. Social advantages and salary are compared to other polish employers very high. This permits a lot of women to take a private nanny as childcare is not functioning well in Poland.
- **Phase 6 Maturity : Supplier diversity:** Motorola qualifies the best of minority- and women-owned businesses as suppliers to the company. Motorola actively participates with numerous national and regional supplier diversity organizations to provide certification, education and networking opportunities to these entrepreneurs. Indeed, Motorola is the only company identified in this study which promotes Phase 6: Maturity, entrepreneurship of women.

Added to this, Motorola has implemented:

- **Surveys:** Different surveys and employee interviews are organised in order to find out more about the needs and problems that they face in their every day work. Questions of interviews are specifically adapted to women. For instance, every employee that leaves the company is questioned on the reasons of this leave. This is called the "Exit interview". In the case of women, one the questions is if they have felt to be treated equally and if the fact that they are a women has caused them any problems.
- **Ethic telephone Line:** This is a general support service for women and men. Employees can talk and complain about harassment cases, bullying or unfair treatment, ethical or professional problems. The service can be anonymous and can result in an enquiry if considered necessary. A specific commission is then called for investigation. The ethic telephone line is commonly used by Motorola employees, and it is more used for information than for complaining (information on employee's rights for example). The code of conduct describes the main values that have to be met in the Motorola workplace: Integrity and constant respect to people.

Biographical example

Junior engineer , Female.

Since University, this junior engineer wanted to work for Motorola Poland. The reason was high technological and scientific advancement of the company, but also the social advantages and working conditions of Motorola. Having married during her studies, she wanted to have children in a short time. Her career started as a junior engineer and within the 2 years of working in Motorola she had already received several promotions. Although she was asked to take a managerial position, she preferred to stay researcher and "close to the machines". In her interview she explained: *"I would never have started engineering studies, if my mom wasn't a scientist. Since I am a small child I wanted to become a researcher in that area of engineering. A lot of people doubted, not understanding how and why I like technology and engineering subjects. The bad mouths said that I was going to the technical university to catch a well educated husband! Once out of the university, I directly applied and started a career in Motorola. In Motorola it doesn't matter that I am women in age of pregnancy. In Motorola I can be a mom and an engineer!"*

4.5.3.3 Best practice in Education

Motorola in Poland aims to eradicate stereotype and encourage girls to consider computer science to be interesting and develop software engineering skills. Motorola convinces that work in this field can be an attractive opportunity.

In 2000, Global Software Group-Poland created the Diversity Project to provide direct interaction in all high schools in Poland and create opportunities for pupils. The main objectives of the project are:



- Encourage girls from high schools to develop an interest in software engineering
- Conduct educational project addressed to pupils from high schools in Poland, to create web site
- Challenge the traditional barriers preventing young Polish women from pursuing software engineering and other technical careers

- Provide long-term career opportunities for young women

- Provide insight to high-school students about software engineering as a profession
- Show to local community that Motorola in Krakow is looking for the software talents

6 editions of the **nationwide Diversity Project** brought significant effects. Within the space of six years about 6,000 pupils took part in Diversity, and participation of girls involved outnumber 50 percent. The program is very popular and the result is that female enrolment in computer science has been and is continuing to increase.

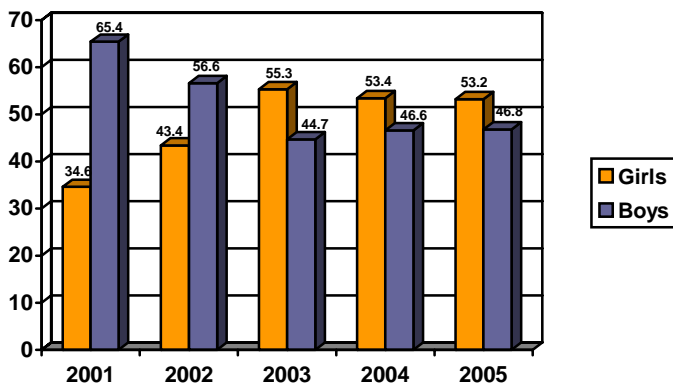
WWW. Diversity.pl



The diversity project of Motorola Poland has been designed for the specific needs and requirements of the Polish society, culture and ICT sector. With a very low number of women in the technical universities of Krakow (2%)³⁶, the increase of women obviously starts with an education problem. The first editions of the project were organised by visits in school. **As from 2003, the competition is entirely online.** This has several advantages:

- In the beginning, the project was very often rejected by teachers. The fact that the project specifically stipulates the participation of girls, was seen as nonsense and teachers did not make any efforts to motivate their female pupils. Since the project is promoted and entirely realised online (except from the awards and meetings), there are more than 50% of girls participating from all over Poland. The graphic shows that since the project was launched online, girls participation (orange) increased by more than 10%.

Percentage of girls and boys in Diversity over 5 years



- The school system in Poland does not yet integrate New Technologies and the use of computers or Internet. Also, the content of the classes do not ask creativity to pupils. The project has a great variety of benefits to both, girls and boys.

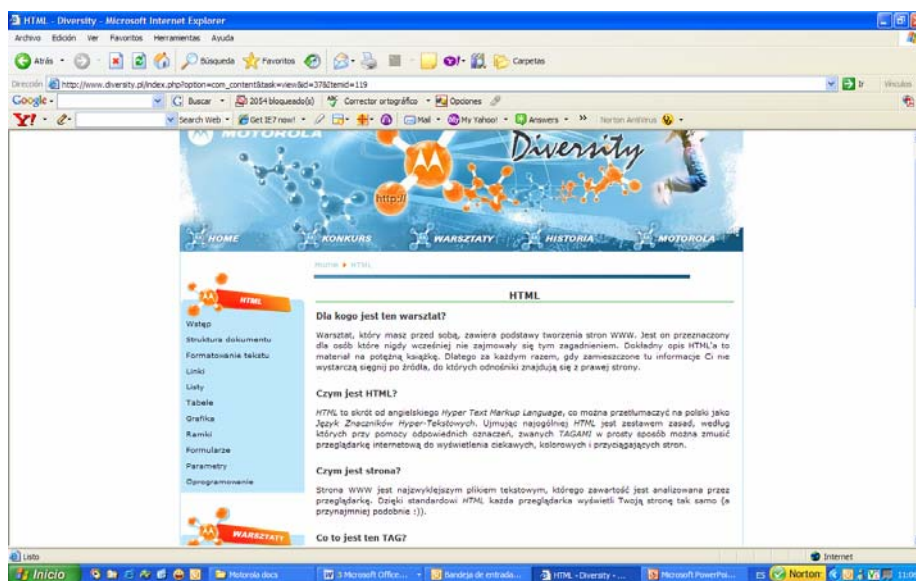
³⁶ Statistics available on the website of the diversity Project, www.diversity.pl

- Available budget is higher because organisational costs of the project are lower. There are almost no travel or subsistence costs, and no time taking visits to schools.
- Visibility of the project to the outside world and to other employees working in Motorola is very high. Since the diversity project has been designed online and has received several awards, it has become one of the core believes of the company.

Concretely, the company launches every 6 months a contest for the creation of a web site. Every award tackles a different theme. Last theme for example was to create a web page with the topic "The world without words ". Contests are launched on the website, publicity is made trough the internet.

Pupils then reassemble themselves in teams (4-6 pupils), with at least half of the team being girls. All polish schools can take part in the contest. Every group needs a tutor, which is generally a teacher of the school.

Technical workshops on how to create a web page are conducted online on the web page of the project (www.diversity.pl)



The teams have 6 month to create the web site. Diversity Jury- members are academics from Krakow's universities, media, patrons and Motorola representatives. The jury evaluates projects in 4 categories:

- Most interesting treatment of the subject
- Most interesting artwork
- Most user-friendly interface
- Most technically advanced web site.

Best projects are awarded during the Award Ceremony, where authors of 20 top projects are invited. Additionally there is a competition for the best presentation, with the audience award at the end of ceremony. There are 4 categories of awards:

- most user friendly
- most technology advanced
- best design, most interesting approach to the subject

In October 2005 the GSG office in Krakow was awarded the "Glass of Equity" prize by the Polish Secretary of State, for its Diversity Project. The award is given to Motorola for it's operation on status equalization of male and female.

In June 2006 Poland's No.1 women's monthly, "Twój STYL" ("Your STYLE") granted its "A company in Your STYLE" award to Motorola Poland in recognition of its Diversity programs to promote careers in software engineering amongst high school girls and exemplifying equal opportunity in its Polish operations.

The diversity project is a mature and well organised project. All Diversity Projects have been created, prepared and maintained by Motorola employees. The great success (high participation of schools and pupils, awards, etc) has brought recognition and esteem to the project and the theme of gender equality. **Key success factor** of this project is the well selected target and the instrument.

- The age of the participants is well chosen (from 12-16 years) as it is the moment of choosing subjects and **deciding for the future**. In university it is already too late to change the situation.
- **Pupils can use their creativity** (arts) and do not need any technical knowledge beforehand. It actually demonstrates to female pupils that technology "is what you do out of it", and that it can be very "feminine".
- **The benefits of participating in the project are larger than the objectives defined.** Even if not all the girls that have participated in the project are interested in studying computer sciences or engineering afterwards, they have learned to use a computer, the internet, and even to create a web page.

4.5.4 World views

The philosophy and working culture promoting diversity in Motorola Poland has its roots and influence from the North American headquarters. Like in many other large size multi-national companies, there exists a set of values, rights and working conditions which are proper to the company and adapted to the specific requirements and laws of the country of establishment. Not all values are the same or have the same intensity in all locations.

Diversity in Poland, only covers gender equality. Very important in the USA are ethnic diversity or pressure from afro-American movements for diversity for instance. In Poland this does not exist. Nevertheless, working conditions and social advantages are adapted to Poland, but have a higher standard than in Polish companies. Rules and policies against discrimination and bullying are far stricter than in the established Polish laws. Each of the Motorola locations has to comply and has to report on a minimum of values and standards. The image of Motorola plays an important role. Quotas of women participation for example are recommended (minimum 20%) and monitored. If not reached, measures have to be taken. The top Management of Motorola supports, brings ideas, helps but also makes pressure on the Polish Motorola to improve the situation.

Motorola Poland believes that the work of mixed teams, women and men, has a better efficiency and contributes to a better work atmosphere. As there are not enough engineer women that apply for position in Motorola, the company promotes and fosters a cultural change in Poland. Objective of the diversity project for instance is to change the image of computer science – show that it can be interesting for everyone and that ICT is a fantastic opportunity for development.

Some of the female employees claim that the main problem is the passivity of men in the area of gender equality, also in Motorola. There seems to be a common belief in Poland, that there are no disparities

between women and men's access to the professional world³⁷, and that the stereotype of "women do not like technologies" or "women have un-technical minds" is strong. The diversity project has brought already some progress within and outside of Motorola on this point, and it has the potential to continue progress.

4.5.5 Main lessons learned

Main lessons learned from the polish best practice with regard to Education are:

- A lot of studies on the polish situation of women describe, that the problem of women's access to ICT jobs is considered **too marginal and elitist** to actively involve society and decisive state structures. Taking into account the urgent need for economic development and the high unemployment rate in Poland, the need for gender equality is often considered absurd. The diversity project of Motorola has a very wide-reaching objective, and the benefits of participation in the project are larger than the objectives defined. It is actually to the benefits of all, promoting at the same time equal opportunities and equal access to ICT professions. Even though not all of the pupils will choose technical studies, everyone has learned to touch a computer and design a web page.
- The diversity project shows that women potentials are not always properly used and that it lies in the interest of the companies, to make the society aware of the problem. Web sited of female winners are the best instrument to demonstrate their potential. **Gender equality is not a women issue**, but an advantage for all.
- The Motorola best practice is an example for successful value transference. A cultural change has taken place in the company by means of the polish diversity project. However, this would have never happed if diversity values of the world-wide Motorola company would not have been communicated.
- Motorola is the only company identified in this study, tackling maturity, seniority and women entrepreneurship. **Supplier diversity** is a concept that should be more promoted in Europe.

³⁷ The Polish report of the Helsinki Group Wise Project tackles this issue. For more information: *Women and Science: Review of the situation in Poland*. Helsinki group on Women and Science. 2001

4.6 Fraunhofer Gesellschaft

4.6.1 Background

The background information on the general situation of women in Germany has already been analysed through out the study of the Hannover University. The following only to mention shortly the most important characteristics:

- Laws in Germany and its Länder with regard to gender equality are advanced and very favourable to gender equality.
- Concrete implementation of these laws through measures and instruments lack behind, eg childcare services are not well organised in Germany.
- There are many cultural barriers to gender equality as the combination of family and work is negatively seen and receives poor support.



Gesellschaft

The Fraunhofer-Gesellschaft has a distinctive profile within the German research environment. Research of practical utility remains the focal objective of all activities, whether these involve contract research, pre-competitive research, consulting services or studies. The majority of the Fraunhofer-Gesellschaft's activities therefore take place in the middle ground between public sponsorship and free enterprise. Nowadays, the Fraunhofer-Gesellschaft is made up of 57 institutes, in 40 locations, staffed by a total of roughly 12,500 employees, engaged in research in hundreds of areas of technology. The total annual research budget of 1,25 billion euros. Two thirds of this sum ingenerated through contract research on behalf of industry and publicly funded research projects. The results of their investigations are available to industry in the form of patents, licenses, training courses and above all through contract research projects.

The are several aspects that have been taken into account in the analysis of the Fraunhofer best practice

- The research organization was founded in 1949, in the same year as the Federal Republic of Germany, and started out as a small office with just three employees. The original purpose of the non-profit organization was to distribute grants and donations for research of direct relevance to industry. Today, the Fraunhofer is one of the biggest research institutes of Europe, and the main vocation of the organisation is still the research, not the profit (or the product). This element is relevant for the comprehension of the general worldview on gender equality, tackled in the following chapters.
- Commissioned and funded by Federal and Länder ministries and governments, the organization undertakes future-oriented research projects which contribute to the development of innovations **in spheres of major public concern and in key technologies**. The Fraunhofer Gesellschaft underlies specific policies and laws of the federal government and the Länder with regard to promoting gender equality. Example for this is the establishment of a gender equality commissioner, as it is also the case for German Universities.

Concerning the situation of women in the ICT sector, here again the main figures in Germany and in the Fraunhofer institutes.

- The proportion of female researchers in the Government Sector in the field of Engineering and Technology in Germany is 17%³⁸. In the private and public sector, there are around 46% women working in the Telecommunication sector, 15% in IT jobs, and 39% in the Media sector³⁹.
- In the Fraunhofer Institute, there is a total of 30% women (with a total of 9227 men and 4064 women working for the organisation). Out of 72 Directors, there is only one female director. Out of 858 Head of sectors, 63 are women (7,3%). Most of the women working for Fraunhofer have a employee position: 34% of employees are women and within the assistant status, there are 27% women.

4.6.2 Research approach

The Fraunhofer institute was visited from the 28th to the 29th of September. Interviews with the Human Resource managers responsible for Gender equality were made, the senior vice president for Personal and Legal affairs, the director of Human resources and engineers and researchers in different positions. A great amount of information and documents were consulted and collected during the visit. To mention just some of them: reports on scholarships, publications on research and studies (eg "How to recognise and integrate gender aspects in research?"), documents and report on mentoring, internal documents on Human Resource policies, application and informational documentation on the Total E-quality award and the Award of the Bavarian government on promotion of women, in which the Fraunhofer has participated (Summary of all measures), DVDs on junior academy and Talent school, Report on Alumni programme and scholarships, legal documents and reports on gender equality and equal opportunities in the Fraunhofer Gesellschaft, explanations on cross mentoring and different kind of internal and public presentation.

As the best practice of the Fraunhofer is so well documented, interviews focused more on the gender philosophy and the world views supporting gender equality measures. Thematical areas that guided the interviews were the following:

- General world view and commitment of the Fraunhofer Gesellschaft towards gender equality
- Most important instruments for gender quality in the ICT sector
- Success factors of initiatives
- Impact of gender equality measures
- Why Fraunhofer and why particularly in Germany?

³⁸ *She Figures 2006, Women and Science Statistics and Indicators*, European Communities 2006.

³⁹ *Netzwerk F.I.T- Statistiken zur Berufswahl*. <http://www.netzwerk-fit.de/tools/index.htm?/tools/statistiken/arbeit/statistikErwerbstaetigkeit.htm>

4.6.3 The Fraunhofer Gesellschaft case

4.6.3.1 Starting point

All institutes of the Fraunhofer have a Gender equality commissioner, and there is one central gender equality office. The Fraunhofer-Gesellschaft is committed to bring more women into applied research. The aim is to increase the proportion of female scientists in all areas where they are currently underrepresented. In order to achieve this objective, different circumstances and interests of men and women have been identified and are integrated in every project and programme from the outset, and reviewed at regular

Harnessing valuable potential - bringing more women into applied research



intervals thereafter. The resulting findings are used as a basis for improving gender equality aspects in personnel recruitment and throughout the working lives of female employees.

The corporate objective regarding gender is to "bring more women into applied research" and actions are implemented under the slogan "Gender Aspects in Research", looking at the market potentials in a gender sensitive way as well in fields of research. These actions have been established in the early 90's and a lot of new and innovative human resources instruments like mentoring, phd-programmes, seminars particularly addressed to women have been organised since then.

An essential ingredient for gender equality is the ability to create a balanced equilibrium between the demands of professional work, family commitments and private interests. An equitable work-life balance has a high priority for both female and male staff. To be an attractive employer, the Fraunhofer-Gesellschaft allows every employee to organize his/her work as flexibly as possible. The part-time and teleworking models already offered by the Fraunhofer-Gesellschaft, as well as the little-used opportunity for sabbaticals, are being systematically extended.

The main categories for gender equality measures of the Fraunhofer Gesellschaft are:

- Doctoral programs
- Professional training seminars for women
- Management training for women
- Research projects on gender-related issues
- Mentoring – career support for young professional women
- Cross-Mentoring
- Total E-Quality Award
- Child-care facilities
- Girls' Day participation
- Vacation workshops for girls

The gender policy is implemented in the human resource department and the budget for gender equality is part of the total budget of the department.

In order to participate in the phd-program for instance, institutes have to deliver a report on its policy with regard to equal opportunities. In addition to this, the gender equality commissioner of each institute monitors all matters concerning the staff like employment, part-time work, bonus, etc. The gender equality plans are implemented by the board of management, gender equality commissioners and work council.

4.6.3.2 Professional Life cycle in the Fraunhofer Institut

In the Fraunhofer Gesellschaft, gender equality can be found for all of the professional life cycle phases.

- **Phase 1 Education: Girls days, traineeships, phd programmes and mentoring.** The Fraunhofer participates every year in girls days, organised by the German government department of Education and Research. In 2005, more than 20 Institutes of the Fraunhofer in all over Germany opened its doors in order to bring their technologies and research closer to girls and wake interest for the theme. Other projects in the field of education are the traineeships proposed to girls in secondary school and called "Girls and technology". These traineeships has a duration of one week with the objective to foster interest and talents in the field of technologies. Since 1999, the Fraunhofer proposes a phd programme for women, in order to increase their number in areas where representation of women is particularly low. Each year the Gremium of the Fraunhofer selects 8 Institutes which receive extra-budget for two or three female phd researchers, for a period of 3 years. Criteria for selection are numbers of women researchers in a specific area and in this specific Institute, activities of the Institute with regard to gender equality, number of women in top positions in the Institute. During the phd programme, seminars are organised on career development and soft skills. The Fraunhofer also proposes various mentoring programmes in German Universities and schools. Depending on the programme, Fraunhofers promotes its senior researchers as mentors (eg mentING Munich University, CYBermentor Ulm Universit, Project TANDEM-PLUS). Focus in all of these mentoring schemes is put on female mentors which combine family and work and can play a role model. Another example is the cross mentoring, which will be tackled in detail in the next chapter.
- **Phase 2 Recruitment:** The gender equality plan is responsibility of the Human resource department. Several Gender experts are working in this department in order to create the most favourable conditions for women and equal opportunities for men and women in the recruitment process. There are two main pillars for this: Awareness and Measures. The Fraunhofer sets a priority on awareness: why are more women needed? Because the Fraunhofer Institute is convinced that research would increase in quality if the views, capacities and values of women are taken on board. Objective is to communicate internally the objectives and implementation of gender equality in Fraunhofer, and to analyse and show the state and situation of each of the Institutes. Measures must permit women the same career chances as men: Family/work, skill development, etc. The Fraunhofer also pays attention to Human resource marketing with the objective to attract young female researchers and foster collaborations with universities. For instance, in Job exhibitions and events, the Fraunhofer promotes its gender equal work organisation.
- **Phase 3 Career development : Leader schip trainings, internal and external networks.** Internal networks: the Fraunhofer support internal networking between women researchers as a major communication tool for career opportunities.

Biographical example

Director of the Modelling and testing competence Fraunhofer Institute, female

She is professor for informatics at the technical University of Berlin and Director of the modelling and testing competence institute for open communication systems FOKUS. In 2004, she was awarded the "Alfried Krupp Förderpreis" which honours excellent university professors (500 000 euros), for her study on "Analysis of accuracy, performance and viability of software systems". The award permits her to continue and deepen the research on that topic without any external pressures. She is also leader of EU project, TT-Medal (Test & Testing Methodologies for Advanced Languages), which received the ITEA Award in 2005.

Having received the title of one of the "top ten young researcher" in a very known German scientific magazine, with her talent and work within the university, in the Fraunhofer and as a mother of two children, she certainly plays a very important role model for other women.

- **Phase 5 Uptakes after leaves:** Maternity leaves vary generally from 1 to 3 years in Germany (In Fraunhofer up to 5 years). However, some of the Fraunhofer Institutes propose already childcare as from 3 month. There are a lot of best practice example concerning childcare in the Fraunhofer Institutes. First Institute, that took the initiative to create a full-day child care service was Stuttgart in 1999. The "Verein kind" (Association Child) proposes childcare from 6 months to 6 years in a building right next to the Fraunhofer Institute. The association also proposes a summer camp in August for children up to 12 years. Other institutes have followed this example or have opened play groups for small children, activities and programmes for school children in the afternoon (Schools hours in Germany are generally from 8 to 13h00).More and more Fathers take paternity leaves and this is very much encouraged in the Fraunhofer. Also, fathers have the possibility to benefit from flexible working and part time working in order to care for the family. Other areas and categories of policies which foster family and work combination in the Fraunhofer are: working time (part-time possibilities and working hours are adapted to family), Work organisation and content of work, location, information and communication policies, leader competence, human resources, specific social services for families.

The Fraunhofer Gesellschaft is the only best practice organisation in this study that also focuses on the gender dimension of the research. A great amount of project and studies tackle gender aspects in the research and development processes, enquiring in all areas and fields if needs, interests and life-situation of both, women and men, are taken into account. Objective of the project "**Gender aspects in research**" for example is to proof, demonstrate and categorise different instruments that detect and identify gender aspects in research, to find arguments and show implementation examples. Neglect certain target groups in research does not only reduce quality of research but can have catastrophic consequences. For instance, influence of airbags have to be checked on pregnant women and babies. Computer modells have been developed for testing situations and tackling the problem.

Gender mainstreaming is incorporated in the overall organisational strategy of the Fraunhofer Gesellschaft. On the one hand side, Human resources guarantee equal opportunities and Work-life balance (Mentoring, childcare, new working models, etc) and on the other, the research strategy guarantees gender sensitive development of technologies (Opening the market, target specific product design,etc). The Fraunhofer is considered as **one of the most attractive employers** in Germany.

4.6.3.3 Best practice in Education and Career development

The Fraunhofer Gesellschaft collaborates and has initiated a great amount of projects in the area of education and career development. Three of them have been analysed in more detail for the purpose of this study: the Roberta project, the cross mentoring programmes and a seminar. The first is targeted at secondary schools, the second and third at women researchers.

Roberta "More women in Informatics"



The Roberta is a project from the University of Humboldt in collaboration with the Fraunhofer. Its objective is to increase number of women in informatics studies by creating more interest and orienting pupils towards the topic.

The target is female pupils and the main aims of the project are:

- Foster from early on, knowledge in the field of informatics and robotics

- Wake interest of female pupils through attractive programmes
- Give an idea of the university studies in the area of informatics with regard to content
- Facilitate the transition from school to university
- Increase number of women studying informatics
- Create equal opportunities for women and men
- Sensitize men to the issue of gender equality

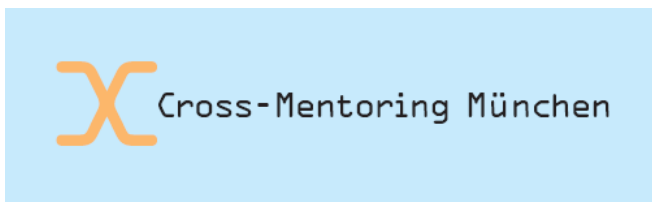


The project proposes different kind of activities and support, depending on the profile and necessities of the groups participating. **Consultancy, orientation and guidance** are proposed, working groups, trainings and courses, traineeship, project days, open door days, visits in schools and mentoring. In working groups for instance, pupils learn to deal with informatics and also new technologies, and one of the working groups proposes to build robots.

Robotics are an attractive entry point to informatics. Throughout the design, creation, programming and testing of mobile robotics, the pupils learn that technologies can make fun and are not boring at all. At the same time, they learn about informatics, electro-technologies, mechanics and robotics. The attractiveness of robots helps to overcome the barriers in a very playful and amusing way. Fascination throughout the development phase wakes interests and motivation. **Leading phrase of this project is “Tell me and I’ll forget, show me and I’ll remember, let me do and I’ll understand”.**

Cross mentoring

The objective of the mentoring is to give individual support and feedback to women fostering their career development. It is specifically targeted at young women in leading position (mentee), organised by senior



leaders positions (mentors). Originality about the cross mentoring is that it permits young women to receive advice and guidance in another company and/or sector. Indeed, the cross mentoring munich of the Fraunhofer is organised in association with Allianz, Bayerische Landesbank, BMW-

Group, Bosch, Siemens, Hausgeräte GmbH, Deutsche Bank AG, and Deutsche Telekom AG. **During one year, a senior leader in one company accompanies a junior leader of the other.** The main objectives are:

- Sustain and guide the mentee in her professional and personal development
- Widen and build up leadership competences
- Prepare them for the taking up a higher, or the top position of the company.

Throughout meetings, mentor and mentee reflect on different vocational topics, such as career development perspectives. They exchange experiences, knowledge and informal soft skills. They discuss leadership issues, exchange contacts and networks.

The cross mentoring is organised through through 3 Framework events:

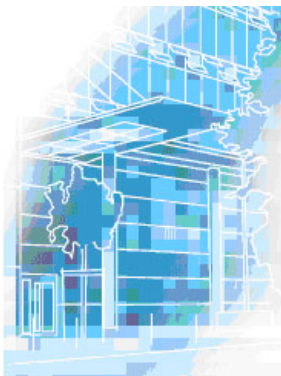
- **Kick off and start up work shop:** The kick off is an occasion for the companies to present themselves to public and press. The following workshop is target at the mentors and mentees. It selects the tandems, presents objectives and challenges and prepare the participants for the cross mentoring.

- **Feed back workshop:** This workshop takes place after 6 months, with the objective to reflect on what has been done and what can be improved.
- **Final workshop and evaluation:** This workshop tackles the results, impact and effectiveness of the cross mentoring. It is also an occasion to agree on an informal continuation of the mentoring.

Mentors and mentees meet at least once a month for 2 hours. Mentors meet twice a year. Other events are organised during the year, such as the “Position seminar”, where mentee can evaluate where there are and where they want to go in the mentoring. In the “group coaching” one mentor and 3 to 4 mentees discuss what can be expected and not from the mentoring. The workshop on “Organisation culture” is an occasion to evaluate the own but also the other cultures of the participating companies and the “Guidance Know-how for mentors” is a training for mentors. The cross mentoring is organised by an external expert, Cross Consult.

Seminar on leadership

The Fraunhofer Gesellschaft organises a great amount of different seminars specifically designed for women. These are organised by the central Human resource offices or on behalf of the different Institutes. The following is an example of a six day seminar that takes place on a regular basis. The seminar is a training on Leadership for women. It tackles the basic elements and characteristics of a leadership position within the Fraunhofer, and participants are trained on the main leadership strategies and instruments. This is done through role plays with feed back analysis.



The content of the seminar can be summarized as follows: the role of the leader and the resulting challenges, the relationship leader-employee, leadership capacity analysis of each participant, Image building, Critical discourse, Convince and give motivation, coaching and leadership instruments.

The content of the seminar is the following

- **Module 1:** Instruments for leaders. Problems and challenges of leadership positions in the Fraunhofer. Identification and training on Instruments
- **Module 2:** Conflict management. Leadership means to direct different people, colleagues, employees and also clients. This module trains soft skills necessary for interpersonal relationships and active communication. Central element is the management of group dynamics and conflicts.

Target of the seminars are female Group Managers, Project Managers as well as female junior employees with little management knowledge. Work methodology is based on short discourse, discussions, exercises, group works, videos as well as role plays.

4.6.4 World views

The central element in the culture of Fraunhofer Gesellschaft is the idea that research cannot succeed without women participation. **Low number of women means low quality research**, as women represent specific needs, interests and ideas necessary for premium research. On the one hand side, society and research cannot function without a certain amount of competent researcher women, as women are an integral part of society, and on the other, mixed teams work much better than homogenous teams. The Fraunhofer Gesellschaft stipulates the participation of women researchers as one of the major success factors of science and research.

The reasons are therefore not so much the products (needs of women with regard to technologies- for instance cars for women, mobiles for women, etc) but **more the research itself, that is important**. Mixed teams do better research because they have more capacities, ideas and competence.

The Fraunhofer Gesellschaft underlines 2 main arguments that lead to its gender equality philosophy:

- **Arguments linked to Research and Science:** more women mean higher quality of research, because women bring other ideas, competences and knowledge with on board. Fraunhofer promotes innovation, creativity, and runs “against the conformity of a man’s world”. As a non-profit organisation and at the benefits for all, this argument is the most important for gender equality.
- **Arguments linked to Economy and Industry:** Research teams are representative for clients and society, and must therefore include women and men.

These two arguments are quiet well accepted and internally promoted. Quotas of women researchers are not recommended as these are generally quite negatively perceived and have a counter effect. Also, the Fraunhofer has intended to find a certain balance, as too much pressure on the issue is also counter effective. The above mentioned arguments are disseminated and mainstreamed in almost all events, information days and dissemination material of the Fraunhofer Gesellschaft.

4.6.5 Main lessons learned

The Fraunhofer best practice is based on a very mature and well organised organisation culture promoting gender equality. The organisation promotes actively gender equality for more than 15 years, and experiences as well as pilot projects, monitoring of policies and measures have showed success and most effective activities inside and outside the Research Institutes. Main lessons learned from this analysis are:

- Gender equality measures have to be adapted to the situation of women and also to the cultural barriers which hold back gender equality. Quota setting can sometimes impede motivation and implementation of measures for gender equality. Some arguments are much more effective than quotas. For instance, a lot of complains on quotas include explanations, that quotas reduce the quality of research because competence should be the first and only criteria for the selection of a researcher. Arguments supporting gender equality in Fraunhofer show exactly the contrary and are therefore much more effective: **more women in research is equal to higher quality research**. Also, a certain sensibility of what, how and when to promote gender equality is needed as too much pressure can stimulate ignorance and rejection.
- The Fraunhofer implements a high number of projects, measures and activities related to gender equality. This is possible because a lot of them are in collaboration with other public institutions, companies and universities. A part from lower costs or direct funding recompense, there are other advantages such as exchange of knowledge, experiences and competences. The cross mentoring has been a very good example for this.
- One of the priorities within the gender equality is the awareness raising and dissemination for all projects, measures and activities. Gender equality is also promoted in events which are not particularly linked to gender equality in ICT or Science.
- A great attention is put on the reponsibilisation of fathers. This is seen as key factor for success, as the German culture holds on very traditional images of mothers at home and fathers at work.
- Arguments, justifications and explanations of the Fraunhofer are based on concrete gender research tackling gender sensitive issues and themes, and showing the benefits of including more women into research.

4.7 University of Malta

4.7.1 Background



Malta has one of the lowest number of women employment in Europe with 35%, and the traditional role and image of women solely responsible for children and household is very strong. Although an increase of 4,9% took place in the last two years for the Communication and Business sectors. Childcare services for children under 3 years almost don't exist and working mothers are not always supported in their decision to work. **The Maltese government has recently introduced several measures to change this situation** and introduce more childcare possibilities for working mothers.

Another element to explain the high number of non working women is that the Maltese social system is very favourable to full time mothers. Financial difficulties of families are actually the main reason put forward to explain the importance of women employment. Personal and professional development of women workers that would actually like to work for their own satisfaction, interest and education is not very often considered as a factor or issue.

Similar to Ireland, multiple discriminatory practices against women existed until 1981. Married women were prohibited to work in civil service. **Equal pay for equal work was introduced in 1969**, and regulations with regard to work situations, health, safety and protection started to exist as from that date. Laws specifically with regard to gender were mainly implemented in 1993, adopting UN and EU conventions and charters promoting equality and equal treatment.

Given that inequality and discrimination in law towards women subsisted relatively long in Malta compared to other European countries, the situation advanced considerably in the last twenty years. With a very small total population of approximately 400,000 persons, merits and commitment to gender equality are easily identified. **The University of Malta has played a major role for the promotion of women** in education but also in industry, politics and decision making.

L-UNIVERSITÀ TA' MALTA



UNIVERSITY OF MALTA

The University of Malta was established in 1592 and counts today more than 9800 students, including some 750 foreign students. It is instructing high qualified professionals, with experience in research, playing a key role in industry, commerce and public affairs. The university has ten faculties, including engineering, and a number of interdisciplinary institutes and centres such as the Energy Technology Institute and the Centre for Communication Technology. A board of Studies for Information Technology regulates courses in IT.

The **size of the University has grown** from 800 students to almost 10.000 students in 15 years. Services and facilities offered to student (eg number of places in university child care service for student mothers) have to adapted and progressively improved to this change. At the same time, culture, society and law has changed in favour of gender equality in education and employment, so numbers of female students have increased enormously and even in proportion larger than men in the University with a ratio of approximately 116/100⁴⁰.

⁴⁰ Malta National Office of Statistics.

Concerning the situation of women in general, women in the ICT sector and more particularly in the technical departments of the University, the following elements have been taken into account:

- The Maltese government, and more particularly the Government's employment public service, has **set up different measures and instruments to facilitate childcare services** in Malta. Motivation for this is the general socio-economic context and the ageing population, the decrease of high competence workforce and eventual difficulties of the pension system depending on those two issues. Indeed, women workers are to play a very important role, and main problems to be tackled are the cultural barriers against women workers but also the increase of high quality child care services. The government trains childcare professionals and facilitate the set up of SMEs as childcare centres. Efforts are still to be done with regard to regulations for this sector (standard, prices, quality, security etc.)
- Maltese female pupils no longer leave school earlier, and are more likely to be in further education. **Currently females represent 57% of all registered students** at the University of Malta. Numbers of women studying technical areas such as IT or engineering are quite low but have been increasing since the last years. As the University of Malta is the only university in Malta, all figures are representative for the academic sector in Malta. In the faculty of engineering, 20% women participated in the Bachelor course, 11% in the master and from 5 Phd students, there was no women⁴¹. The board of studies for Information Technology retains 18% women in Bachelor courses, 13% in Master. On the contrary, in the Faculty of Education there are 77% women in bachelor courses. There has been much progress in the Faculty of Science (including medicine, nursing, dentistry, engineering and pure science) as it retains 48% of women students.

4.7.2 Research approach

The University of Malta was visited from the 7th of the 8th of November 2006. Different face to face interviews were realised, and documentation on the university and its Gender Issues Committee was collected. Interviews have been made with senior lecturers of the University, experts in gender studies, members, current and past Chair of the Gender Issues Committee and Chair of the sub-committee that worked on the Mentor Scheme at the University of Malta, the Communication and Press Officer of the University, the first and only full time female professor of the university, and the EU Helsinki group member for Malta, also working in the University. Documentation that has been collected were annual reports of the university, descriptions and other reports of the university, activity reports, studies, minutes and presentations of the Gender Issues Committee meetings, official statistics of the university.

Questions that guided the interview were the following:

- Numbers of women and men in ICT studies and employment with explanations/ descriptions of the situation.
- Role of the Gender Issues Committee
- Importance of awareness raising measures
- Cultural barriers and how to overcome them, gender and the digital divide.
- Regulatory framework in Malta and in the University of Malta in favour of promoting women in the ICT sector.

⁴¹ Official numbers 2005 provided by the University of Malta.

4.7.3 The Malta University Case

4.7.3.1 Starting point



The definition and implementation of gender policies within the organisation is managed by the Gender Issues Committee (GIC). The University strives to promote a policy of equal opportunities for both men and women. The three main pillars of the gender equality policy in the University of Malta are:

- Raising Awareness
- Mentoring Schemes
- Anti harassment policy

Concretely the University's aim is to:

1. **Facilitate domestic responsibilities:** Identify, arrange and promote study and work arrangements for parents by the encouragement of more flexible patterns of employment and study.
2. **Monitor gender equality:** Statistics are maintained of job applicants and successful appointees in various grades of jobs and studies. In addition, consultations with trade unions and other groups representing employees and students take regularly place. Results are used to develop relevant policies and practices in employment and in the way services are provided.
3. **Facilitate recruitment:** Design of good practice promotion and selection criteria and procedures.

4.7.3.2 Professional Life cycle in the University of Malta

The University of Malta implements different kind of measures through the Gender Issues Committee, that correspond to the different phases of the professional life cycle. The following are the most important which have been identified:

- **Measures against discrimination and sexual harassment:** The sexual harassment policy applies to all those who work and study at the University. It is one of the first and most important measures with regard to gender discrimination implemented in the University. Sexual harassment has been defined and any behaviour or action falling and described by this definition is treated and processed by the University. The University has appointed a Special Advisor on Sexual Harassment and an Alternate Advisor, who provide information, advice and assistance to staff members and students making complaints of sexual harassment. The Advisors also play a key role in investigating and resolving complaints. Following a consultation process between the complainant, the advisor and the head of department there are three main options: 1) to follow the informal procedures 2) to make a formal complaint 3) to take no further action. The Advisors prepares an annual report on the number and disposition of complaints and reviews the University procedures and recommends any changes that are necessary to facilitate the University's ability to deal effectively with instances of sexual harassment.
- **Phase 1 Education : Participation in projects on gender equality:** The GIC is taking part in a number of on-going education and research projects. The Gender and the Digital Divide – The People's Forum is one of the most relevant examples. The GIC together with National Council of Women (NCW), organized a well-attended seminar, partly sponsored by the British High Commission and the European Commission (EC). Main topics were the gender digital divide and

the success for women in gender-equality-friendly environments, the eradication of poverty and the production of a fairer and more prosperous world, considering that the lack of opportunities to sectors of civil society as the worst forms of poverty. There were more than seventy five participants and seven main speakers. Another example is the UNESCO Project, where the GIC is a co-manger. The research project called “The Gender Gap in Science and Technology in Malta – Tackling the Issues”. The research has the objective to fill in gaps in existing data in Malta on gender and science, assist in creating a dynamic interface between scientists and policy-makers and promote awareness on the benefits of science among female students.

- **Phase 3: Career development:** The Gender Issues Committee organises workshop, seminars and other awareness raising events in order to promote career development of women in the ICT sector. For example the GIC sponsored the seminar “Exciting Prospects for Science Graduates”, held on the 22nd December 2005 and organised by the Department of Mathematics, Faculty of Science. The event attracted a wide spectrum of society. Representatives of the student body, the academia, National Women Council and GIC were present. The theme focused on the various careers that rely on a strong background of mathematics in areas such as bio-informatics, on-line betting, game companies and teaching. The University also proposes several courses in the area of gender equality, for instance “Gender and Law”, and it promotes different thesis and research projects on the theme.

Biographical example

Full time female professor of the University of Malta

After finalising her studies in 1969, the professor started as a Research assistant in the university. She and two other students were the first women working as Research assistants. She applied for a Phd, was however not successful. As she explained: *“I applied for a Phd and that was the biggest challenge of my life. When I arrived at the interview and they saw that I was a woman, the interview did not take longer than 2 minutes. Nowadays, these attitudes have changed but it’s still difficult to get through. The academic sector is very political”*. She finally received a Phd position and grant in London. Coming back to Malta, she worked as senior lecturer in the University, got married and had 3 children. During her first pregnancy she became the only female professor of the University of Malta. She explained: *“My father was a doctor and during my studies I was in contact with a female doctor who had a high impact on my life: she taught me to see high. My husband and me, we have both very demanding jobs, and without the support of my parents with regard to child care, I would not have succeeded. The reason why there are no women professors is that they have to struggle with work and family. Also, Malta is very small and there are very few Phd positions: for women it is particularly difficult to convince.”*

- **Phase 4 Management: Femmes de tête** The Malta University tries to find and to expand the impact of women role models in the University. For instance, the GIC supported the preparation and organised the viewing of and discussions on the DVD on prominent women scientists in the EU produced by the EC. The GIC also collaborates with internal and external media to promote its activities and success of women researchers in the university. For instance, the GIC Web Site is regularly updated and the members of the GIC represented the committee on various university and national committees, in conferences, workshops as well as on the local radio and TV stations. On the Maltese Channel 22, members of the GIC explained the objectives of the mentoring scheme at the UoM in a TV interview, in-house magazine and Sunday Times of Malta have published a number of articles to disseminate the objectives of the Mentoring Scheme, the GIC members participated in the conference “Women and Men in an Enlarged Europe” (Malta), Mentor Plus IST where a member of the GIC took part in a training session on mentoring and creating multipliers in Information Society Technologies held at MCST (Bighi) and organised by INNOVA (Italy).
- **Phase 5 Uptakes after leaves:** The University possesses a childcare service, called IT-Tajra University Child care service for students and working staff. It started operating in 1996 in order to make it easier for parents of pre-school children to study or work on the Campus and to serve as a centre for research in child development and Early Childhood Education. Target are children aged

from 2 to 3 years old. Maximum capacity is 31 children. In addition to this, the University has a “kids on campus” summer programme which is open to the general public and caters for children from 3 to 11 years old. “kids on campus” runs for eight weeks, five days a week.

Main difficulties to be tackled are linked the cultural barriers that impede the increase of women in the labour market and more particularly in the ICT sector. It's for this reason that on of the main ambitions of the University is to create and expand awareness. There are two main barriers:

- Once women are married and have children, the general opinion recommends them to stay at home and stop to work. Added to this, there are almost no other possibilities for mothers (no childcare services).
- Role models of working women start to exist in Education, Medicine, Psychology and also Law, but there are very few women role models in technical fields. Typical women jobs are very often associated with “care services” and not with “technology” or “engineering.

4.7.3.3 Best practices in the area of Education and academic career development

The objective of the gender equality strategy in the University of Malta focuses on the increase of women in in ICT as an academic sector. Currently, there is a great difference between the number of men and women studying computer science and technology. The objectives of the strategy are twofold: To increase the number of women studying computer science and technology and to increase the number of women entering the academic and research careers. Indeed, there is only one women professor full time working for the university. The best practice analysis has focused on two main measures: the creation and vocation of the GIC as the implementing body of the gender equality strategy and the mentoring scheme implemented and followed up by the GIC.

The Gender Issues Committee:

The committee was originally set up in 1991 in order to act as a focal point on gender issues on the recommendations of the Women in Society Secretariat. Its terms of reference are to advise the University Council on issues of gender equality. It is appointed by the Council and it reports annually to the Council.



The Committee works on several areas including the identification of sources of unequal opportunities or treatment with respect to gender, and promotes a policy of equal opportunity, including specific help to women to overcome problems.

The objective of the Committee is to create the conditions whereby students and staff are treated equally in all aspects of the life of the University. Its vocation is to identify sources of inequality or discriminative treatment, promoting a policy of equal opportunities including specific help to women, receiving and monitoring complaints from University staff and students regarding sex discriminatory practices.

Ongoing work includes the establishment of networks with individuals and organisations with similar objectives, from outside the University and from the international scene, such as the Women in Society Secretariat, the Commission for the Advancement of Women, and the relevant directorates within the European Commission. The GIC is seeking ways of raising the profile of university employees by publishing their profiles. One of the initiatives of the GIC was a Mentoring Scheme for students. Mentoring is a way of

reaching out to students at crucial decision-making stages in their lives and helping them to have the confidence to continue in their chosen field of study.

The Gender Issues Committee also **promotes teaching and research that reflects the knowledge, experience and aspirations of both men and women.** It particularly welcomes any local research and data collection being carried out in the gender field. Lecturers of the courses on gender are all part of the Gender Issues Committee. For instance, the university proposes a diploma on “Gender and development”, which tackles question of how to change the regulatory framework in order to change the situation of women in Malta. Generally, there are up to 35 students, coming from different backgrounds however mainly from civil services.

The GIC meets almost every month, regrouping its members but also student representatives and university representatives. Aim of those meetings is to discuss what has been done and what is to be done. Another aim is to analyse the image of the GIC and its popularity in the University. All members work on a voluntary basis in the Committee, and the Committee has no own resources: projects, mentoring and awareness activities are funded with the general budget of the University. Members work on an individual basis for the GIC (Participating in projects or events on behalf of the GIC) or in collaboration with other members. Actions are based on initiatives of the individual members or of the Committee, however have always to be discussed with the Council of the University. The Committee is managed by the following members:

The Chair person (University Professor), a representative of the Junior college, a student representative, a lecturer in Social work, 2 lecturers of Law, a lecturer of Communications, a representative of the Matsec (Exam Institute), an external national commissioner of gender equality and the communication and press officer. Out of 10 members, 2 are men.

The mentoring scheme of the University of Malta

The mentoring scheme has been designed and is implemented by the Gender Issues Committee. Its objective is to reach out to students at the crucial decision-making stages in their student lives and helping



Mentoring Scheme at University of Malta

organised by
The Gender Issues Committee (GIC)

them to have the confidence to continue in their chosen field of study. The scheme meets a need in the University, as studies and research of the GIC had identified sources of discontent at the University to which the mentoring scheme was adapted.

Evaluation of the situation has been the starting point and enhances the learning process throughout the scheme. In this way, the University can boast of an avant-garde initiative, the need for which is beginning to be understood by leading universities world wide.

The mentoring is 100% voluntary from the side of the mentors. On the one hand side, the main benefits for the mentors are: widen their circle of knowledgeable contacts by encouraging their mentees to follow their expertise, enhancing peer recognition and job satisfaction. On the other side and depending on the individual needs and stage of studies of the mentees, the mento provide impartial advice on careers and a broad range of issues. The tasks of the mentor can be aimed at various levels:

- To make efficient, effective and pleasant use of the university life.
- To have a smooth introduction at the beginning of their course
- To direct the mentee towards areas of study for which they have the most aptitude and to consolidate their vision during their course
- To buffer unexpected setbacks that may force the students to leave their chosen field of study
- To give the mentee a genuine insight into the world of work

- To be directed towards a rewarding career
- Through contacts enjoyed by the mentors, placements can be negotiated with companies so that mentees can develop skills related to the profession of their dream. This is unlike the traditional work experience schemes in which a student is often under-employed and forms a negative attitude to work.

Mentors and mentees manage and organise their meetings themselves and decide on frequency and content. To initiate the scheme, academic members of staff are invited to inform their Head of Department of their willingness to offer some of their time to support students in their faculty, The Head of department then informs Deans of Faculties and Directors of Institutes and Centres. A list of mentors is placed at the University's website, providing at the same time information and guidelines for the mentoring, information on careers and education, links to resources, short profiles of mentors, forms of mentor and mentee feedback to the Mentor-Mentee Scheme Committee, online forms for potential mentors and mentees to sign up for the scheme.

The student can contact a particular mentor who then decided whether s/he is in a position to accept, or can ask to the Committee to be matched to a mentor. When a potential match is found, the mentee and mentor are informed, they decide to go ahead or use a veto. If they continue, the pair is free to communicate as they see fit, although guidelines are provided.

The work of the Gender Issues Committee is immense and almost none of the activities and actions for gender equality would exist in the University without its presence. The effectiveness of the various activities is actually based on the fact that through the GIC, **the individual commitment, motivation and ideas for action of its members become collective** and therefore more organised and powerful. To say it in other words: Most of the actions (Projects, events, policies, mentoring,...) are initiated by one of the GIC members, however highly supported and facilitated by the other members.

The mentoring scheme has a lot of success as it does not oblige the mentor or mentee to a certain amount of added-on work: the pair is guided and monitored in their relationship but can freely decide on the intensity of their work together.

4.7.4 World views

The Maltese culture is the main barrier to women in ICT studies and jobs. In summary the analysis has shown:

- Women have difficulties to choose a professional career as once they get married and have children, social and cultural pressure obliges them to stay at home. Childcare services for children under 3 years almost don't exist, so even if women go against the social pressure, they have no choice.
- In the University, women are well represented however only in certain areas, linked to the "caring" and "Nursing" stereotype of women's work.
- Financial difficulties of families is the main reason put forward to explain the importance of women employment. First consequence of this is that the image of women working is negative: "She has to work". The second consequence is that the personal and professional development of women workers is not seen at all. The fact that women actually like to work for their own satisfaction, interest and education is not considered as an issue.

What does the University and the GIC do to overcome these barriers? The world view behind the initiatives, activities and awareness raising is strongly activist, however positive and not based on a simple "complain" or "protest" strategy. As one of the interviewees explained, the GIC *"will not go on a strike, but will continue to*

push and to give pressure to hierarchy to change the situation". The GIC pushes through commitment and through its optimism and positive working approach. It's for this reason that the GIC is very well perceived and its work appreciated by colleagues.

The main message of the GIC with regard to Gender and ICT is that Research, technological advancement and economy would be progressing far higher with more women. Also, women have a right to develop themselves professionally on behalf of their aspirations as the GIC considers the under representation of women in the ICT sector as a form of poverty and exclusion. Focus is put on "Female quality" when talking about the benefits of gender equality.

4.7.5 Main lessons learned

Malta has a very traditional culture with regard to women involvement in society however at the same time attitudes are positive towards progress. The main lessons that can be drawn from the analysis are the following:

- Given the very male dominated socio-cultural context, actions on gender equality are important however **awareness raising on them even more**. Studies, research, policies and activities for gender equality have to be disseminated in order to have a full beneficial impact for society.
- Universities are in a very good position to give a best practice example on childcare services. Students or academic staff will be used to have childcare facilities and will **stop to feel guilty** of "giving away their children".
- With regard to the ICT sector in the context of Malta, there are two very important mechanisms to change the situation: mentoring and role modelling. Nevertheless, as there are not enough women in the ICT sectors of the University and neither in industry, mentoring is currently the most effective way to **attract and most of all retain more women** in the se areas.

5 PART IV CONCLUSIONS AND RECOMMENDATIONS

5.1 Women in the European ICT sector today

The objective of the study was to identify and analyse European best practice examples for an even gender distribution in the ICT sector.

Why and to which degree public and private EU ICT organisations improve the situation of women working in the ICT sector?

- This section tackles the situation of the ICT sector and its main stereotypes which make this sector very unattractive to women
- At the same time it discusses the world views breaking down the cultural barriers of women participation in ICT

What are the key mechanism and instruments that have lead to progress in those ICT organisations?

- The following sections present the general findings of the study and,
- A cross checking of best practices

5.1.1 The ICT sector and its stereotypes

The elaboration and implementation of best practices for an even gender distribution in the ICT sector presumes the knowledge of causes and effects of the under- representation of women in this sector.

The study as well as the literature review has shown that discrimination and gender segregation is related to culture, mainly as consequence of stereotypical assumptions deeply integrated in company procedures and practices:

Establishing an equality environment demands action aimed at changing the organisational culture to overcome gender stereotypes, and ensuring that employees adopt values, attitudes and behaviours that are consistent with equal opportunities. It is important to ensure that people are treated as individuals rather than members of stereotyped groups. This means judging people on their own merits rather than acting on the basis of assumptions about how any group to which they belong “always behaves”.⁴²

Stereotyped assumptions are generally based on biological sex difference between women and men describing women to be “less competent” or “less interested” in technological fields. The male image of ICT is very alive and can be found in the professional culture of many programmers, in the educational sphere and in the design of informatics products. The stereotypes derived from ICT assigns to boys action, sport and combat games; for girls, chat, mailing list, and communication.

⁴² *Promoting Gender equality in the workplace*. European Foundation for the Improvement of Living and Working Conditions. 2002. (p. 53)

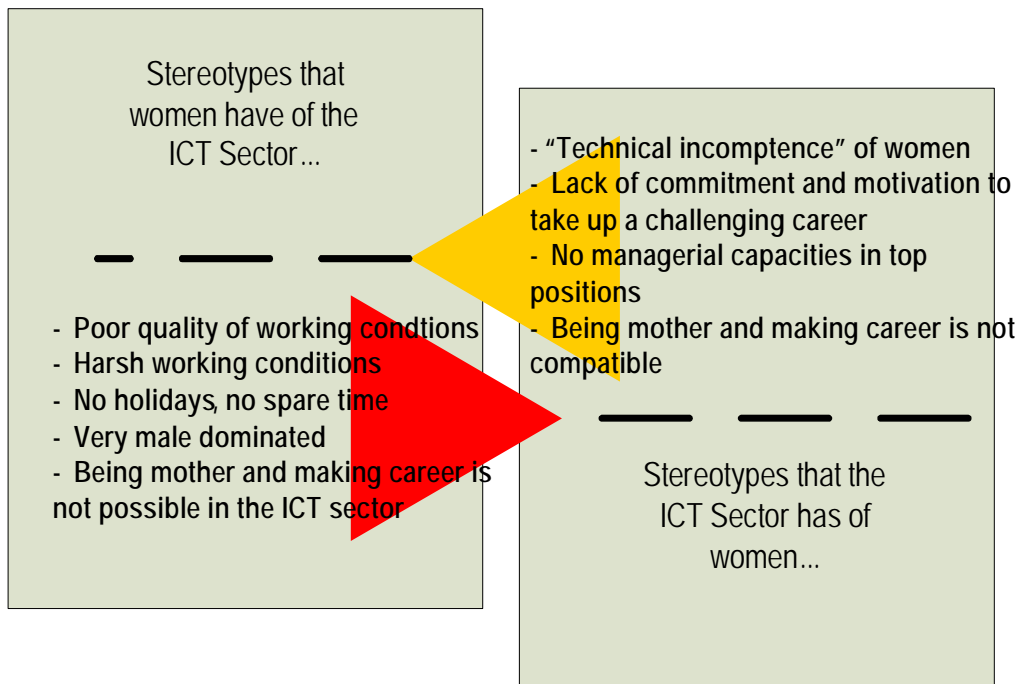
Added to this, the image of the ICT sector is dominated by poor quality working conditions such as “long working hours”, to not decide freely on holidays, working on inconvenient hours, following courses in leisure time, no parental leave et cetera but “earning loads of money” and have “big lease cars”⁴³.

The stereotype of IT professionals is typically male, young (in their mid twenties), and without domestic responsibilities. Existing images on employment in the ICT sector insist on its harsh conditions and high competency. It is predominantly based on full-time permanent contracts, part-time employment and flexible

For a lot of women, the ICT sector cannot be seen as attractive

working arrangements are very much an exception, and they are more common among female employees. Full-time working is often synonym to long working hours. Project work can be unpredictable, involving tight deadlines, so evening and weekend working is not unusual.

Why is the ICT sector so unattractive women?



5.1.2 European ICT companies and organisations promoting even gender distribution

The analysis of the cases studies has shown that the image of the ICT sector and its stereotypes is not always correct. On the contrary, companies and organisations analysed in this study propose effective solutions to overcome the negative image, as well as the barriers and difficulties of women working in the ICT sector.

The best practices identified in the different European organisations are very much linked to the cultural and socio-economic context of the country and to the type/vocation of the organisation. Each case has therefore to be referred to a background analysis of the situation:

⁴³ *The absence of women in the ICT sector. A research project conducted by the AIAS, University of Amsterdam.* Caroline van den Brekel, Maarten van Klaveren and Kea Tijdens. Amsterdam 1999.

Best practice	Context	Objectives of gender strategy
Telia Sonera	<p>In Finland, very favourable legal framework and gender friendly culture</p> <p>In Telia Sonera, women and men are fundamentally considered as equal and instruments for gender equality are very positively perceived by all employees</p> <p>Low number of women engineers/ICT experts</p> <p>Low number of number in high salary jobs</p>	<p>Gender equality involves actively men, and men are equally included in all objectives and as a target</p> <p>Revalorisation of the technical sector to women (more attractive conditions)</p> <p>Revalorisation of Marketing/Service/HR sectors to men (increase of salaries)</p> <p>Training for promotion and career development taking into account specific needs of women</p>
Hannover University	<p>In Germany, combination of family and career is seen as incompatible and family duties are seen as women duties</p> <p>Very favourable legal framework for gender equality however no concrete measures (childcare)</p> <p>Low number of women studying ICT areas, low number of women engineers/ICT experts</p> <p>In Hannover University, gender equality measures are seen as fruitful and beneficial for the University (recognition/ budget)</p>	<p>Insisting on the benefit (budget, recognition) when tackling gender equality</p> <p>Creation of interest in ICT areas in secondary schools (homogenous groups of female pupils)</p> <p>Training of female students in the area of ICT and soft skills</p> <p>Creation of job and business opportunities for female students</p>
RTE	<p>In Ireland, legal framework with regard to gender equality has had a drastic progress as from the 1970's.</p> <p>Low number of women engineers/ICT experts</p> <p>In RTE, there is no sole opinion on gender equality measures. Many women ask for a radical change of the situation as they still see a great amount of discrimination.</p>	<p>Feminist point of view, asking for a radical change on the one hand, on the other insists on what has already changed.</p> <p>Creation of better working conditions in all departments including the newsrooms</p> <p>Gender studies and training</p> <p>Creation of female databases for job opportunities</p>
General Electrics	<p>In France, legal framework and implementation of gender equality is improving. A majority of women work.</p> <p>Low number of women studying and working in the ICT sector.</p>	<p>More women in ICT means better products and growth</p> <p>Creation of favourable working conditions for all employees</p> <p>Training, self development and</p>

	<p>In General Electrics, gender equality is linked to a more general concept of diversity and is seen as a business objective</p>	<p>creation of self confidence for women</p> <p>Women Networking</p> <p>Women Role models</p>
Motorola	<p>Legal framework is improving however women have a very traditional role in society</p> <p>Low number of women studying/working in ICT areas.</p> <p>In Motorola, gender equality is part of a larger concept of diversity. This concept is not relevant in the context of Poland and has is therefore used as synonym to gender equality.</p>	<p>Gender equality focuses on the professional potential of women for the ICT sector in general</p> <p>Creation of interest in ICT areas in secondary schools (homogenous groups of female pupils)</p> <p>Creation of know-how of ICT in secondary schools</p>
Fraunhofer	<p>In Germany, combination of family and career is seen as incompatible and family duties are seen as women duties</p> <p>Very favourable legal framework for gender equality however no concrete measures (childcare)</p> <p>Low number of women studying ICT areas, low number of women engineers/ICT experts</p> <p>In Fraunhofer, gender equality in research is seen as a must and more women in ICT research means better ICT research</p>	<p>Focuses on the research itself and scientific excellence that women bring to ICT research.</p> <p>Training and knowledge transfer in schools and university with the objective to increase number of women interested in technical areas</p> <p>Create awareness on benefits of gender equality</p> <p>Human Resource Marketing</p>
University of Malta	<p>In Malta, women are assigned into the traditional role of mothers and this is seen incompatible with a professional career (Lowest number of women working in Europe)</p> <p>Very low numbers of women studying or working in ICT areas</p> <p>In the University, importance is put on awareness raising activities and on changing the worldviews on women</p>	<p>Awareness raising on the fact that low number of women in ICT is a form of injustice and exclusion</p> <p>Training and knowledge transfer in schools and university with the objective to increase number of women interested in technical areas</p>

The context defines the concrete objectives and the target in each of the best practices. Nevertheless, the study has also shown that **best practices can be transferred and effectively adapted to other contexts**. For instance, Motorola Poland has adapted the diversity strategy of the company very effectively to the polish context. In Poland, there are almost no cultural minorities and the concept of diversity has not the same significance than in the US. Diversity in Motorola Poland is equal to gender equality. General Electrics in France is another successful example for a cultural transfer of a best practice on gender equality. It has

implemented the US diversity concept with regard to “race” (afro-American) into a larger context of “minorities”.

The context defines the target (e.g. profile, sector, age), sometimes the content (eg human resources, technological know-how, soft skills), the activities (eg policies, mentoring, events) and can also define the degree of commitment.

The degree of commitment is determined by the **world view which lies behind the best practice**. World views take different forms and are very often influenced by internal policies and/or national and European laws. In Telia Sonera for instance, long-term father leaves (eg 6 month) are quite normal (46%). This is because they are an integral part of the working culture and since very long time Law.

Most of the organisations promote gender equality in a positive and optimistic way and some link gender to a more general concept in order to avoid radicalisation of views. General principles encountered are:

Encouragement and Promotion rather than critics

Compensation (awards, recognition) rather than “punishment”

Pushing rather than striking

Being part of a larger network for more women in ICT, fostering power and a positive image. Open up networks rather than creating “closed” women societies.

Promotion of female **professional excellence** and competence rather than insisting on quotas. Quality rather than Quantity.

Diversity rather than only “gender equality”. As gender is sometimes misunderstood and used as synonym to women or feminism, some organisations prefer to use the word diversity.

Key success factor of the General Electric's gender strategies and instruments is for instance the link to the diversity concept, as it is defined in the USA. Diversity is synonym to business, prosperity, growth. Diversity is seen as an instrument for production growth. Universal, the concept of diversity has also been embraced by GE France.

Each of the companies and organisations that have been analysed has developed its own mode of justification and reasoning for gender equality, **with the intention to create commitment among colleagues and/or hierarchy**. In Motorola Poland for instance, the gender equality focuses on the professional potential of women for the ICT sector in general. In the Fraunhofer Gesellschaft the objective focuses on the research itself and scientific excellence that women bring to ICT research. More women in ICT means better products and growth for General Electrics. The University of Malta insists that the low number of women in ICT is a form of injustice and exclusion. The university of Hannover insist on the benefit (budget, recognition) when tackling gender equality. In Telia Sonera, gender equality involves actively men, and men are equally included in all objectives and as a target. The RTE case reveals a very feminist point of view and asks for a radical change on the one hand, on the other insists on what has already changed.

With regard to ICT jobs and ICT areas, the main problems that have been identified and mentioned by all of the organisations are:

- Existence of **women stereotypes: women versus ICT jobs (Women at home, women have “untechnical minds”)**
- **Lack of role models in the ICT sector**. Role models are considered as extremely effective, and all of the organisations analysed in this study have implemented mentoring schemes to foster role modelling.

- **Image of harsh working conditions in the ICT sector** (particularly in the media sector). The sector has to be demystified, as not being “too difficult for girls”. A lot of organisations foster interest and organise activities that show that ICT can be very “feminine”.
- **Lack of childcare possibilities** and strong image of mothers at home.

Solutions proposed are different however they all include a very strong commitment and motivation to change the situation. One of the most important elements is therefore creating awareness on measures, instruments and their reasoning in order motivate others to do the same.

5.1.3 Cross-check of key mechanism and instruments for gender equality

The following is a cross check, taking into account the different phases of the Professional Life cycle and tackling the main measures and instruments proposed to promote gender equality in the ICT sector.

PLC Phase	Area of Intervention	Objectives	Intervention (Measures, activities)	Expected Results and Impact
Phase 1: Education	Mentoring in secondary Schools	Main objective of the mentoring in schools is to give individual based guidance, support and wake interest to female pupils for technical studies, technological fields and engineering and demystify the complexity of technical studies. Mentoring aims at breaking down cultural stereotype of women's "technical incapacity" and foster role modelling.	Activities within mentoring programmes for pupils can take the form of : <ul style="list-style-type: none"> - Meetings with the mentor, discussing aspirations, ambitions and interests for the future, advising sessions - Information days in schools, explaining the main differences between school and university, content of ICT studies, how to succeed technical studies. - Visits to the university/company: going to courses, participating in meetings, guided tours, Techlabs: practical experiences testing their newly acquired knowledge. 	Increase of female students in technical areas of university Increase of interest, knowledge and skills of female pupils in ICT fields Create gender equality in professional networks
	Mentoring in Universities	Objectives are to promote, train, coach and guide young female ICT scientists into their professional life: setting up of precise future objectives, training them soft skills such as public presentations, self marketing, projects management. Aim is also to facilitate contact making and networking, exchange of experiences and knowledge and role modelling	Activities within mentoring programmes for students can take the form of : <ul style="list-style-type: none"> - Meetings between mentor and mentees (Tandem collaboration) - Organisation of events, such as seminars on specific topics (Technical skills, soft skills), Participation in research projects - Traineeships in companies of potential future employers 	Increase number of women working in the ICT sector Increase number of women in top positions in the ICT sector Increase of knowledge and skills of women in ICT fields but also managerial skills Create gender equality

				in professional networks
Seminars and Information days in schools	Give a better image of ICT careers. Counterbalance image of highly difficult studies and harsh working conditions. Foster role modelling.	Presentations in schools: Presentation of ICT careers, focusing on advantages and benefits for women.		Increase of female students in technical areas of university. Increase number of women working in the ICT sector
Seminars and Information days in Universities	Aim is to extend profession-relevant personal abilities and soft skills (project management) and develop an early contact to industry and business.	Seminars targeted only at women inviting role models and relevant contacts from Industry to give recommendations and guidance.		Increase knowledge and skills of women in ICT fields, managerial skills and creation of gender equality in professional networks
Girls days	Objectives are to wake interest of girls in technical fields and bring technology and research more closer to girls	Typical activities of girls days are: <ul style="list-style-type: none"> - Workshops on specific technical topics (Software, engineering, etc) for girls - "Open door days" in which organisations present their work and vocations, their infrastructure, working conditions, etc. 		Creation of interest and increase of women studying ICT areas
ICT projects with schools	Develop interest of girls in the field of technology and engineering subjects, give a clear and understandable picture of professions in ICT areas, prepare female pupils for studies in the field of technology and engineering, foster their creativity, challenge the traditional barriers preventing young female students from pursuing software engineering and other technical careers.	ICT projects in the area of gender equality can include: <ul style="list-style-type: none"> - Organisation of information sessions with pupils, working groups, trainings, courses - Involving pupils in a projects such as an the creation of a website promoting and managing online courses on html and other web-design courses - Lab days where female pupils learn to use their creativity by means of new technology. 		Increase of female students in technical areas of university Increase of ICT knowledge

Phase 2: Recruitment	External recruitment	Objective is to increase the number of women appointing for engineering jobs, motivate women to apply for all job positions	Measures for this include: <ul style="list-style-type: none"> - Development of gender neutral or gender friendly vocabulary (in advertisements and publicity) and creation of an attractive image (attractive employer for women), behavioural rules (eg interview questions) - Gender neutral announcement tools: newspapers, internet, Human Resource Marketing - Discussions of gender equality in HR trainings - Guarantee Transparency: Procedures, selection criteria, competence test and positive discrimination in urgent situations - Creation/Utilisation of female databases for recruitment, attribution of bonuses for female recruitment 	Increase of women working in the organisation/company in ICT areas Increase of women in ICT top positions
	Internal recruitment	Guarantee equal opportunities for high posts in the company or organisation Guarantee equal opportunities for self development and training	<ul style="list-style-type: none"> - Selection of training candidates in proportion to their overall number - Training specifically developed for women - Flexibility and time arrangements in high positions - Foster visibility of competent women 	Increase of women in top positions
Phase 3: Career Development	Training	Objective is to create transparency in career development, guarantee that the most competent persons accede to Manager positions. Provide knowledge on new technological advancements Provide knowledge on soft skills Support women excel	<ul style="list-style-type: none"> - Short term training: 1-3 days work shops or forums, exploring and discussing different professional challenges: business, innovation, new technologies and ideas (techlabs) but also networking, leadership, management and other soft skills. Invitation and presentation of role models. - Medium term trainings: 1 week to 3 months trainings on strategic business projects, ICT research projects, etc. - Long term trainings: 6 month to 1 year or more. Traineeships in different technical departments of the organisation or 	Increase of female numbers in top positions of the company or organisation

			company. Hands-on experiences and participation in long term projects. Post-docs programmes specifically designed for female students	
	Self assessment	Support employees to discover more about themselves Gain self confidence Provide a foundation for future individual development	<ul style="list-style-type: none"> - Elaborations of socio-economics life-plans - Analysis sessions of weaknesses and strengths - Psychological assessments, individual or groups interviews with external psychologists. - Group assessments: interchanging groups, feedback on personal behaviour and work approach. - Workbooks and questionnaires for self assessment 	Increase visibility of women excel Increase of self confidence
	Career Planning	Permit women to set more ambitious targets with regard to their ICT career Bring clarity about career paths and career goals Provide women with clear methods to organise their ICT career	<ul style="list-style-type: none"> - Individual or group discussions on professional orientation, exchange of experiences between junior and senior staff members - Advising sessions with senior ICT researchers, top managers or directors or executive board - Focus groups lead by Senior Managers that describe career possibilities in the company/organisation 	Increase of women in top positions
	Coaching/Mentoring/Cross Mentoring	Involve women in their own career development and enhance their promotion potential Provide assistance and encouragements in critical times and increase job satisfaction Provide women with a better understanding on how to operate effectively in the corporate culture of the organisation	<ul style="list-style-type: none"> - Individual discussions/assessments with top managers or directors of the organisation or company - Creations of mentoring tandems (+initial training on mentoring) in between the same division or ICT departments, mentoring in between different divisions or ICT divisions - Cross mentoring: creation of mentoring tandems (+initial training on mentoring) working in different companies/organisations. 	Increase of women in top positions

		Guide women into a better understanding and knowledge on the company/organisation		
	Networking	Strengthen internal and external networks Promote contact making with future employers (internal for companies, external for universities) Acting against the “old boys network” Bring women in contact with decision making bodies of the company/organisation Networking with other women groups	<ul style="list-style-type: none"> - “Meet a leader”: Discussion sessions, lunch, dinners or cocktails where leaders and top managers are invited and make contact with potential future female employees - Establishment of women networks within the company or organisation - Forums and events with other women networks - Informal or formal internal networking between women researchers as a tool for career opportunities - Mentoring: mentors communicate their professional contacts and networks 	More visibility of female staff Increase of women in top positions
	Monitoring female career development	The objective is to identify the ICT sectors where women participation is particularly low Identify the reason of women under representation Realise studies on how people feel towards gender equality measures	Establishment of a team recollecting and/or regrouping statistics and realising gender relevant research. Examples can be found in: <ul style="list-style-type: none"> - Equality Task force (TeliaSonera) - Gender equality Commissioner (Hannover+Fraunhofer) - Women Network (GE) - Gender Issues Committee (University of Malta) 	Reliable quantitative and qualitative data on the participation of women in the Organisation/Company.
Phase 4: Management	Visibility of women	Promote transparency of promotion procedures Bring more visibility to the performances and capacities of women	<ul style="list-style-type: none"> - Auto evaluation reports: self assessment reports on performances, strong and weak points, career visions required from all staff members in all positions (visibility). 	Increase number of women in high positions
	Leadership programmes	Create knowledge, competence and soft skills for managerial	Information sessions, workshops, trainings for leadership competence and soft skills linked to the latter: team	Increase of women leadership abilities

		positions	management, conflict management	Increase of women in high positions
	Expand the impact of role models	Promote self confidence, create awareness and interest in senior or managerial positions	Role models in media	Increase number of women in high positions
Phase 5: Uptakes after leaves	Family leaves	Promote gender neutral use of family leaves Promote gender neutral sick leaves (in the case a child is sick)	Awareness raising activities on the advantages of father leaves Free in-house services for sick children (nannies paid by the company)	Increase male numbers asking for leaves
	Training	Facilitate the uptake	Mentoring throughout the leave (keeping mothers/fathers updated on their work) Training in new technological advancements, market features, organisational/managerial changes, etc Self assessment before, during and after leaves in order to identify future needs	Smooth come back
	Childcare	Facilitate reconciliation of work and family life Permit mothers/fathers to take work up as soon as possible	Creation of in-house child services and crèches Holiday programmes for children (School holidays are not always matching and are generally longer than work holidays)	Increase number of women taking up their job after short leaves
	Flexible work arrangements	Facilitate reconciliation of work and family life	Part time 4-days weeks Job sharing teleworking	Increase takes- up Reduction of maternity leave durations

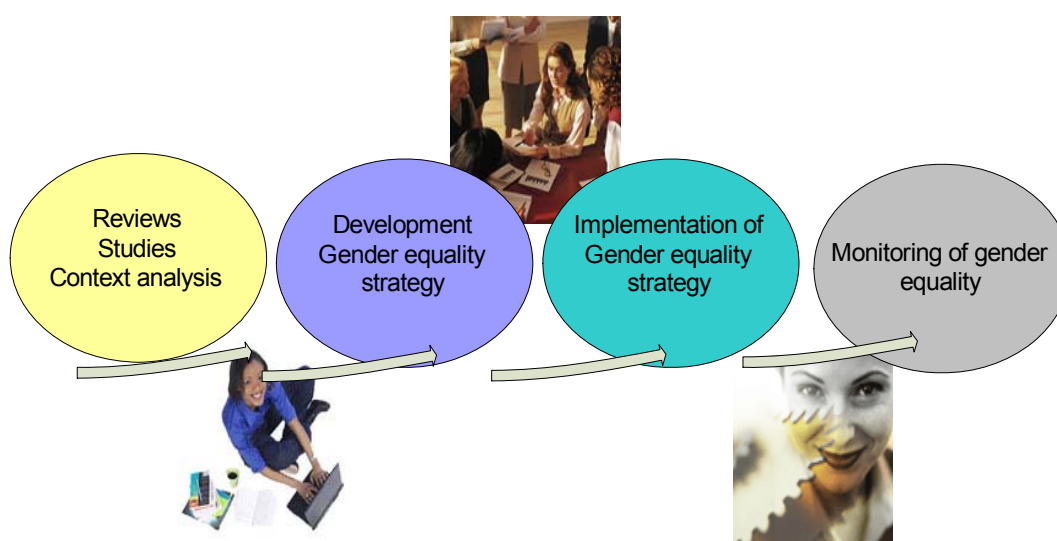
Phase Maturity 6:	Supplier diversity	Promote women entrepreneurship	Selection of women entrepreneur suppliers and free lancers	Increase of female numbers in entrepreneurship.
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How to make change happen

The best practices on even gender distribution in the European ICT sector presented by this study brought a great amount of different and very valuable input for a higher participation of women in ICT at all levels. The following is a short summary of more general recommendations, which can be applied to any context and any area of intervention with regard to gender equality in ICT.

5.1.4 Structure and Intervention logic

All of the best practices identified have been designed and implemented following one same structure to be followed:



Context analysis

The area of intervention, the objectives, the instruments and measures should be based on a qualitative and quantitative study of the context in which the gender equality strategy will be applied.

Analysis of the national context:

- Review of the ICT sector: overview of the marketplace, industrial relations, labour market, international position
- Key indicators of women's positions in the ICT sector: review of the participation of women in the ICT sector (Numbers, Positions, Areas).
- Review of the general culture: Trends, motives, influences and limitations that affect gender equality in the ICT sector.
- Study on main barriers of women in ICT sectors (Cultural barriers and organisational barriers such as lack of childcare), study on existing stereotypes, on gendered roles in society and in the ICT sector
- Key features of the institutional framework: Legal Framework, its implementation and implications, the socio-economic context (social system, industry, employment)

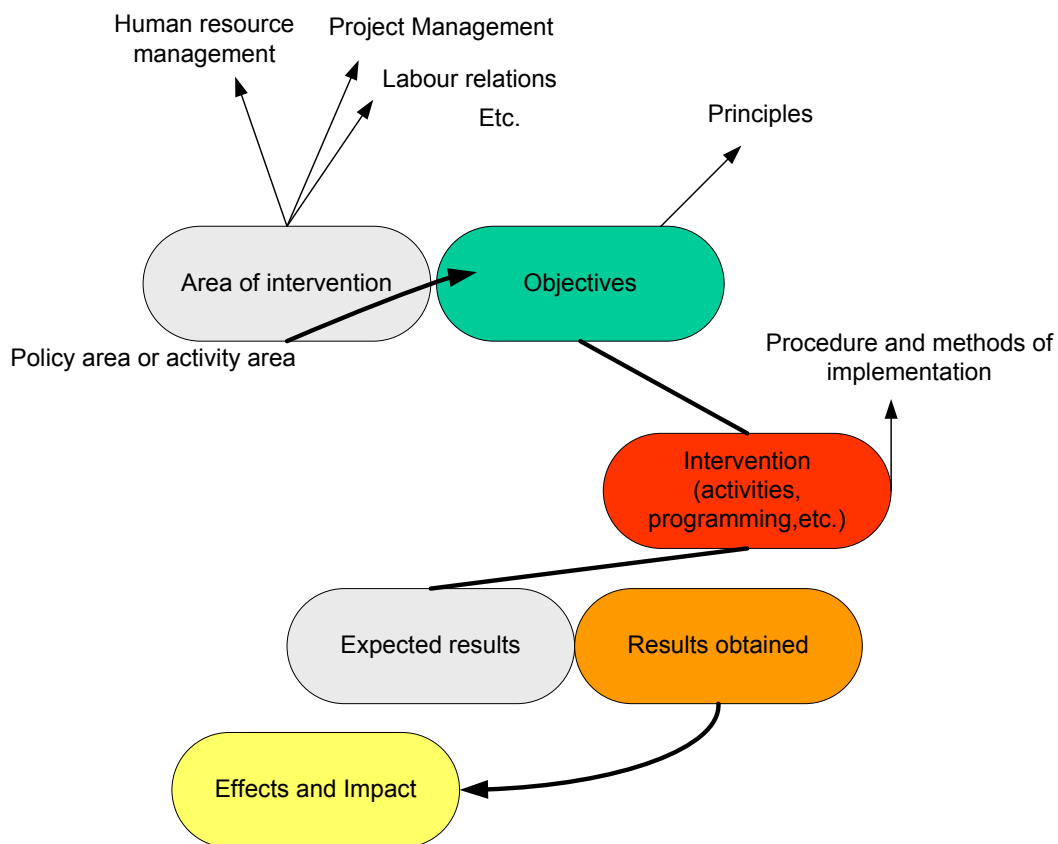
Analysis of the company/organisation context:

- Assessment of the gender equality situation in the workplace, including statistics, grade of jobs and positions, performances of men and women, differences in pay, etc
- Importance given to gender equality in relation to corporate strategies and policies

- Necessary measures: Research on needs of women (eg training) and men (eg father leaves) in the organisation/company. Staff consultation and surveys
- Review of the extend measures previously implemented and directly or indirectly linked to gender have been organised and results achieved
- Interviews tackling views of women and men on gender equality
- Study on the organisational culture of the company/organisation.

Gender equality strategy

After the analysis comes the planning and goal setting. One the basis of the context analysis, the gender strategy can be defined. The strategy should identify the area of intervention, which has positive implications on the professional life cycle of women (Education, Recruitment, Career development, Management, Uptakes after leaves, Maturity), the objectives, the instruments and measures and the expected results and impact. The gender equality strategy should follow and describe the following intervention logic:



The areas of intervention and the objectives correspond to the different phases of the professional life cycle of women that has been the main reference for the analysis part of this study:

- **Education:** knowledge transfer through training, mentoring, role modelling in schools or in University
- **Recruitment:** Human resource marketing, job advertisement, widening recruitment pool, selection process, training, development and promotion
- **Career development:** Ensure equal professional development and career paths through training, coaching, mentoring and flexible work arrangements. Increase visibility of women.
- **Management:** Ensure promotion through coaching and training of female high potentials
- **Uptakes after leaves:** Ensure work/ family balance, training and professional development

- **Maturity:** Foster women entrepreneurship through supplier selection and training

Implementation of the gender strategy

With regard to the intervention, its implementation should foresee and define different roles and responsibilities which have to be transmitted. It is recommended to set up a team or to assign the management of the strategy to a gender commissioner. The steps involved in the implementation process may include to:

- Mobilise and organise the different actors to be involved (including women and men employees, trade unions/work councils, senior management)
- Ensure appropriate investment in time, money, people

The following are some specific recommendations with regard to the best practices analysed :

PLC Phase	Area of Intervention	Recommendations
Phase 1: Education	Mentoring in secondary Schools	Should be as practical as possible: learning by doing Take into account needs and requirements of girls: showing that technology can be feminine (creation of jewellery) Create homogenous groups as this excludes the cultural barriers for girls to become interested in technology
	Mentoring in Universities	Must be as near as possible to “reality”: creation of professional networks and learning by doing Create heterogeneous groups as this is more “real” and does not create a situation of “exclusiveness.
	ICT projects with schools	ICT projects in the area of gender equality can have broad and parallel objectives creating interest in ICT but also knowledge.
Phase 2: Recruitment	External recruitment	Use of gender neutral or gender friendly vocabulary and gender neutral announcement tools: newspapers, internet, Human Resource Marketing Guarantee Transparency in recruitment procedures and selection criteria,
	Internal recruitment	Foster visibility of competent women
Phase 3: Career Development	Training	Create heterogeneous groups and adapt training content particularly to the needs of women
	Career Planning	Support women to set higher targets to their career
	Networking	Foster the establishment of women networks however these should not be seen as a “closed society” to men colleagues.
Phase 4: Management	Visibility of women	Creation of role models
Phase 5: Uptakes after leaves	Training	Trainings should focus on keeping mothers up to date and include them in the decision making process of their work
Phase 6: Maturity	Supplier diversity	Insist on quality and image marketing rather than quantity

Monitoring of gender equality

Progress and impact of the gender equality strategy should be measured by monitoring and evaluating the results of all equality actions. Importance should be paid to the development of different indicators covering all the phases of the professional life cycle of women. In particular, indicators should be integral and should cover at least:

- Impact on employees
 - number of women recruited
 - women at managerial level
 - number of women in non traditional and solely technical areas
 - Improvement of skills and careers development
 - Balance of work and home family
- Impact on the organisations
 - Cultural change
 - Improved perception of women's skills
 - Greater awareness of the importance of equality
 - Additional benefits
 - Barriers to cultural change
 - Improved public image
 - Improved employee retention, attendance and satisfaction

A part for the monitoring and evaluation itself, it is highly recommendable to:

- Communicate the outcome of monitoring and evaluation to the appropriate actors- both within and outside the organisation (Gender equality Marketing)
- Use the results of monitoring and evaluation to undertake fresh analysis, set new goals and make new plans.

5.1.5 Policies, legal and regulatory Framework

The analysis of the best practices has shown the great impact the European and national regulatory frameworks can have on the management of gender equality in different public and private organisations of the ICT sector. Ireland and Poland have been examples to show the great benefits of European policies in the area of gender equality, as both country reached significant progress for gender equality in the ICT sector.

Nevertheless, Finland and Germany also show that the participation of women in the ICT sector could improve even better in a long term perspective if certain concrete measures are integrated in Law. The two main measures encountered in these countries are:

Finnish Law which requires an equality plan. The very detailed act on Equality between women and men in Finland is applied since 1992. The Section 6a§ 2 of the Act on Equality between Women and Men in the Finnish Law requires **a gender action plan** which should include⁴⁴:

- An assessment of the gender equality situation in the workplace, including details of the employment of women and men in different jobs and a survey of the grade of jobs performed by men and women, the pay for those jobs and the differences in pay;
- Necessary measures planned for introduction or implementation with the purpose of promoting gender equality and achieving equality in pay; and

⁴⁴ The full Act on Equality between Women and Men can be viewed on the Internet at: <http://www.finlex.fi/en/laki/>

- A review of the extent to which measures previously included in the gender equality plan have been implemented and of the results achieved.

The German law requires the establishment of a gender equality commissioner which coordinates and implements gender equality in University and other public bodies. The law is regional, however exists in all Länder, adapted to their specific context.

Both of the laws, the Finnish and the German law on gender equality could be applied very effectively in other European countries, and stand therefore as a highly relevant recommendation.

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7 ANNEXES

7.1 Email questionnaire

REFERENCE QUESTIONNAIRE

Indicator 1: Gender approach and goals.

Question 0.- Your Role within your organisation

- Please define your task within your organisation.
- Please define your involvement in the definition and implementation of the gender policies within your organisation.
- Please indicate the tasks and time you allocate to activities directly related to gender mainstreaming.
- Have you received any training on gender mainstreaming? Marcela Bourová: No, they don't consider there's a need of it.
- What type of instruments has your organisation implemented to monitor gender mainstreaming?

Question 1.- Gender instruments definition and implementation

- Please, define briefly how gender oriented practices/instruments are conceived and applied within your organisation. Marcela Bourová: No gender policies.
- Please indicate whether they are applied at corporate level, whether application is actively supported, whether application involves all responsibility levels in the organisation, whether awareness actions are organised, whether impact on the research activities is considered.

Question 2.- Gender Strategy

- Does your organisation have gender focused strategic objectives? Please, detail and quantify, if possible
- When did you start implementing gender policies?
- What has been their evolution?
- Could you describe the main achievements so far?
- Could you describe the main difficulties encountered so far?
- Could you describe the main challenges you are currently facing?
- Could you indicate external influences that have a direct impact on gender mainstreaming within your organisation?
- Could you indicate internal influences that have a direct impact on gender mainstreaming within your organisation?

Question 3.- Gender Priority

- Please, explain briefly the priority gender equality and gender mainstreaming is given within your organisation and specifically within the resource management strategy
- Please indicate whether gender policies are linked to business objectives.

Question 4.- External Support

- Does your organisation subcontract external assessments and/or support in the implementation and monitoring of gender oriented practices?

Question 5.- Organisation and market influence

- In your opinion, what aspects of the organisation and/or of the organisational culture should be changed to improve gender equality?
- Does the nature of the market have an influence on the gender unbalance within your organisation?

Question 6.- Values and perceptions

- How are gender equality measures perceived in your company/organisation? What reactions do they generally trigger?
- Have you encountered any negative feedback in relation to gender Equality measures? If yes, which measures were particularly criticised or not appreciated?
- Which gender strategies are generally accepted/ or even appreciated by employees? And which are generally accepted/ or even appreciated by directing posts such as Senior researchers, Managers, Directors?
- Can you outline a profile of persons that particularly support gender equality (from a point of view of the sex of the persons, position, age category, sector, and department)?
- With regard to your experiences, was a time dimension linked to acceptance of gender strategies within your company/organisation, e.g. harder in the beginning of their implementation?

Indicator 2: How gender mechanisms are designed, implemented and monitored

Question 6.- Objectives per instrument

- Does your organisation define specific and measurable objectives for each mechanism/instrument launched to promote gender equality?

Question 7.- Budget and resources

- Does your organisation dedicate budgetary and human resources for the implementation of each designed mechanism/instrument?

Question 8.- Definition process

- What is the process followed by your organisation to define the gender oriented mechanisms/instruments? Do Unions participate in the definition process? If so, how do they participate?

Question 9.- Monitoring

- How do you monitor the results? Does your organisation define monitoring and follow-up mechanisms for each gender oriented instrument launched?
- Does each instrument have its own defined success indicators?

Question 10.- List of instruments

- Please list the major instruments/mechanisms that your organisation is currently supporting.
- Name of the instrument, Major objective envisaged with its implementation

Indicador 3: Detailed description of each practice

Question 11: Quantitative Goals

- Please detail gender oriented goals (quantified if possible), in the following areas: Recruitment, Training, Promotion, Work-life balance, Communication

Question 12: Instruments qualification

For each instrument identified in Question10, please fulfill the following table:

Name of the Instrument

Description of the Instrument

Planning

WHEN was it launched?

WHY was it launched? Starting point.

WHAT was it launched FOR? Objectives.

Target audience.

Budget calculation

Organisational support required. Responsible staff allocated.

Support procedures created.

Success Indicators defined

Execution

Major problems encountered

Monitoring mechanisms created

Results

Quantified results

Assessment of the instrument: internal and external positive and negative perceptions

Cost of the instrument.

Key aspects that are to be considered to ensure an effective and and efficient implementation of the instrument

Is it a transferable instrument? In which circumstances?

7.2 Telephone questionnaire

ORGANISATION GENERAL INFORMATION

Organisation Name:

Organisation Activity:

Type of Organisation (public/private/mixed):

Contact (Name, surname):

Organisation Position:

Phone N°: Fax N°+ e-mail:

Address: Postal Code: City, Country:

Number of employees:

Turnover (M€):

Workforce distributed by categories and gender (please indicate n° of individuals in each):

Position	Male	Female
Director		
Head of sector/department		
Team Leader/Executive/Manager		
Employee/Member of staff		
Assistant		
Trainee		
Other, please specify:		

Total

QUESTIONS

PART1: GENDER POLICIES

1. Does your organisation have any defined gender policies?

2. Since when? June 2004

5. Can you provide a brief description of the major strategic actions of your organisation towards women employees?

6. How were they designed and defined? How are they renewed?.

7. Is there a specific gender committee in your organisation?

8. Has your organisation received any type of gender distinction, label or prize for promoting equal opportunities for woman?

9. Have the gender policies brought any benefits to the organisation?.

PART 2: GENDER POLICIES DETAILED DESCRIPTION

RECRUITMENT

Has your organisation any particular procedure for reviewing, advertising and adapting the recruitment processes, with special measures for women? If YES, please describe them briefly.

TRAINING

Has your organisation training and awareness activities related to gender equality, training programmes for women in management or other technical abilities, where they are underrepresented? If YES, please describe

them.

PROMOTION

What kind of evaluation, promotion and professional development opportunities are defined, including supervision under gender equality personnel in the process, and elimination of any discriminatory requirement in the selection process?

WORK-LIFE BALANCE

Do you have flexible working hours, improved and extended legal leave, general information regarding work-life balance facilities like company nursery, economic facilities for dependent people, etc?. Please define them.

COMMUNICATION

Does your organisation's corporative image mention the commitment to gender equality and the use of non-sexist language in any publicity or internal communication text?

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