

# Challenges for Women in a Changing Profession

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**Key words:** Changing Profession, Female Skills, New Techniques.

## ABSTRACT

In many countries of the world the profession of the surveyor is still dominated by male professionals. The profile of the profession is changing and in a few years it will be completely different from now. On the one hand technical methods had changed the profession from a sometimes strenuous one towards a profession focussed on organisational skills. On the other hand the economical surroundings are creating a completely different situation for the professionals which opens a variety of chances for female professionals and female skills.

## ZUSAMMENFASSUNG

In vielen Ländern ist der Beruf des Vermessungsingenieurs nach wie vor in einem hohen Maße durch Männer dominiert. Das Anforderungsprofil des Berufes ändert sich stetig und in wenigen Jahren wird es sich vollständig gewandelt haben. Einerseits haben sich die technischen Methoden grundlegend geändert und damit sind Anforderungen an die physischen Fähigkeiten der Berufsausübenden nicht mehr relevant, anstelle dieser sind Organisationsfähigkeit und Koordinationsfähigkeit gefordert. Andererseits hat sich der Beruf durch das geänderte wirtschaftliche Umfeld grundlegend gewandelt und bietet neue Chancen speziell für weibliche Ingenieure und typisch weibliche Fähigkeiten.

## CONTACT

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## 1. INTRODUCTION

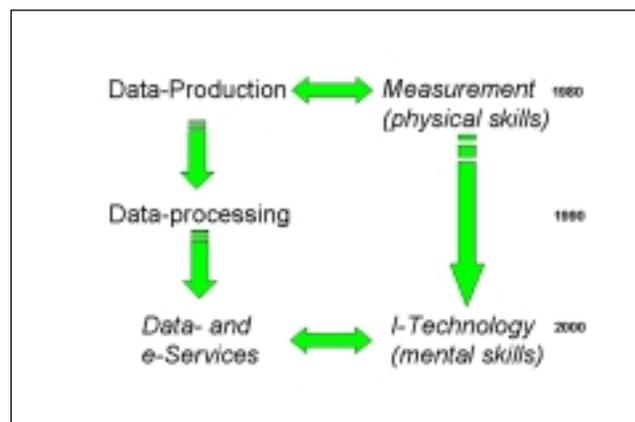
In many countries of the world the profession of the surveyor is still dominated by male professionals and even the majority of the students is still male. The contents of the curricula are considered to be on the one hand dominated by technical subjects and therefore demanding a high level of technical skills and on the other hand surveying subjects are still seen to make high demands to the physical condition of the person carrying out these activities.

Traditional male professions do not really attract female candidates for the university courses. Without promoting these fields of study very intensively towards female students, it is difficult to raise their proportion compared to male students.

The profile of the profession is constantly changing and in a few years it will be completely different from now. On the one hand technical methods had changed and organisational skills are rather demanded than physical skills. On the other hand these conditions open a variety of chances for female professionals to use female skills.

## 2. CHANGING PROFESSION

Two decades before measuring methods have been sometimes very strenuous for the surveyor. The object that had to be ascertained had to be contacted irrespectively of the topographic conditions. This meant in many cases that persons without physical skills were excluded from a part of the professional work. Many techniques have changed recently and it is no longer necessary to carry out measurements on the objects themselves. Especially all photogrammetric and remote sensing methods create masses of data without any physical efforts of the involved professionals.



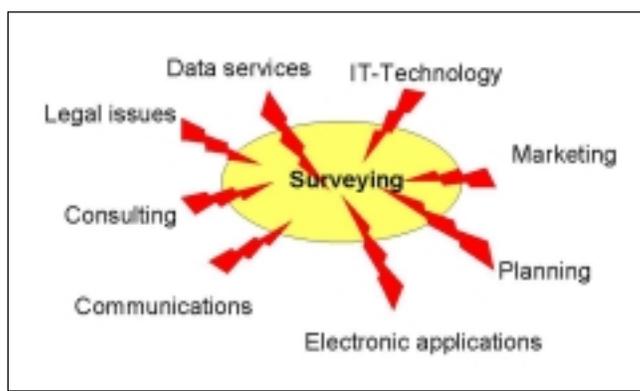
Change of skills

Instruments and fittings have developed mostly to easily portable things and can be handled by one person on his own and measurements have often changed towards registration of automatically generated readings.

The focus for the profession is now more on the further processing of data and creating services for data providing than on production of data.

Knowledge of measurement procedures and techniques has been replaced by skills on information technology, service providing skills and ability to promote data services and open new markets.

The major part of the profession will be covered by activities related to the *e*-business and thus the demands to the professionals will be quite different from today.



### **Incoming Professions**

Due to change of markets and techniques for the surveyor a number of new professions have entered to the surveying profession regarding a wider range of professional skills.

Besides the profession will have to find additional markets and new activities to meet decreasing business of traditional surveying activities including property surveying. Fields as land management as a very extensive service for sustainable development of land property as well as consulting for land owners for their own property management including legal issues could be occupied by surveyors.

In many countries valuation is not yet defined to a particular profession although it could be one of the key items for the profession.

Anyway there will be a need to co-operate more intensively with new incoming professions and to focus more on economical, organisational and management issues.

### **3. CHANGING CONDITIONS**

New technologies will dominate the surveying profession and make participation for women more easily than in the past. Using the incoming communication methods it is no longer

necessary that employees are working from one single office, electronic networks allow teams to act in a virtual office and not to be bound on a real existing site. Part-time work and tele-work are going to be common and help to serve women in their intentions to stay on job during periods of personally caused need for reduced working times. New models of working hours are a milestone for women on their way to a equal participation in the profession.

#### **4. FUTURE SKILLS**

Due to service activities covering the major part of the profession there will be recommended skills like

- Information Technology
- Marketing
- Communication
- Promoting
- Consulting
- Empathy for clients
- Sensibility for what can be done

Women will have to be attracted for the electronic techniques to avoid that the present situation is prolonged. At the moment users of the web are mainly female but students in IT-courses and suppliers of IT-services are mainly male.

#### **5. WOMEN'S CHANCES**

Soft skills are mainly obtained and traditionally well practised by women. This will open a wide range of chances for women even to get into technical professions. First activities to enhance female professionals will have to promote the new conditions of the profession and therefore encourage women to get into unusual technical professions.

For the new incoming parts of the profession women are destined to contribute a leading part. If women will be able to qualify for these new activities by continuing post-graduate training and fill the gap that is going to be opened within the profession there will be a real chance to succeed in getting into technical professions.

Chances have never been better as now for women to contribute to the profession and help to build up a profession which plays an important role in the global and local market representing the interests of both genders according to the proportion in the population – which is to say fifty-fifty.

## BIOGRAPHICAL NOTES

**Gerda Schennach**, Dipl.-Ing. (MSc)

Born in Austria in 1956, baccalaureat in 1974, Diploma of Commercial College in 1975. Study of Geodesy at University Innsbruck 1975-1977 and Vienna Institute of Technology 1977-1980. Graduated Dipl.-Ing. (MSc) in Geodesy in 1980.

Professional career started in 1981 in the Austrian Federal Office for Metrology and Surveying (BEV), head of a cadastre office from 1983-1998, since 1998 senior consultant for GI affairs of the EC and for international organizations in the Headquarters of BEV.

Activities in professional bodies:

- Austrian Association for Surveying and Geoinformation (ÖVG), *Member* of the Executive Board since 1998
- Austrian Umbrella Organization for Geographic Information (AGEO), *Foundation member* of the organization, *Secretary-General* of the organization since foundation 1998, re-elected in 2001.
- German Association for Surveying (DVW), *Member*
- Comité de Liaison des Géomètres Européens – European Council of Geodetic Surveyors (CLGE), *Secretary-General* of the organization since 1998, re-elected in 2001
- International Federation of Surveyors (FIG)
- *Secretary* of Commission 3 (Landinformation) from 1990-1994
- Austrian *Delegate* to Commission 7 (Cadastre) since 1994, *Member* of Working Group "Cadastre 2014" in Commission 7
- *Member* of Task Force on "Under-represented Groups" in Commission 2
- EuroGeographics, *Member* of project team for establishment of an European Road Database, *Member* of Working Group on GI dissemination in the E-ESDI project
- Working Group for women's equal rights in the Austrian Ministry of Economics and Labour, *Member* since 1984