

# Marketing of Surveying Education in Finland

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**Key words:** Surveying education, marketing of surveying education

## SUMMARY

Surveying education is offered on three different levels in Finland. The first degree in surveying after basic studies is the cartographer. Bachelors of Science (Tech.) in Surveying are graduated from Polytechnics and Masters of Science (Tech.) in Real Estate Economics, and Masters of Science (Tech.) in Geomatics are graduated from Helsinki University of Technology.

General trend in the surveying field in Finland in the 1990's was that enrolment to surveying education dropped year by year on all of the three education levels. Surveying education interested too few young people in the late 1990's and many educational institutions had less applicants than open posts. At the same time it was obvious that by the year 2010 about a half of the surveyors working in the late 1990's would retire offering plenty of vacant situations. In this situation the occupational organisations, educational institutions and biggest employers in the field awoke to consider how this change of generation would be implemented successfully and how the marketing and introduction of the surveying field in comprehensive and secondary schools would be enhanced to make more and more young people choose surveying as future profession.

This threat of decline in the surveying field made the occupational organisations, educational institutions and employers form a joint marketing team (Imago Team) for planning and realising actions for marketing surveying education among the young generation. Simultaneously and in co-operation with the Imago Team the educational institutions are also enhancing their own marketing. As a result of this work the familiarity of surveying has increased among the young generation and enrolment to various educational institutions has started to increase.

This paper considers the various marketing methods and channels used in Finland in the 21st century for increasing the familiarity of surveying education and interest in the field among the young generation.

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## 1. INTRODUCTION

The Finnish education system is composed of nine-year basic education (comprehensive school), preceded by one year of voluntary pre-primary education; upper secondary education, comprising vocational and general education; and higher education, provided by universities and polytechnics.

Basic education is free general education provided for the whole age group (currently c. 60,000 children). After completing the basic education syllabus young people have finished their compulsory schooling. It does not lead to any qualification but gives eligibility for all upper secondary education and training.

The post-compulsory upper secondary level comprises general and vocational education. Both of the forms usually take three years and give eligibility for higher education. About 55% of the school-leavers opt for the general upper secondary school (high school) and 39% initial vocational education and training school (VET).

The upper secondary school (high school) is based on courses with no specified year-classes and ends in a matriculation examination. It does not qualify for any occupation. After the upper secondary school, students continue in universities, polytechnics or vocational institutions. The aim of vocational education and training school (VET) is to improve the skills of the work force, to respond to skills needs in the working life and to support lifelong learning.

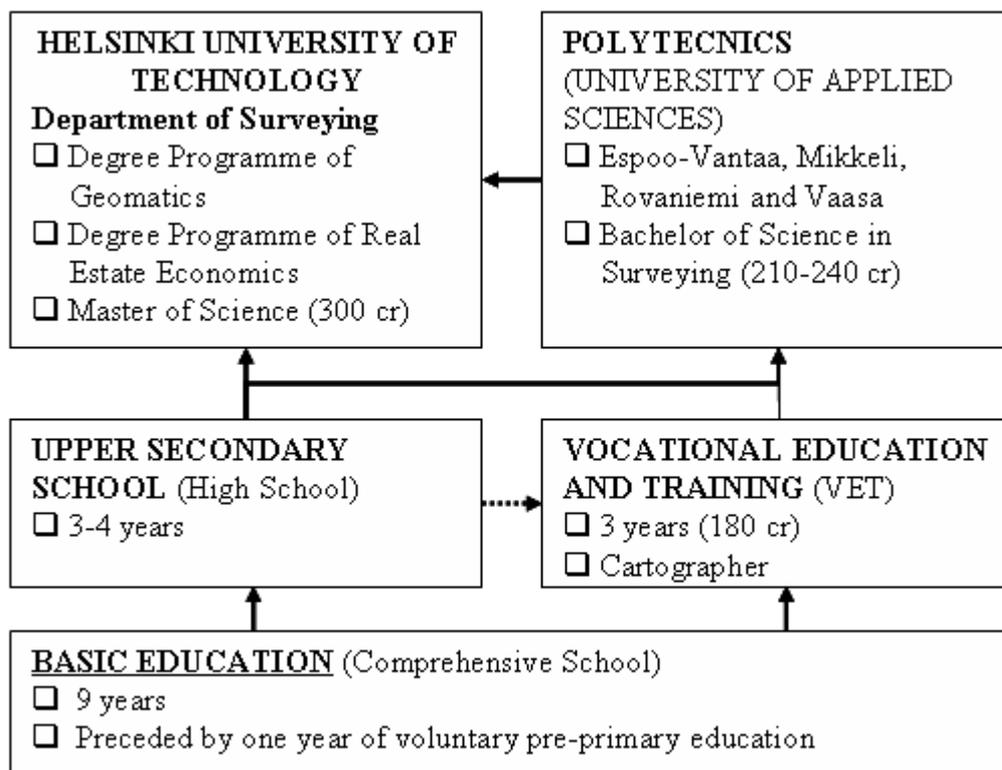
The Finnish higher education system consists of two complementary sectors: polytechnics (universities of applied sciences) and universities. The mission of universities is to conduct scientific research and provide instruction and postgraduate education based on it. Polytechnics train professionals in response to labour market needs and conduct research and development (R&D), which supports instruction and promotes regional development in particular.

The studies in universities and polytechnics are quantified as credits (European Credit Transfer System - ECTS). One year of full-time study corresponds to 60 credits. The extent of polytechnic degree studies is generally 210 to 240 credits, which means 3.5 to 4 years of full-time study. This education is arranged as degree programmes. The entry requirement is a certificate from an upper secondary school or the matriculation certificate, a vocational qualification or corresponding foreign studies (see Figure 1).

At the universities students can study for lower (Bachelor's) and higher (Master's) degrees and scientific or artistic postgraduate degrees, which are the licentiate and the doctorate. In the

two-cycle degree system students first complete the Bachelor's degree, after which they may go for the higher Master's degree. As a rule, students are admitted to study for the higher degree. The universities also arrange separate Master's programmes with separate student selection, to which the entry requirement is a Bachelor's level degree or corresponding studies. The extent of the Bachelor's level degree is 180 credits and takes three years. The Master's degree is 120 credits, which means two years of full-time study on top of the lower degree (see Figure 1).

The first degree in surveying after basic education studies (comprehensive school) is the cartographer. Bachelors of Science (Tech.) in Surveying are graduated from polytechnics, Masters of Science (Tech.) in Real Estate Economics and Masters of Science (Tech.) in Geomatics are graduated from Helsinki University of Technology (see Figure 1).

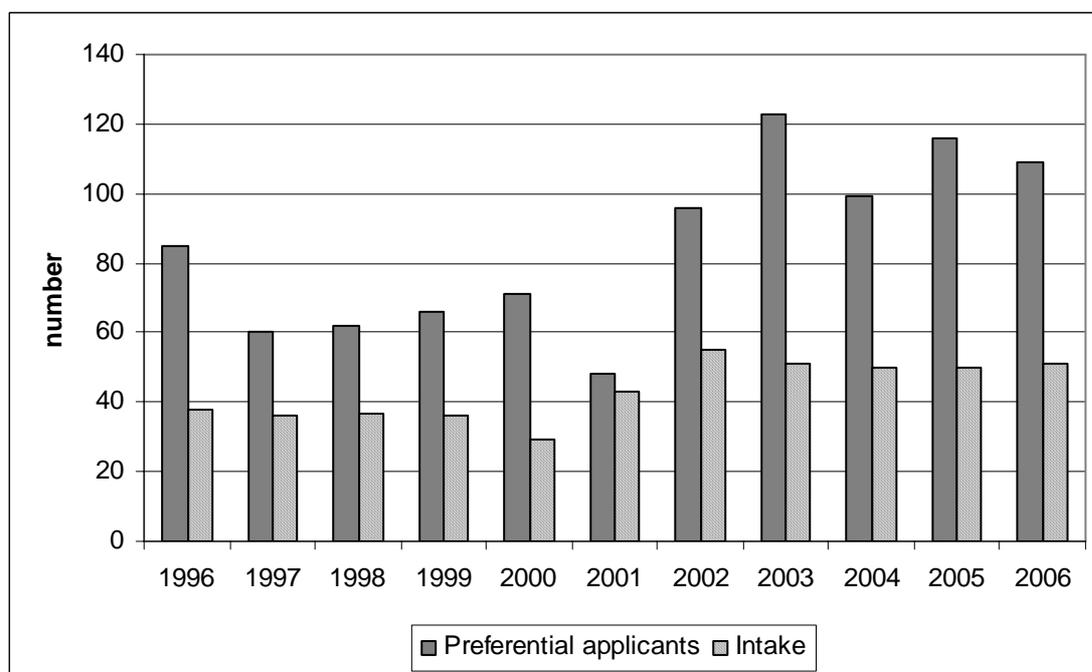


**Figure 1.** The Finnish surveying education system.

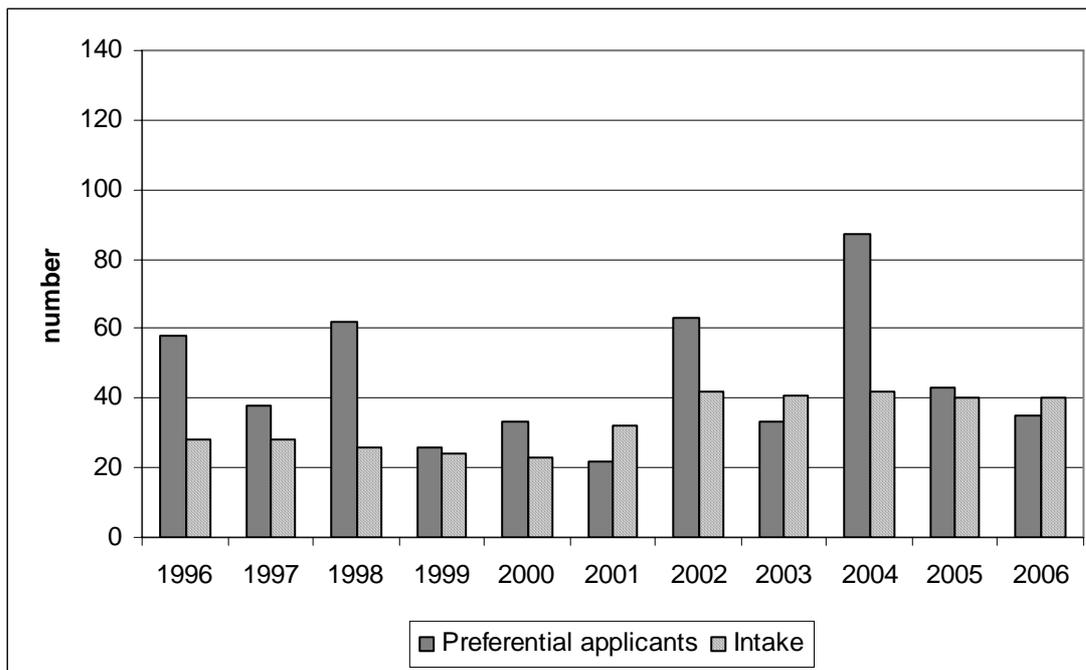
Cartographers are graduated from eight vocational schools. Open posts for new students of cartography annually total in about a hundred. Bachelors of Science (Tech.) in Surveying are graduated from four Polytechnics. The annual intake is some 80. The present annual intake for the Degree Programme of Geomatics at the Helsinki University of Technology is some 40 and for the Degree Programme of Real Estate Economics some 50.

Working posts in the surveying field in Finland are both in the public and private sector. In the state and municipal sector the surveyors carry out tasks of cartography and measurement, legal cadastral surveys, and maintain the national land data bank system. In private enterprises the surveyors are mostly specialised in property management, real estate valuation, and various tasks of cartography and measurement. 60 % of the members in The Finnish Association of Geodetic and Land Surveyors work in the public sector and 40 % in the private sector.

General trend in the surveying field in Finland in the 1990's was that enrolment to surveying education dropped year by year on all of the three education levels. Surveying education interested too few young people in the late 1990's and many educational institutions had less applicants than open posts. Shortage of students was especially encountered with cartographers. Figures 2 and 3 show the development of (preferential) applicant numbers to the Department of Surveying at the Helsinki University of Technology during the years 1999 to 2006. At the same time it was obvious that by the year 2010 about a half of the surveyors working in the late 1990's would retire offering plenty of vacant situations.



**Figure 2.** (Preferential) applicants and intake to the Degree Programme of Real Estate Economics (Helsinki University of Technology)



**Figure 3.** (Preferential) applicants and intake to the Degree Programme of Geomatics (Helsinki University of Technology)

In this situation the occupational organisations, educational institutions and biggest employers in the field awoke to consider how this change of generation would be implemented successfully and how the marketing and introduction of the surveying field in comprehensive and upper secondary schools would be enhanced to make more and more young people choose surveying as future profession.

## 2. MARKETING OF SURVEYING EDUCATION

### 2.1 The Imago Team

In 2001 the educational institutions in field, the biggest employers, and the occupational organisations assembled to discuss what should be done to make the young ones in choice of their profession consider surveying as studies option. The discussions pointed out that the educational institutions of surveying require a sufficient number of students in order to maintain good student material and avoid future labour shortage. In this competition for students the image of the surveying field must be sound and truthful.

Imago Team was established in the spring of 2001 for promoting and marketing the various educational levels of the surveying field in the comprehensive schools and upper secondary schools. The Imago Team is a voluntary cooperative body formed by employers, educational institutions, and employee organisations ideating, planning and implementing different measures for improving the familiarity of the field, coordinating the workings of the various

actors, and monitoring the development of the student situation in different educational institutions.

During its existence the Imago Team has, for instance, produced a Surveying Info File and a Surveyor CD. The Info File consists of brochures and contact information of every educational institution in the field. The CD offers basic information of the surveying studies. The File and the CD are used as supplementary material when the students from the Helsinki University of Technology and Polytechnics go to upper secondary schools to tell about the surveying studies and when the surveying field is presented at other occasions, for instance at the Helsinki University of Technology. Another example of the Imago Team's accomplishments is the participation in a campaign, which distributed the extra issue of the *Maankäyttö* magazine to all teachers of geography in the upper secondary schools. This campaign also opened up the possibility of getting acquainted with the geographic information material to the students of the upper secondary school through the Map Site of The National Land Survey of Finland. Further, with The National Land Survey of Finland the Imago Team has promoted the surveying field and work opportunities in cooperation with the various leisure organisations moving in the terrain. For example, The Finnish Orienteering Association is one of such partners. The surveying field has been introduced to the young ones at the orienteering camps arranged by the association.

## **2.2 The National Land Survey of Finland**

The National Land Survey of Finland as the biggest employer in the field is devoting to developing the image of their own and the surveying field by working actively in the Imago Team. Further, at the result agreements between the production units and the central administration The National Land Survey of Finland has agreed that the local surveying offices sponsor and participate in the briefings organised by the students of surveying in the local educational institutions.

As regards The National Land Survey of Finland the demand for new labour force is great in the future to replace the ones retiring. This has made the organisation also spontaneously market The National Land Survey of Finland to the young ones as a future employment. The National Land Survey of Finland has systematically published various brochures informing of the jobs and established Internet pages ([www.karttakeppi.fi](http://www.karttakeppi.fi)) telling about the various options of the surveying field to the young ones at their choice of career.

As the newest channel for familiarising the field The National Land Survey of Finland has decided to establish Internet pages in cooperation with the TAT Group during the year of 2007. These pages are directed to the teachers of geography and biology and the young ones planning their studies. (TAT Group is a communication, consultancy and training organisation owned by the Confederation of Finnish Industry and Employers, TT Trust and Confederation of Finnish Industries). These Web pages will include, for example, video presentations where experts in the surveying field tell about the various jobs and students of surveying tell about the contents of their studies.

## **2.3 Helsinki University of Technology and the Polytechnics**

Helsinki University of Technology is the only scientific university in Finland where Masters of Science (Tech.) in Surveying are graduated. However, since jobs in the surveying field are available throughout Finland the Department of Surveying aims at informing of its educational supply nation-wide. This is accomplished on the Web pages of the Helsinki University of Technology and the Department of Surveying, and, for example, by brochures sent to all upper secondary schools. These brochures would describe the contents of the Degree Programmes of Geomatics and Real Estate Economics and give instructions on applying for a student.

Annually in the autumn and spring the Department of Surveying and the students arrange an "open day" together with the rest of the departments in the Helsinki University of Technology. The department and the studies options are presented to those interested. In addition to this, the students go to upper secondary schools around Finland and tell about the studies at the Department of Surveying. These direct marketing events have proven very successful. Some 20 to 40 events are annually arranged at upper secondary schools. The Department of Surveying, The National Land Survey of Finland, and the Imago Team have promoted these events, for example, by participating, covering the students' travel expenses, and producing the necessary demonstration material.

The Polytechnics also arrange similar briefing to the students at the upper secondary schools. Since 2005 students from the Helsinki University of Technology and the Polytechnics have been working in co-operation and arranged joint events at upper secondary schools.

## **3. CONCLUSION**

The surveying field in Finland is undoubtedly modernistic making in the world of geographic information. Further, some of the tasks are made in the terrain, which is interesting to many young people. The rate of employment will be very good according to the prognoses and the wage level is moderate. The field is, however, rather narrow as a whole, and its problem is the fact that it is poorly known among the young ones planning their studies. According to a study those who have found their way to the Department of Surveying have had the information mainly from two sources: the Internet and relatives and acquaintances.

In this situation the actors in the field: the employers, educational institutions and occupational organisations must work together and jointly plan actions and campaigns for encouraging the young ones to apply for a student post. The situation starts to look promising with the contribution of the Imago Team.

As a result of this work the familiarity of surveying has increased among the young generation and the enrolment to various educational institutions has started to increase.

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## BIOGRAPHICAL NOTES

### Arvo Vitikainen

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1979: Cadastral surveyor, Kaarlela Land Consolidation Office  
1985: Head of Land Consolidation Office, Ylivieska Land Consolidation Office  
1989: Surveying Manager and Senior Engineer, Lapland Land Survey Office, Rovaniemi  
Present position: 1999: Professor of Land Management and Cadastral Science, Helsinki University of Technology, Institute of Real Estate Studies; Chair of the Degree Programme Committee at the Department of Surveying, Helsinki University of Technology

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