



GERMANY is missing engineers
- surveyors too ?

Situation of the geodetic education
and the needs of the labour market



Common Situation

- ➔ To become an engineer
is not the first choice of the young people

- ➔ Germany's associations complains
20.000 engineers missing



Why we are missing so many engineers

- policy of the labour market
 - younger employees are retired in the last years
- more and more retirements in the coming years till 2012
- not enough students in this years



affectet professions

- mechanical engineering
- ship building
- aircraft construction
- electrical engineering
- space engineering
- computer science



not affected professions

- constructional engineering
- architecture
- urban development
and
- surveyours ?



situation in the field of surveying

- public sector
 - reduction of jobs since 1995 nearly 20 %
 - reduction phase continues

- private sector
 - reduction of jobs since 1998
 - nowadays nearly constant



reduction of jobs

- possible by retirements
- more and more automation
- less work in the kernel of
 - cadastre
 - mapping



Situation at the universities

Number of students

➤ **Technical Universities**



➤ **Universities of applied science**



➤ **dual education for technicians**





Consequencies since 2000

- more advertising
- starting the new Bachelor and Master Education
- developing
 - new names
 - new focal points
 - new special fields



activities of our associations

- advertisement at schools
- flyers
- contest GIS at school
- many local activities

Results

- Number of students became stabilized



Fields of activities of the new engineers

till 1990 70 % public sector
 30 % private sector

in 2005 30 % public sector
 70 % private sector



private sector

- engineering offices
- software
- GIS industry
- valuation
- navigation
- research



fields capable of development

- ◆ valuation
- ◆ geoinformation
- ◆ software industry



Importance

competition with other qualified fields

new focus

new curricula



Summary

profession is on a good way
classical fields are decreasing
new fields are increasing
we have not enough students till 2012



target for the future

- developing new fields of activities
- more integration with other disciplines
- more services
- more PPP
- strengthening of the private sector



The situation in the private sector is divided in three bigger blocks

- **1. Companies with their focus on industrial and engineering jobs**
- **2. Companies with a focus on civil engineering with their own surveying engineers**
- **3. Companies mainly doing cadastral work**

Germany has a total number of about 25.000 surveying engineers and about 25.000 surveying technicians



The situation to employ new surveying specialists

- The Companies mentioned under 2. and 3. lost about 40 % of their surveying staff during the crisis on the construction market between 1997 and 2004
- The unemployment rate for surveying engineers is about 10 % for Germany
- The universities develop about 700 surveying engineers each year
- There is no lack of surveying engineers in Germany nowadays