



The Council of European Geodetic Surveyors
Comité de Liaison des Géomètres Européens

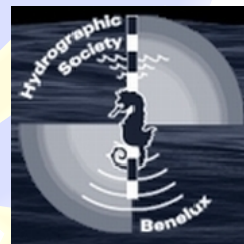
Experience and future of Geodetic employment in the Netherlands

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Kadaster





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At first...some history

- **After 2nd world war: start of geodetic studies / education on several levels:**
 - Delft – technical university, international well known
 - Utrecht – polytechnic college- bachelor
 - Breda, Arnhem, Hengelo, Groningen – secondary schools/ technicians
 - Some governmental services – own education/training
- **Started in period of rebuilding in the Netherlands**
- **All studies in the neighbourhood of civil engineering and building constructions**
- **Geodesy is totally government oriented / dominated**



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Status now (facts)

Totally about 5500 persons:

- About 800 Msc/ technical university
- About 1200 Bsc/ polytechnical college
- About 3500 technicians

2004: investigation of needs (surveyor / geo-inf) in coming years:

- About 60 Msc per year
- About 25 Bsc per year
- About 90 technicians per year
- 10-20% of these are for surveyor and the rest is geo-inf

Biggest problem: lack of new technicians



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Trends in the Netherlands

- The interest for technical studies nationwide has been decreasing (-10% since 2000)
- The interest for surveying studies has also been diminishing
- The number of surveying jobs is staying equal
- The number of surveying managers has been decreasing
- The choice for a study = more internet and TV related
- No longer life-time employability in a company → Move on to a next job in 4-5 years



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Background of trends (not limited)

- **Government policy** (competition, result-oriented, scaling-up of schools, budget, privatization, etc)
- **Social change to fast consumption** (internet, TV, etc). Good pictures/movies gives more result than words.
- **Education** used to be more knowledge based than competence oriented
- **Change towards 24 hours economy**; for instance maintenance of roads/railways is at night
- **Automation leads more and more to a black box** (gives the impression of fool proven instruments and software)
- **Management competence skills getting more important.**



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What went wrong:

- **Geodesy is small, has no image, is not visible.**
- **Number of surveying students = 10 of totally 400.000 (too small).**
- **Practice : number of staff members is bigger than students; no move on in the staff; the staff is getting older and older and has no connection to the practical field.**
- **A school is better with extern and intern oriented staff (innovations).**
- **A school is going down when internally and theoretically oriented. (f.e. faculty geodesy of Delft)**
- **Geodesy doesn't have a strong branch or lobby**



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Government policy

- **Result/budget oriented → pass rate and budgets are more important than quality: (f.e. no move on between schools; teacher is ill whole period → student get passed because otherwise no budget)**
- **Competition and budget system → no cooperation in this very small study**
- **Scaling-up schools/faculties → geodesy is disappearing in the big faculties of building and civil engineering → less connection with the people in the field.**



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Image of geodesy

- Geodesists/surveyors have no 'sexy' marketing image (web design, pimp up a car is very popular)
- Strong promotion gives result, but for a short time
- Possible better now, to promote with :
 - Environmental problems
 - Flood problems / climate change
 - Google earth / internet maps
 - GIS applications (?)
 - Navigation systems (Tom-Tom etc.)
- No longer :
 - Image of the classical land registry surveyor
 - surveying is just a (necessary) part of building constructions



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Policy in Education

- In the past : knowledge based
- Last decade : only competence education (skills and behaviour/attitude) → knowledge is less important (say : no more mental arithmetic)
- Result → managers are no longer geodesist; other were more competence skilled
- Now : combination of knowledge and competence
- For the future :
 - for geodetic managers is it too late to change this trend back?
 - big need (and gap) for new technicians
 - enormous growth in GIS in other studies.



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Conclusions

- For the geodetic surveyors as manager it is possibly too late
- The quantity of other jobs in geodesy/surveying is still equal
- Promotion, oriented on the internet, for supply of students is extremely necessary, especially technicians.
- The companies/organisations have to help / support the schools.
- Now: everyone is feeling the need of urgency.
- Initiatives are taken, but difficult to realize and to coordinate (takes time).
- Big chance: strong linking pin between study/schools and practice