The Role of Non-geodetic Professional Expertise of a University Educated Surveyor in an Emerging Ambiguous and Unsafe Future of the Profession

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Meaning of Professional Titles

- Architects, Lawyers, Civil Engineers, Doctors, Surveyors… traditional names with abstract meaning anymore
- Professional Titles $\Longleftrightarrow$ Professional Activities
- Professions $=\sum f(\text{specific qualifications})$
- Expertise: Job Description $\Leftrightarrow$

$$\Omega = f_i(\text{qualifications}|_m^n)$$

The Surveying Problem

- Impact of New Technologies
- Activities of the Surveying Profession

New Technologies...

- Measurements and Data Modeling is relatively easy
- Market Profile: Qualifications of >BAC+3 not quite necessary, e.g. in public sector of Germany:
  - *Surveying Technicians* increased by 11.5% between 1984 and 1995
  - *Surveying Engineers* reduced by 10.6% in same period

Surveyor...

- Profession of … variations, diversifications, split, undefined sectors, different names
- Local and biased definitions
- FIG definition: globally incomplete and non all-inclusive; needs redefinition
- Full understanding of Surveyors Profile is of paramount importance for re-establishing an attractive profession globally; a Profile of *Integrated Competence* in Land, Property and Construction (Magel,1999)

Non-geodetic Surveyor: Accomplishments

- Successful and Respected Professional where found
- High Level Qualifications
- Accepted by Free-Market
- Untouched by current negative market trends of the conventional surveying activities

Non-Geodetic Surveyor: Who is Who ?

- Supplement to conventional Surveying Qualifications or Individual educational background
- Accredited and licensed usually by individual body
- Some are represented in FIG, e.g. urban planner, valuator, land manager etc.
- Frequently a Title is associated with specific professional activities

Archaeological Surveyor

- Making plans, maps of archaeological sites
- Use of Special Methods for locating buried Objects (Magnetic, Radioactive Methods etc)
- Accurate plotting of Artifacts and Archaeological Finds
- Degree in Archaeology with Land Surveying Supplement
- Vice Versa
- E.g. Greece, Italy, U.K.

Building Surveyor

- Plans & Specifications of Building Works
- Alterations & Extensions of Buildings
- Administration, Coordination, Control of Building Projects
- Application of Landlord, Tenant, Administrative, Building and Contract Law

- Degree in Building Surveying or Relevant Studies
- e.g. Greece (partially), Italy, Ireland, Spain, U.K.

Building Services Engineering Surveyor (~Facility Manager)

- Contractual Documentation
- Measurement & Evaluation of Building Services
- Equipment & Installations
- Accounting
- Legitimate Claims

- Degree in Building Services Engineering or Relevant Studies
- e.g. Germany (facility manager-FM), Italy, Ireland, U.K., U.S.A. (FM)

Civil Engineering Surveyor

- Surveying, Setting-out, Supervision of Civil Engineering Works
- Stability of Structures
- Testing of Materials
- Quality Control
- Remedying Structural Defects
- Contract Law

- Degree in Civil Engineering or Relevant Studies
- e.g. Greece, Ireland, U.K.

Construction Surveyor

- Construction Management Process
- Tendering & Post-Tendering
- Estimation
- Technical Law
- Financial Control of Projects

- Degree in Construction Surveying or Relevant Studies
- e.g. Greece, Italy, U.K.

Environmental Engineer

- Resource Management
- Sanitary Engineering
- Rejuvenation of Contaminated Soil and Water
- Risk Analysis
- Risk Engineering

- Degree in Environmental Engineering or Relevant Studies
- e.g. Greece, Switzerland

Mining Surveyor

- Plan preparation
- Mining Surveying
- Geological and Mineralogical Features Recording
- Ventilation
- Safety Surveys
- Mineral Valuation and Rating
- Soil Stability

- Degrees in Geology or Mining Engineering or Relevant Studies
- e.g. Germany, U.K.

Municipal Surveyor

- Building Control
- Public Safety
- Operation of Grant Schemes
- Improvement & Redevelopment of Areas
- Landscaping
- Labor Organization
- Town Planning

- Degrees in Civil Engineering Surveying, Land Surveying, Valuation, Town Planning etc.
- e.g. U.K.

Town Planning Surveyor

- Land Use Management
- Environmental Assessment
- Development Briefs
- Conservation Area Policies
- Transportation Strategy
- Countryside Schemes

- Degree in Town and Country Planning or Relevant Studies
- e.g. Denmark, Germany (Dipl.-Ing.), Greece, U.K.

Quantity Surveyor

- Cost Estimates
- Cost plans
- Bill of Quantities
- Tendering
- Specifications for Labor & Materials
- Payment
- Dilapidation Scheduling
- Pricing
- Proof of Evidence

- Degree in Quantity Surveying (Construction Economics)
- e.g. France (Economiste de la Construction), Ireland, U.K.

Rural and Surveying Engineer

- Land Surveying
- Hydraulic Engineering
- Regional Planning
- Transportation Engineering

- Degree in Rural and Surveying Engineering or Relevant Studies
- e.g Germany (partially), Greece, Switzerland

Concluding Remarks

- Surveying covers indeed a wide spectrum of professional activities not widely known even within the surveying community
- Component of planning in the Surveying Profession (non-geodetic surveyor) is important (e.g. predominance in GIS Market !)
- Embracing the whole spectrum of Surveying is vital for the profession (Foster)
- Not easy but inevitable if …