

Applying a Land Management Approach to Surveying Education

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**SURVEYING TOWARDS SUSTAINABLE DEVELOPMENT
8TH FIG REGIONAL CONFERENCE
MONTEVIDEO, URUGUAY, 26-29 NOVEMBER 2012**

Montevideowow



1820



PLANO DA CIDADE DE MONTEVIDEO

 MOSTRANDO OS TERRENS OCCUPADOS PELAS DIFERENTES

 PROPRIEDADES

 PROPOSTO DA PLANTACAO DE ARVORES AO MERCADO DA VERDEIRA

 LACUNHA E MERCADO DE BOVINO

III.º E EX.º S. CAP.º GE.º BARRAM DA LAGUNA

 COMANDANTE EM CHEFE.

 PRESENTE DO ALCAIDE DA BARRAGEM J.º DE ALMEIDA

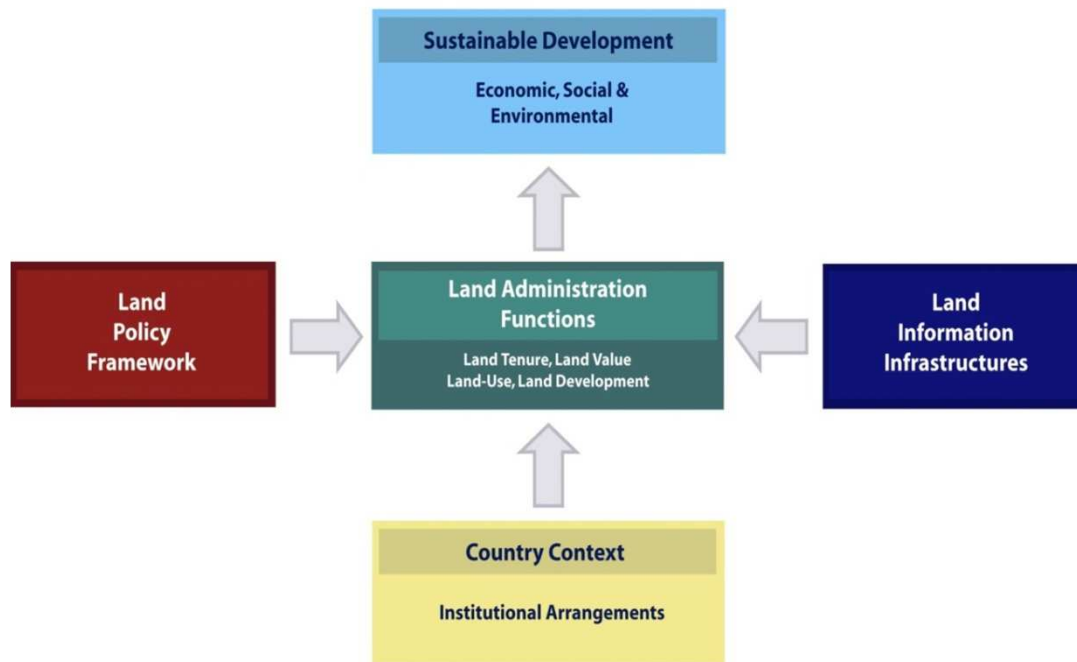
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Year 1820



Land Governance



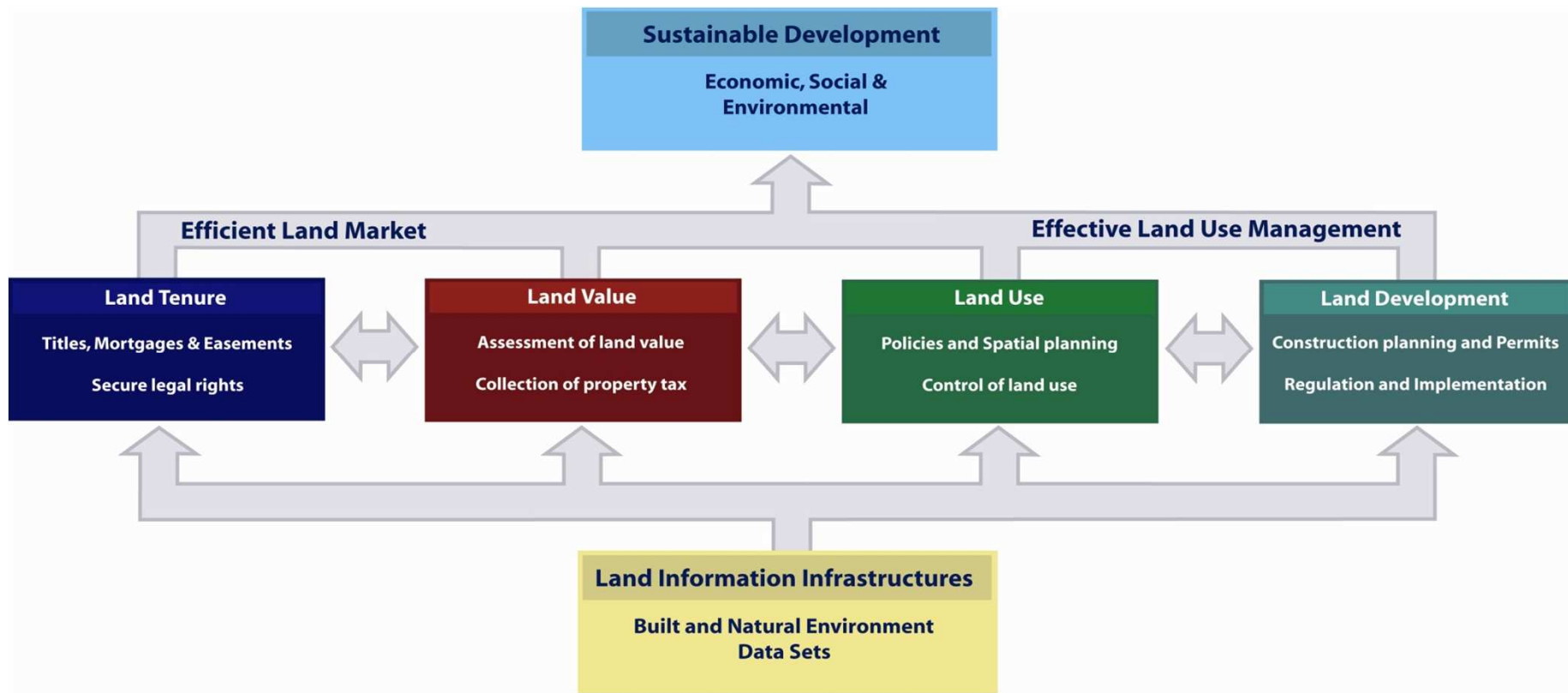
The land management paradigm

Land governance is about the policies, processes and institutions by which land, property and natural resources are managed.

Land governance is about determining & implementing sustainable land policies.

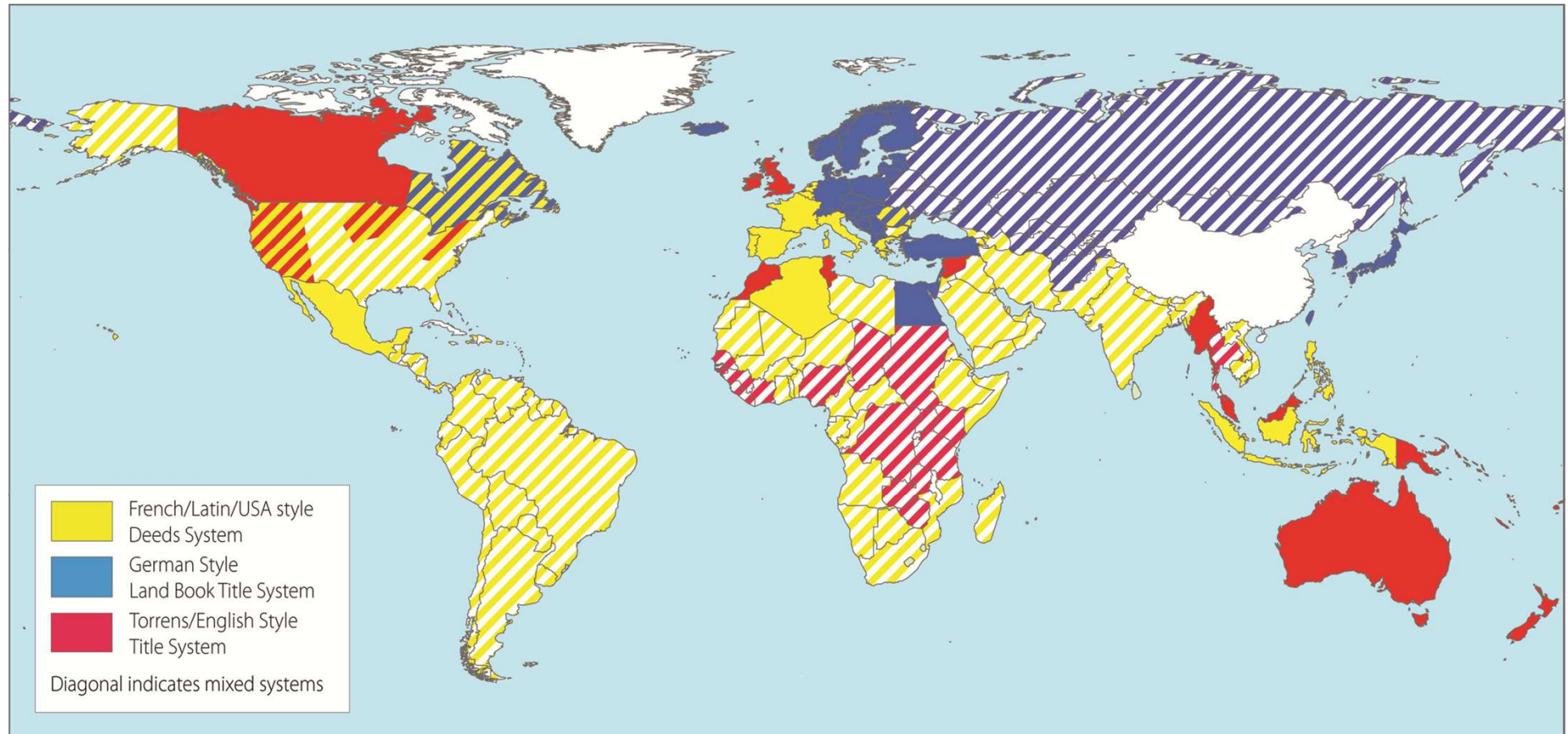
Land management covers all activities associated with the management of land and natural resources that are required to fulfil political objectives and achieve sustainable development

Land Administration Systems



- Land Tenure:** Allocation and security of rights in lands; legal surveys of boundaries; transfer of property;
- Land Value:** Assessment of the value of land and properties; gathering of revenues through taxation;
- Land-Use:** Control of land-use through adoption of planning policies and land-use regulations at various levels;
- Land Develop:** Building of new infrastructure; implementation of construction works and the change of land-use

Land Registration Systems around the World



Deeds System (French/Latin/USA style): A register of owners; the transaction is recorded – not the title.
Title System (German, Torrens/English style): A register of properties; the title is recorded and guaranteed.

Ten Land Administration Principles

1. LAS provide the infrastructure for implementation of land polices and land management strategies in support of sustainable development.	6. LAS are dynamic and reflect the continual evolution of people-to-land relationship.
2.. The land management paradigm provides a conceptual framework for understanding and innovation in land administration systems	7. LAS include a set of processes that manage change
3. LAS is all about engagement of people within the unique social and institutional fabric of each country.	8. Technology offers opportunities for improved efficiency of LAS and spatial enablement of land issues.
4. LAS are the basis for conceptualizing rights, restrictions and responsibilities related to people, policies and places	9. Efficient and effective land administration systems that support sustainable development require a spatial data infrastructure to operate.
5. The cadastre is at the core of any LAS providing spatial integrity and unique identification of every land parcel	10. Successful LAS are measured by their ability to manage and administer land efficiently, effectively and at low cost

Benefits to Society

<ul style="list-style-type: none"> • Support for governance and the rule of law 		<ul style="list-style-type: none"> • Protection of state lands
<ul style="list-style-type: none"> • Alleviation of poverty 		<ul style="list-style-type: none"> • Management of land disputes
<ul style="list-style-type: none"> • Security of tenure 		<ul style="list-style-type: none"> • Improvement of land-use planning
<ul style="list-style-type: none"> • Support for formal land markets 		<ul style="list-style-type: none"> • Development of physical infrastructures
<ul style="list-style-type: none"> • Security of credit 		<ul style="list-style-type: none"> • Management of resources and environment
<ul style="list-style-type: none"> • Support for land and property taxation 		<ul style="list-style-type: none"> • Management of information and statistical data

Williamson, Enemark, Wallace, Rajabifard, ESRI Press, 2010, 500 pages.

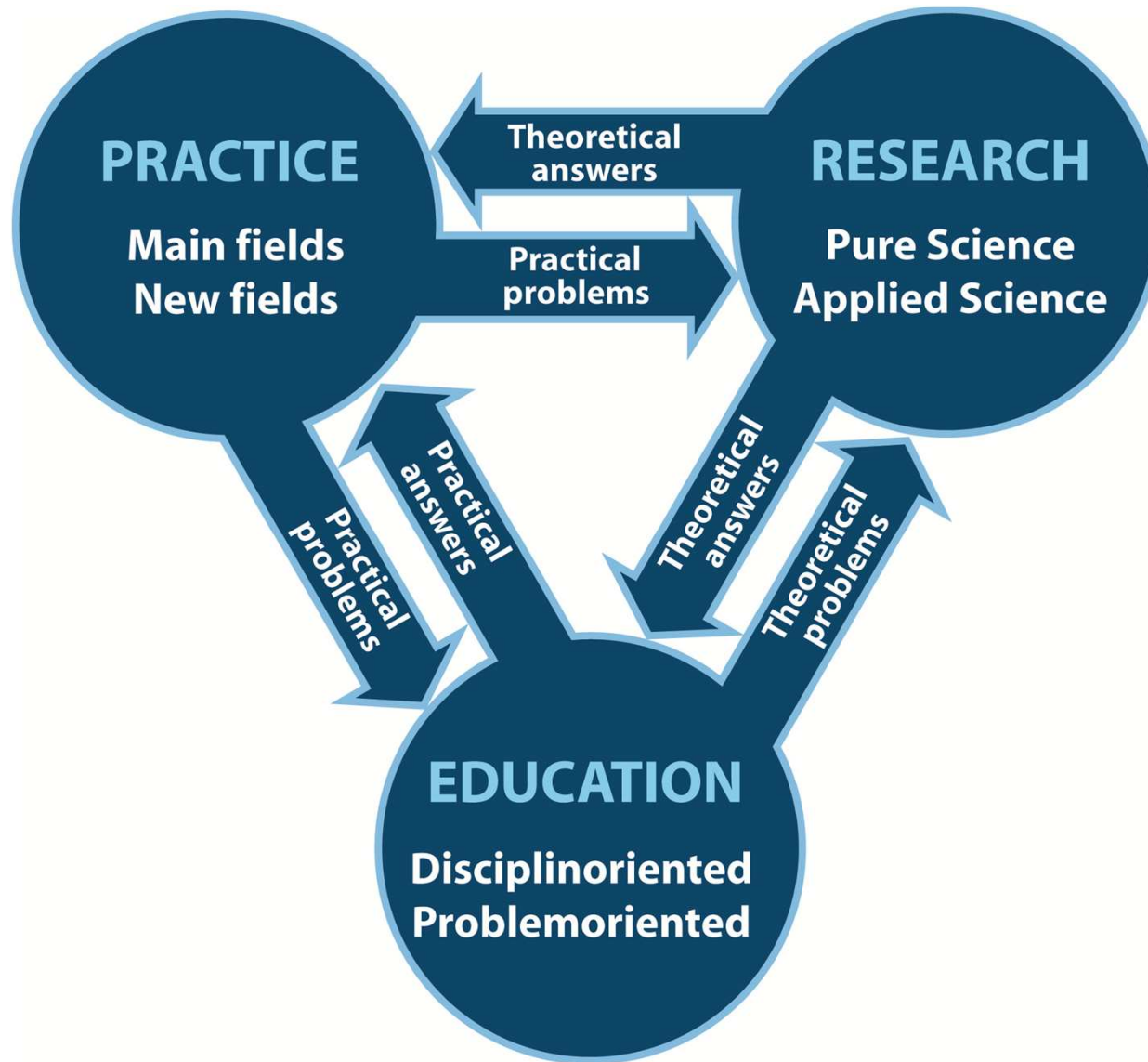
A Land Management Approach to Surveying Education

Surveying is not only an engineering discipline

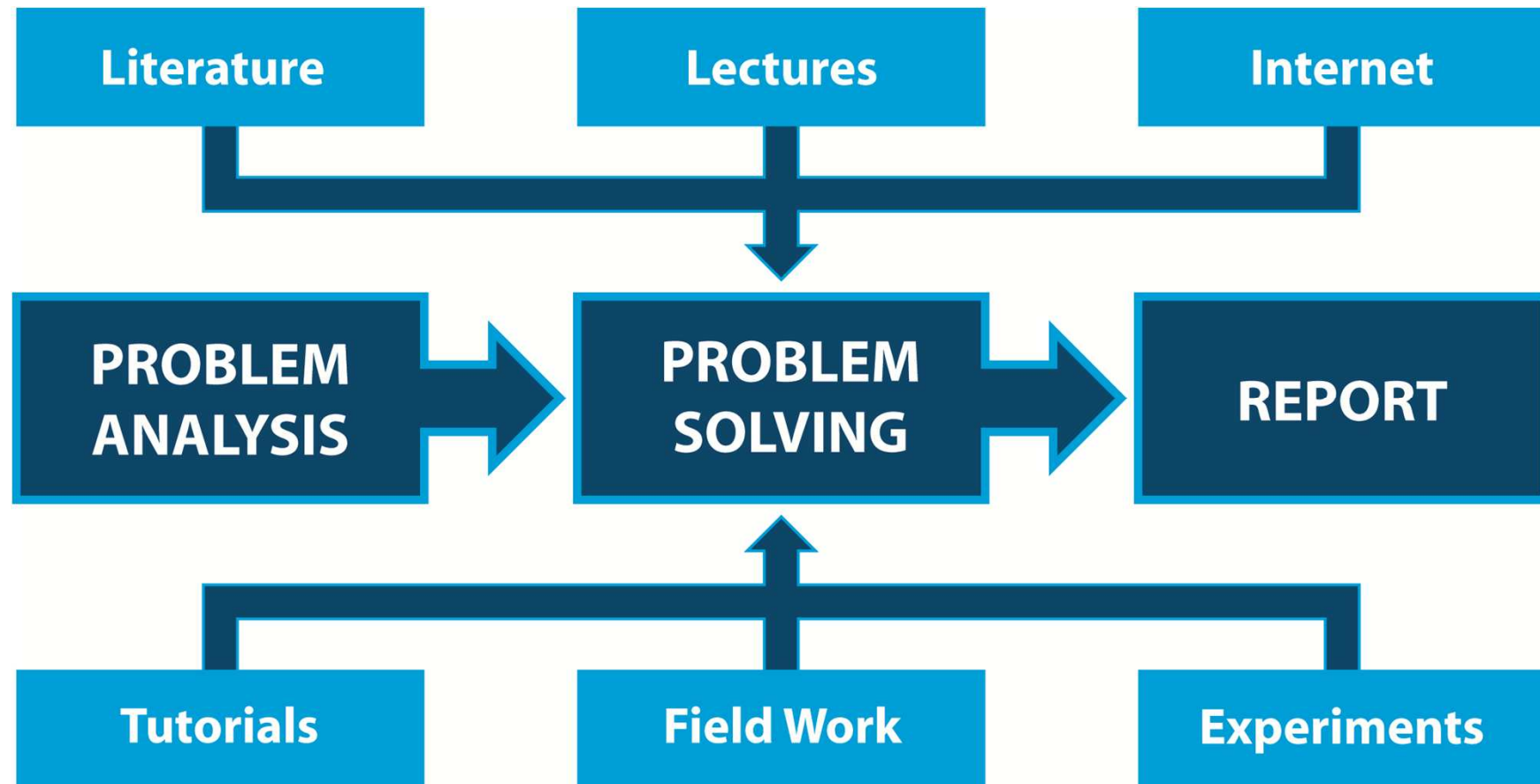
Surveying and mapping	technical science
Geo-Information management	natural science
Cadastral, Land law	social science
Land management,	
Spatial planning	

An interdisciplinary approach
focus on management and problem solving

Education, Research and Professional Practice



Project-organised and Problem-based Learning



Project-organised and Problem-based

Project-organised:

Taught courses assisted by actual practice is replaced by project-work assisted by courses.

From description and analysing to synthesising and assessment.

Problem-based:

Textbook knowledge is replaced by the necessary knowledge to solve theoretical problems.

From understanding of common knowledge to ability to develop new knowledge.



”You only know things for sure when you are capable of explaining this knowledge to others”

Key Philosophy

Tell me and I will forget

Show me and I will remember

Involve me and I will understand

Step back and I will act

Chinese proverb

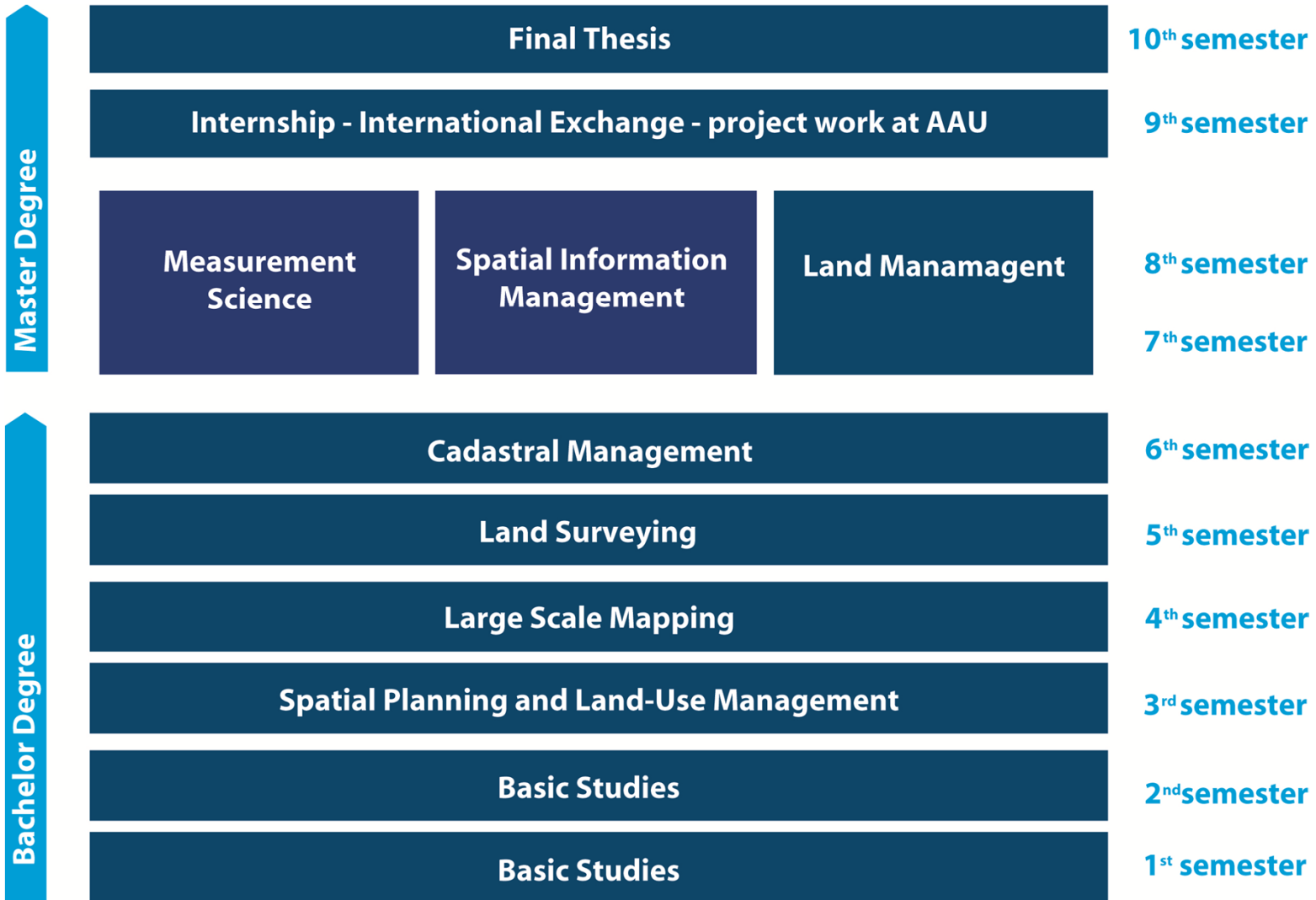
Learning to Learn

The only constant is change...

Professional and technical skills can be acquired and updated later in ones carrier, while skills for problem solving and skills for learning to learn can only be established through the process of academic training at the universities.

Skills of dealing with the unknown problems of the future

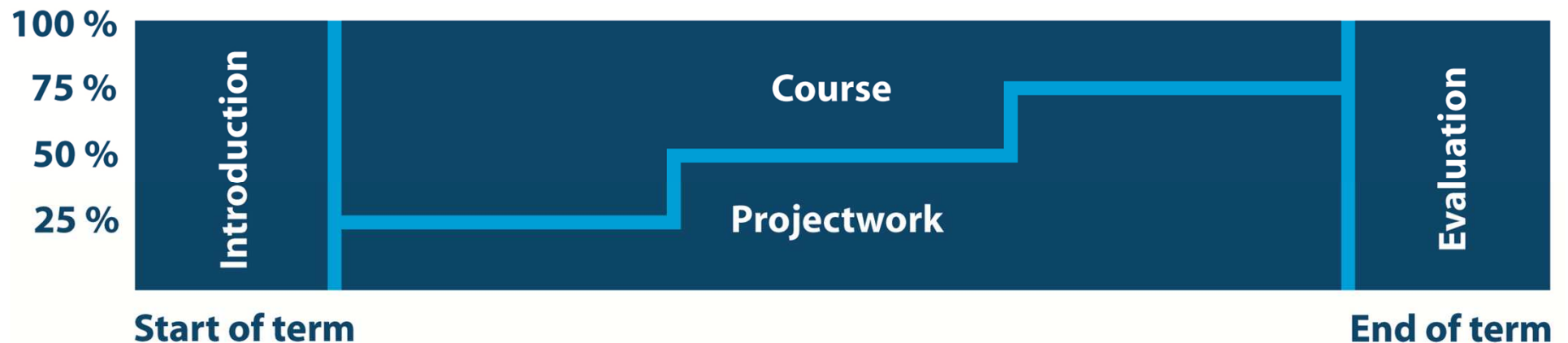
The Aalborg Curriculum



Lecture Courses and Project Work

Project work:
50 % a major assignment within a given subject-related framework determined for each semester.

Lecture courses
50 % mainly on subjects within the theme of the semester
partly on subjects relating to the overall academic profile of the curriculum.



Features of PBL Education...

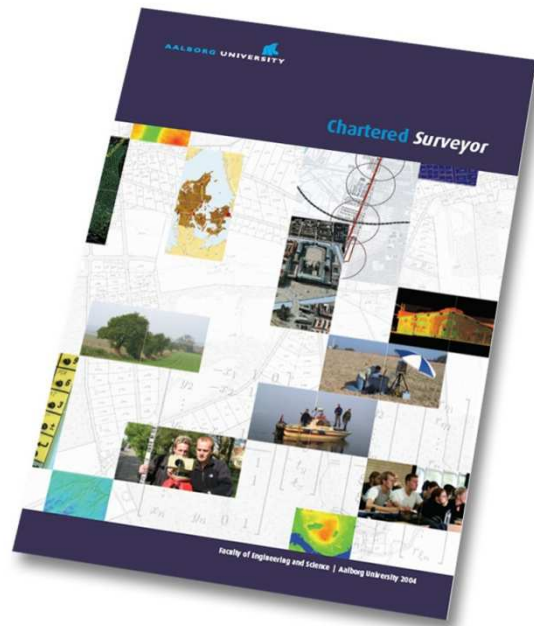
Role of the Teacher

- A three-dimensional role:
 - Lecturer (teacher), Supervisor (coach), Researcher (scientist)
- Focus on learning rather than teaching
- On-going renewal of lecture courses
- On-going and dynamic interaction between education, research and professional practice

Examination

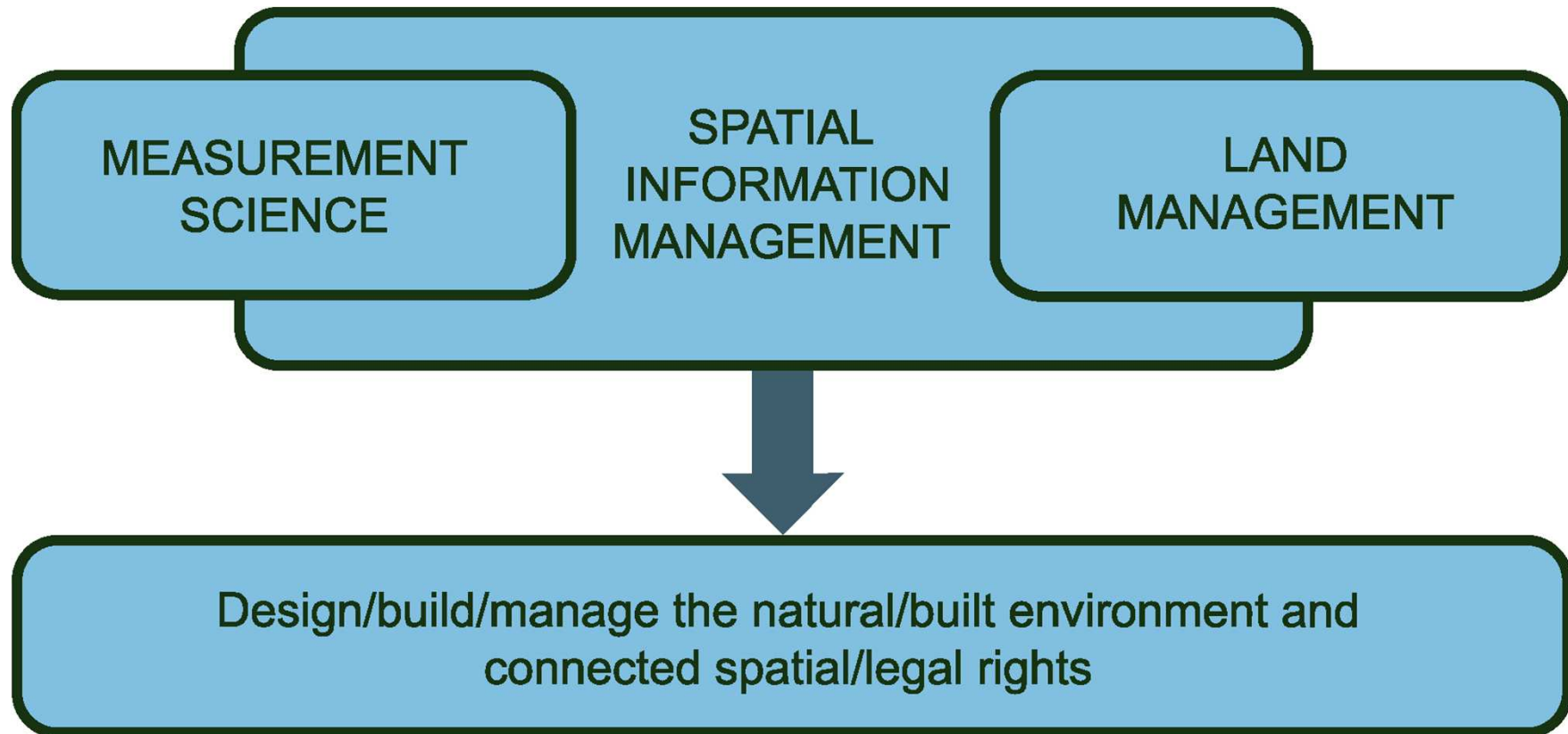
- Conducted as a group seminar chaired by the supervisor
- One third of the program involve external examiner
- Presentation from each student followed by questions/discussion (about three hours in total)
- Assessing methodological and professional understanding
- Individual marking of each student
- Lecture courses are assessed internally by pass/fail

The Aalborg Model

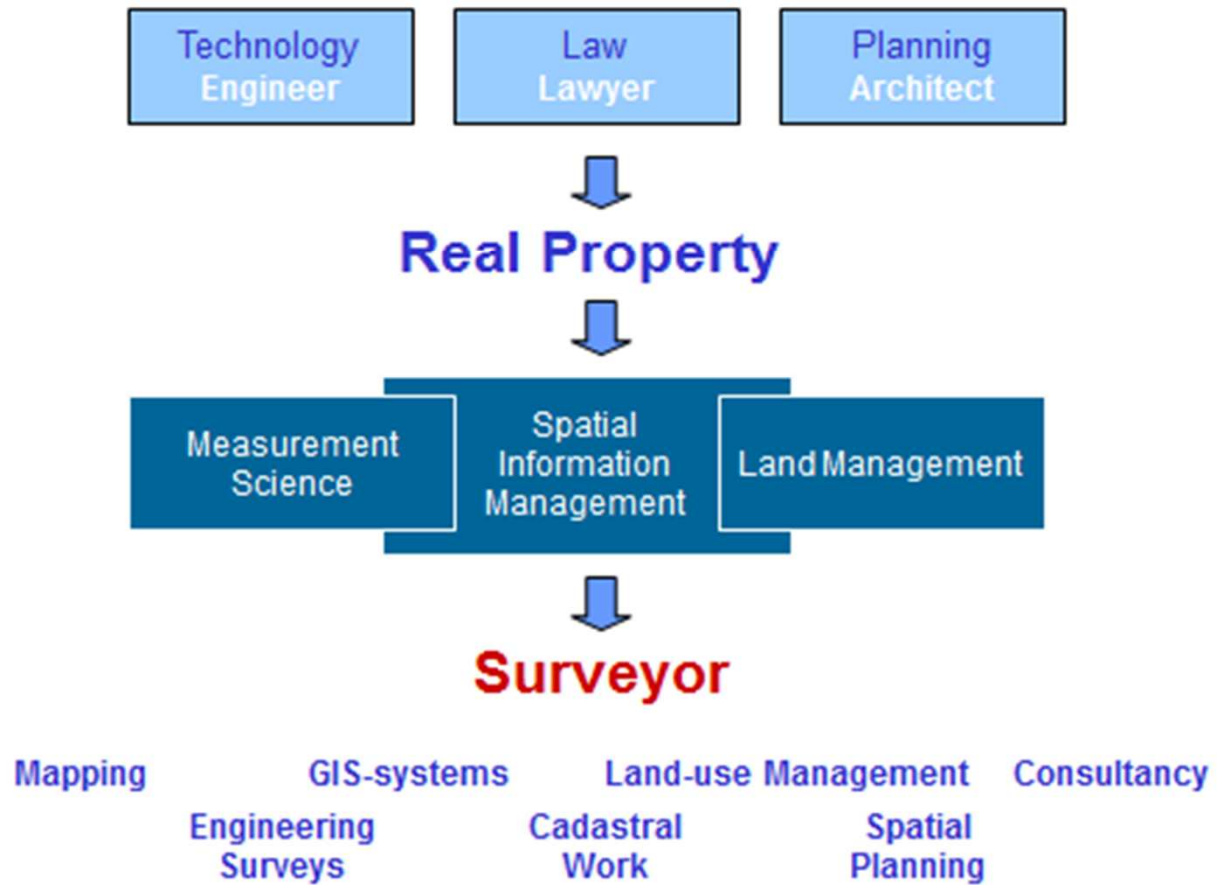


- **Problem Based Learning**
 - Based on real-life engineering problems
- **Project Organised Education**
 - Project work supported by lecture courses
- **Group Work**
 - Groups of four to six students
 - Supervised by the teachers
- **Interdisciplinary Studies**
 - Integration of theory and practice
 - Focus on Learning to Learn

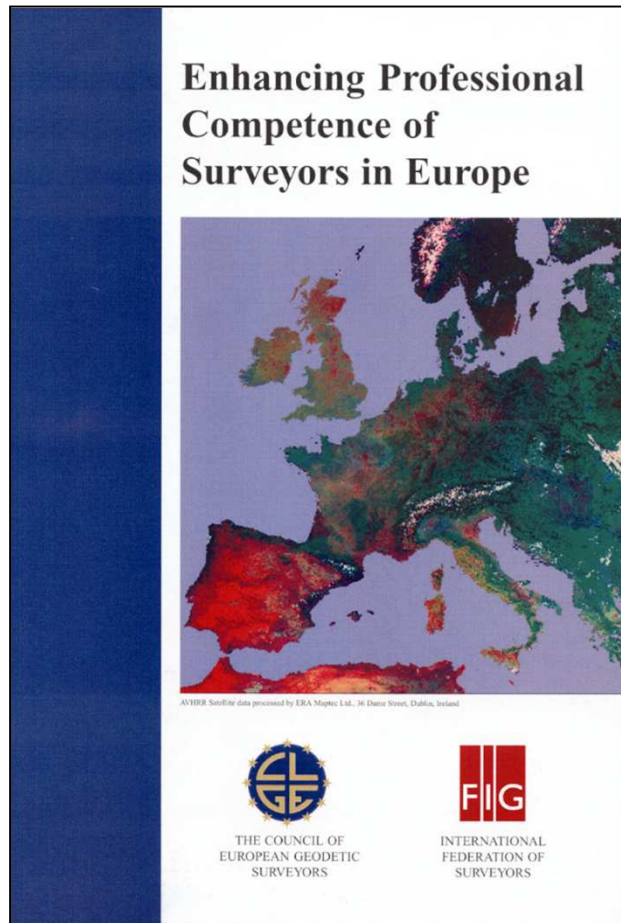
The Educational Profile of the Future



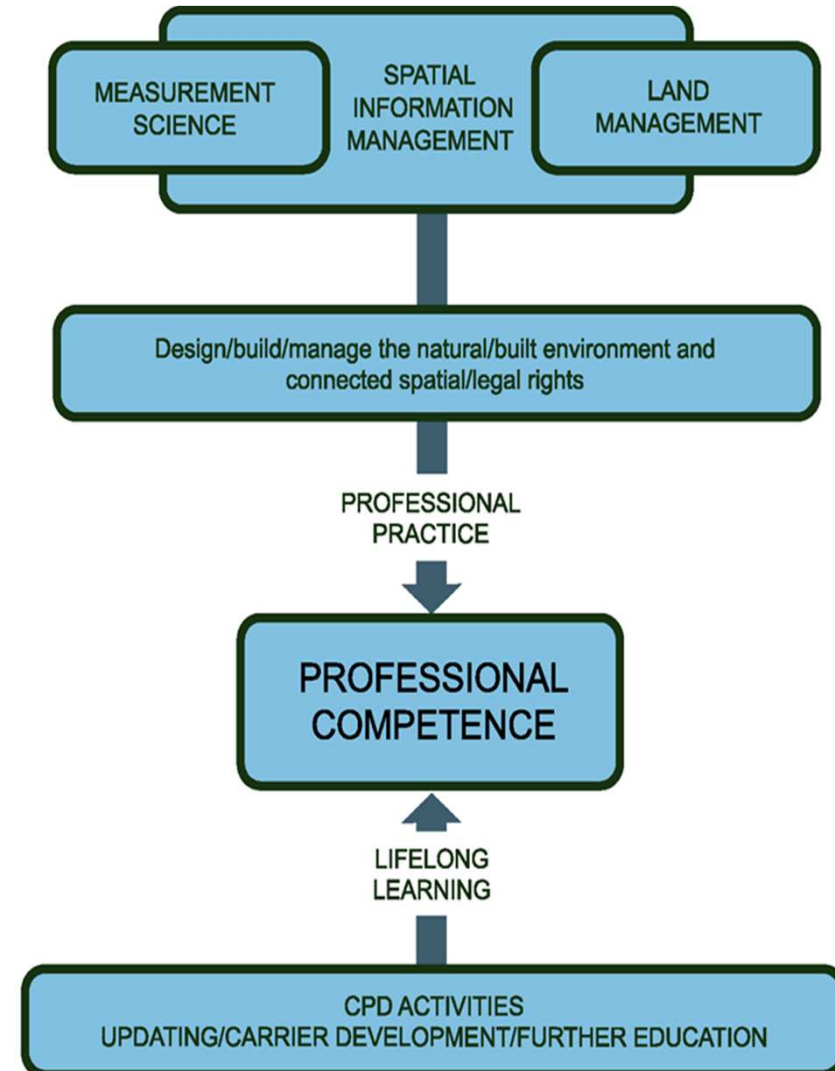
The Surveyor's Profile in DK



Enhancing Professional Competence

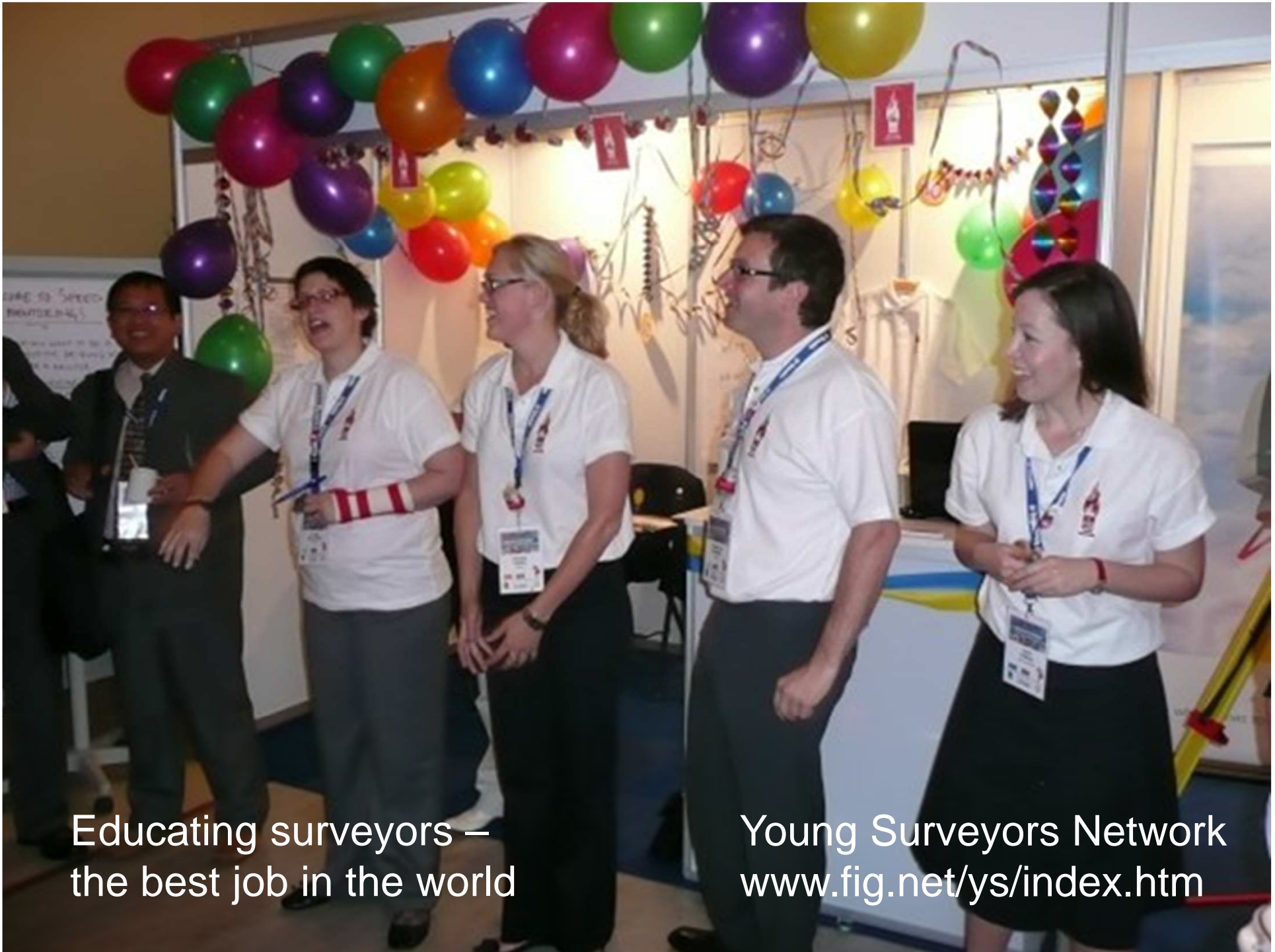


www.fig.net/pub/CLGE-FIG-delft/report-1.htm



Key Message

Curriculum innovation essentially depends on developing an efficient interaction between education, research, and professional practice,
- and focusing on learning to learn



Educating surveyors –
the best job in the world

Young Surveyors Network
www.fig.net/ys/index.htm