Cadastre 2014 – Review of Status in 2004

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INTRODUCTION

- review of the 'project' Cadastre 2014 from the 2004 perspective – ten years after the establishment of the Working Group and ten years before 2014
- TOR investigation
- Trend analysis assessment
- Review of the six statements
- Recommendation adoption by the different addressees
- Use of benchmarking methods

ASSESSMENT OF COMPLIANCE WITH THE TOR (1)

Task	Work done
To study cadastral reform and procedures as applied in developed countries	Investigation of the existing situation, the strengths and weaknesses as well as the reforms and trends with two questionnaires. Responding countries were developed, developing and transiting countries
To consider the automation of the cadastre	The answers showed a strong impact of automation on the development of the different cadastral systems

ASSESSMENT OF COMPLIANCE WITH THE TOR (2)

Task	Work done
To consider the role of cadastre as part of a larger land information system	Cadastres serve several purposes in most countries and land information systems only are successful when based on reliable cadastral information
To evaluate trends in this field	Trends cover six areas: extension of content, tightening of organisations, replacement drawings by data, data modelling, replacement paper/pencils by computers, cooperation of private/public sectors, awareness of economic aspects.

ASSESSMENT OF COMPLIANCE WITH THE TOR (3)

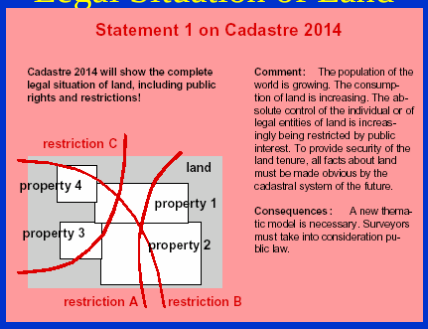
Task	Work done
To produce a vision of where cadastral systems will be in the next twenty years	The vision was characterized by six statements corresponding to the trends
To show the means with which these changes will be achieved	Mental change was identified as the most important mean to deal with the future
To describe the technology to be used in implementing these changes	Independent from technological change. Key technologies: overlay technique and object-oriented data modelling.

Trend Analysis

- Trend towards inability to meet the increasing needs of the land market because cadastre only shows private law matters; restrictions from public law are not shown and are not transparent to land market.
- Trend to inefficiency because the link between 'map' and 'register' is not efficient enough.
- Trend towards digital data format.
- Trend towards data automation and computerization.
- Trend towards privatization, especially in the level of operational control.
- Trend to New Public Management (cost awareness).

-> ALL TRENDS REMAIN VALID!!!!

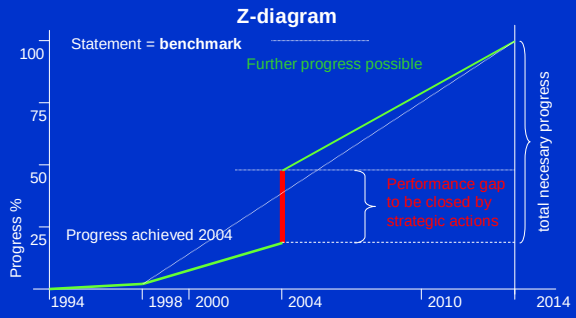
Legal Situation of Land



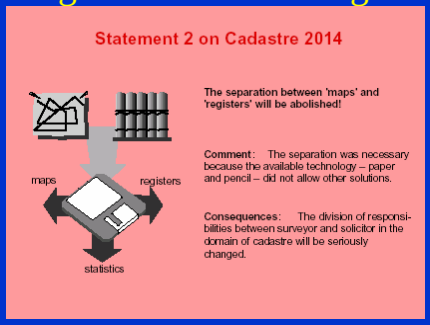
REVIEW OF STATEMENT 1

Complete documentation not disputed in general - realization often assessed pessimistically.
Idea of the legal independence and possibilities of polygon overlaying technique not understood.
Hard to imagine, that land objects other than parcels might be a task of surveyors and that insertion of information into a GIS might be an official registration.
Increasing work done in the direction of statement 1.
System providers like ESRI and Intergraph undertake efforts for data models and functionalities.
This statement remains important.

Performance Gap Statement 1



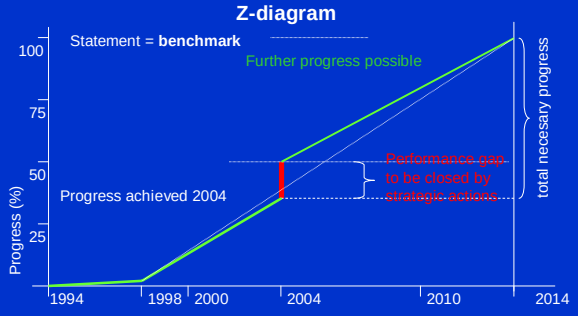
Integration with the Register



REVIEW OF STATEMENT 2

Not very big discussion.
Cooperation between people documenting land objects and those registering the legal aspects improves with IT and Internet/web.
Organizations unified and projects for separation stopped.
Communication between surveyors and registrars intensified.
Competition, competence disputes and institutional obstacles exist, but ICT diminishes the influence of persons.
Important is that cooperation takes place.
The statement corresponds to real needs and can remain unchanged.

Performance Gap Statement 2

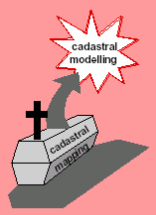


REVIEW OF STATEMENT 3

Understanding hindered by the traditional thinking.
Idea of data and representation modelling developed slowly
Also standardisation is slow.
Competition format level and traditional regulations of graphical representation dominant a long time.
Obstacles overcome late. Progress hopefully better in future.
Object oriented representation models to become standard.
Statement can remain unchanged.

Modeling Over Mapping

Statement 3 on Cadastre 2014

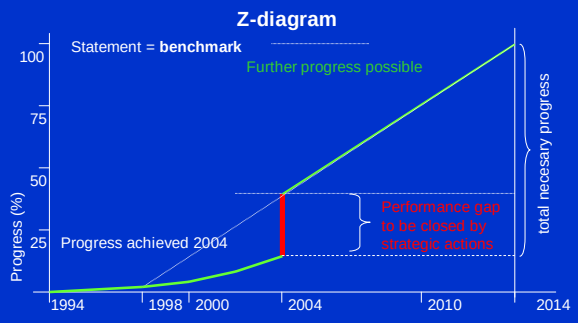


The Cadastral mapping will be dead! Long live modelling!

Comment: Maps have always been models, but the available technology did not allow for the use of these models in a flexible manner. So in mapping flexibility had to be brought in by different scales. Different scales had to be represented by different data models.
Modern technology allows the creation of maps of different scales and registers in different forms from the the same data model.

Consequences: In 2014 there will be no draftmen and cartographers in the domain of cadastre.

Performance Gap Statement 3



True "E-Cadastre"

Statement 4 on Cadastre 2014

'Paper and pencil - cadastre' will have gone!

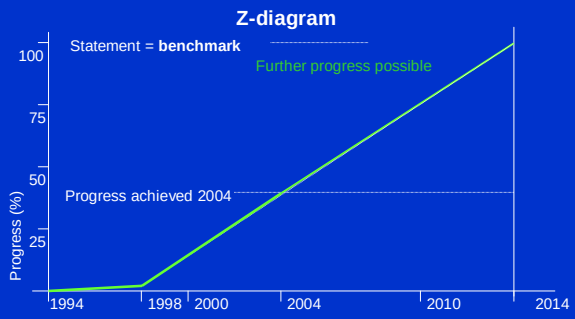
Comment: Geomatics technology will be the normal tool for cadastral work. Real low-cost solutions are only possible when this technology is used in combination with lean administrative procedures.
Developed, developing, and transitional countries need models of the existing situation to resolve the problems of population, environment and reasonable land use.

Consequences: The modern cadastre has to provide the basic data model. Surveyors all over the world must be able to think in models and to apply modern technology to handle such models.

REVIEW OF STATEMENT 4

Vision in the years 1994/98 is reality in 2004.
IT is the tool of modern cadastral systems.
Systems often are to heavy and to complex. To replace IT-infrastructures creates considerable cost.
Good experience to reduce cost, is data modelling.
Systems to be designed as simple and straight-forward as possible to be low-cost.
Cadastre 2014 uses simple structures of low complexity.
Re-formulation: Paper and pencil in the cadastre will be replaced by lean IT-infrastructures applying simple data structures of low complexity.

Performance Gap Statement 4



Private Sector Involvement

Statement 5 on Cadastre 2014

Cadastre 2014 will be highly privatized! Public and private sector are working closely together!

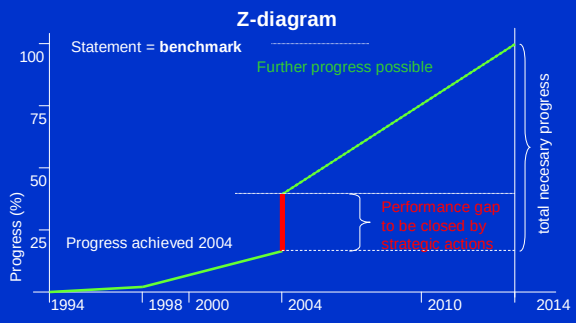
Comment: Public systems tend to be less flexible and customer oriented than those of private organizations.
Free economies demand flexibility in land markets, land planning and land utilization. Flexibility may be provided better by private institutions. For necessary security, however, public involvement is indispensable.

Consequences: The private sector will gain in importance. The public sector will concentrate on supervision and control.

REVIEW OF STATEMENT 5

Public Private Partnership discussed very intensively.
Creation of a private sector for operational work is main topic.
No privatisation of the strategic tasks like supervision and verification of the results produced by the private sector.
Countries with public cadastres react slower than transiting and developing countries.
The statement keeps to be up to date.

Performance Gap Statement 5



Cost Recovery

Statement 6 on Cadastre 2014

Cadastre 2014 will be cost recovering!

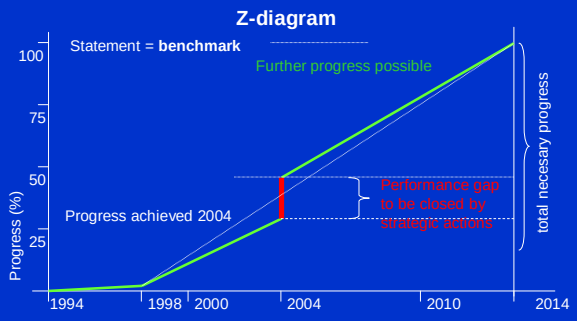
Comment: Cadastral systems need considerable investment. But the land documented and secured by the cadastre represents a multiple of the investment. The investment and operation costs have to be paid back at least partially by those who profit.

Consequences: Cost/benefit analysis will be a very important aspect of cadastre reform and implementation. Surveyors will have to deal more with economic questions in future.

REVIEW OF STATEMENT 6

Economic considerations are discussed more intensively.
Opinions differ considerably.
Running cost to be covered anyway by fees.
ROI by fees for data is disputed. High fees may prevent from using the data.
Low fees contribute little to depreciation of the investment.
Will value-added products create higher tax income?
Adaption of statement: 'Cadastre 2014 will cover its running cost and contribute to return of investment'

Performance Gap Statement 6



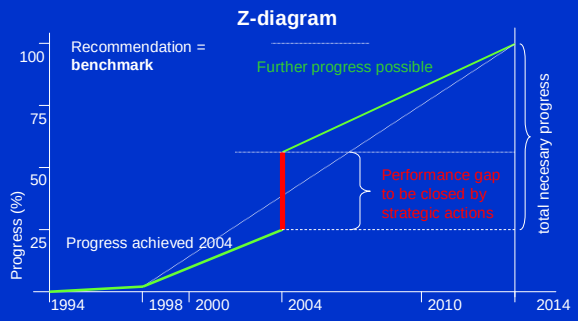
Recommendations for Surveyors

To complement the traditional skill of producing maps and plans with dealing with information and data models;
To understand the phenomenon of public law land objects;
To play the role of a land administration specialist.

Surveyors are confronted with the progress of IT and learn step by step to change attitudes and procedures;

Data models and public law land objects not sufficiently taken into consideration.
Land administration concentrates still on land parcels.

Performance Gap Professionals



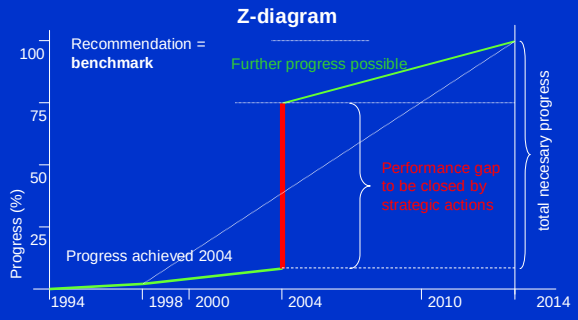
Recommendations for FIG

FIG can contribute:

- By establishing a competence centre for modern cadastral systems;
- By developing recommendations for future national licensing policy for surveyors;
- Further use of its contacts with governments and NGOs.

FIG did not establish a competence centre. Commission 7 did not follow-up the topic;
No efforts have been taken in the field of redefinition of licensing policies. Licenses remain focused on land parcels;
The president of FIG promoted Cadastre 2014 very strongly.

Performance Gap FIG

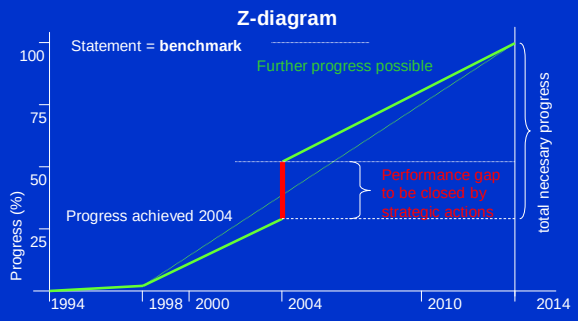


Recommendations for Associations

- Promote understanding of modern cadastral systems;
- emphasize the need for improved information about the legal situation of land;
- providing acknowledged consultants to parliaments and governments.

National associations have done considerable work in the field of Cadastre 2014;
Besides translations of the booklet, presentations, seminars and discussions, interest groups and commissions were established in many countries.

Performance Gap Associations



CONCLUSIONS

- Cadastre 2014 had considerable impact on develop-ment and way of thinking of the stakeholders in the fielöd of cadastre!
- Need for better legal security confirmed and more urgent!
- Performance gaps exist and need to be closed by efforts in mental area mainly!
- Countries can chose different speeds and decide on the use of resources and finances for the cadastre!
- Trends and concept are still valid!
- Development in direction of Cadastre 2014 takes place!