E-governance in cadastral and land management need a new theoretical paradigm

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e-Governance in Cadastral and Land Management
Need a New Theoretical Paradigm

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"New winds" are changing
• the era of the "parcel-orientated" chartered surveyor is ending.
• new SOA-technologies will force governmental bodies to rethink and redesign their models
• the citizen will ask for one portal to access all information about his property.
• and strengthened the long-term focus on e-governance
  ( SOA = Service Oriented IT – Architecture )

2007-reform" of State and Municipal bodies will strengthened the implementation of
• Governmental reorganization and modernization (2000) "placing the citizen in the centre"
• Political focus since 2002 to reduce cost and manpower on public administration.
• E-Government as a road to institutional reorganizing public bodies and structures.

Standardization in a changing world
Datamodel (Stable)
Schema standard (Stabil through 3 to 5 years)
Protocols (permanent changing)

Focus on Management Domains
• The next – but already available database technology – will focus on management domains in e-Governance and not on institutional structures.
• Every profession and organization need to rethink their objects and procedures pressed by the need in communication, IT-architecture (SOA) and globalisation.
Property information is **Spatial Data Infrastructure** and an independent, coherent domain of knowledge and management.

- **Location**
- **Ownership**
- **Use and Buildings**
- **Restrictions and Protection**
- **Taxation**
- **Mortgage**

**Chartered Surveyors' competence is**

- Property - design - development - change - registration

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**Ejendomsinformation er infrastruktur og et selvstændigt, sammenhængende vidensdomæne- og forvaltningsområde**

- **Belægning**
- **Besiddelse**
- **Bemykelse og bebyggelse**
- **Bemykelse og bevaring**
- **Bestyrning**
- **Belægning**

**Landinspektør- kompetence er**

- **Ejendoms - Design - Udvikling - Registrering**

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**Besitz information ist Infrastruktur und ein selbständig, zusammenhängend, domäne der fachwissen und verwaltung**

- **Beliegenheit**
- **Besitzung**
- **Verwendung und Bauwerk**
- **Bewahrung**
- **Besteuerung und Bewertung**
- **Betreten (Grundstück)**

**Kompetenz der Vermessungs- Ingenieur ist**

- **Design - Entwicklung - Änderung - Registrierung der Besitz**

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**Property information is** **Spatial Data Infrastructure** and an independent, coherent domain of knowledge and management.

**Institutions and communication**

- **Location**
- **Ownership**
- **Use and Buildings**
- **Restrictions and Protection**
- **Taxation**
- **Mortgage**

**Location:**

- Property register with information to identify the property in the field or in the building as an object, size (parcel-building) and the boundary lines against other property (identification and position of boundaries).

To guarantee the existence and to manage change in size and design.

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**Property information is** **Spatial Data Infrastructure** and an independent, coherent domain of knowledge and management.

**Institutions and communication**

- **Location**
- **Ownership**
- **Use and Buildings**
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- **Mortgage**

**Location:**

- Property register with information about the use of parcel, building size and - character plus the use of building units.

The address of each unit. Planning documentation with purpose and possibilities for buildings and land.
Property information is Spatial Data Infrastructure and an independent, coherent domain of knowledge and management

Institutions and communication

Location
Ownership
Use and Buildings
Restrictions and Protection
Taxation
Mortgage

Restrictions and Protection
Property register with information about restrictions on use of property, parcels and buildings.
Planning documentation describing forbidden activities and rules regulating this.

Taxation

Property register with information about valuation of the property components (parcel, building, resources) for taxation and information about signed sales prices.

Mortgage
Property registers with information about mortgage loans and economic rights and registered debt on the property.

Chartered Surveyors competence is
- design
- development
- change
- registration

"Socio-economic functions" for Property-Registers in Society

Yields from Citizens
Ownership and Public authorities as Tax on real estate and Duty on location based consume (ex. Mortgage, Electricity, energy &c)

Institutions and communication

Location
Ownership
Use and Buildings
Restrictions and Protection
Taxation
Mortgage

Transfer of income from Public Authorities to Citizens and Enterprises as Grants and subsidies for individuals, Enterprise, Heritage Nature Social welfare

The details in regulation and procedures are national and institutional history

- The institutional structures, division of labour, level of technology penetration in the property registers is historical and national influenced by tradition of management.
- In the future domain-oriented focus on the basic element in the function to secure this - not to maintain existing institutional related management procedures.
The Property Information Domain
historical explainable, but complex

Location
Ownership
Use and Buildings
Restrictions and Protection
Taxation
Mortgage

Cadastral Register
Land Book
Spatial Planning Register
Cross-Reference Register
Building and Housing Register
Property Valuation Register

The Property Information Domain - Actually 4 Ministries involved

Part of Management domain

Location
Ownership
Use and Buildings
Restrictions and Protection
Taxation
Mortgage

Responsible Minister

Environment
Justice
Finance

The Property Information Domain – actual and complex digital roads to information

One portal to citizens

Point 1
Chartered Surveyor competence is

PROPERTY
- Design,
- Development
- Change
- Registration

Representing an independent, coherent domain of knowledge and management

The development of technology – cadastral indexing

- "Letter and numer" with books and papermaps
- Databases (1st and 2nd generation - RDMS)
- Geografical indexing in WEB-GIS (2D)
- SOA-architecture ("single sign-on" and userportals)
- Navigating in 3D environment with intelligent spatial legal objects on thin clients.
- After 2014 ……..?
Point 2

- Access to property information for citizens, managers, stakeholders and data owners will be based on their functions.

- Managing the rights of access to information is an issue of high importance and will challenge the structure of the governmental bodies.

Point 3

Cadastral surveyors have to rethink and replace themselves as:

- as important SDI-managers
- in a more "profitable" place in the value-adding process of property development
- as key role players in social balanced and sustainable use of land and nature-resources

Point 4

- The Discussion on the Core Cadastral Model 2004 is still not reflecting the Service Oriented Architecture and the integration towards Spatial Data interaction with other area than with the Cadastral Sector.

Thanks for your attention