

# The Emerging Land Management Paradigm

- A Major Challenge for the Global Surveying Community

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## The Message



- The Land Management paradigm is complex and highly interdisciplinary. This paper attempts to build an overall understanding.
- Land and property must be viewed as an asset and a scarce natural resource. Proper management of land and properties is vital to achieving sustainable development.
- There is a need for institutional development to establish sustainable national concepts in this area. This includes the adoption of a holistic approach to land management.
- This calls for increased international co-operation towards enhanced educational and professional standards. FIG is prepared to meet that challenge.

## Interests in land

You do not own land itself, but the right to use the land in conformity with community laws, practices and expectations

Rights



Responsibilities

Restrictions

Land is the most important and basic asset of any country

## The Land Management Paradigm

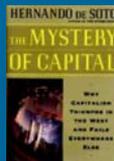


Land Management is the processes by which the resources of land are put into good effect.

## The Increasing Role of Property Rights

"Civilised living in market economies is not simply due to greater prosperity but to the order that formalised property rights bring"

Hernando de Soto - 1993

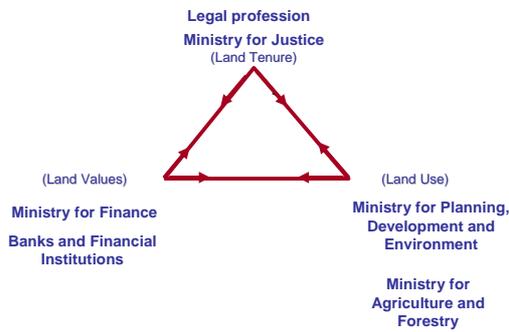


## Importance of Land and Property

- Security,
- Social stability,
- Credit,
- Improvements to land,
- Productivity,
- Liquidity,
- Labour mobility,

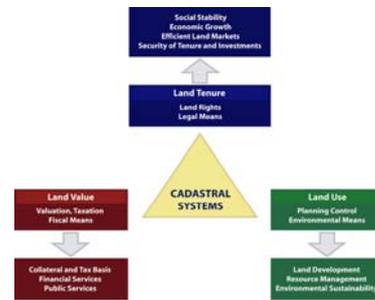
- Land and property values,
- Land and property taxation,
- Public services,
- Resource Management, and
- Social development

## Property Systems: Tenure, Value and Use



Source: Land Administration (Peter Dale and John McLaughlin, 1999)

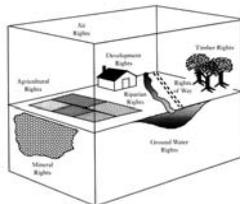
## Cadastral Systems



Cadastral Systems is about identification of land parcels for the purpose of securing land rights, assessing land values/taxation, and controlling the use of land.

## The Cadastral Concept

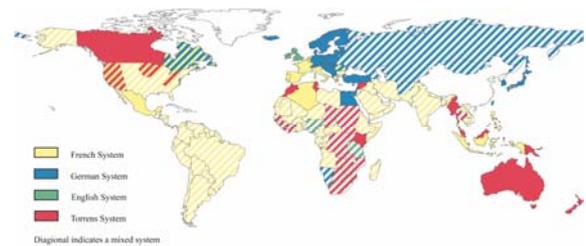
The basic building block in a land administration system is the cadastral parcel.



The cadastre consists of two parts - the registers and the maps.



## Land Registration Systems around the World



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

## The Danish Cadastral System ...

CAD NO	AREA	WAY	NO OF PARCELS
8th	826 <sup>2</sup>	0 <sup>2</sup>	1

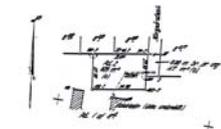
The Cadastral register identifies the land parcels by number and area



The Cadastral map identifies the land parcels geographically

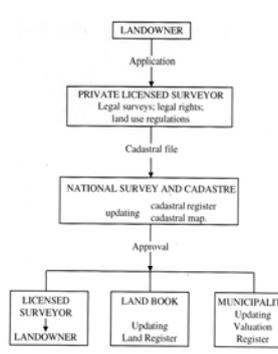
CAD NO	OWNER	MORTGAGE	BASE	RENT
8th	DATE	DATE	DATE	DATE
826 <sup>2</sup>	DATE	DATE	DATE	DATE
	DATE	DATE	DATE	DATE
	DATE	DATE	DATE	DATE

The Land Book secures the legal rights based on the cadastral identification



The cadastral measurements identify the position of the property boundaries

## The Danish Cadastral Process

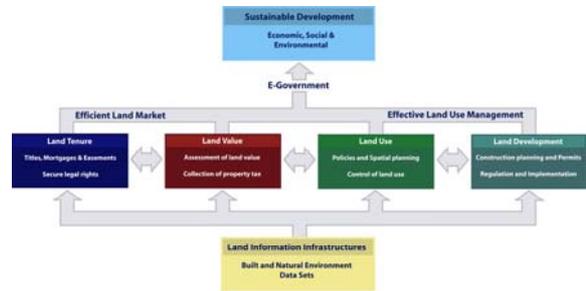


## Evolution of Western Land Administration Systems

	Feudalism - 1800	Industrial revolution 1800-1950	Post-war reconstruction 1950-1980	Information revolution 1980-
Human kind to land evolution	Land as wealth	Land as a commodity	Land as a scarce resource	Land as a community scarce resource
Evolution of cadastral applications	Fiscal Cadastre Land valuation and taxation paradigm	Legal Cadastre Land market paradigm	Managerial Cadastre Land management paradigm	Multi-purpose Cadastre Sustainable development paradigm

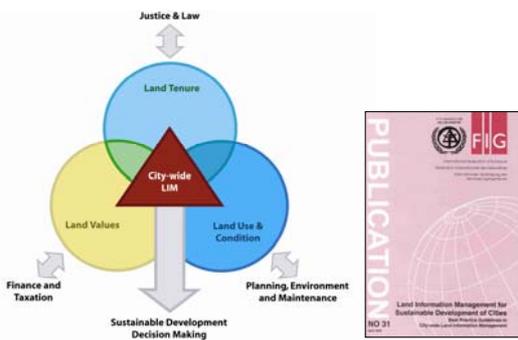
Developed from Williamson and Ting, 1999

## Land Administration Systems

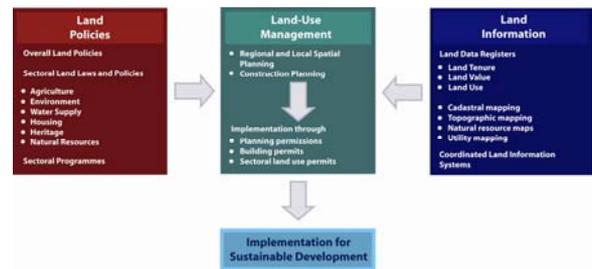


Land Administration Systems are concerned with the four land administration functions of land tenure, land value, land-use and land development.

## Land Information Management



## Integrated Land-Use Management – a holistic approach



## The Global Drivers

- **Technology development**
  - GPS, GIS, Internet
- **Micro-economic reform**
  - privatisation, decentralisation, downsizing, quality assurance
- **Globalisation**
  - from local to global
  - events in one part of the world impact on people in other parts of the world
- **Sustainable development**
  - developments that effectively incorporates economic, social and environmental concerns in decision-making
  - meet the needs of the present without compromising the ability of future generations to meet their own needs

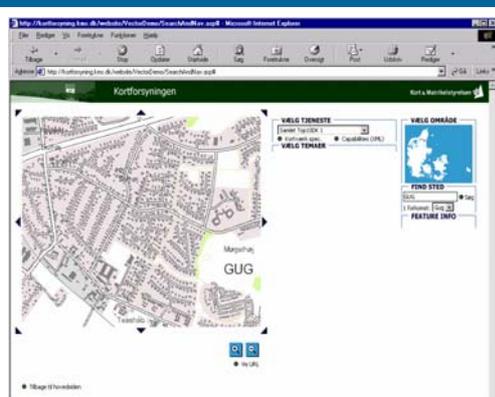
## The Spatial Information Infrastructure



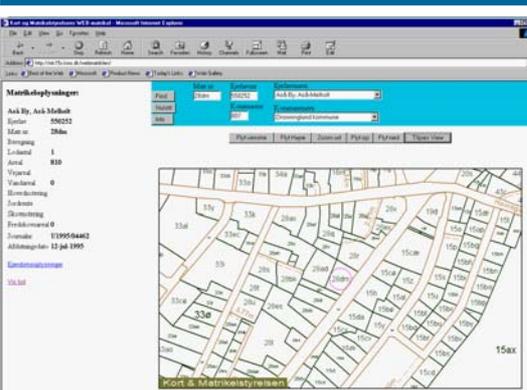
## The Public Information Server



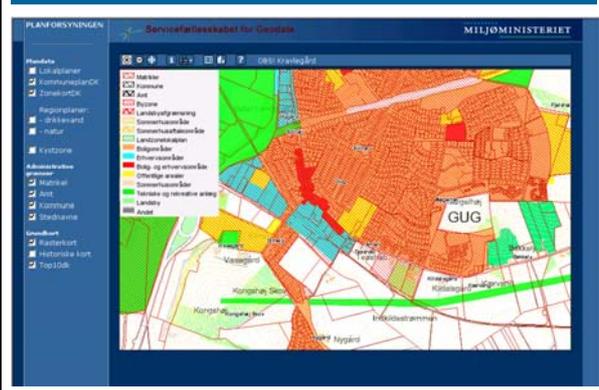
## The Map Service



## The Web-Cadastre



## The Planning Information Service



## County Administration Web Service

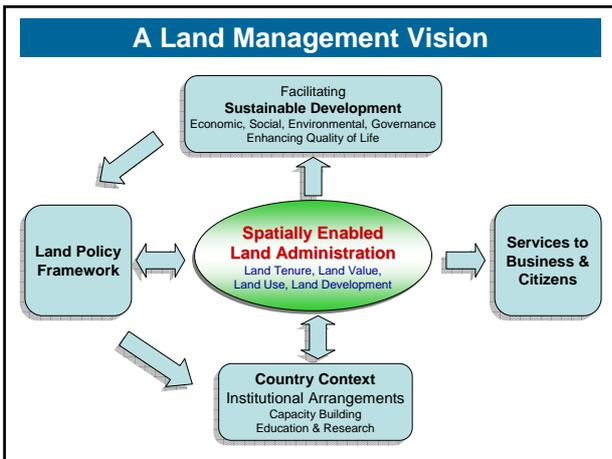
Showing the various land-use restrictions



## Revisiting the Land Management Paradigm



Land Management is the processes by which the resources of land are put into good effect.



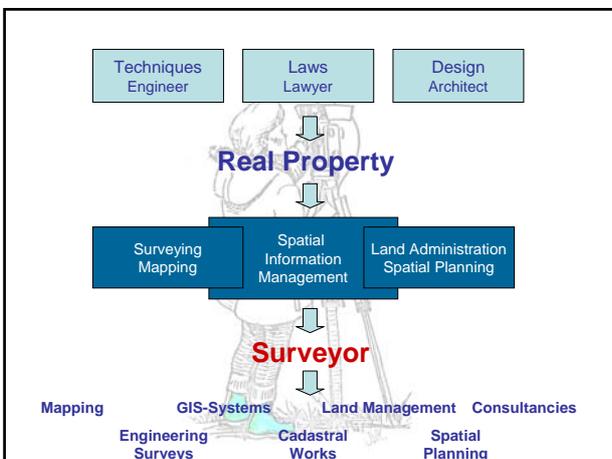
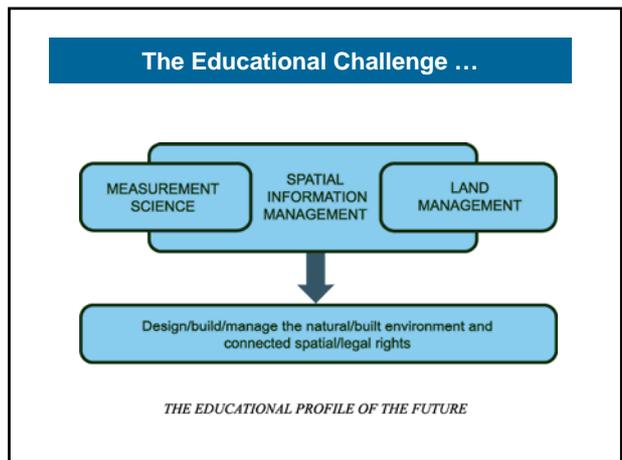
### What is a good property system ?

- People in general can participate in the land market; widespread ownership; everybody can make transactions and have access to registration
- The infrastructure supporting transactions must be simple, fast, cheap, reliable, and free of corruption.
- The system provides safety for housing and business, and for capital formation

**Only 25-30 countries in the world apply to these criteria.**

### Capacity Development

- In many countries, the national capacity to manage land rights, restrictions, and responsibilities is not well developed in terms of mature institutions and the necessary human resources and skills.
- This calls for increased international co-operation to face the challenges of the future:
- The educational, professional, and institutional challenge.



### The Professional Challenge ...

- Professional structures must reflect the new land management paradigm
- National associations will have to develop structures that accommodate a modern interdisciplinary profile.
- This includes adoption of ethical principles and model codes of professional conduct suitable for performing this modern role.
- Public-private partnerships must be promoted to support sustainable development

### ...The Institutional Challenge - recommendations

- Develop in-country self assessment procedures to identify institutional capacity needs
- Promote adoption of comprehensive land policies and a holistic approach to land management
- Establish a clear split of duties and responsibilities between national and local government based on the principles of good governance
- Promote the understanding of land management as a highly interdisciplinary paradigm
- Promote the need for an interdisciplinary approach to surveying education
- Establish strong professional bodies
- Promote the need for CPD activities

### The changing role of the surveyors

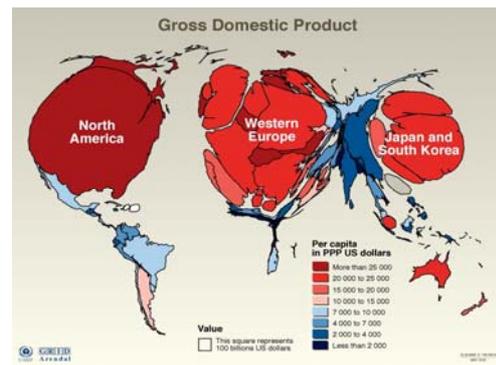
- From playing a key role as geodetic engineers in exploring and measuring land and seas of the world  
*Today everybody can do precise measuring and advanced technology makes accurate maps*
- To playing a new key role as and managers of land and properties  
*Eradicating poverty and achieving sustainability*

### The Enlightened Globe



Source: NASA/REUTERS

### The Poor-Rich Projection of the World



Source: Svein Tveitdal; FIG Regional Conference, Marrakech, December 2003.

### Facing the Challenges

#### The surveying profession must:

- Understand the wider importance of good property systems and good land administration systems
- Recognise that we are in a service business – moving the focus from objects to services
- Understand that the land market is dynamic and continuously changing

### The Role of FIG



- Professional Development
  - Global forum for professional discussions and interactions
  - Conferences, symposia, commission working groups, .....
- Institutional Development and Capacity Building
  - Institutional support for educational, professional, and institutional development at national and international level
- Global Development
  - Cooperation with international NGO's such as the UN agencies, World Bank, and sister organisations
  - Joint activities and common policy-making to reduce poverty and enforce sustainable development

## FIG Publications...



[WWW.FIG.NET](http://WWW.FIG.NET)

## An Overall Conceptual Approach



### Overall Land Policy

- Determine values, objectives and the legal framework in relation to management of land as a legal, economic, and physical object.
- Basis for building sound land administration infrastructures.

### Cadastral Systems

- Identification of land parcels and securing land rights
- Facilitation of land registration, land valuation, and land-use control
- Underpinning sound Land Administration

### Land Administration Systems

- Administration of land tenure, land value, land-use, and land development
- Facilitation of efficient land markets and effective land-use management
- Underpinning sound Land Management

### Land Management

- Management of processes by which land resources are put into good effect.
- Facilitation of economic, social, environmental sustainability
- Underpinning and implementation of sound Land Policies

## Final Remarks



- Land and property must be viewed as an asset and as a scarce natural resource. Proper management of land and properties is vital to achieving sustainable development.
- There is a need for institutional development to establish sustainable national concepts in this area. This includes the adoption of a holistic approach to land management that combines the land administration functions with the land policies and land information infrastructures.
- The debate should be aware of the global trends in this area, while still recognising that the design of such systems will always be country unique. This calls for increased international co-operation towards enhanced educational and professional standards.
- FIG is prepared to take a lead role



Time is up

**Thanks  
for your  
attention**