From Measurement to Management
- the changing role of surveyors in support of the global agenda

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Greetings from Denmark
43,000 sq km
5 mill inhabitants
One third lives in the capital area
Flat country
70% agriculture
10% urban
7000 km coastline

Wonderful Copenhagen

Greetings from the Home Base

Aalborg – my home town

The key message
From measurement to management
• From playing a key role as geodetic engineers in exploring and measuring land and seas of the world
• To playing a new key role as and managers of land and properties
The need for eradicating poverty and achieving sustainability

The Land Professionals
The Role of FIG

- **Professional Development**
  - Developing the profession through providing a global forum for professional discussions and interaction
  - Conferences, symposia, commission working groups, …
  - This global forum offers opportunities to take part in the development of all aspects of surveying disciplines.

- **Institutional Development**
  - Building the capacity through institutional and organisational development at national and international level
  - Providing institutional support for professional organisations to adopt standards for education, CPD, and professional code of conduct.

- **Global Development**
  - Building a better world through contributing to the global agenda
  - 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.

The Global Challenges

- **Technology development**
  - GPS, GIS, Internet

- **Micro-economic reform**
  - Privatization, decentralization, downsizing, quality assurance

- **Globalization**
  - 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 incorporate 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 UN Millennium Development Goals

Goal 1: Eradicate extreme poverty and hunger
Goal 2: Achieve universal primary education
Goal 3: Promote gender equality and empower women
Goal 4: Reduce child mortality
Goal 5: Improve maternal health
Goal 6: Combat HIV/AIDS, malaria and other diseases
Goal 7: Ensure environmental sustainability
Goal 8: Develop a Global Partnership for Development

The framework includes 18 targets and 48 indicators enabling the ongoing monitoring of annual progress.

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The first seven goals are mutually reinforcing and directed at reducing poverty in all its forms. The last goal — global partnership for development — is about the means to achieve the first seven.

Surveyors play a key role in terms of providing some of the fundamental preconditions for development.

These preconditions are embedded in the MDGs and spelled out in the targets and indicators for achieving the MDGs.

FIG should make the world understand the important contribution of the surveying profession in this regard.
It is all about:

- **People**
  Human rights, engagement and dignity

- **Politics**
  Land policies and good governance

- **Places**
  Shelter, land rights and natural resources

The role of FIG

Is strongly committed to the MDGs and the UN-Habitat agenda on the GLTN

The role of the surveying profession

The MDGs is a powerful concept towards development, security and human rights for all. The surveying profession plays a key role by providing:

- Geographic information in terms of mapping and databases on the natural and built environment
- Secure tenure systems
- Systems for land valuation, land use management and land development
- Systems for transparency and good governance

FIG responses to the global agenda

WWW.FIG.NET
From Cadastre to Holistic and Pro Poor Land Management

- Holding of rights to lands
- Economic aspects of land
- Control of land use and land development

Administering the people to land relationship through
- Land Policy
- Land Management
- Good Governance
- Building the capacity to deal with this

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

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.

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.

USA: The rectangular system (PLSS)

USA: Linking a legal land description to the GIS Cadastre
Characteristics of traditional Cadastral Systems

- The Cadastral register identifies the land parcels by number and area.
- The Cadastral map identifies the land parcels geographically.
- The Land Book secures the legal rights based on the cadastral identification.
- The cadastral measurements identify the position of the property boundaries.

A worldwide Comparison of Cadastral Systems

- Traditional cadastral systems do not provide for security of tenure in informal settlements.
- A more flexible system is needed for identifying the various kind of social tenure existing in informal settlements.
- Such systems must be based on a global standard and must manageable by the local community itself.

Australia

Cadastral Lite, PSMA 2001
One map - 10.2 mill parcels

Land Management

Public Lands Managed by the Bureau of Land Management (BLM)

Australia – Torrens System

Cooperation Agreement with UN-Habitat
UN-Habitat has asked FIG (ITC) to develop a prototype:

- Develop STDM as a conceptual model
- Develop specifications for prototype development
- Develop a prototype
- Test STDM prototype with real data
- Procedures for review and quality control

Cooperation Agreement with the World Bank:

- Mutual representation at conferences, forums and meetings
- Mutual representation in collaborative projects
- Joint publications
- Joint promotion
- Organizing a joint WB/FIG high profile conference late 2008 at the WB headquarters in Washington DC

Good governance:

Key for sustainable development and disaster risk reduction:

- Participation
- Rule of law
- Transparency
- Responsiveness
- Consensus orientated
- Equity and inclusiveness
- Effectiveness and efficiency
- Accountability

Care Building:

- Training activities
- (Disaster) education programs
- Public information
- Technical assistance
- Improvement of organizational abilities
- Dissemination of knowledge
- Improvement of infrastructure
Surveyors without frontiers?

Tsunami, South East Asia
December 26 2004

Measurement
Surveyors will still do measurements but this special expertise is no longer the core activity due to technology development.

Management
Surveyors will increasingly contribute to building sustainable societies as experts in managing land and properties.

The Land Professionals

Understanding the Land Management Paradigm

Land Management includes all activities associated with the management of land and natural resources that are required to fulfill political objectives and achieve sustainable development.

Land Administration Systems

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

A Land Management Vision

Spatial Enablement

Spatial enablement offers opportunities for visualisation, scalability, and user functionalities.

- Attachment of information to images of the parcel and property
- Identification of "the place" in ways that are understandable by non-technical people (Google Earth)
- Capacity of businesses and citizens to manipulate the information through service oriented IT-architecture.
- Integration of government information systems
- Provision of seamless information to institutions and government
Spatial Information Management

Integrated Land-Use Management

Spatial information management; Cadastral management
Land-use management; Project management

The Educational Challenge

The Professional Challenge

The big swing

from
• Measurement
to
• Management

The Land Professionals

People, Politics and Places - and Power

Spatial information management; Cadastral management
Land-use management; Project management

The Land Professionals
The future belongs to our children