



International Federation of Surveyors  
Fédération Internationale des Géomètres  
International Vereinigung der Vermessungsingenieure

***Challenges and the role of the surveyor***  
***Engaging the Challenge: Enhancing the Relevance***



**Chryssy Potsiou**  
**FIG Vice President**  
**Assistant Professor NTUA, Greece**  
***chryssyp@survey.ntua.gr***

---

**Symposium of the Croatian Geodetic Society**  
**29 May 2012 , Zagreb, Croatia**

# National Technical University Greece



FIG Commission 3 (2007-2010)  
FIG Vice President (2011-2014)



UN ECE  
Working Party on Land Administration  
Bureau member (2001-2013)



# Content

Surveyors actually have someone's **life** in their hands  
- someone's **property** in their hands.

Our activity : *To advance and enforce standards in land, property and the built environment, and to promote the usefulness of the profession for the public good*

The surveying profession has gone from local to global

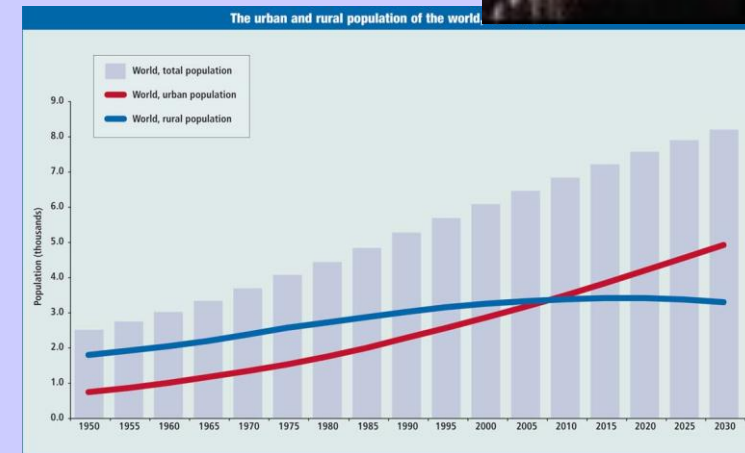


- Global Challenges
- The need to re-define our strategies, policies, tools

# Challenges (I)

Certain challenges characterize our era, such as:

1. Democratization of nations & transition to free market economies and the need for **privatization of land & re, housing & enterprises and for registration**
2. Rapid urbanization due to political & climate migration informal development and the need for **good governance & formalization**
3. Climate change and the need for **adaptation** and **mitigation** measures





# Challenges (II)

4. Economic globalization & sustainable prosperity for all and the need for **reforms** and **harmonization of policies and legislation**

5. Economic crisis and the urgent need for **development & poverty reduction**

6. The hope for more **democracy, transparency & peace** and the need for **citizen awareness, citizen participation and public support to the reforms**

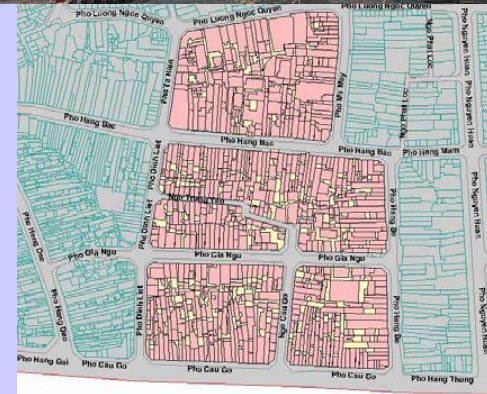


# 1. Democratization & Transition to free market

Development projects, infrastructure, land-use & planning reforms require land takings and rearrangement of rights

***Huge reforms have huge impact on land & property rights***

- ***strengthen and protect the formal and informal property rights***  
(for fairness, public acceptance & peaceful reforms)
- ***spatial information & cadastre***  
(for transparent decision making, management & implementation)





*39 WB funded LAM projects in Europe and Central Asia:*  
The largest program of land reform the world has ever seen! 30 countries - US\$ 1.1 billion in loans and grants

Population: ~900M Land area: 27,381,300 km<sup>2</sup> Properties: ~300M



Gavin Adlington, 2011:

- ✓ Embrace **social media & crowd sourced technology** to provide transparent land administration in places where corruption & inefficiency is endemic
- ✓ With an understanding of errors, accuracies & usefulness of various forms of spatial information

- ✓ **High technical education**
- ✓ **Be pragmatic & flexible**
- ✓ **Meet the needs of society**
- ✓ **Be confident, not conservative**



## 2. Political + climate migration, rapid urbanization, informal development: the need for good governance






FIG PUBLICATION  
NO 48

FIG REPORT

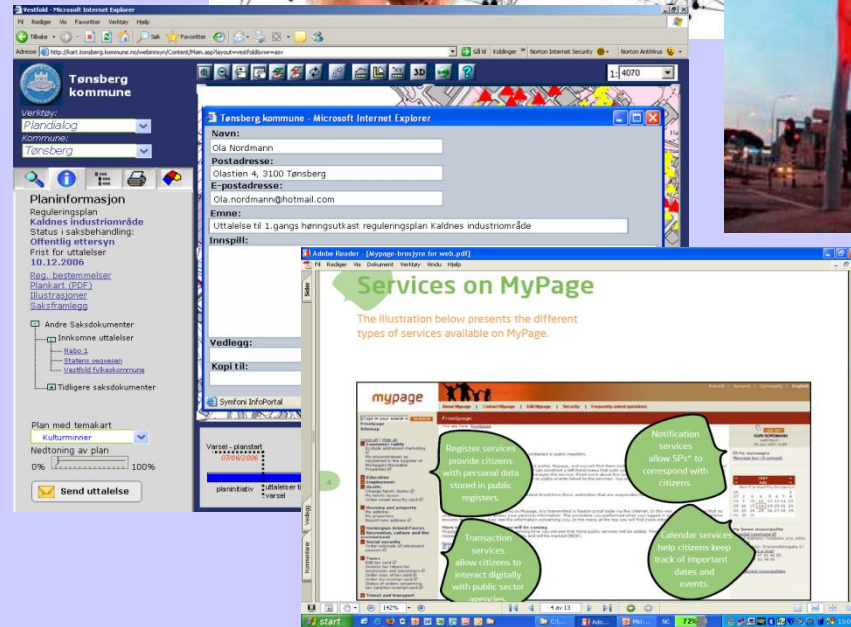
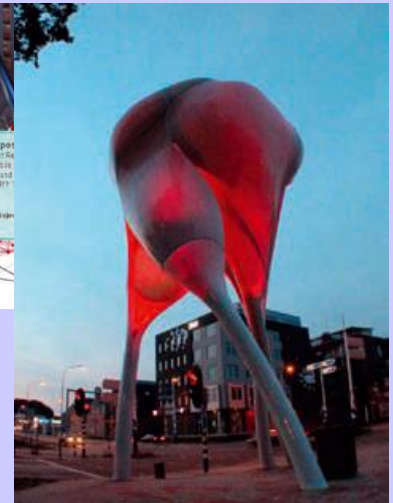
### Rapid Urbanization and Mega Cities: The Need for Spatial Information Management



Research study by FIG Commission 3



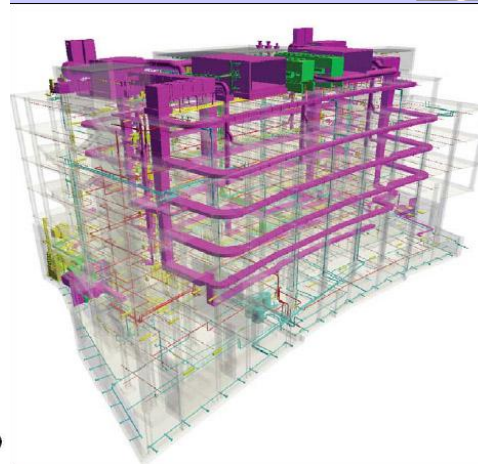
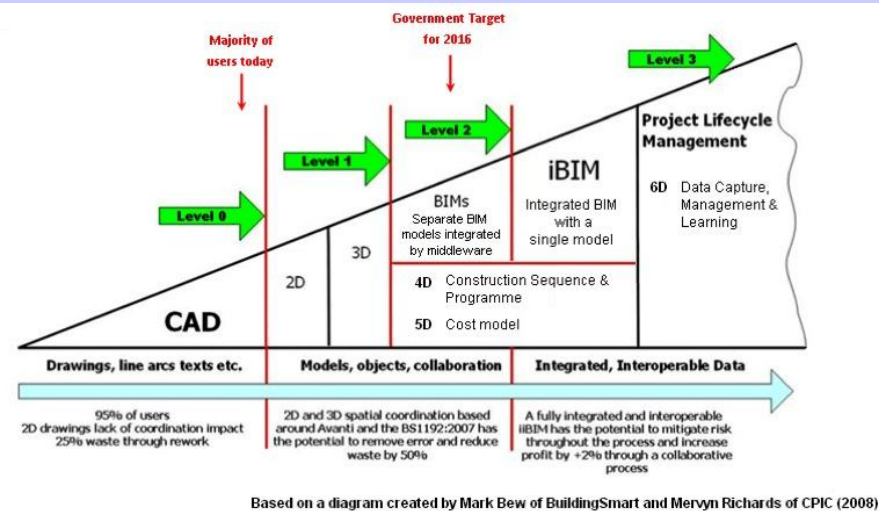
INTERNATIONAL FEDERATION  
OF SURVEYORS (FIG)



Make good use of **all available** information, crowd sourcing, VGI



# BIM: owners/operators, engineers, surveyors, architects, designers



*At its simplest level, BIM provides a common environment for all information defining a building, facility or asset together with its common parts and activities. This including building shape, design and construction time, costs, physical performance, logistics and more.*  
(RICS “What is BIM”)

Shanghai 1990



Shanghai 2010



Technology has changed the professional landscape

Surveyors should respond to change

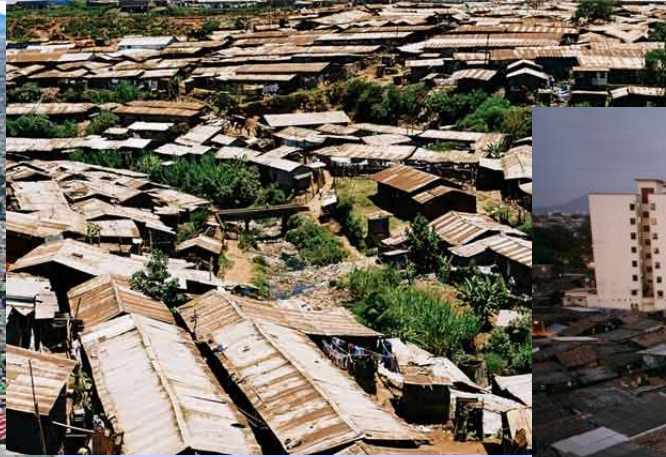
*“It is not the strongest of the species that survive, nor the most intelligent, but the one **most responsive to change.**”*

Charles Darwin, the Origin of Species



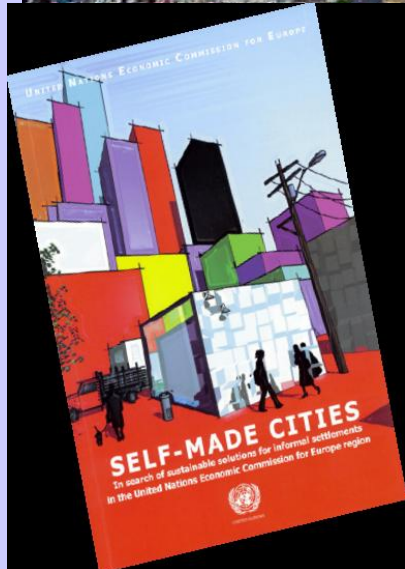


# Access to land, adequate housing and property rights is a fundamental human right



- *50M people in greater Europe live in informal settlements*
- *on-going legalization projects-property titles ; city planning reforms*

*Technology is easy ; Good Governance is difficult*





# Negative environmental and food security impacts

- Use of large parts of forested land for the production of bio-fuels
- Dedication of large areas of fertile land in a country to the production of food for another country
- The unplanned expansion of urban areas on agricultural land or ecologically fragile areas (UN-HABITAT)





### 3. Climate change: need for adaptation and mitigation measures

#### Cities:

Sustainable —————> Adaptable

#### Local Authorities:

Responsible for more sustainable cities

#### increased urban densities

Need for revising:

- land-use plans,
- transport modalities,
- building designs

Climate Change  
Measures should also  
make Economic Sense



Food and Agriculture  
Organization of the  
United Nations

*for a world without hunger*

Sustainable management of  
**Rural** and **Forest** areas  
for increased emission control  
and productivity



## 4. Economic globalization and sustainable prosperity for all and the need for **reforms** and **harmonization of policies and legislation**

The resilience of covered bonds depends upon:

- the strictness of regulatory requirements
- the soundness of the governing jurisdiction, in particular the certainty of property rights
- .....
- One of the more notable things about foreclosure is that the rules and procedures differ in the various jurisdictions

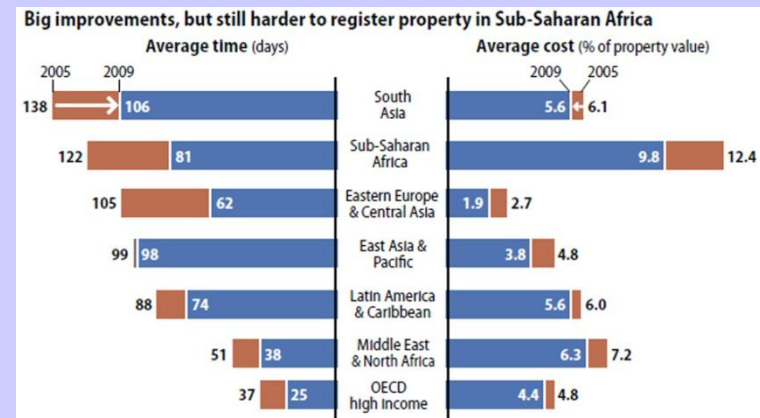
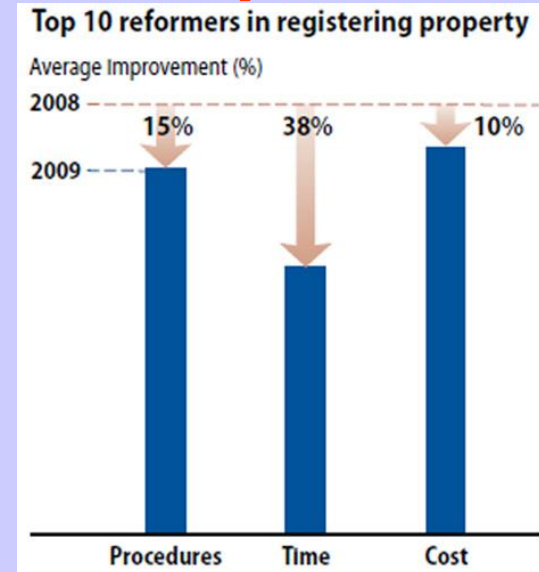




# 5. The economic crisis & the need for development



- Privatization, Formalization of weak rights, property registration
- Computerization: big time-saver
- Reducing average time and cost for property transactions
- Easing access to the registry
- Implementation of NSDIs
- Easing construction permits
- Reducing labor costs

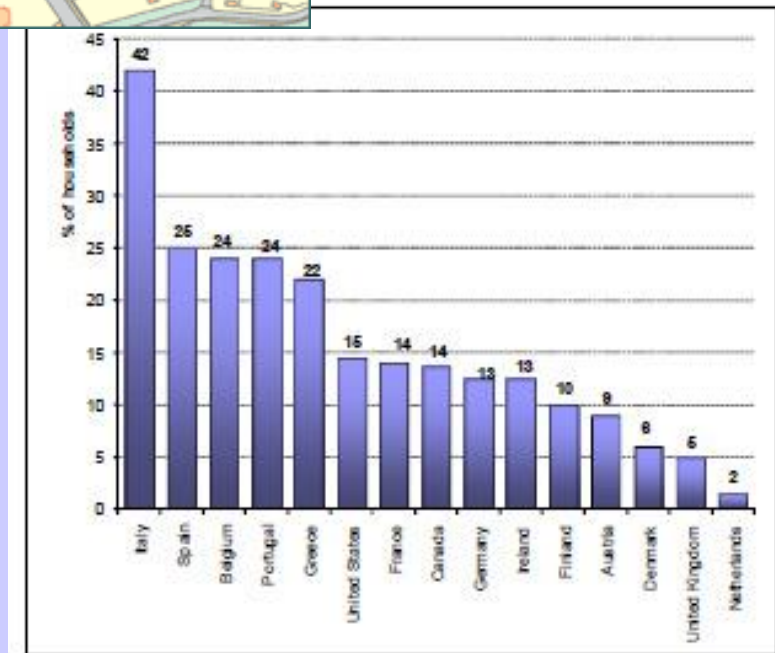


re added in subsequent years.

# The growing housing “affordability” problem

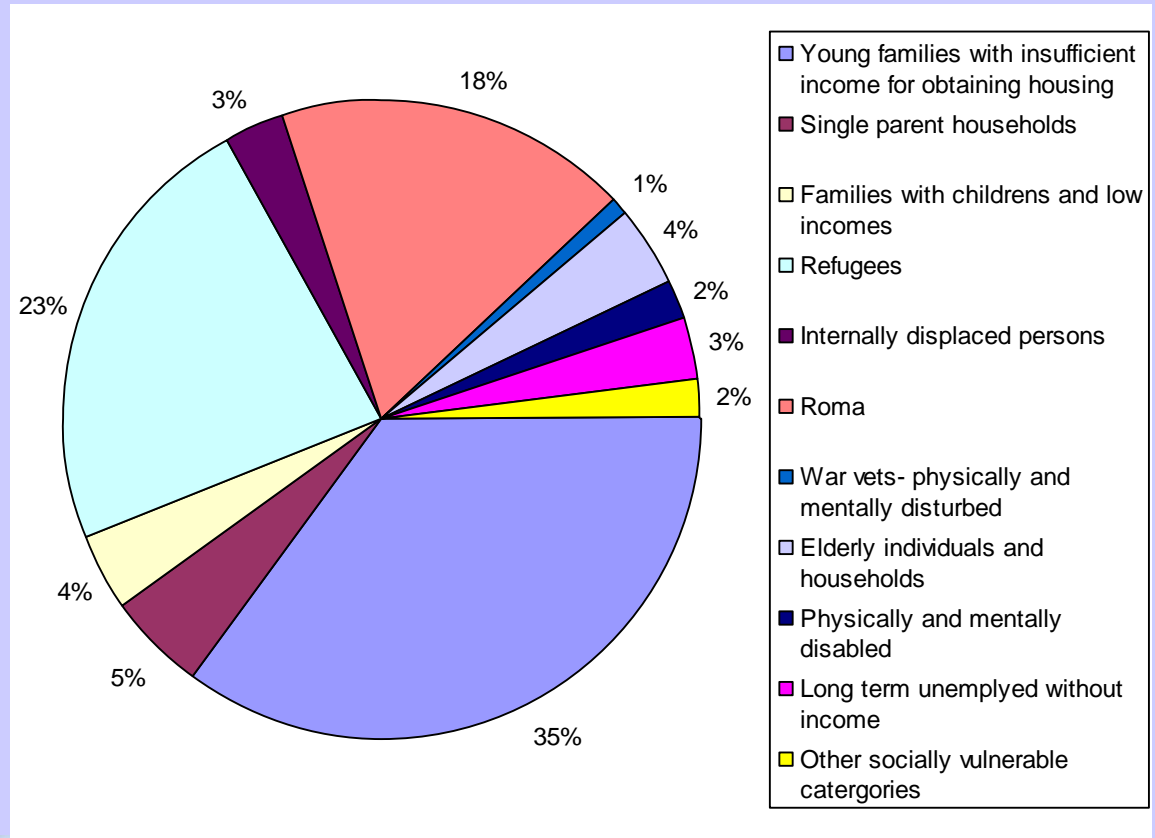
Significant barriers to  
"affordable" housing:

- High and complex zoning + building restrictions (limited supply)
- uncertain timeframes
- property taxation
- ...
- There is a growing number of **low-income workers** who constitute a “demand” but those who control the market see no profit in housing them



# MDGs report: Gains were significant before the crisis

Vulnerable groups  
Refugees, Minorities  
Roma  
Indigenous people  
Elderly individuals  
Long term  
unemployed  
.....





- Foreclosures have become a very real and almost daily occurrence in many cities.
- Prices fluctuate wildly and property taxes are leaving some home owners out in the cold.
- Home owners can find themselves unable to sell their property because its value is too high , or in possession of a home that has lost its value.



## 6. The hope for more **democracy, transparency** and **peace: Creative Participation** versus **Violence**



✓ *How can we use web 2.0 technology to enhance citizen participation?*

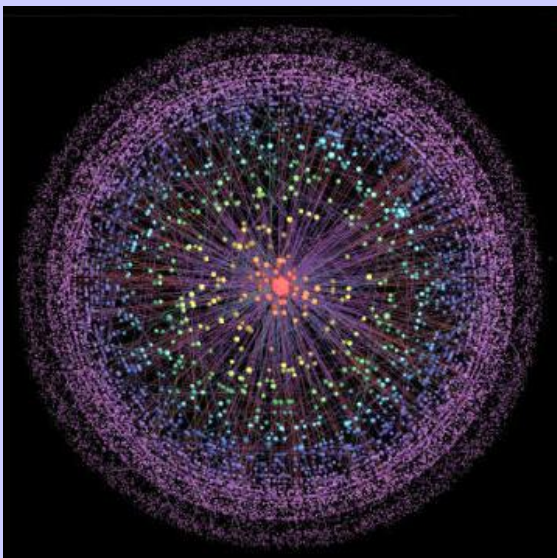
✓ *Determine where land management should go with social software technologies*

✓ *Determine the tasks can citizen contribute/undertake?*

✓ *How do we take the local administration out to the community or bring the community in?*

✓ *Do we have a strategic plan?*  
*Appropriate policies?*

✓ *How will we measure our effectiveness?*





# Need for new tools for *Spatial Information* & for *Spatial Planning*

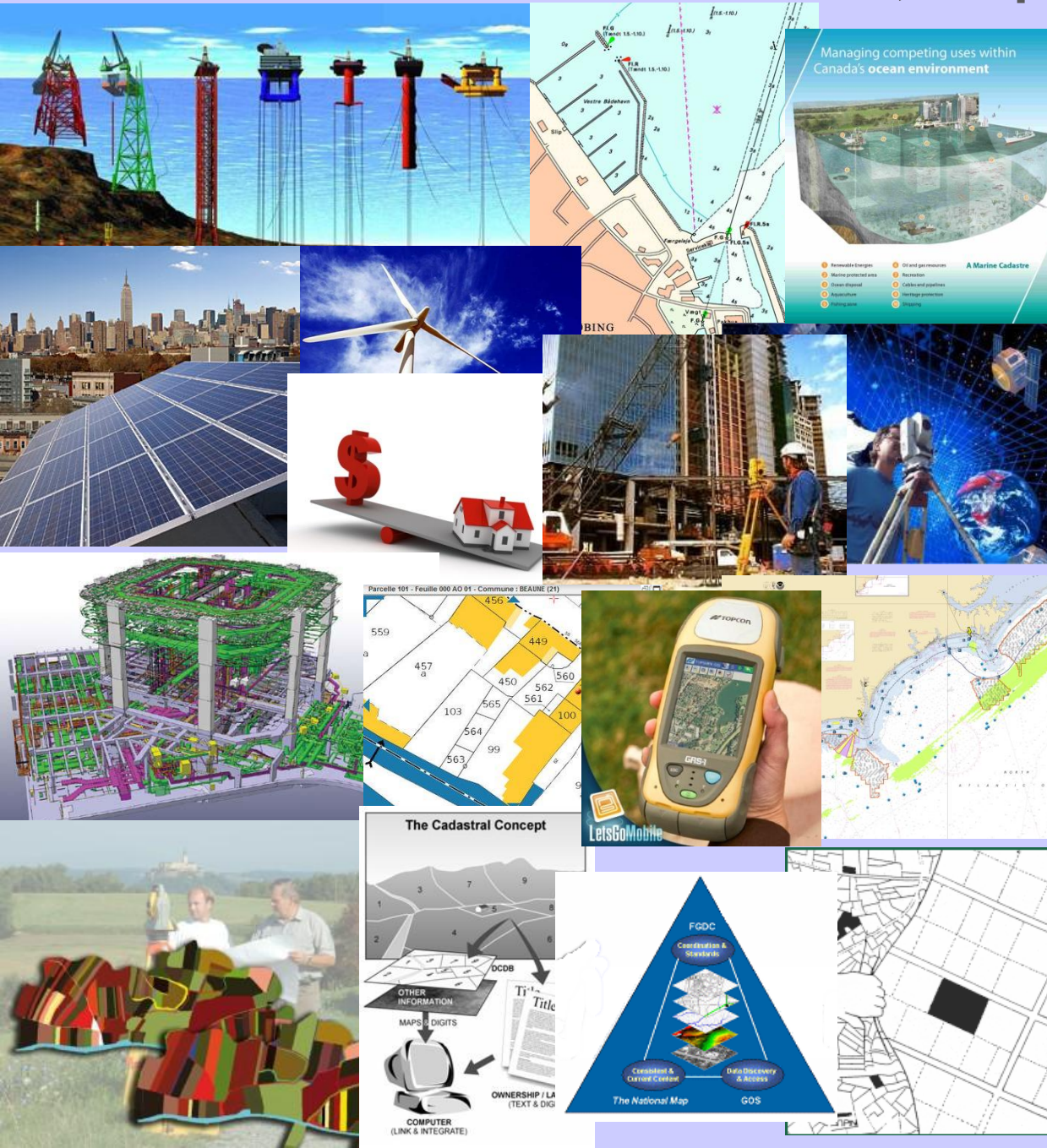
*To investigate:*

- *housing beyond the economic crisis (sustainable housing and housing rights)*
- *decentralization of responsibilities; the role of the local authorities and the private sector in affordable planning*
- *how can various actors of the housing sector cooperate and improve their efficiency*
- *tools for replacement of old constructions; redistribution of property rights when urban density is increased*
- ....
- *tools for making agriculture competitive and increase production*
- *Tools for sustainable managing forest areas, and state land*





# A Unified Profession: Land/waters, Property and Construction



**Our goal:**

- ensure consistency between surveying practices;
- promote best practice and knowledge sharing;
- enable a strong, global voice

**What are the challenges?**

- ✓ Social resistance to change
- ✓ Lack of awareness, education and training
- ✓ Lack of evidence of financial benefits
- ✓ Interoperability issues
- ✓ Professional ethics

**Thank You**

