



***THE ROLE OF SURVEYORS AND SPATIAL
PROFESSIONALS IN SUSTAINABLE
DEVELOPMENT***

SECURE LAND RIGHTS AND SMART CITIES

Prof Chryssy Potsiou

FIG President

UN ECE WPLA Bureau member

National Technical University of Athens

School of Rural and Surveying Engineering, Greece

chryssy.potsiou@gmail.com



***Secure Land Rights and Smart Cities
Making It Work for Sustainable Development
UN-GGIM Academic Network Forum, UN New York, 31 July 2017***

Geospatial Transformation of the World

Objectives:

- *the 2030 Sustainable Development Agenda &*
- *the Advancement of our Profession*

FIG collaboration with:

- *International Organizations (UN agencies & WB)*
- *Collaboration at Regional level*
- *Collaboration with our members at local level-visits-events*

We, FIG Council, Commissions, Task Forces, Networks, are a link amongst the land surveyors & other various geospatial professionals, governments & International Organizations



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

2016



ANNUAL
REVIEW

"Ensuring the Rapid Response to Change,
Ensuring the Surveyor of Tomorrow"

Increase the **value** of geospatial data, systems and land tools for all

Our mission:

To deliver more benefit, more transparency, more safety, more environmental quality, more growth, more fairness, more education, more gender equality, and more efficiency in governance of urban and rural areas.

This is our contribution to the dream of a future intelligent city and a sustainable management of natural resources.

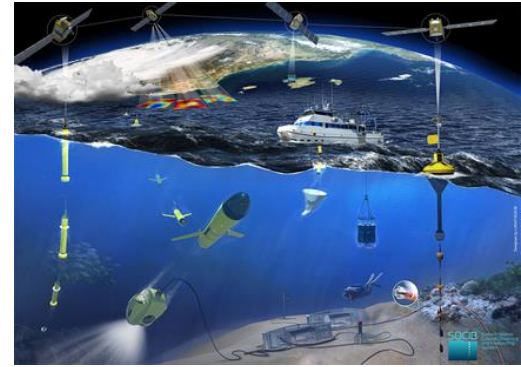
*To contribute in **eradicating poverty**, addressing **climate change** and building **peaceful, inclusive societies** by 2030.*

The Sustainable Development Goals Report
2017



Location information changed people's perception

- *The geospatial transformation of the society supports*
 - *transportation*
 - *property markets, access to credit mechanisms, fair taxation*
 - *construction, city modeling, monitoring*
 - *disaster recovery, humanitarian support*
 - *agriculture & water management,*
 - *security, justice, good governance*
 - *...*
- *we cannot measure or monitor sustainability and growth without the intelligent use of evidence-based geospatial data*
- *Technology helps us to “create-uncover” the “missing information”, identify weaknesses, reduce inequalities...*



Location information within the Big Data world

- *Enhances productivity,*
- *Reduces costs,*
- *Enables GDP growth.*
- *A country's geo-maturity can now be measured (WB standard: Lawrence, Kelm, 2017)*



Location: common link to various data

image, map co-ordinates, or an address

From a “spatially enabled” society to a “spatially mature” society

From the need for providing

- *reliable,*
- *evidence-based,*
- *open or low cost data*

for decision-making, toward

- *massive creation & consumption of data (structured/not)*
- *extended use of affordable smart devices*
- *increasingly high downloading speeds*
- *the Internet of Things (IoT)*
- *cognitive computing for all to improve human decision-making*
- *the provision of personalized information*
- *the Internet of Me*



Professional aim: to increase our skills

- *Combine authoritative and non-authoritative data*
- *FFP infrastructures & tools*
- *Interpret & process data; inform once and use it several times, for several purposes*
- *Increase the “**usability**” of data, systems and tools, (among professionals & communities & especially the young)*

- *Establish a mechanism for a consistent and repeatable update of information to compare & monitor the “**geospatial maturity**” of our society: our ability to retrieve the right information and use it to **optimize activities required to achieve the SDGs.***



The contribution of our profession: LA & LM

*Governments around the world do not always have a clear picture of their capacity to provide coordination across sectors, or have a sufficiently integrated approach to land administration & management (for example spatial planning, land use, property valuation/taxation, development permitting, housing issues) to optimize the activities required **to achieve the SDGs.***



68 FIG PUBLICATIONS & more joint publications with UN agencies & the WB:
<http://www.fig.net/resources/publications/index.asp>

- EDUCATION,
- PROFESSIONAL DEVELOPMENT,
- LOCATION,
- SPATIAL INFORMATION MANAGEMENT
- RECOGNITION, REGISTRATION & VALUATION OF PROPERTY RIGHTS
- LAND USE AND PLANNING
- CONSTRUCTION CONTROL & MANAGEMENT

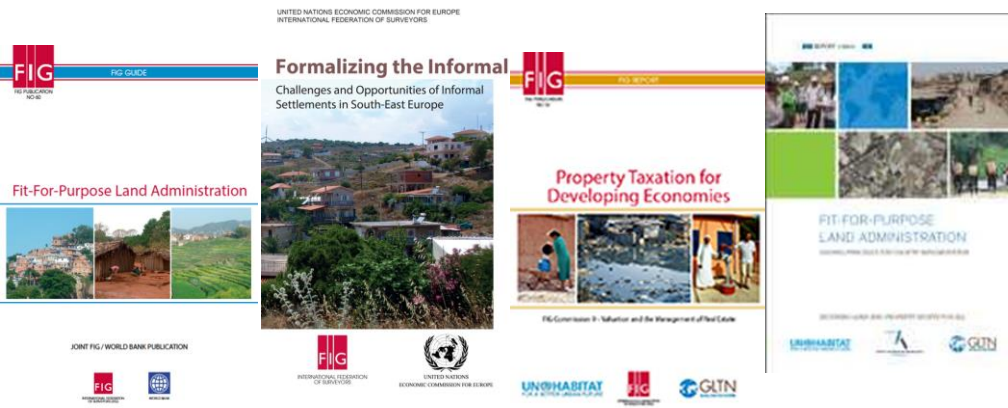


FIG is Building the Future: IoT & more

- *Overlying & controlling these aggressive policies in the smart/sustainable city movement is the **Internet of Things**: the digital interconnectivity of traffic, parking, transportation, waste management, street lighting, utilities, noise control, housing, emergency service, healthcare, education, security, and all the other myriad of civic activities.*
- ***3d city modelling & 3d Cadaster & Cadaster 4.0**: the daily collection of such data from strategically placed sensors must be understood in their geospatial dimension & translated into useable information for urban agencies*
- *The potential of **Blockchain technology** for property market security*
- ***Crowdsourcing & surveying** (its benefits & limitations)*
- *The “**fitness for purpose**” issue in land tools (fast, affordable, reliable)*
- *Development of **indicators & standards***



sensors

TECH TRENDS
2017

BLOCKCHAIN

