

***Ensuring our Rapid Response to Change  
Ensuring the Surveyor of Tomorrow***



## ***FIG Looking Back and Forward***



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# The globalization of our profession



*140 years of FIG*



*Having served FIG for 35 years I have realized that  
**Our similarities outreach our differences by far***

*For all these years we have had a joint vision to develop a **prosperous and sustainable profession** everywhere; to be informed about the **technological, social, economic and environmental change** and its impact on our profession; to be **inclusive**, to encourage **participation** and to develop strong **synergies**.*

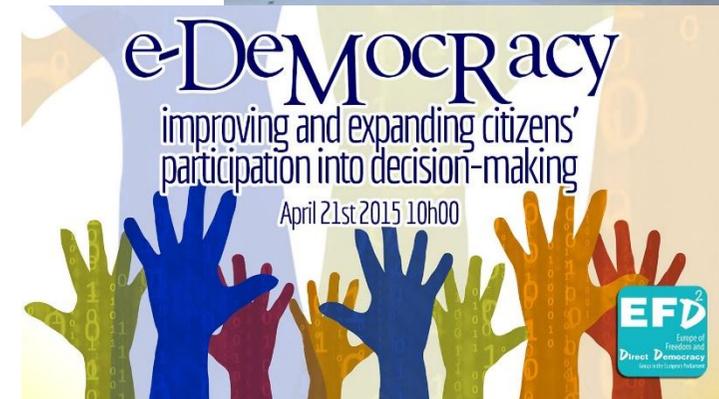
# The 1964 prediction & the Global Village transformation



*Together we have experienced major global technological developments, such as the development of the **mobile phone**, the **Internet** and the **cloud** that have changed our lives radically.*

*These developments have changed the way we work and communicate and the way we behave over the past 20 years.*

*We spoke about e-government, m-government and mobile services, open data and even about “e-democracy”.*



## Cooperation with past Presidents



- ü **1983 Vassil Peevsky** ü *participant*
- ü **1988-1991 Juha Talvitie** ü *participant*
- ü **1991-1994 Earl James** ü *participant*
- ü **1995-1998 Peter Dale** ü *Commission 7 correspondent member*
  
- ü **1999-2002 Robert Foster** ü *Commission 3 WG chair*
- ü **2003-2006 Holger Magel** ü *Commission 3 WG chair*
- ü **2007-2010 Stig Enemark** ü *Commission 3 chair*
- ü **2011-2014 CheeHai Teo** ü *FIG Vice President*

# The definition of the surveyor



## 1988-1991

§ *Definition of Surveyor 1991*

§ *Sustainable Development as a challenge and a responsibility for Surveyors 1991*

§ *Surveyor's contribution to land management 1991*

*We all have to recognize the global responsibility surveyors have in proper land management and keep in mind the statement of Dr Arcot Ramachandran, Executive Director of HABITAT at the opening of the FIG Helsinki Congress in 1990: "Land is the starting point for all settlements development, and at the beginning of this process stand the surveyors." Prof Henssen and others*

*FIG had 9 commissions*

*The PC Appointed commissions chairs*

§ *FIG and Member Associations*

Ø *Participation/communication*

Ø *Delivery of proceedings and summaries to all MA*

Ø *Request that MA will publish in their local journals*

Ø *Organization of events in the developing countries*

Ø *A proposal to create regional groups within FIG*

# Measurement aspects

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## **1991-1994**

*Hydrography in Ports and Harbours 1994*

*Recommended Procedures for Routine Checks of Electro-Optical Distance Meters (EDM) 1994 (edited by Rudolf Staiger 2007)*

*FAO and FIG Future Collaboration in Cadastral Reform in Rural **Economies in Transition**: report of round table meeting.  
Peter Dale VP*

# Land Administration/Management, countries in transition, and administrative reforms



## 1995-1998

*The FIG Statement on the **Cadaster** 1995*

*Ethical Principles*

*Website-Internet*

*Presidents' Meeting*

*Land Tenure, Land Management and Land Information Systems*

- ü *In response to the major social and economic reforms, UNECE countries focus,*
- ü *UNECE Guidelines on **Land Administration** for **countries in transition** 1996*
- ü *cooperation with FAO for the cadastral reform in countries in transition*
- ü *WPLA, UN HABITAT*
- ü *Educational issues , **CPD programs***
- ü *CPD – CONTINUING PROFESSIONAL DEVELOPMENT, Quality Assurance and its future promotion within FIG –Stig Enemark, chair of commission 2*
- ü *The Bogor declaration 1996*
- ü *administrative reforms to elect the President and council by the GA to become more open and democratic and more efficient...and we finally became political*

# Professional Aspects, Settlements, SDIs



ü **1999-2002**

ü *FIG Agenda 21*

*Establishment of the Office,*

ü **Gender participation/national reports**

ü *Permanent office in Denmark*

ü **Ethics 1998**

ü *The Bathurst declaration 1999*

ü *Terminology and Classification of Deformation Models*

ü **women's access to land 2002**

ü **Mutual recognition of professional qualifications 2002**

ü **Business matters**

ü *Standardization*

ü *The Nairobi statement on **Spatial Information** for Sustainable Development 2002*

ü **Land Information Management for sustainable development of cities 2002**

ü **Spatial Data Infrastructures**

# Globalization, urban/rural interrelationship, the new role of the state

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## 2003-2006

- ü *Africa focus,*
- ü *JB of Geospatial Societies*
- ü *Marrakech declaration –**urban rural** interrelationship 2004*
- ü *The Aguascalientes Statement (land Information Policies in the Americas)*
- ü *Underrepresented groups*
- ü *Marine Spaces*
- ü *Hydrography*
- ü ***Disaster risk management 2006***

## **2007-2010**

- ü *Informal settlements*
- ü *Costa Rica declaration on costal management*
- ü *Improving slums*
- ü *The Millennium Development Goals*
- ü *E-Learning*
- ü *Urbanization and megacities*
- ü *GNSS positioning techniques*
- ü *Hanoi declaration*
- ü *STDM*
- ü *History of Surveying*
- ü *Compulsory purchase*
- ü *Sydney declaration*
- ü *capacity building, GLTN*
- ü *WB Conference*

# Spatially Enabled Society, FFP Land Administration UNGGIM , climate change

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## **2011-2014**

- ü *Spatially Enabled Society,*
- ü *Hydrography*
- ü *International Boundaries*
- ü *FFP Land Administration*
- ü *Cadaster 2014 and Beyond*
- ü *Reference Frames*
- ü *Africa Task Force*
- ü *Climate change*
- ü *WB*
- ü *UNGGIM*
- ü *GLTN*

# Sustainable Agenda 2030: FFP Land Administration, Young Surveyors, Property Markets, Disaster Management



## **2015-2018**

- ü *Young Surveyors Implementation Activity*
- ü *3d cadaster*
- ü *Property taxation*
- ü *Disaster management*
- ü *Christchurch declaration*
- ü *Informal settlements-Guidelines for formalization*
- ü *Valuation of Unregistered Lands*
- ü *TF on Property Markets*
- ü *standardization*
- ü *WB study on estimating the losses of not formalizing the informal Real Estate*
- ü *Crowdsourcing*
- ü *Block chain*
- ü *Africa and Asia-Pacific Network*
- ü *Cooperation with Regional Bodies*
- ü *Guidance for Quantity Surveyors, Construction Economics, Cost engineers*
- ü *joint consultation in decision making, at all levels, corporate members?*
- ü *Cooperation with FIABCI and relevant professionals*

# The Digital Economy - an opportunity for everyone?



*The road to digital transformation:  
Challenges & opportunities & a lot of unanswered questions...*

- ü *Provide the digital infrastructure- Develop the **platforms**  
types of investment? Metropolitan areas? rural areas? benefits?  
**connectivity & density** (people & business)*
- ü *Engage governments: affordable **energy** to enable connectivity,*
- ü ***Informal sector**? regulations, openness & stability to attract  
investors,*
- ü *Enable **digital financial inclusion**? To support sustainable  
digital and technological entrepreneurship*
- ü *Create the **digital society**: Skills? The **young** generation*
- ü ***Information**: mapping the jobs & training facilities to measure  
the gaps  
job cuts? New jobs? retraining? Skill flow?*
- ü *Education? **on-line training** ? certification?*



The Sustainable Development Agenda 2030 was signed  
by 193 UN state members in 2015



*Surveyors' contribution to the Sustainable Development Agenda 2030:  
17 goals(SDGs), 169 targets and 230 indicators*



***FIG contributes to  
SDG 1,2, 4, 5, 6, 8,  
9,10,11, 13,15,16,17***

# SDGs: do your homework!



ü Use the **crowd** in a powerful way

ü “**bring the people to the data**” - increase the **usability** of the data

ü secure **property rights for all!** “**informal settlements and the missing data**”,  
The great economic divide: 2.5 billion people can register property rights and 5 billion they can't .

Property rights are one of the drivers of **economic growth** as well **economic freedom**

ü policy issues! technical issues! “**make it simple...if you can**”

ü adopt **fit-for-purpose land administration**,

ü **standards** and the **blockchain technology, IoT**

ü the need to “**focus and set priorities**” for “**implementation**”,



# Surveyors' Role in the Age of Disruption

*From the need for providing society with  
∅ reliable, evidence-based, open or low cost data*

*for decision-making, toward the need to manage a  
“tsunami” of geodata*

- ∅ extended use of affordable smart devices ;  
crowdsourcing*
- ∅ 5G mobile network technology, 40-60% higher speeds  
by 2020: massive creation & consumption of data*
- ∅ the Internet of **Me**, Internet of **Things**,*
- ∅ Internet of **Value**, Blockchain & Distributed Ledger  
Technology (DLT)*
- ∅ Machine learning, cognitive computing for all to  
improve human decision-making*
- ∅ Autonomous vehicles & drones*



# Where is the Data: increase our skills



- ü *Have compassion, cooperate-work with others, deal with diversity,*
- ü *increase our **digital fluency & computing skills** to ensure **democratization** and make **digitalization a peaceful transition power** for the benefit of all*
- ü *In the digitalized world to be capable to infuse codes and algorithms with our **values***
- ü ***Cooperation with other professionals economists and electrical engineers and real estate experts***



## ***Diversity***

- ü ***benefits All of us,***
- ü ***means All of us,***
- ü ***is the key to success for All of us***
- ü ***If we are not diverse, we are not global!***

## ***The Global Surveyors' Day 21<sup>st</sup> of March***

*A good opportunity for MAs to inform their members.*

*LADM*

*3D, 4D,...*

*Cadaster 4.0*

*Informal development and real estate markets*

*SDGs*

*Block chain*

*Crowdsourcing*

*Augmented reality*

*BIM, UAVs, Autonomous vehicles*

*Platforms, FFP solutions*

*To continue the unfinished work of the commissions  
in education in various regions, professional  
aspects, geospatial data and SDGs, blue economy,  
pro-growth planning, new fields for the surveyors*

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