

# FIG WORKING WEEK 2019

22-26 April, Hanoi, Vietnam

Presented by the FIG Working Week 2019,  
April 22-26, 2019 in Hanoi, Vietnam

"Geospatial Information for a Smarter Life  
and Environmental Resilience"



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## Why Crowdsourcing in Surveying

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Since the creation of the on-line world in the 90s

- *digital economy - internet economy - web economy*: the branch of economics studying zero marginal cost of intangible goods over the Net

Digital networking and communication infrastructures have provided a global platform over which people and organizations devise strategies, interact, communicate, participate, collaborate and search for information

*e-government, e-business, e-commerce, e-democracy, e-participation and m-government*

- Much of the information exchanged through this activity is geo-referenced



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- We cannot measure and monitor sustainability without **accurate, evidence-based geospatial data**  
transportation, agriculture and water management, property markets, taxation, access to credit mechanisms, construction, city modelling and monitoring, disaster recovery and humanitarian support, uncovering and reducing social inequalities
- Massive creation and consumption of structured or unstructured geo-data
- Extended use of affordable smart devices: allows us to reach out to people even in the most remote corners of the planet with information and services  
Governments invest,  
private sector innovates and improves traditional business,  
academics and professionals are actively assessing how to respond



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- Surveyors, like all other professionals, try to adjust and redefine their role in this “age of disruption”
  - Competition became more global and more intense
  - Many fear the loss of jobs digitalization may bring, and all aim to improve their performance and skills
- The road to digital transformation is not yet clear
  - There are hundreds of opportunities, but also there are several challenges and many unanswered questions
- Challenges that governments still face include:
  - providing the necessary digital infrastructure;
  - dealing with existing informalities to improve openness, stability and trust for investors;
  - investing in affordable energy while developing the relevant platforms;
  - increasing connectivity in society in order to maximize the benefits from such investments;
  - enabling digital financial inclusion to support sustainable digital and technological entrepreneurship;
  - creating a digital society, that is, improving the digital skills of the public, providing on-line training to minimize the gap between the developed and the developing worlds, and providing information about skill-flow and job opportunities

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## There are many geo-spatial data collection devices available

- The coming together of this new powerful and affordable technology (e.g., UAVs, smart phones and mobile apps, digital cameras, etc.) with surveying is rapidly becoming central to the long-term strategy of the United Nations Organization and its 193 member states as well as their national mapping agencies
- Surveyors are alternately challenged and excited by new concepts like the “internet of things”, data mining, and crowdsourcing
- Surveyors are challenged to take a long, hard look at their role as **change agents** for global sustainable development **to ensure democratization and make digitalization a peaceful transition for the benefit of all**



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- Surveyors and geospatial experts are expected to make a practical application of the available technology, update their tools and manage a “tsunami” of available geo-data in order to serve the continuously increasing needs of society as clearly defined in the **UN Sustainable Development Agenda 2030**
- Surveyors should be able to collect, integrate, manage, visualize, process and provide reliable and personalized geospatial information for their clients reliably and timely, as it is needed.
- They must be prepared to provide affordable and fit-for-purpose solutions for their clients.
- It's about using the latest technology and developing the appropriate tools and methods **to do what we already do – but better; more services, different services**



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- It is about serving society's economic and environmental needs
- It is all about improving our skills
- societal disparities, digital transformation and decentralized business models; a volatile economy; evolving new city design models; and natural disasters, climate change and anthropogenic environmental damage
- poverty, hunger, health, education, global warming, gender equality, water, sanitation, energy, urbanization, environmental and social justice
- the operation of smart cities, the management of natural and manmade disasters and the management of epidemics, as well as the management of land. The establishment of property rights is one of the drivers of economic growth and economic freedom
- **A collective journey for the "Geospatial Transformation of the World"**

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**FIG encourages Surveyors to offer their expertise to create solutions for the relief of the helpless and marginalized when confronted with rapid economic and technological change**

**and to bridge the geospatial digital divide in the implementation of the 2030 Agenda for Sustainable Development**

**Governments can involve their peoples in a powerful way**



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## Crowdsourcing: a relatively new concept in surveying today

- more heads are better than one
- every person has something of value to contribute
- the technique is applied in a search for new ideas
- often used in micro-tasking
- work may be done *faster* and *cheaper* but most importantly it allows the collection of such data that *would never be possible* to be collected by traditional methods
- *better services* with even *fewer errors* when validation systems are in place
- its primary value is in the geo-data *collection* process
- the issue of validation is critical
- assumes a certain amount of preparation and training of members of the so-called crowd
- studies on *motivation*
- in the data collection phase, but also in the *editing* of geo-data and even further in *providing their experience for defining policies and procedures*

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## Enjoy reading



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