

What is disrupting the surveying profession?

Report from FIG Commission 7 - Daniel Paez





My passion are strategic thinking and innovation



Fédération Internationale des Géomètres (FIG)



- Peak international body for geospatial professionals (surveying, GIS, photogrammetry, drones, ect)
- Country associations are the main members (e.g. SSSI)
- The organizational structure is:
 1. Council (primary admin)
 2. Commissions (Technical work)
 3. Networks
 4. Taskforces
- Main interactions occur during events:
 - Congress (every four years)
 - Working Weeks (every year)
 - Commission annual meetings



FIG Commission 7

- Cadastre
 - Cadastral surveying
 - Land information systems
 - New technologies
 - Laws and regulations
- Land Management
 - Registry
 - land taxes, rates and municipal finances
 - Global challenges such as poverty alleviation and climate crisis





The UNGGIM Academic network enables countries to act in their needs

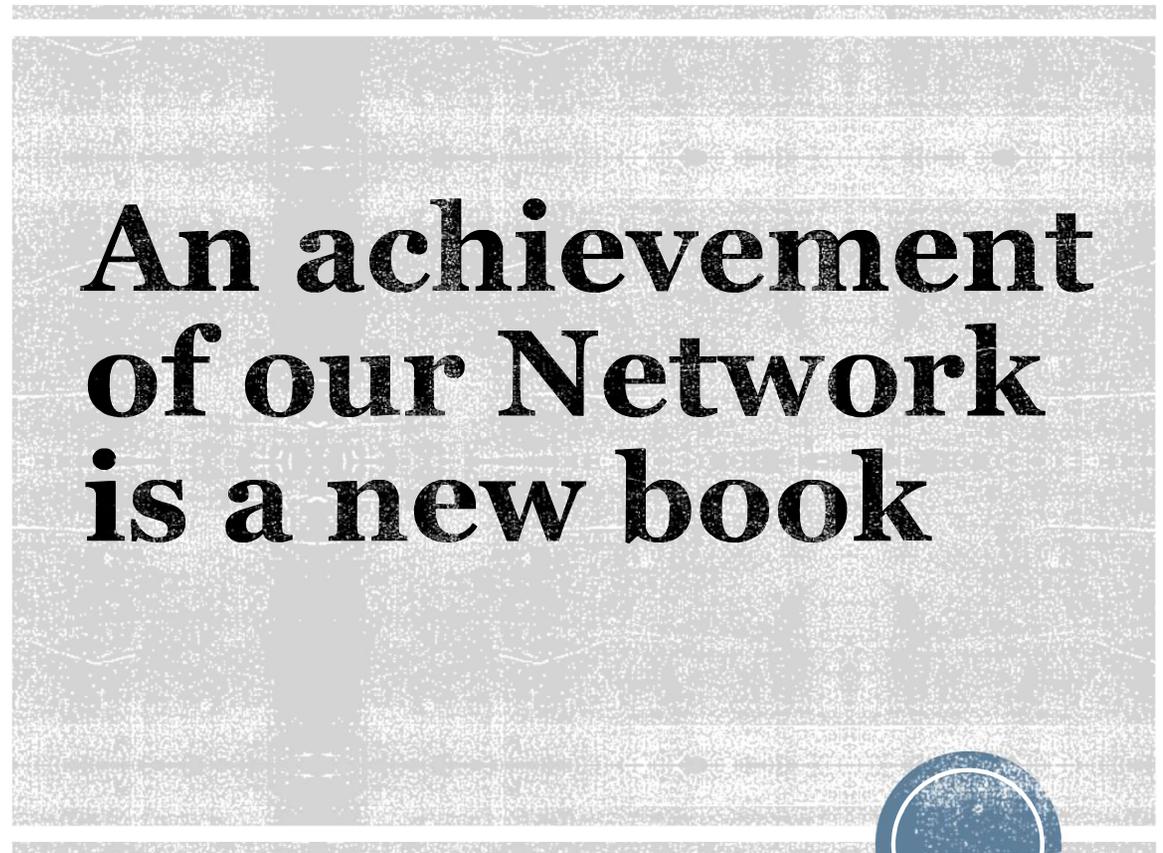
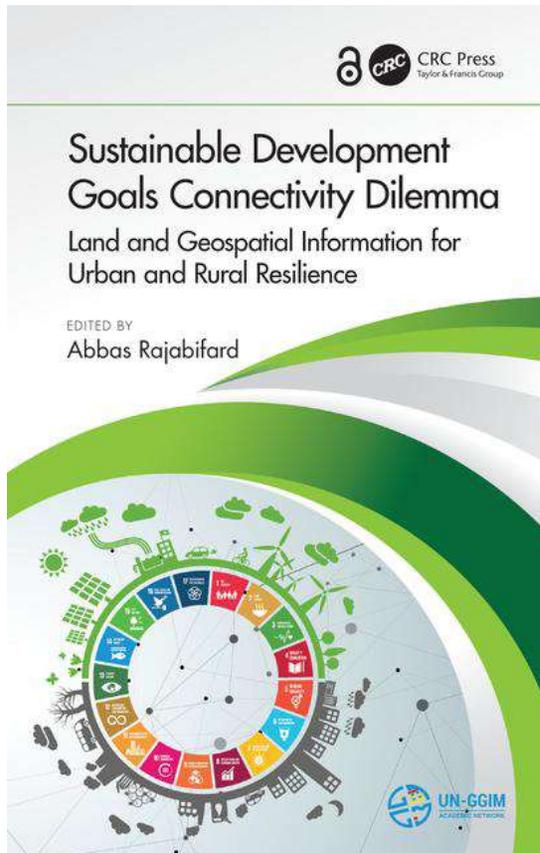
- Current main focus
 - Review of the current UN-GGIM WGs' work plan to identify areas for **support** and input.
 - **Promotion** of the Network to potential member institutions.
 - Registry of **current capabilities**, degree programs, training programs, research, and courses, relevant to UN-GGIM gathered as part of the membership application process as well as through additional means.
 - Establishing an **Online Training Platform** for Education, Training and Research.



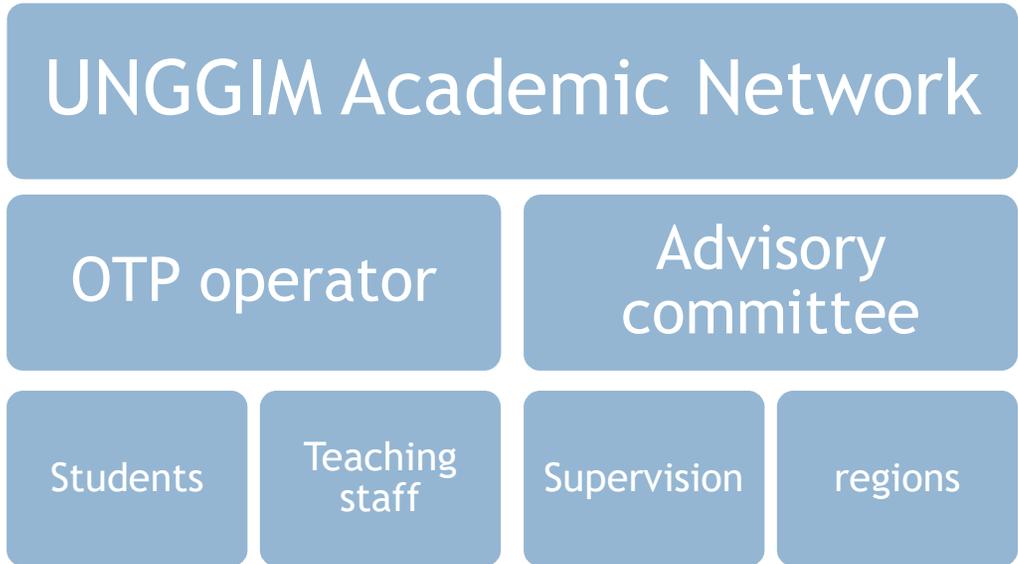
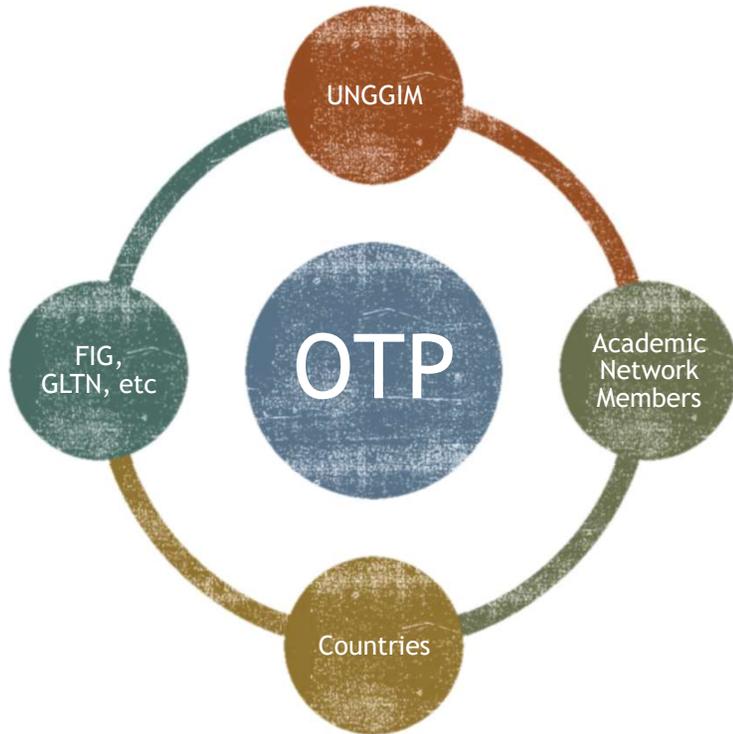
Online
Training
Network

unggim.academicnetwork.org





OTP would have a direct relationship with UNGGIM members and other institutions





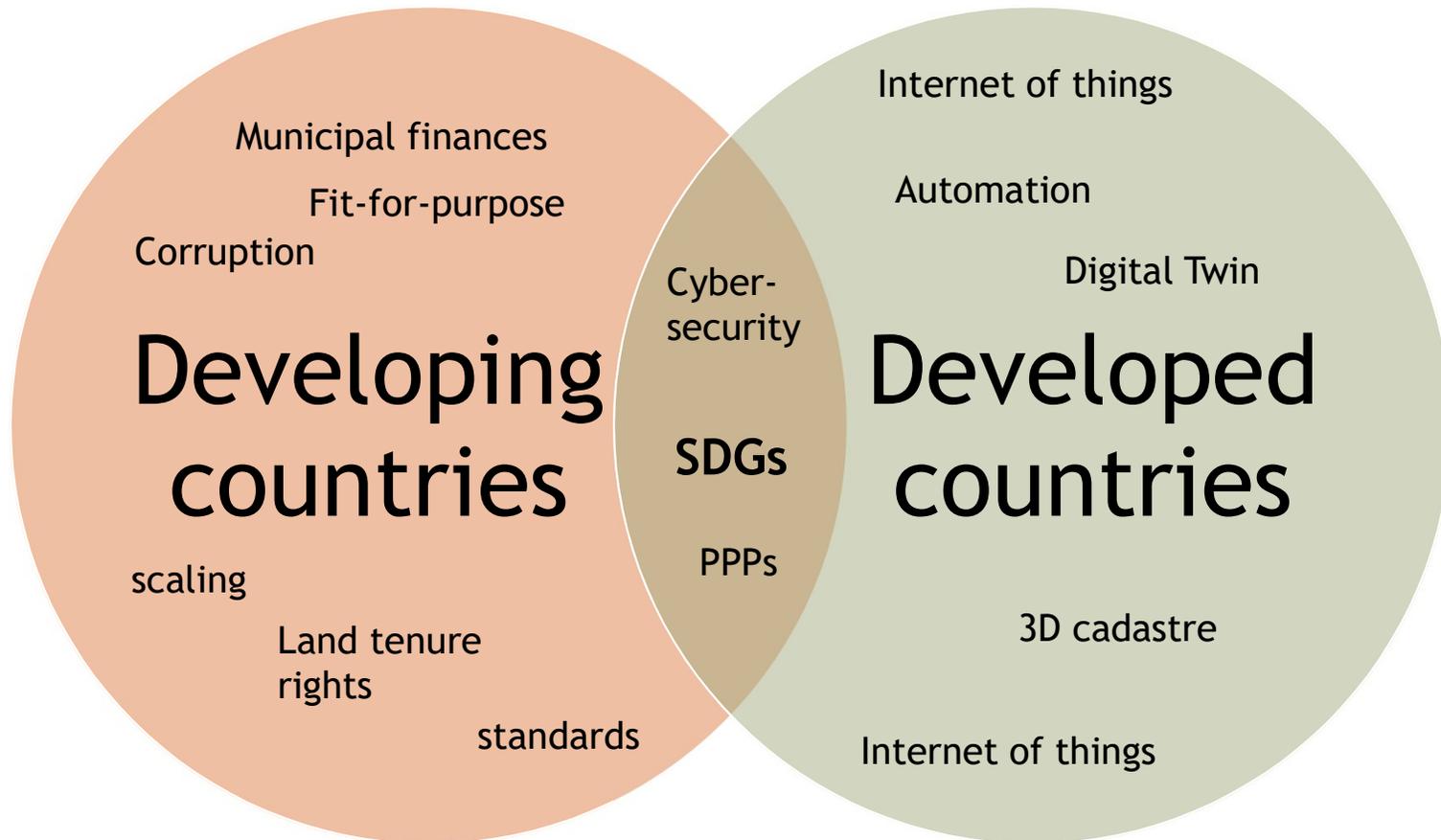
SDGs give us a very good indication where challenges are





LAND
RIGHTS

The fourth revolution is changing geospatial business for everyone



Global venture capital investments in AI themes grow at a clip to reach >\$27B/year

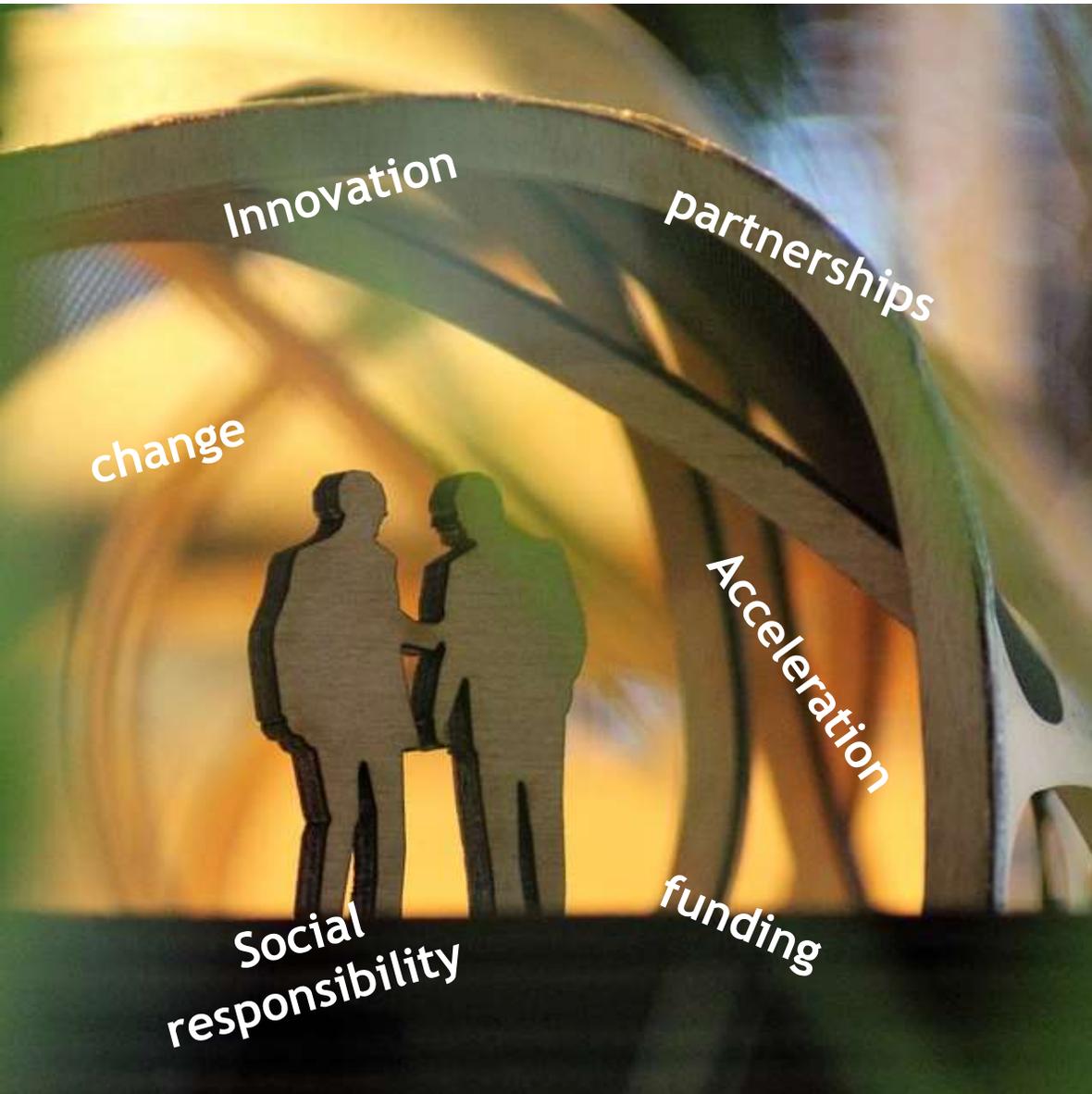
▶ Almost 80% more capital invested in FY18 vs FY17 with North America leading the way at 55% market share.



Ideas for WG2 (UNGGIM-AP)

- Develop a publication on best practice
- Organise a parallel event in Indonesia with key partners in AI (e.g. academia, private industry)
- Conduct a survey on current pilots/innovation ideas with automation on Land administration
 - Parties identification
 - Spatial correction
 - Integration with digital twins





The private sector is here and everywhere as a new driver



FIG Commission 7 is working with WPLA (UNECE) on developing principles for land PPPs

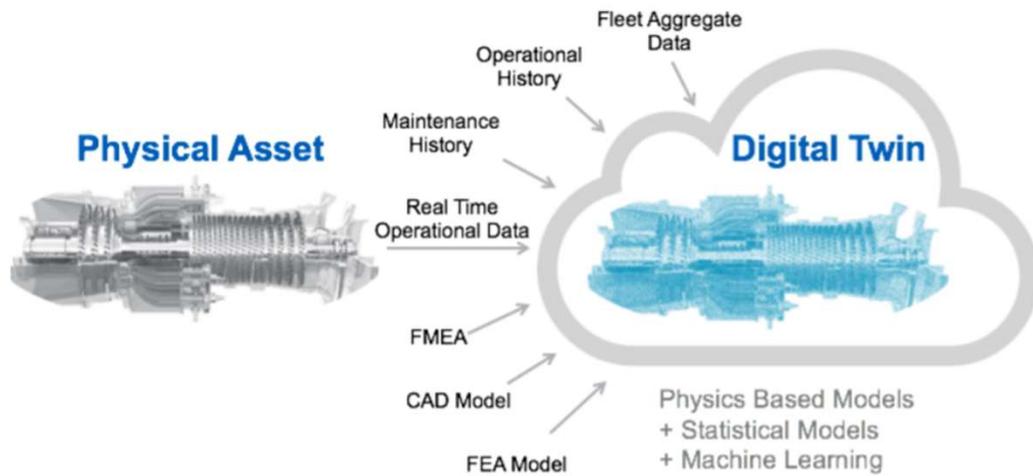


The image shows the logos for FIG Commission 7 and UNECE Working Party on Land Administration. The FIG logo is a red square with the letters 'FIG' in white. The UNECE logo is a blue globe with the letters 'UNECE' in blue and 'Working Party on Land Administration' in smaller blue text below it.

Call for Nomination - PPPs in land administration TASKFORCE

<http://bit.do/landPPP>





Source: LX (Korea)

Digital twin

A digital twin is a virtual representation of a physical object or system across its lifecycle, using real-time data to enable understanding, learning and decision-making



Why Digital Twins Will Drive the Industries of Tomorrow



— “ —
Digital Twins help to predict changes before they happen, so we can have contingency plans in place. We can use Digital Twins for planning purposes, running scenarios and providing insights from strategies that we couldn't trial in the real world.
— ” —





Source: Siemens

Digital-twin are new to land administration but not in other areas

Transport (Air, automotive, trains, etc)

Health (hospitals, emergency response, etc)

Utilities (water, power, TICs)

Construction (BIM, contract administration, etc)



LX 한국국토정보공사

Digital Twin
Hologram Control System



Urban Vs rural
Smart city Vs digital economy

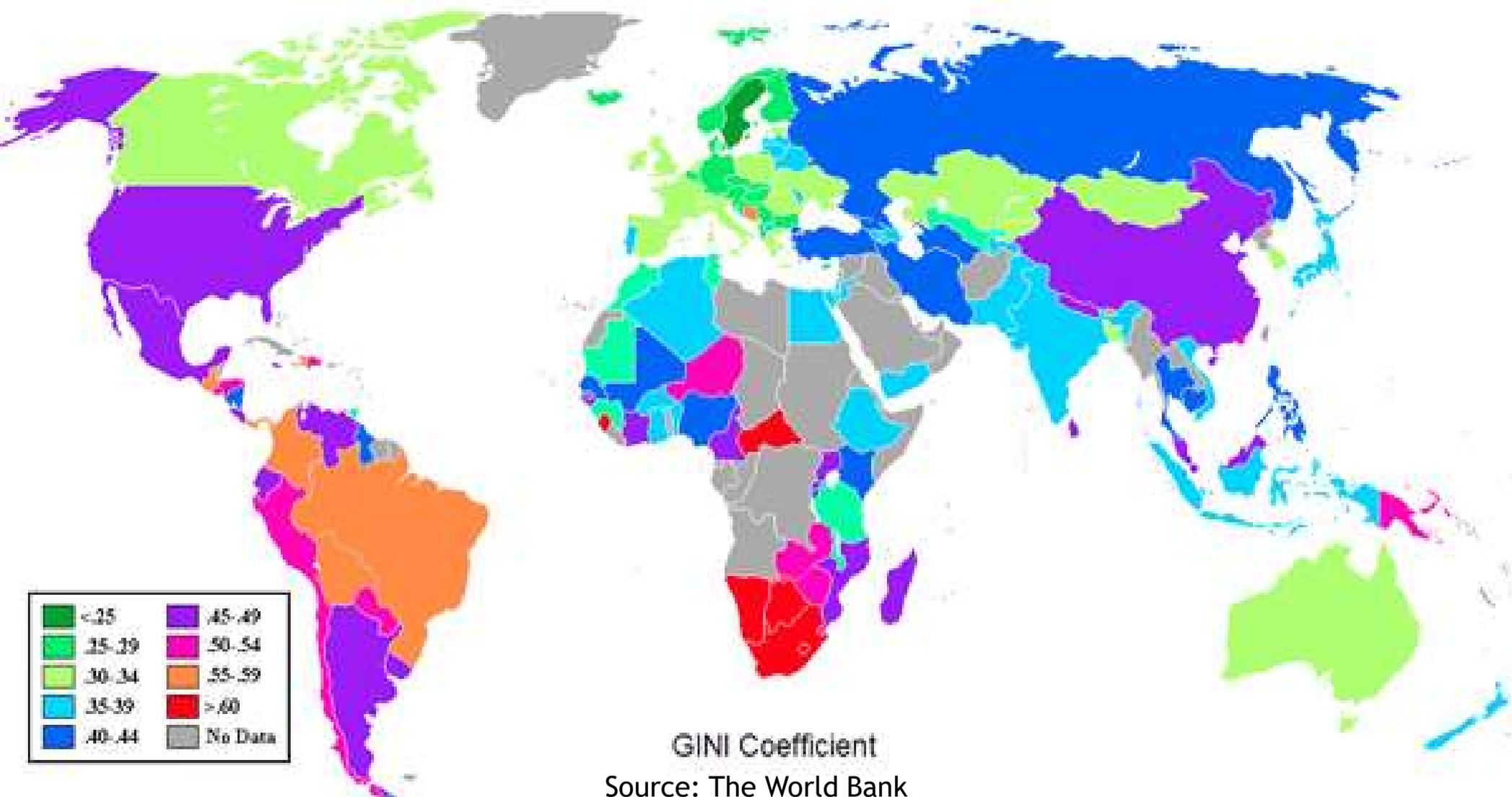
Ideas for WG2 (UNGGIM – AP)

- Publish a white-paper on digital twin for land administration
 - What is it?
 - Why is important?
 - Case studies
 - Korea
 - Australia
 - UK
 - Others..



Source: The University of Melbourne





Ideas for WG2 (UNGGIM – AP)

- Join Academic Network parallel event NYC 2020
 - Awareness raising
 - SDGs and land conflict
 - Land conflict and climate change
 - Impact of land tenure investment in reducing land conflict
- Survey/study on land conflict evolution in Asia Pacific
 - Monitoring scheme
 - Self-reporting efforts and success stories

