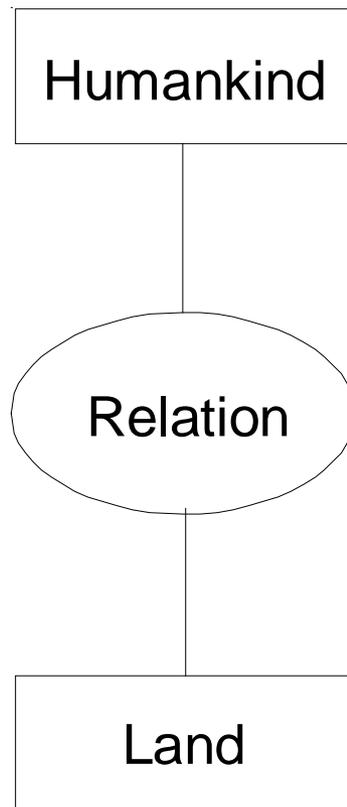# RESPONSIBLE LAND ADMINISTRATION: GEOINFORMATION AND MORE

Prof.mr.dr.ir. Jaap Zevenbergen

Professor Land Administration and Management

Head of Department PGM
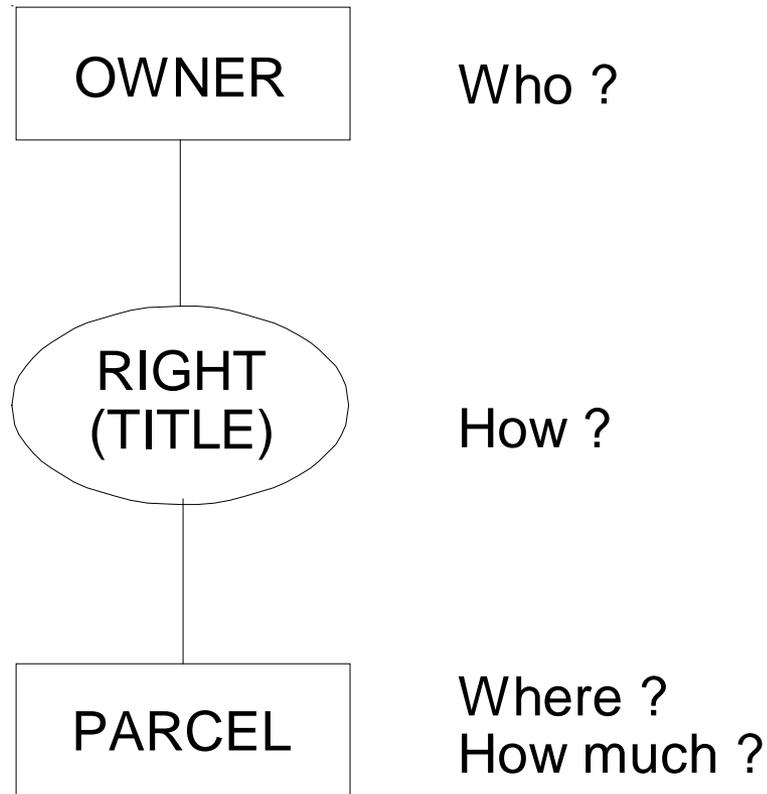
Editor in Chief Land Use Policy

LAND ADMINISTRATION
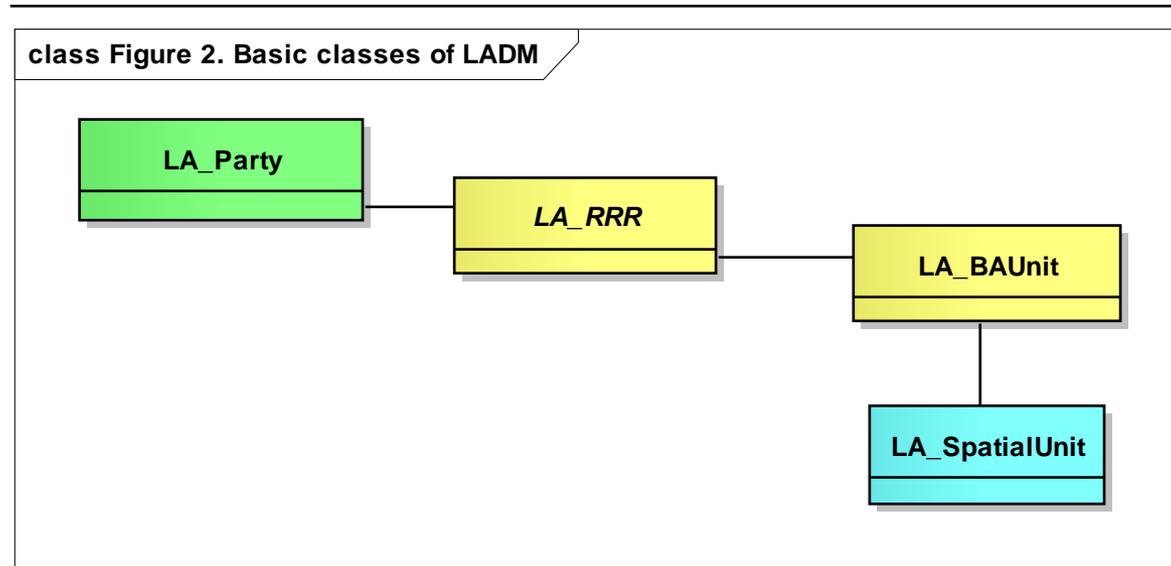
- People-to-land relationships

LAND ADMINISTRATION

- We need to **determine** the who, the how and the where !

OWNER — Who ?

RIGHT (TITLE) — How ?

PARCEL — Where ? How much ?

LAND ADMINISTRATION DOMAIN MODEL

class Figure 2. Basic classes of LADM

```
┌─────────────────┐
│    LA_Party     │
│                 │──────┐
└─────────────────┘      │
                    ┌─────────────────┐
                    │    LA_RRR       │
                    │                 │──────┐
                    └─────────────────┘      │
                                    ┌─────────────────┐
                                    │    LA_BAUnit    │
                                    │                 │
                                    └─────────────────┘
                                            │
                                    ┌─────────────────┐
                                    │  LA_SpatialUnit │
                                    │                 │
                                    └─────────────────┘
```

- ISO 19152 (2012; currently being updated)
  - 4 main entities, Spatial Unit is 1 of the 4
- RRR = Rights, restrictions and responsibilities
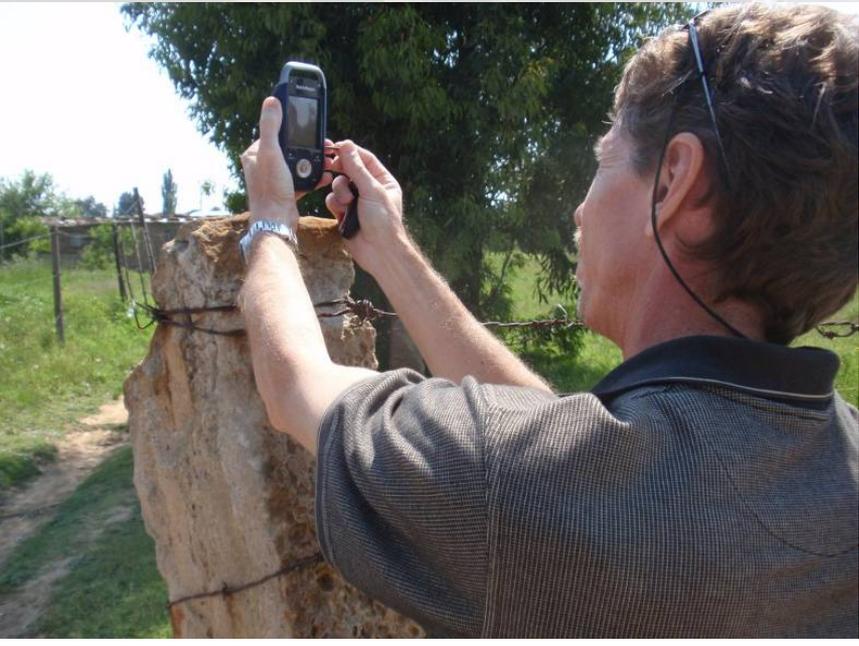 - People-to-people-to-land relationships
- Spatial Unit asks for technology

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USE OF TECHNOLOGY

- capturing the parcels and their dimensions
  - use of technology from early on

    - e.g. Plane Table →

ANALOGUE DISTANCE MEASUREMENT (RDS) NETHERLANDS, 1985

GNSS for ground control and parcel surveys

USE OF HIGH-RESOLUTION SATELLITE IMAGERY
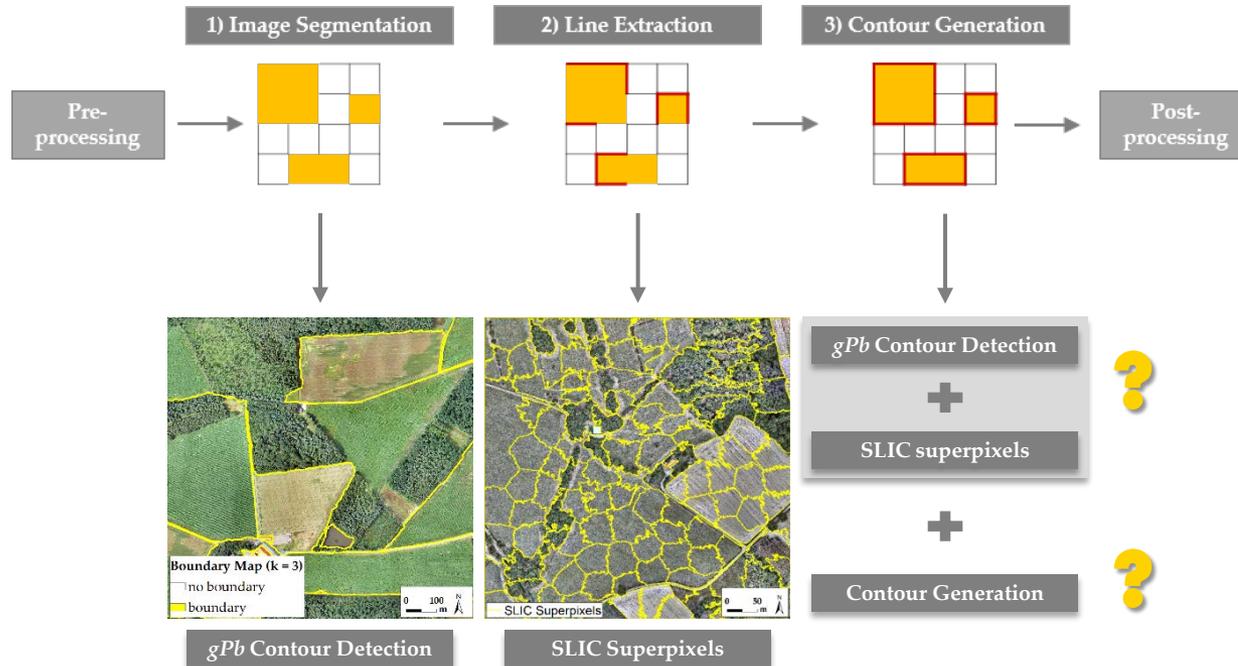
USE OF UAV TO COLLECT (LOCAL) IMAGERY

- Early work in Namibia

H2020 project: its4land

(SEMI) AUTOMATIC FEATURE EXTRACTION

- To automate Feature Extraction for UAV-based Cadastral Mapping
- H2020: Crommelinck et al 2019 – PhD defense in October
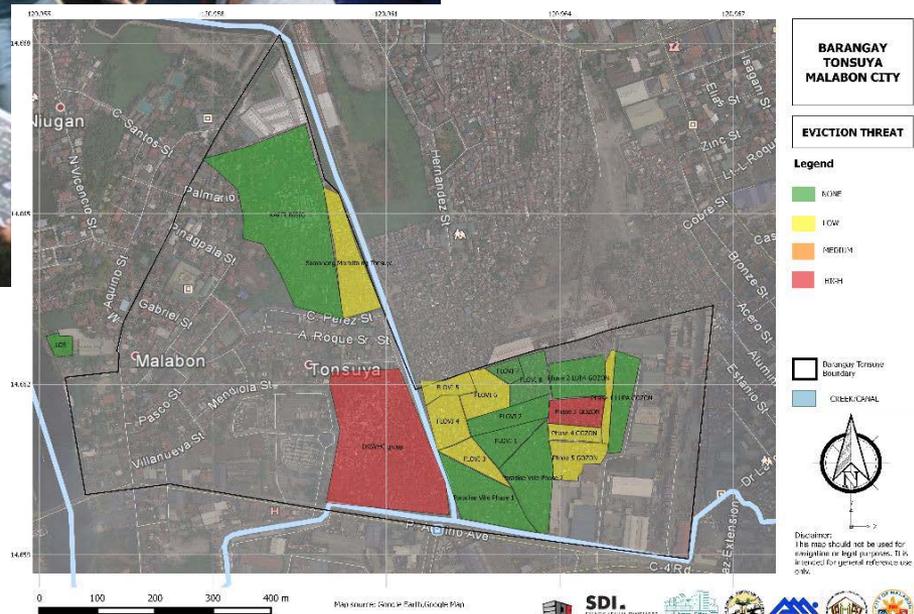
REMEMBER:

- **PEOPLE**-to-land relations

- It is about the people

- For the people

- And with the people
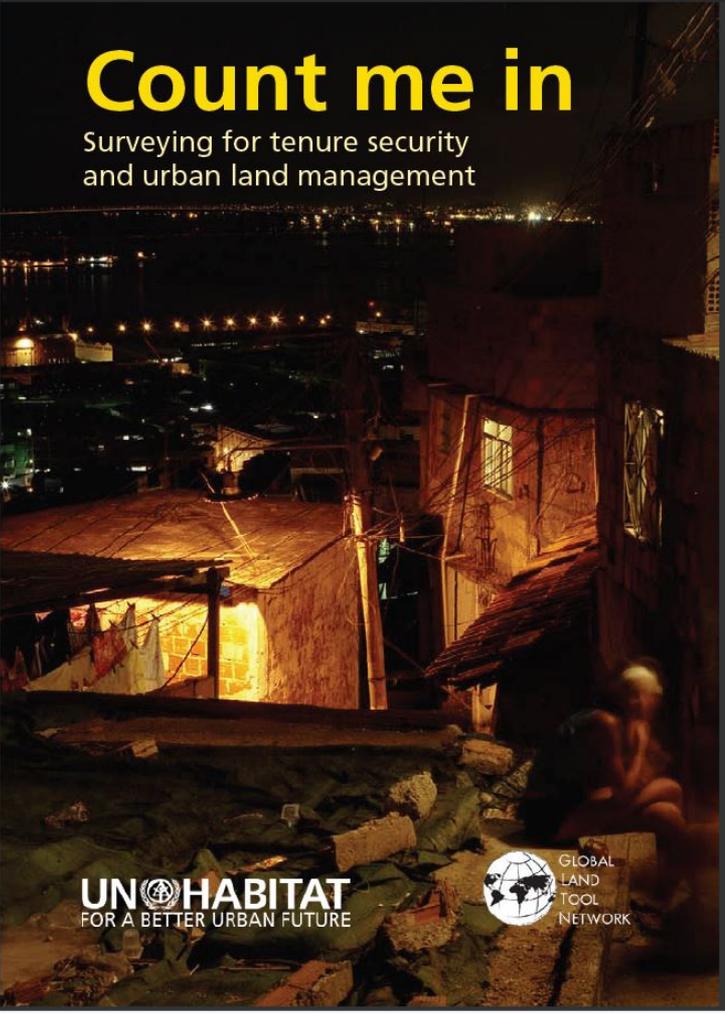
    - Participatory Processes

X

TAMPEI Philippines

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Count me in
Surveying for tenure security
and urban land management

UN@HABITAT
FOR A BETTER URBAN FUTURE

GLOBAL
LAND
TOOL
NETWORK

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HUGE DATA SETS

HUGE GEO DATA SETS

GEO

What can my data tell me about here?

Geo-ethics

What can my data tell you about me?

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THE STATE SAYS THIS A FOREST?

Georgiadou 2017

Fit-for-Purpose Land Administration – the concept
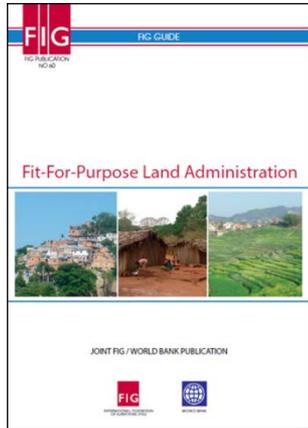
FIG pub. no. 60
2014

Spatial Framework
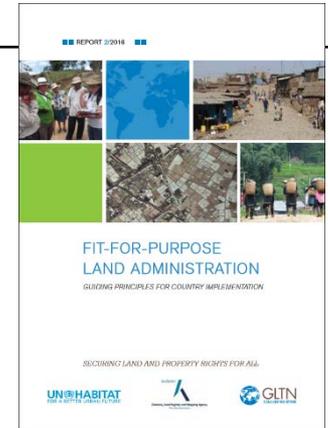
**Fit-For-Purpose
Land Administration**

GLTN Guide
2016

Legal Framework

Institutional Framework

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'SMART LAND MANAGEMENT'

- Smart land management refers to the various kinds of land governance, land policy, and administration processes

- "that use social **technologies**, volunteered geographic information, and crowd sourcing in combination with technical drivers of intelligent information systems and big, linked, and open data"

- **to drive solutions for land-related challenges**

- (Zevenbergen, de Vries and Bennett, 2016: p.274).

Advances in Responsible Land Administration

Edited by Jaap Zevenbergen
Walter De Vries • Rohan Mark Bennett
CRC Press
Taylor & Francis Group
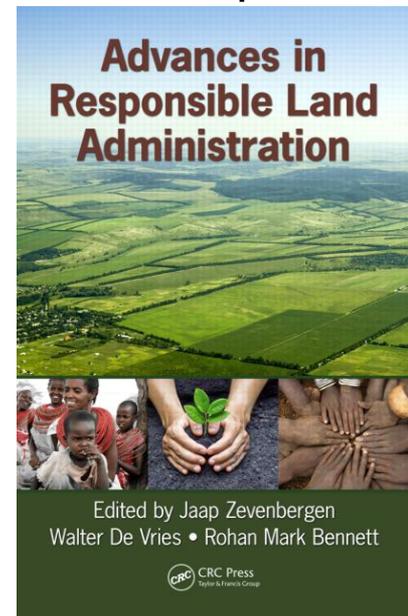
CHANGE AGENTS

- Innovative land administration can be done
  - technologically enough is already available
  - it needs esp. change of mindset
    - interdisciplinary and cross agency thinking
    - goal and client orientation, not technocratic procedures, requirements and 'mandates'
  - appropriate (post) graduate training in new ideas, but especially in **attitudes** of land professionals, which include (parts of):
    - land surveyors, lawyers, planners, valuers / real-estate economists, IT-specialists, ..
  - land professionals should "Be Part of the Solution, Not the Problem!" (FIG president in 2012)

Mulțumesc!

Smart Surveyors for Land and Water Management