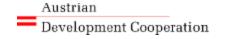
#### **L**adaster













# Unconventional approaches a point of view of land registars and land surveyors



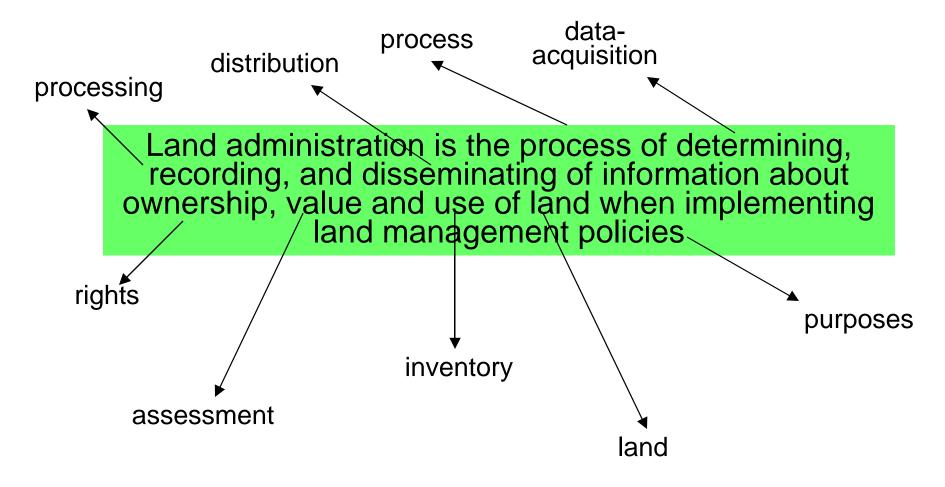
Paul van der Molen & Christiaan Lemmen
Expert Group Meeting
Nairobi 11-12 Nov 2004







### What is land administration

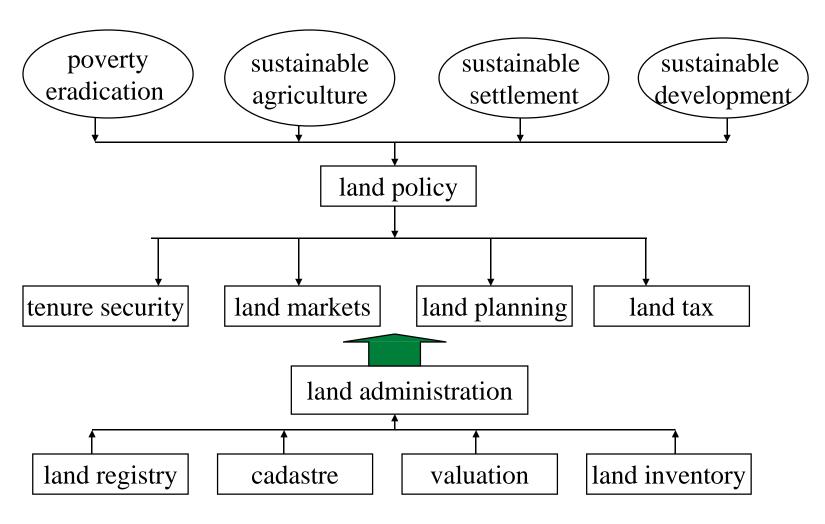


Source: UN/ECE Land Administration Guidelines 1996





### Functions of land administration: example





# **Economic justification**

Economic magnitude of land policy instruments

Investments in land administration systems

## Status of land administration systems

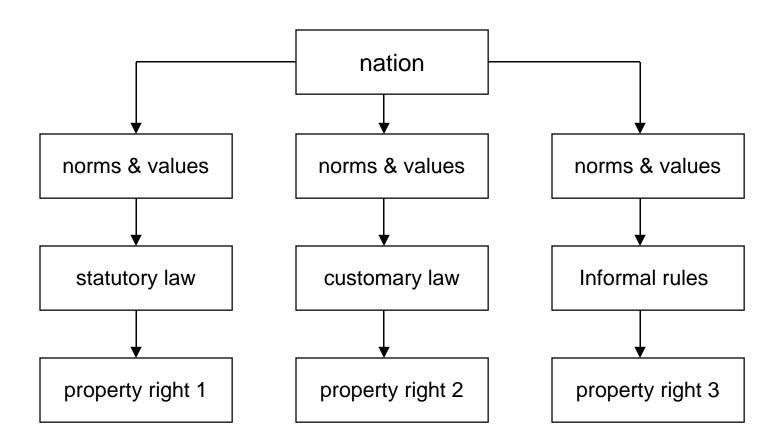
- Industrialized countries: quite OK
- Central & Eastern Europe: well up steam
- Latin America: problems with land reform
- Africa: problems with legal pluralism
- Asia/Australia: up steam

Overall: 50 (OK) - 150 (something) - 50 (not OK)



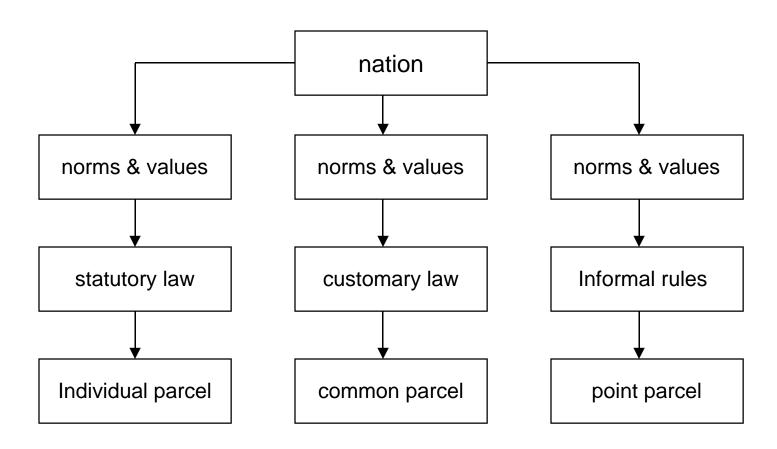


# Legal pluralism: example



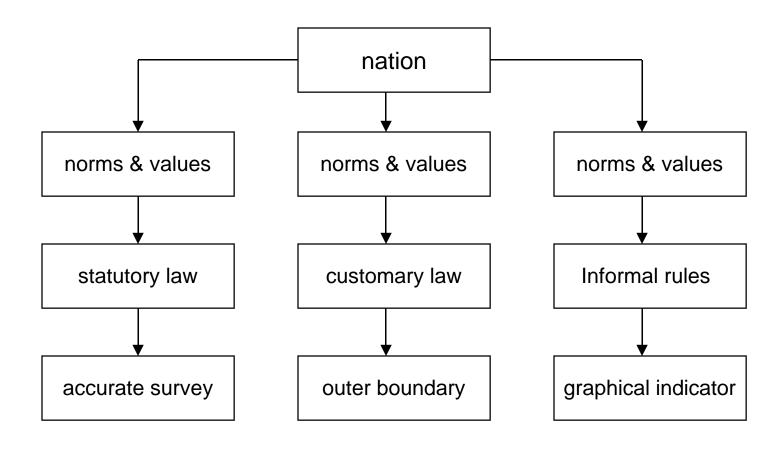


# Spatial units: example



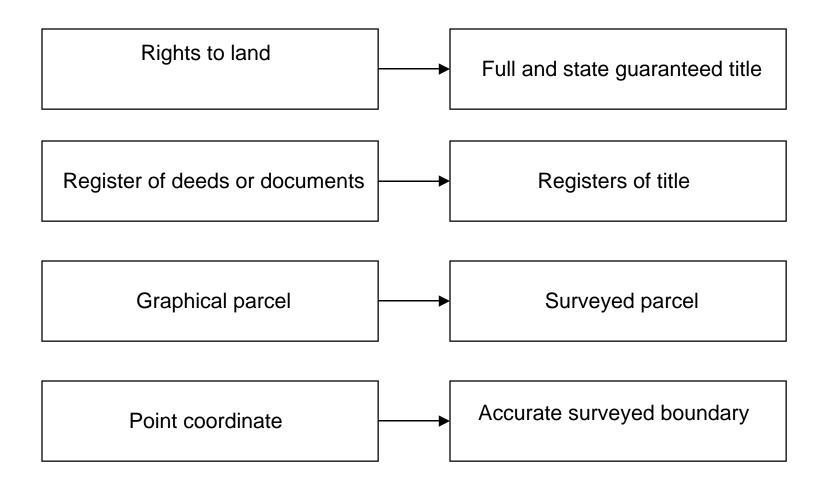


# Cadastral boundary survey: example





# **Evolutionary approach: example**



# **Technical Approaches**

- Standards
- Data Acquisition: initial and maintenance



### **Standards**

- There are supposed to be huge differences between systems
- Look to the common area's:
  - Standardised Model
  - Avoid re-inventing the wheel
  - **■** Enable involved parties to communicate

### **Basic datamodel**

- 1. Parcel
- 2. Apartment
- 3. Building
- 4. Spatial Unit

One Point

Lines

Polygon (low accuracy)

Polygon (high accuracy)

Qualilty labels

- 1. Formal Ownership
- 2. Customary
- 3. Indigenous
- 4. Tenancy
- 5. Starter, landhold, freehold
- 6. Possession
- 7. Mortgage
- 8. Usufruct
- 9. Long Lease
- 10. Restriction Type 1
- 11. Restriction Type 2
- 12. State
- 13. Informal
- 14. Unknown
- 15. Disagreement
- 16. Occupation
- 17. Uncontrolled privatisation
- 18. Conflict

1. Natural Person

- 2. Company
- 3. Municipality
- 4. Co-operation
- 5. Group
- 6. Ministry

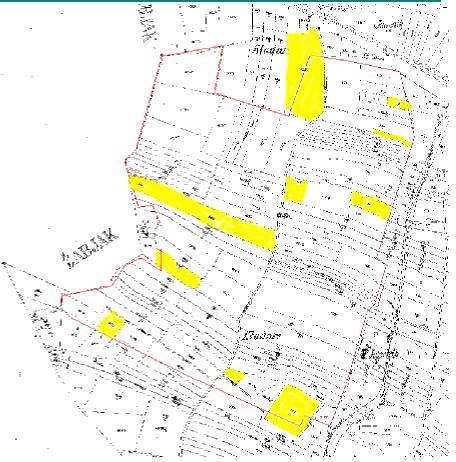
Biometric identification

Overlap

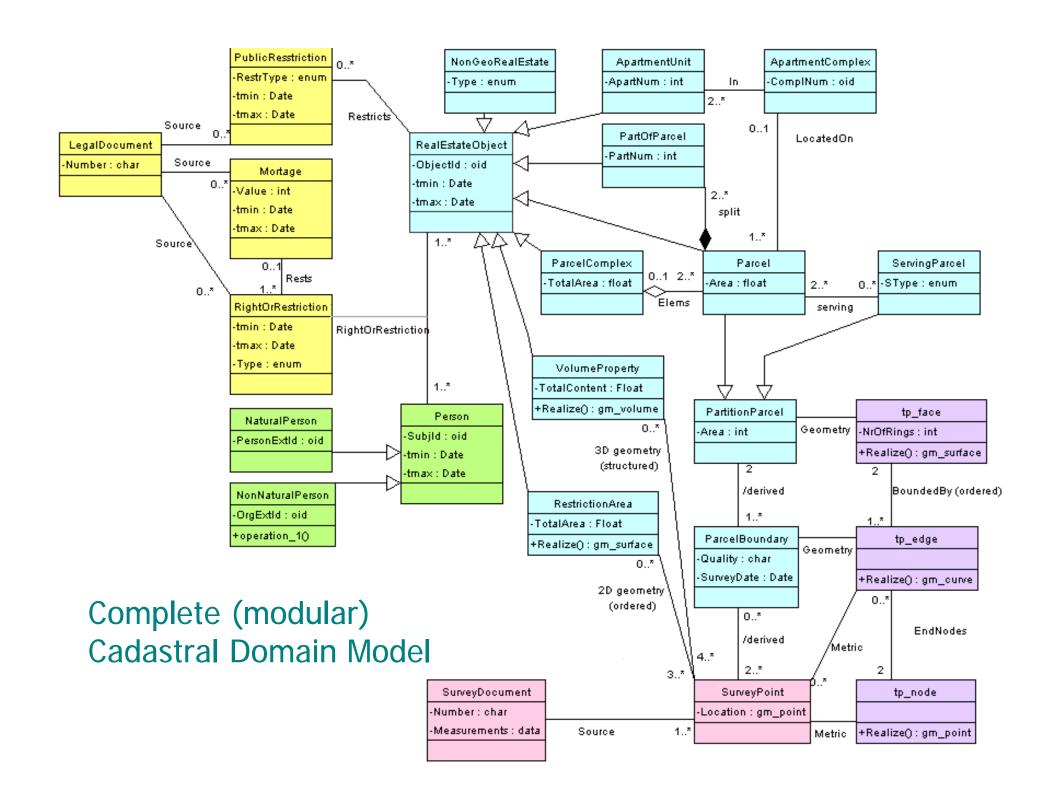
#### Situation in field

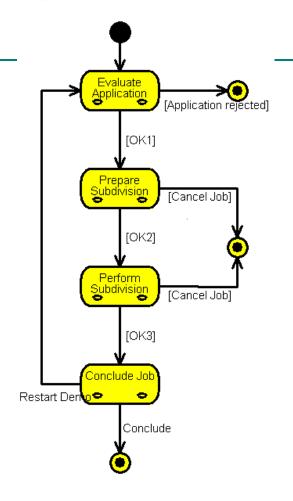
#### Situation on Cadastral map





Parcels with unsolved ownership





### **Work Flow**

- Guides User through all steps in a Job
- **☑** Controls the Work Process
- Includes manual- & automated steps

Interorganisational workflows

Again: standards to be developed



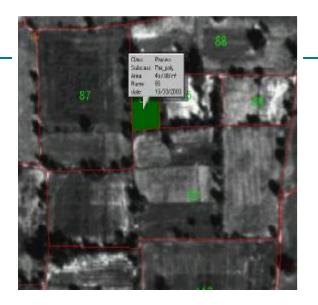
## **Data Acquisition**

- Different accuracy in different area's
- It should be more easy to combine different data acquisition methods with available data sources
- Lidar, Ikonos, Quickbird, GPS, Galileo, Cyclomedia, Tape measurements, Total stations, Ortho Photo's, Aerial Photographs
- Source documents
- WGS/UTM
- No monumentation

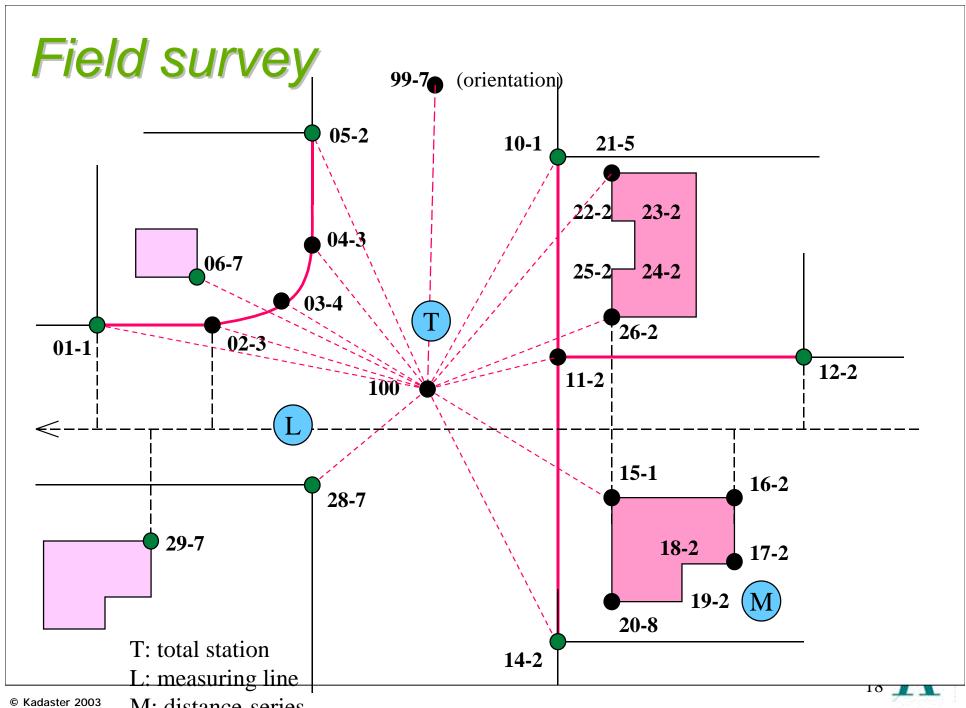




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M: distance-series

Organisation, network, cadastral data exchange

