

# FIG WORKING WEEK 2017

Surveying the world of tomorrow -

Helsinki Finland 29 May - 2 June 2017

From digitalisation to augmented reality

## STDM Concepts and Rationale

**Social Tenure Domain Model Development Innovations  
(FIG YSN & UN-Habitat GLTN)**

**Helsinki – Finland**

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## Rationale

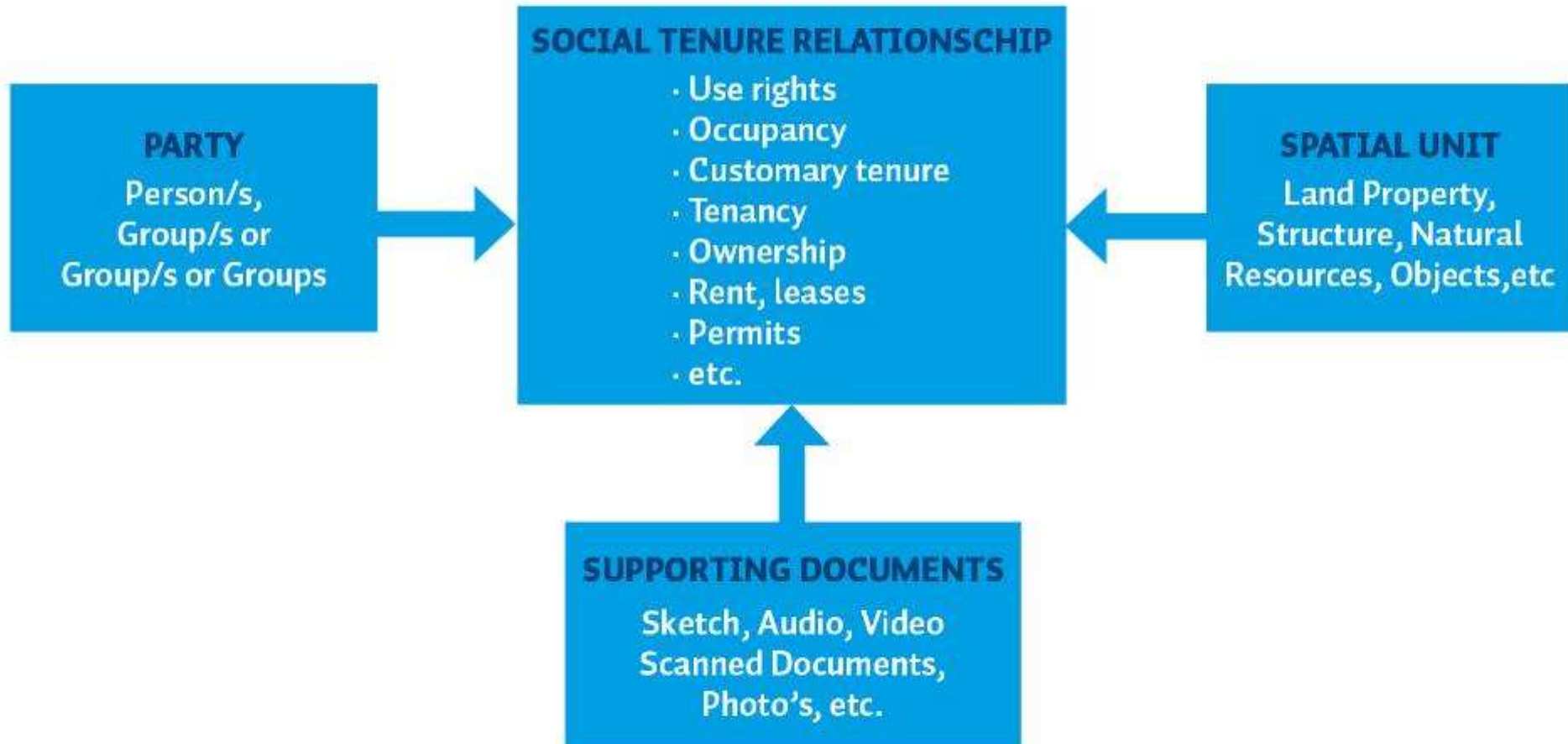
- large portions of land remain untitled in developing countries
- less than 30% of cadastral coverage conforming to the situation on the ground
- where there is little land information, there is little land management
- conventional land information systems cannot adequately serve areas that do not conform to the land parcel approach applied in the developed world
- a more flexible system is needed for identifying the various kinds of land tenure in informal settlements
- this system has to be based on a global standard and has to be manageable by the local community itself
- enter the social tenure domain model



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# STDM Conceptual Model



# Mashimoni No. 10 (Nairobi)

- Mashimoni No. 10 (Nairobi) has been identified as a potential beneficiary for tenure regularization under KISIP
- The Mnazi Moja residents are facing eviction threats from private developers
- Both communities used the data captured in STDM to advocate for their tenure rights





# A community driven land Information System in Mashimoni

The screenshot displays a software interface for a community-driven land information system. A window titled "Persons Records Manager - 1360 rows" is overlaid on a map. The window contains a table of person records and a search filter.

Family Name /	Other Names	Address	Identification	Contact Telephone	Age	Gender	Spatial Unit Id
Abednego	Atonya						MMN10/D/034B
Abega Abega	Eliud						MMN10/D/03...
Aboko	Benson						MMN10/E/054B
Aboso Peter	Jane						MMN10/B/085A
Acharia Kamau	Tony						MMN10/F/040A
Achayo	Emily						MMN10/D/006A
Achieng	Gladys						MMN10/A/065B
Achieng Othambo	Evelyne						MMN10/B/069F
Achieng Okoth	Judith						MMN10/C/05...
Achieng Omond	Lesh						MMN10/B/014A
Achieng Ouma	Esther						MMN10/D/050B
Achieng Ouma	Esther						MMN10/B/043C

Below the table, there is a search filter: "Look For" with a text input field containing "Type the filter keyword here...", and a dropdown menu for "In Column" set to "Family Name". A "Close" button is located at the bottom right of the window.

The background map shows a grid of land parcels outlined in red. Labels on the map include: MMN10/B/068C, MMN10/B/068B, MMN10/B/053D, MMN10/B/053A, MMN10/B/053B, MMN10/B/051D, MMN10/A/054B, MMN10/B/052D, MMN10/A/052A, MMN10/B/045C, and MMN10/A/045B.

At the bottom of the interface, there are buttons for "Calculate", "Export", "Clear", and "Help".

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# Training



# Community Resource Centres



# Data Collection



# Continuous updating of the data



# STDM Software

- A plugin for QGIS, open source software
- Can capture relationships between people and spatial units
- Developed by UN-HABITAT/GLTN, University of Twente, International Federation of Surveyors (FIG) among others
- Based on global standard (LADM)
- Facilitate the recording of all forms of land rights and claims
- It captures access rights instead of ownership rights only
- Encourages participation and transparency
- Complements other tools and development interventions
- Empowers poor communities and non-technical land stakeholders
- For informal settlements, it provides a record account of structure ownership and land ownership in a bid to prevent land related conflicts in the informal settlements



# Achievements

- Communities embraced STDM and appreciated to have a digital data base
- STDM able to capture social tenure relationships in slum settlements
- Has facilitated securing of women/widows rights to land
- Helped in resettling community members in cases of fire outbreaks
- Community able to update and manage their data in the STDM framework and to train members from other communities
- Communities used the information in the data base for land tenure negotiation
- Village leaders use the generated STDM report for their work
- Community members got to know each other better
- Many land sector stakeholders acknowledged STDMs capacity of capturing tenure situations in informal settlements
- Mombasa County Government carried out resettlement exercise in STDM framework
- NLC planning for STDM workshop



# Conclusions by the users

- STDM is able to capture the complex tenure situations of informal settlements among others
- STDM is “fit for purpose”. It can be customized to meet various needs, e.g. resettlement, planning for service delivery or census of residents
- The STDM approach is easier, faster and more flexible than conventional surveying methods
- Sensitization of communities on the ground is crucial to make them understand and appreciate the STDM approach
- Participation of the community in data collection, verification and management is crucial for the quality of data and implementation of further plans based on the data
- Regular data verifications and updates are important
- Success and acceptance of STDM depend on political/ administrative goodwill and appreciation of community





# amsterdam

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**WORKING WEEK 2020**

**MAY 9 – MAY 15**



**Smart Surveyors for Land  
and Water Management**

