



# FIG WORKING WEEK 2023

28 May - 1 June 2023 Orlando Florida USA

Protecting  
Our World,  
Conquering  
New Frontiers

Presented at the FIG Working Week 2023,  
28 May - 1 June 2023 in Orlando, Florida, USA

# LELA-Based Geospatial Knowledge Infrastructure

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# Overview

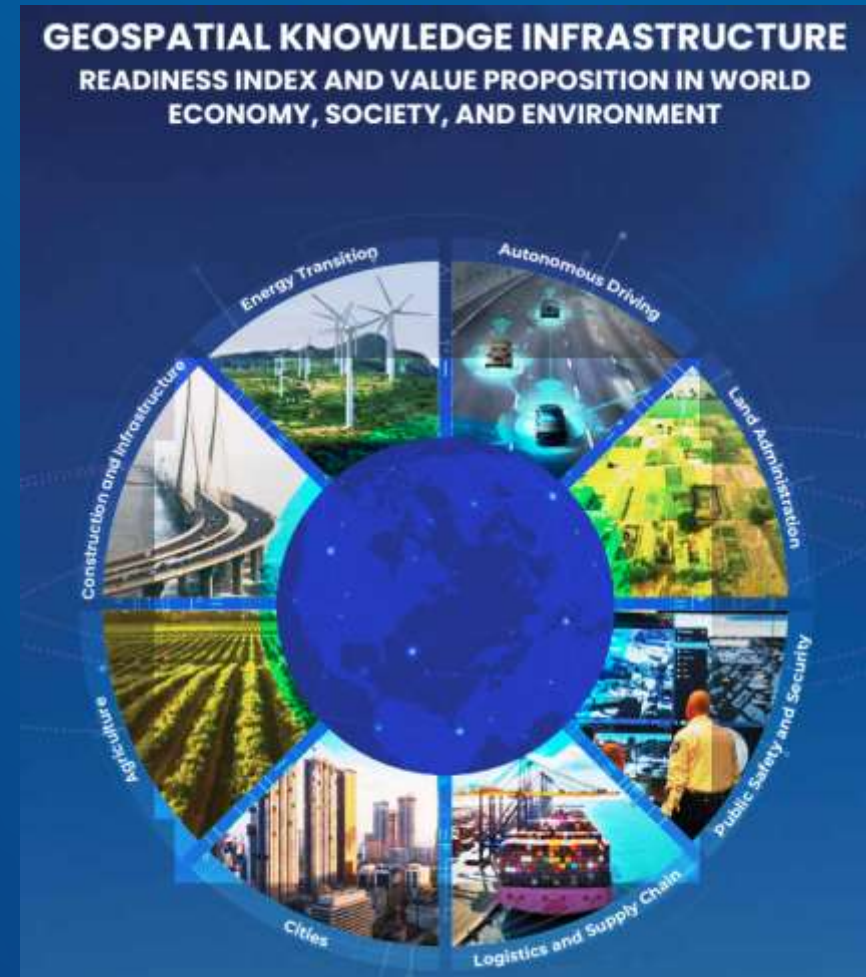
- 1 Intro**
- 2 What's there (FELA, FFP, LADM)**
- 3 Who should contribute**
- 4 Components of FELA helpful in GKI**
- 5 Geospatial software tools**
- 6 GKI related to FELA**
- 7 Conclusions**

# Geospatial Knowledge Infrastructure; Geospatial Readiness Report

## *Two Key Findings*

- 1. Trusted and authoritative foundation data (such as Cadastre)**
- 2. Technology architecture to make this data available for use**

*We need a Geospatial Knowledge Infrastructure on Land Administration to support these two things!*



# Geospatial Knowledge Infrastructure on Land Administration

**Knowledge sharing space**

**Good land administration practices**

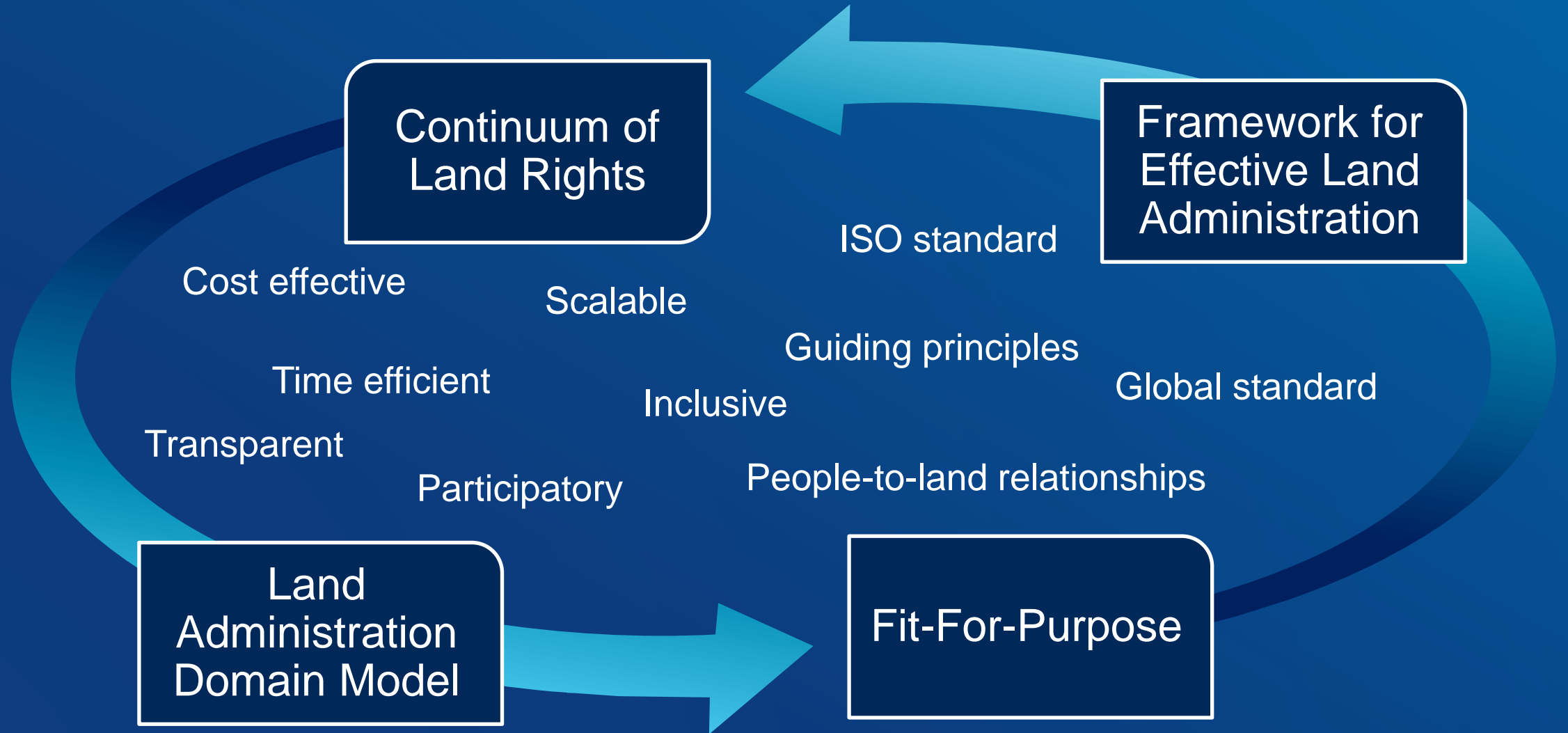
**Successful technical operationalization**

**Continual knowledge sharing and contribution**

# Geospatial Knowledge Infrastructure on Land Administration

Internationally established and agreed upon evaluation, recordation, and tenure security standards should be supported by scalable technical solutions for the development of transparent, trustworthy, secure, and inclusive LASs.

# The Need for Land Administration



# Components of FELA-Based Knowledge Infrastructure



# Components of FELA-Based Knowledge Infrastructure



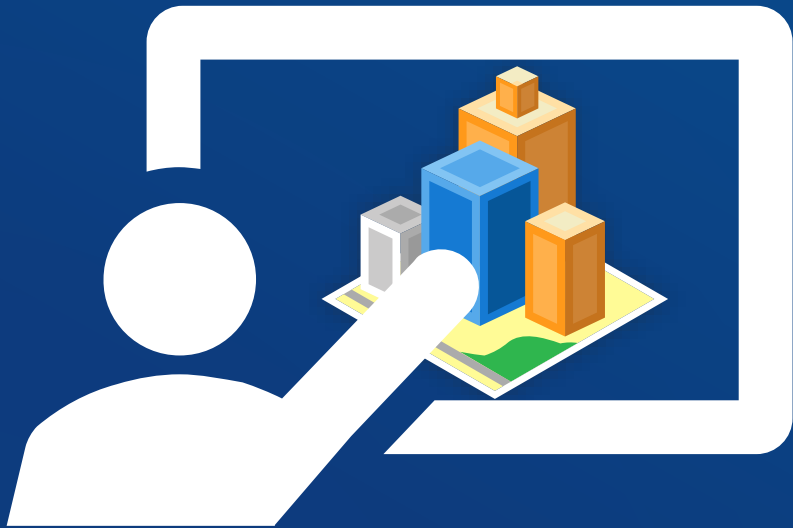
Communities of Practice



Conferences & Events



# Components of FELA-Based Knowledge Infrastructure



Training and Capacity  
Building Opportunities



Geospatial Software  
Tools



# Components of FELA-Based Knowledge Infrastructure

Communities of Practice





# Components of FELA based Knowledge Infrastructure

Communities of Practice



Registries



Tenure  
Security



Parcel  
Management



Spatial Data  
Infrastructure



# Components of FELA-Based Knowledge Infrastructure

Communities of Practice



LANDac



Technische Universität München



Utrecht University



CIFOR



WAGENINGEN  
UNIVERSITY & RESEARCH

LANDLINKS



GLTN  
GLOBAL LAND TOOL NETWORK



Food and Agriculture Organization  
of the United Nations

FAO elearning Academy

SDGacademy



# Components of FELA-Based Knowledge Infrastructure

Communities of Practice



Young Surveyors  
Network



Esri User Community  
for Geospatial  
Authorities



# Components of FELA-Based Knowledge Infrastructure

Conferences & Events

**FIG WORKING WEEK 2023**  
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FIG Working Week 2023

NSPS

*Protecting Our World, Conquering New Frontiers*

Organization of American States

More rights for more people

**GWFF 2023**  
GEOSPATIAL WORLD FORUM

**Esri User Conference**





# Components of FELA-Based Knowledge Infrastructure

Training and Capacity Building Opportunities

## Land Administration Modernization | Curriculum

This site contains hands-on tutorials, blogs, and videos to help land administration agencies modernize their workflows. Covering every stage of the process, these tutorials teach you how to plan your work, conduct field collection, monitor your operations, and disseminate your authoritative data, all using ArcGIS. The tutorials also explain fundamental GIS concepts and cover multiple ArcGIS software products





# Components of FELA-Based Knowledge Infrastructure

## Geospatial Software Tools

System of Insight  
(Analytics)



System of Engagement  
(Apps and Maps)



System of Record  
(Transactions)



*Bringing Together Systems, Workflows and Content*





# Components of FELA-Based Knowledge Infrastructure

Geospatial Software Tools

*Field Operations*



*Parcel Management*



*Land Use Planning*



*Property Valuation*



*Stakeholder Engagement*



Collect



Manage



Analyze



Share



# Components of FELA-Based Knowledge Infrastructure

## Geospatial Software Tools



Image Classification from Street-Level Photos

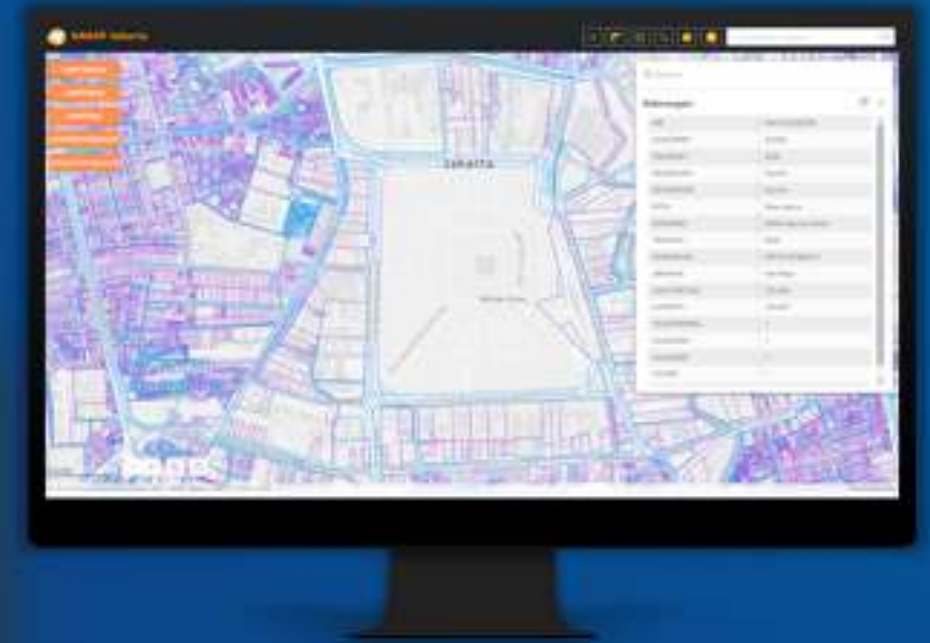


Photo Survey App



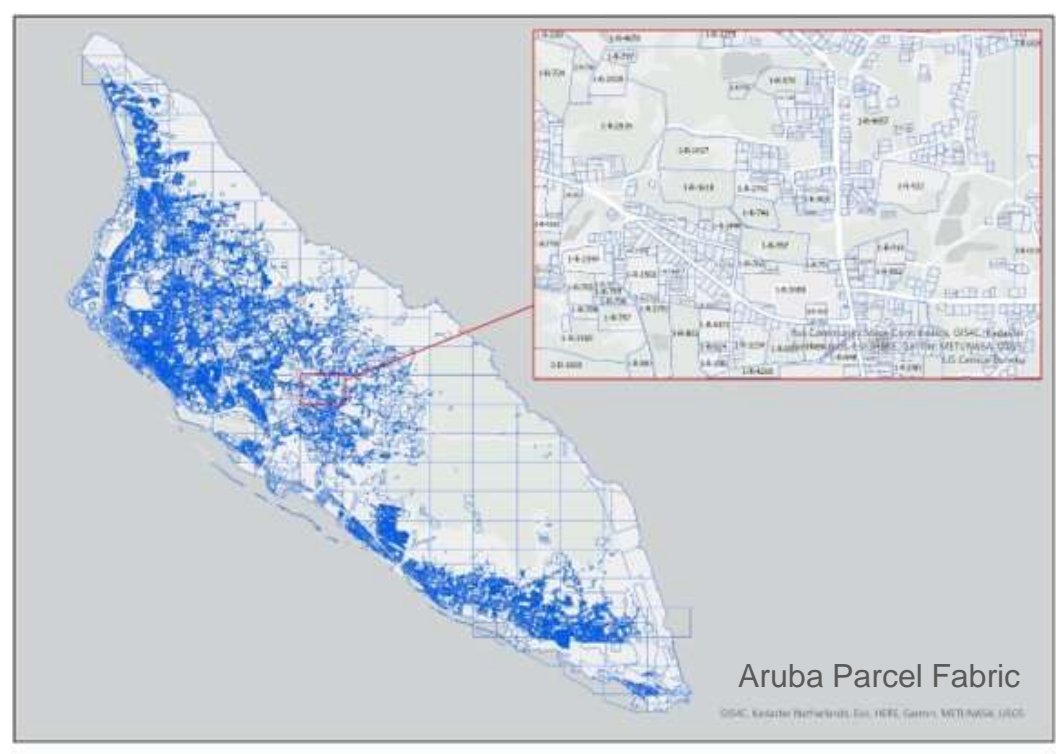
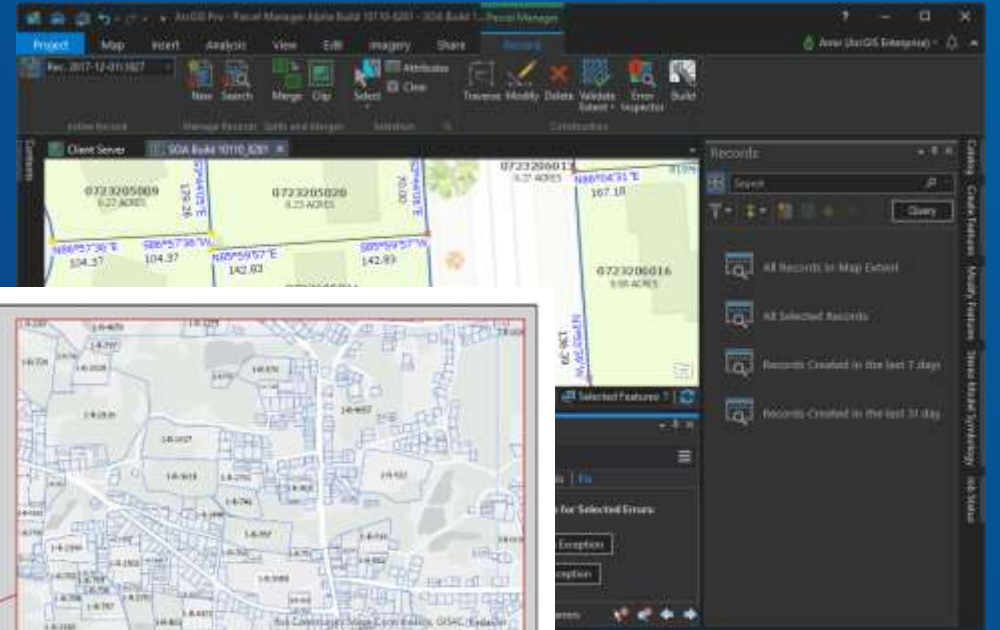
Feature Extraction for Tax Assessment

KAKAP Jakarta Web Viewer





# Expertise captured in the Parcel Fabric



Aruba Parcel Fabric

OSAC, Kantar Barthelme, Esri, HERE, Garmin, Mapbox, UCC

# Where next?



Standards &  
Frameworks

Multi-level  
contexts

Communities  
of Practice

Conferences  
& Events

Training &  
Capacity  
Building

Scalable  
Technical  
Solutions

Knowledge  
Sharing  
Space



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SCIENCE  
OF  
WHERE**<sup>®</sup>