



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

FIG WORKING WEEK 2023

28 May - 1 June 2023 Orlando Florida USA

Protecting
Our World,
Conquering
New Frontiers

Decision support for the practical implementation of land administration systems

Kees de Zeeuw & Brent Jones - Esri
TS07J: 11.30 – 13.00, June 1, 2023



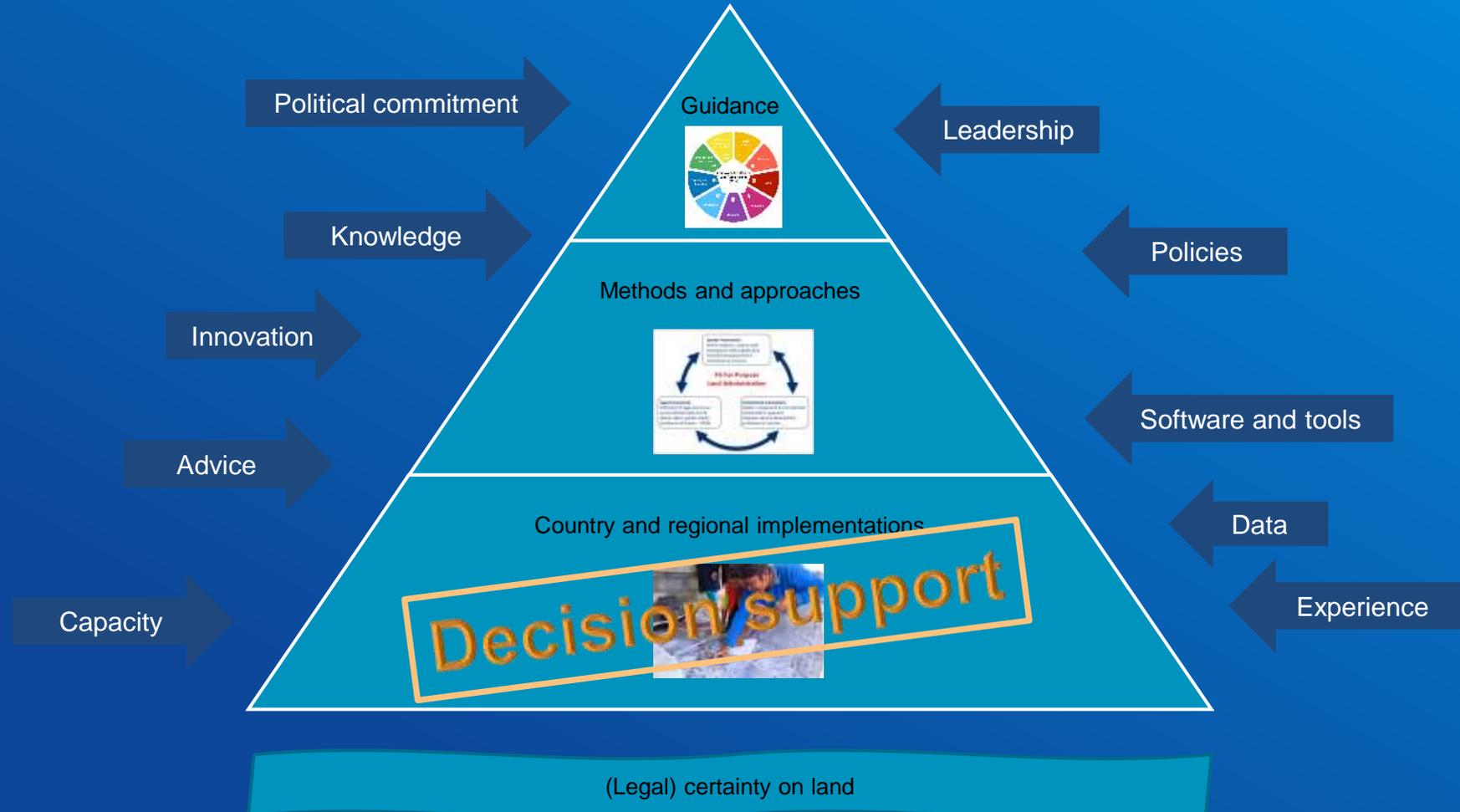
Organized By



Diamond Sponsors

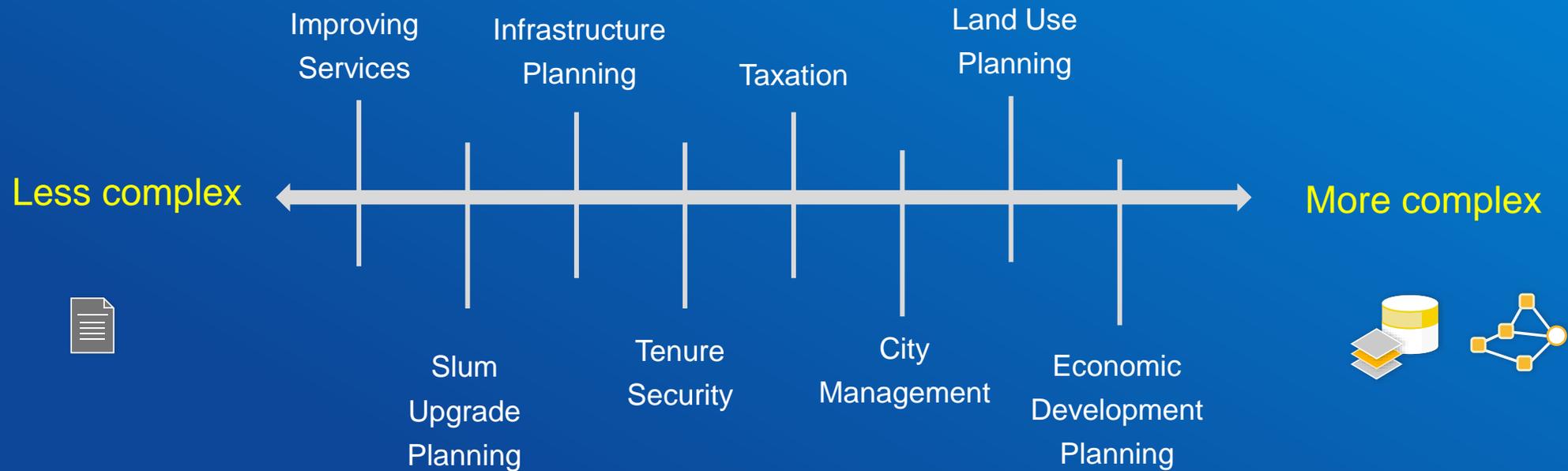


Decision Support in Land Administration



Fit for Purpose Implementations

- Consider the geospatial, legal and institutional context



Evolvable Fit for Purpose Systems



Less complex



More complex

Scalability and innovation



Land Administration Integration

- Link the past, present, and future
- First time registration, transactions and system upgrade
- Part of a National Spatial Data Infrastructure (NSDI)



Decision Support in Land Administration Implementations

- Design choices
- IT Solutions in practice
- Architecture and infrastructure
- Using GIS



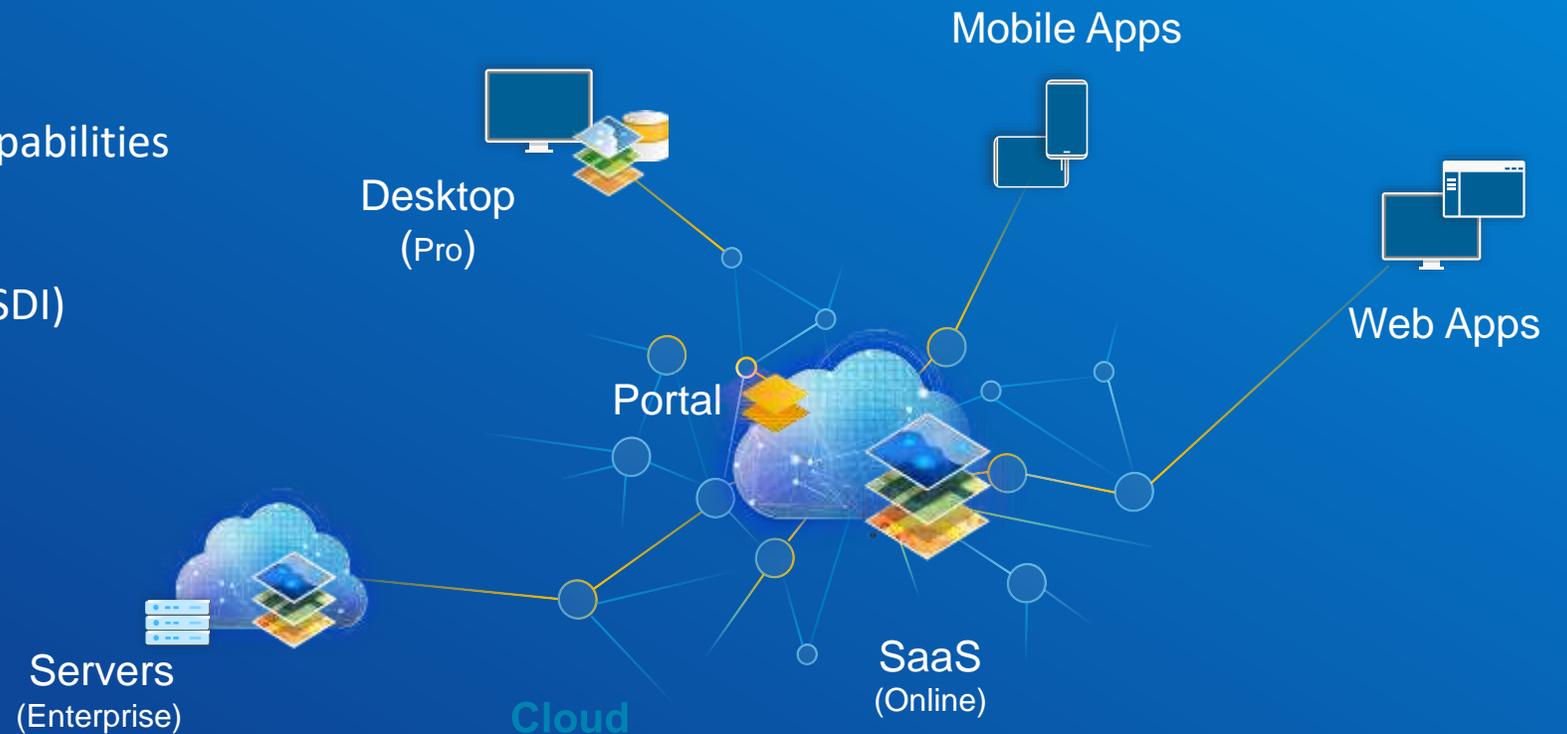
Land Administration Design Choices

- Make it sustainable (operations, technique, and finance)
- Use a business model
- Be innovative and current
- Make it futureproof (AI, 3D) but not futuristic
- FFP data acquisition
- Make it evolvable and expandable
- Learn to and from others
- Cooperate and share (GKI of LA)

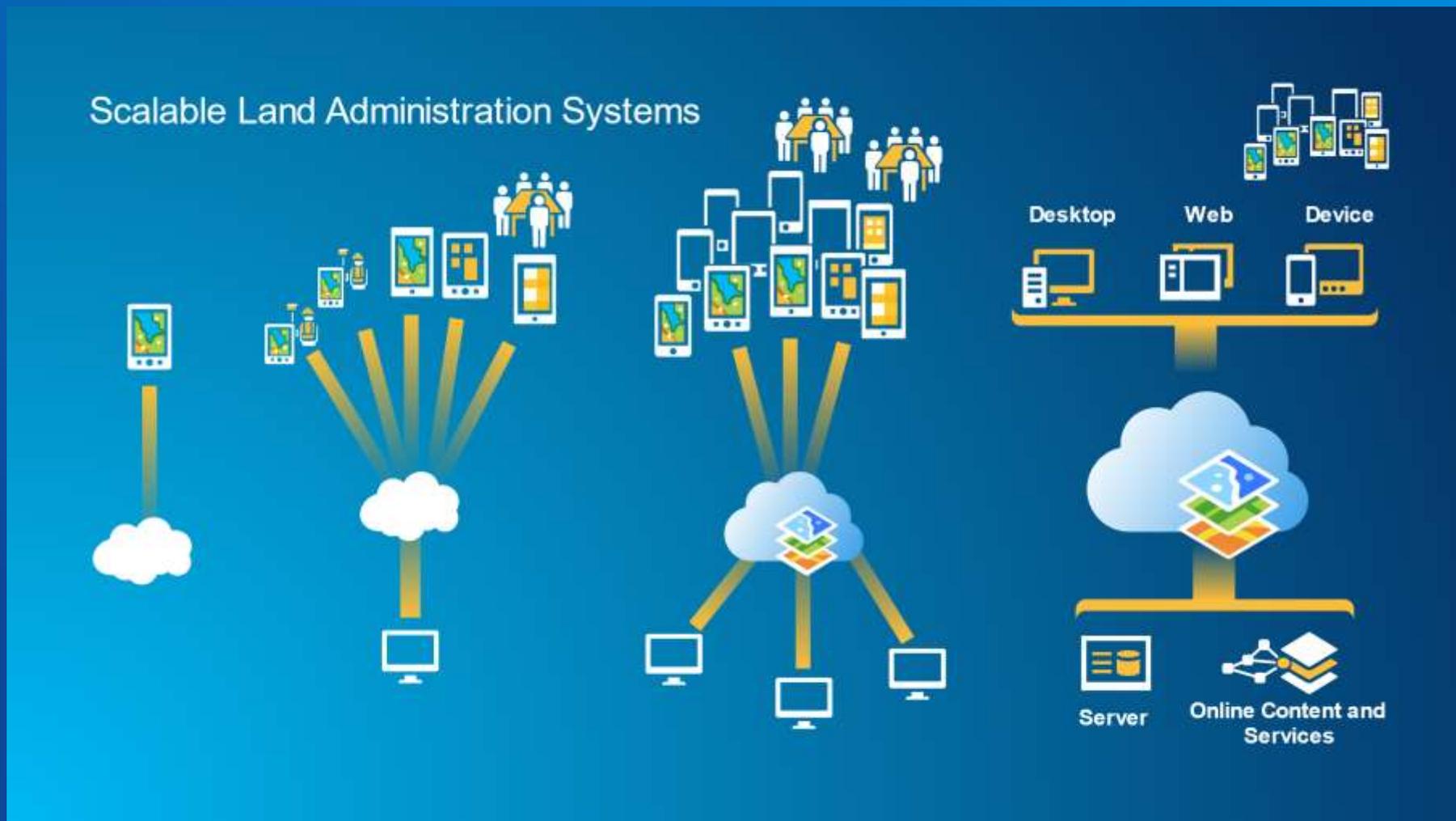


The right architecture and infrastructure

- Integrated registries and maps
- Scalable (performance, number of records, workflows and capabilities)
- Versioning (past, present, future)
- Use of standards (OGC, ISO, LADM)
- ETL (Extract, Transform and Load) capabilities
- Interoperability
- Evolvable (multipurpose cadaster, NSDI)



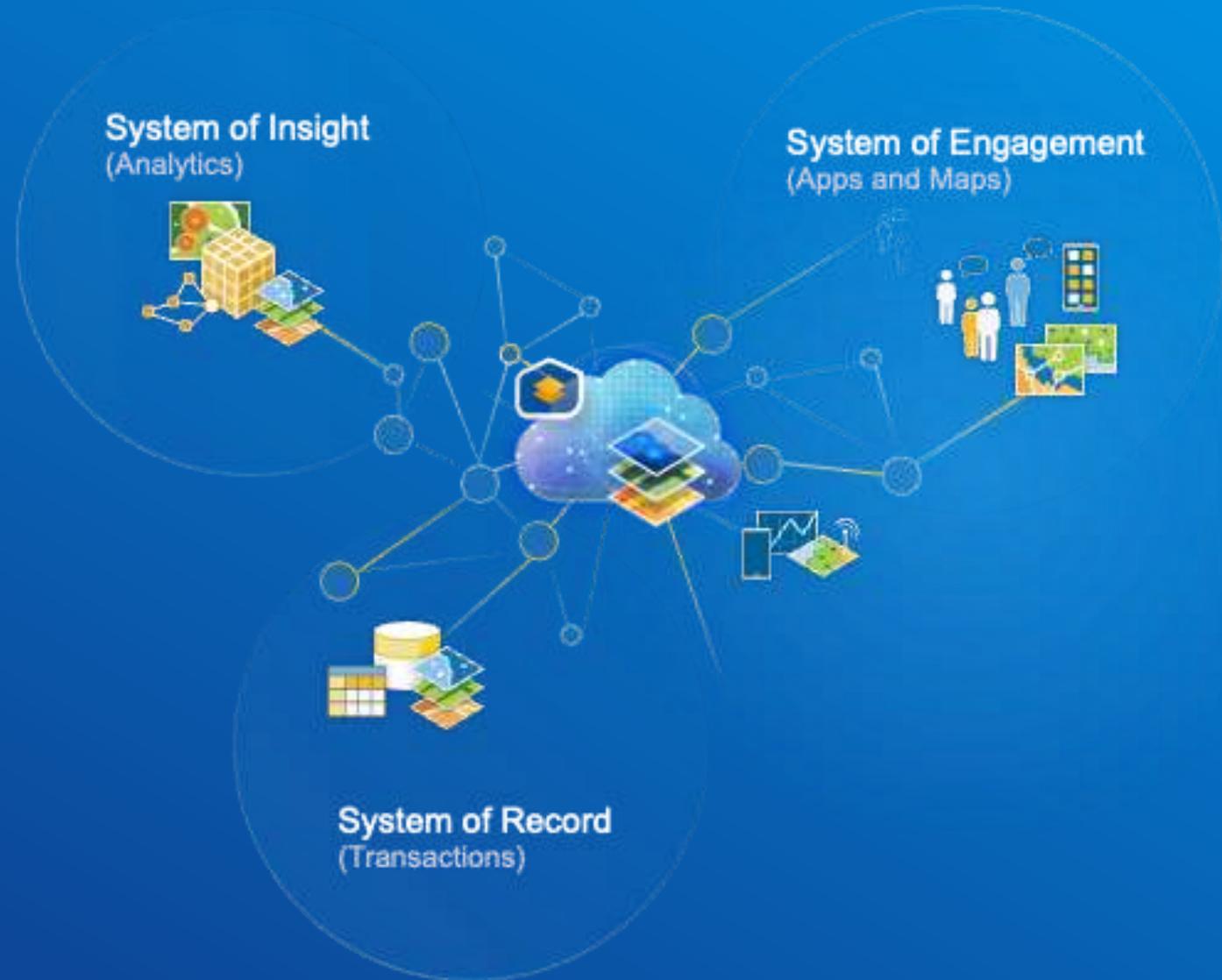
The Use of GIS



GIS Solutions

ArcGIS:

- Parcel Fabric
- Survey123
- Fieldmaps
- Enterprise Architecture
- Workflow Manager
- Etc.



Land Administration Solution Areas and Workflows

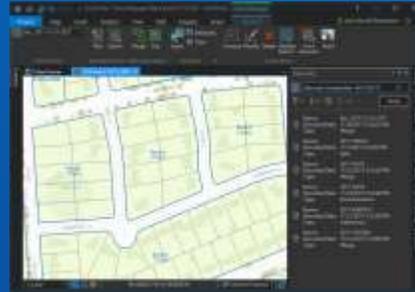


Field Operations



- Fit for Purpose, LADM
- First registration
- Workforce Management
- Field capture of parcels and attributes
- Drone imagery

Parcel Management



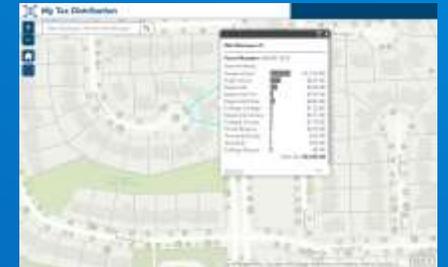
- Parcel Fabric in Pro
- Built in quality management
- Parcel history
- Spatial adjustment

Property Valuation



- Geo-enrichment
- Data visualization and exploration
- Spatial Modeling & Value Prediction

Stakeholder Engagement



- Open data and SDI
- Community engagement
- Public-facing maps & apps

Take-aways on Decision Support

- Use of existing guidelines and approaches: FELA, Fit for Purpose, LADM
- IT solution, architecture and infrastructure should be designed scalable, sustainable and affordable (long term objectives)
- Use of GIS for system of records, insight and engagement



FIG role:

Geospatial Knowledge Infrastructure
for Decision Support in Implementations





esri®

THE
SCIENCE
OF
WHERE®

