

Use of Spatial & Surveying Representation Sub- Package of the LADM in Modelling Customary Land Data

57th ANNUAL SURVEY CONGRESS 2025

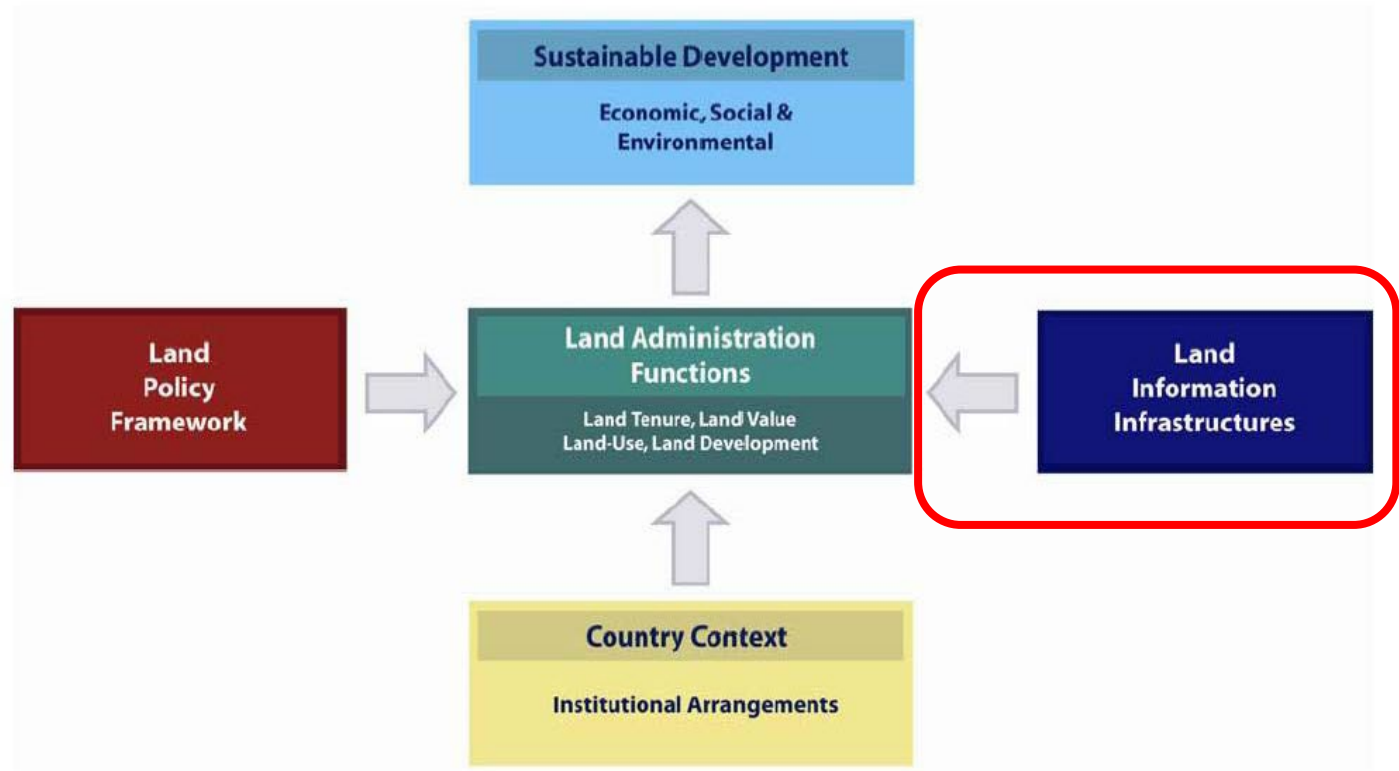
Theme: “Traversing the Future: An Evolutionary Look at the
Survey Industry – Past, Present and Future”

Wycliffe Antonio

Land Management Paradigm

❑ Land Administration Systems (LAS)

- Essential for sustainable development.
- Provide a framework for managing land resources in a balanced manner.
 - **Social,**
 - **Economic, and**
 - **Environmental needs,**
 - **while promoting Good Governance.**

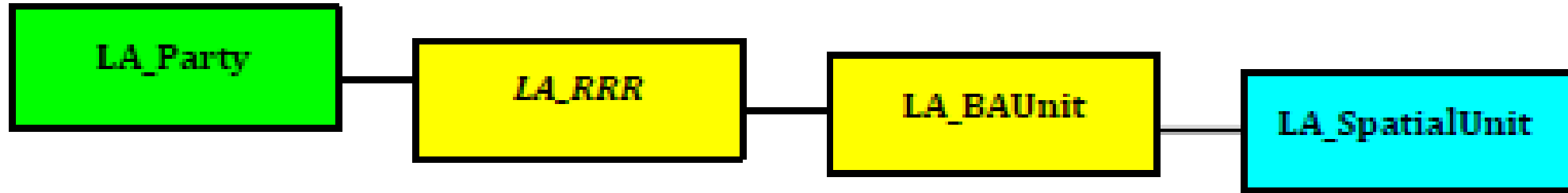


LAND MANAGEMENT PARADIGM (Enemark, 2005)

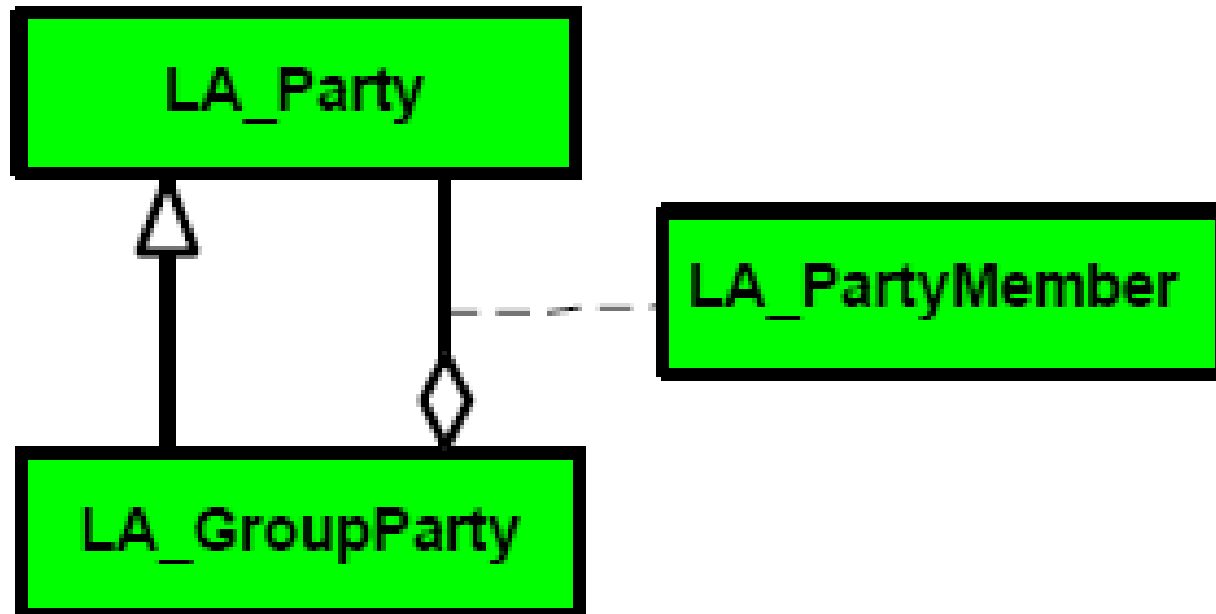
Land Administration Domain Model (LADM)

- ❑ **An International Standard published by International Organisation for Standardization (ISO) as ISO 19152**
 - **Universal information model covering basic model information-related components of land administration**
 - **Captures the semantics of the land administration domain**
 - **Provides common language for domain experts as well as policy and automation experts**
 - **Implementations all over the world**
- ❑ **First Edition in 2012 – focused on Land Tenure**

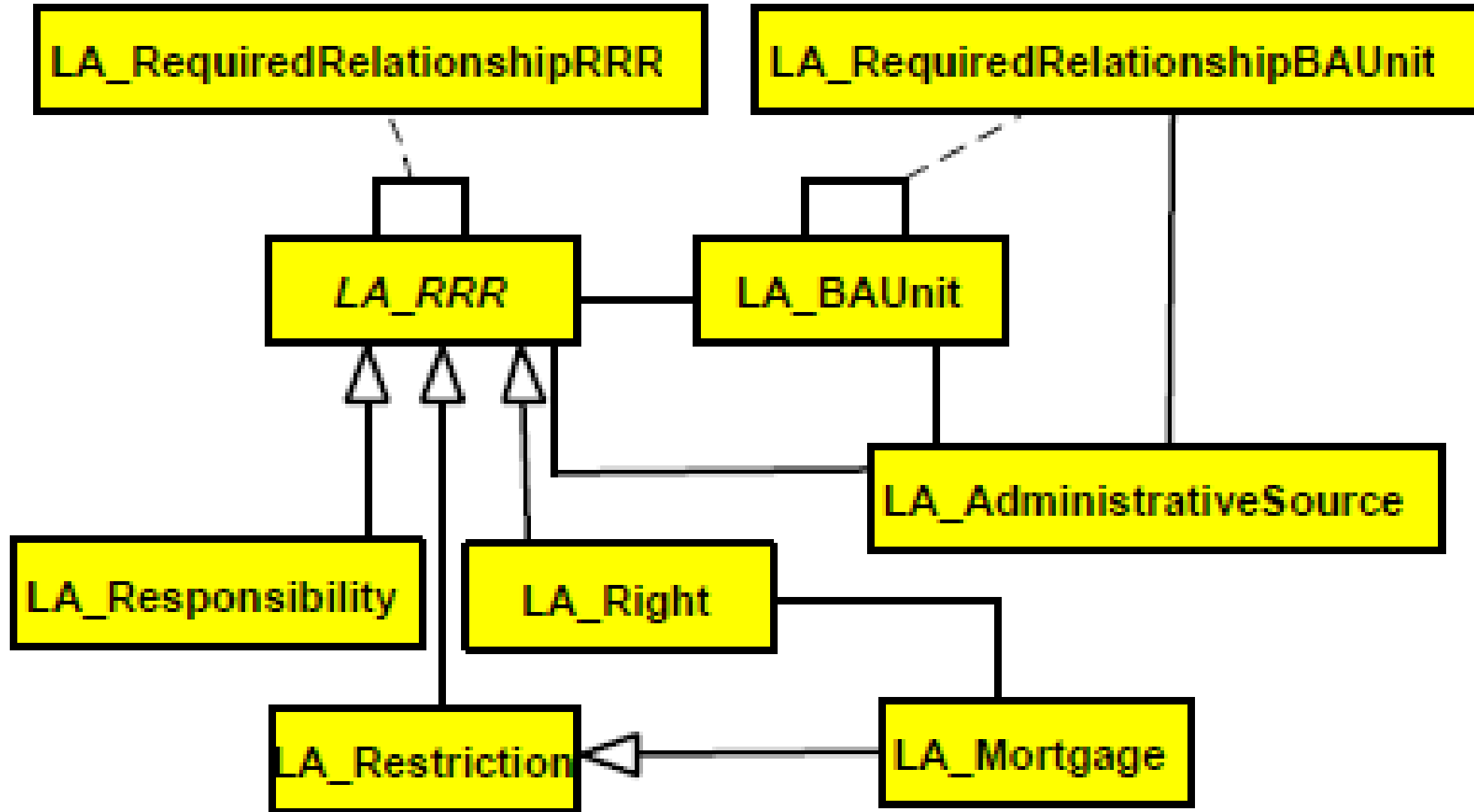
BASIC CONCEPTUAL MODEL OF LADM



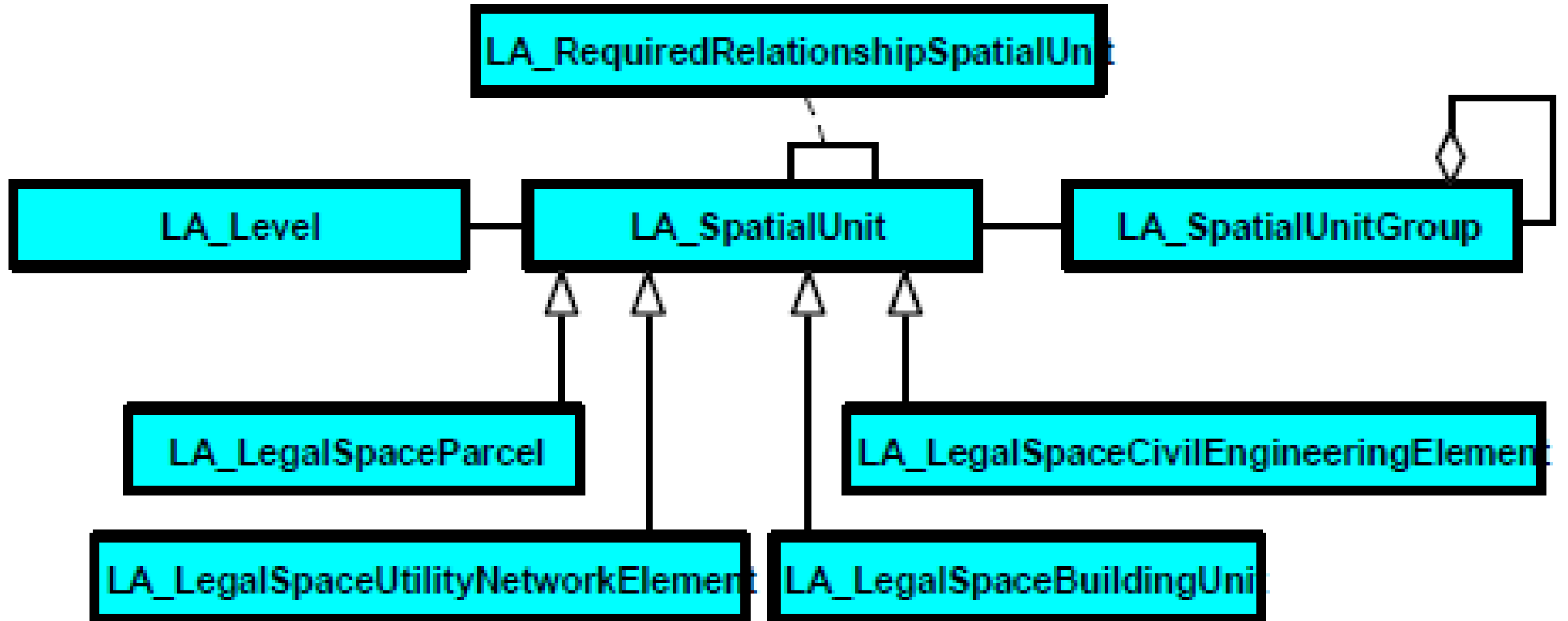
1. PARTY PACKAGE



2. Administration Package



3. Spatial Unit Package

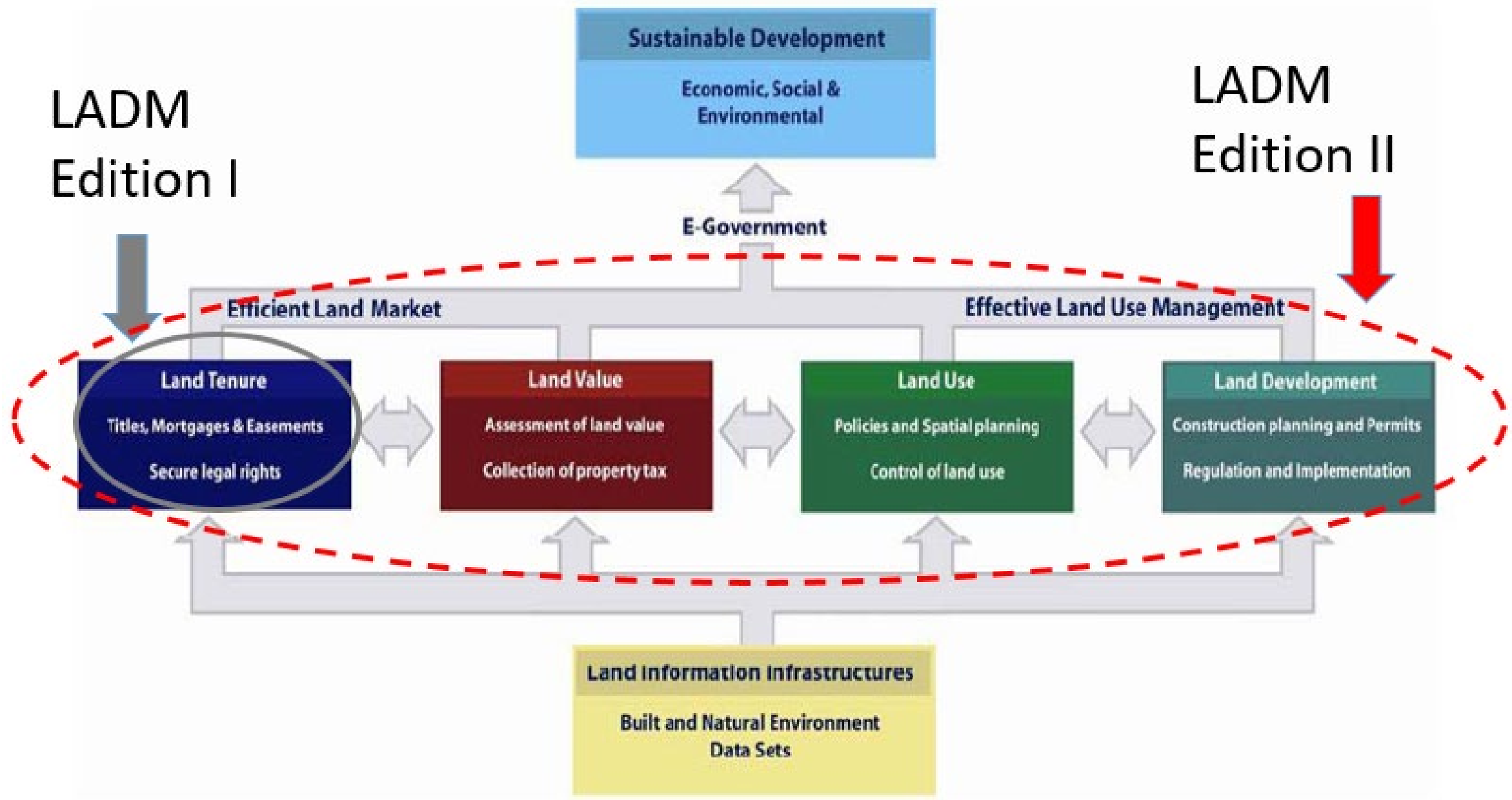


LADM 2 - 2025

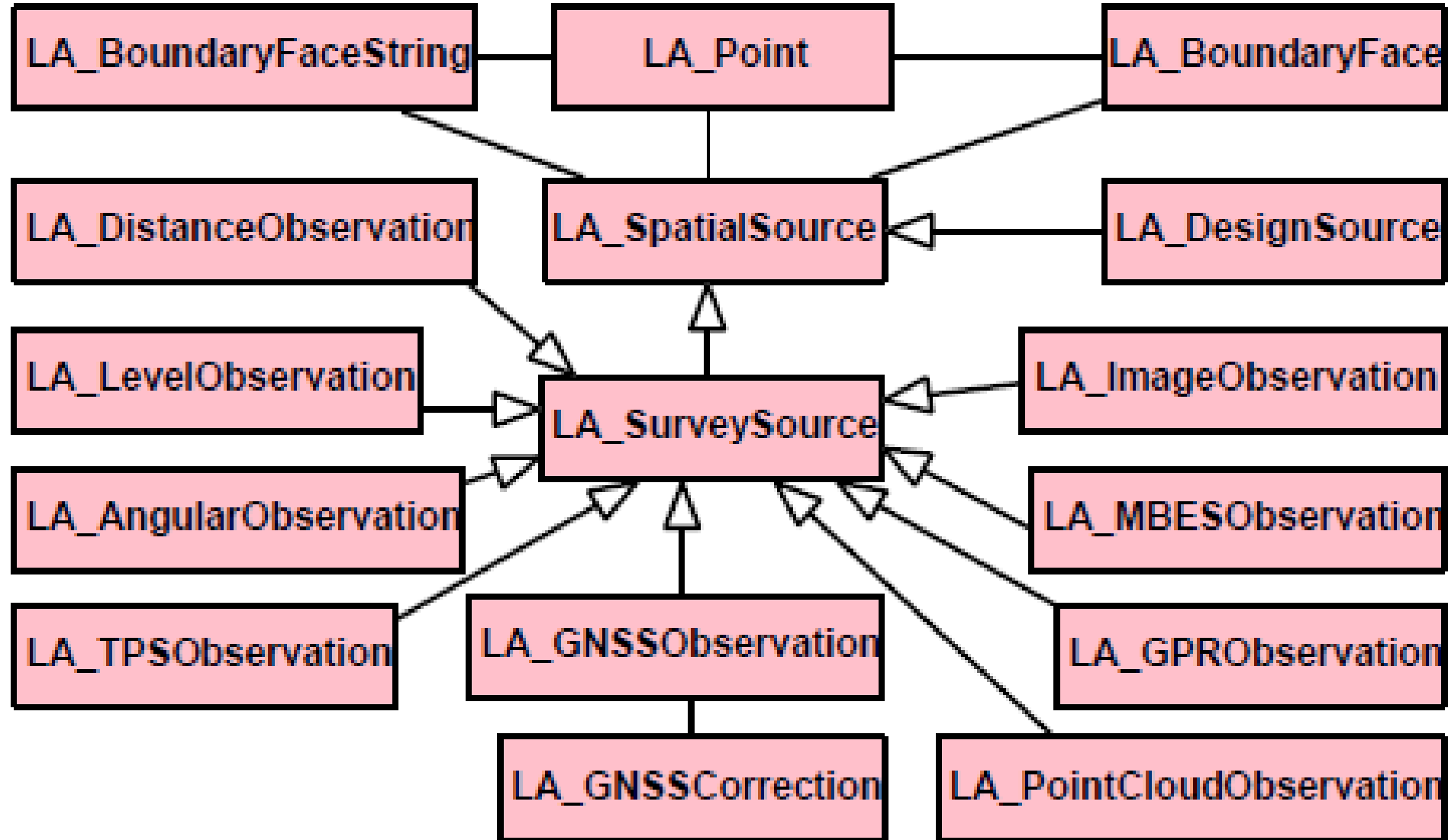
- ❑ **Revised Edition is Multi-part; (Lemmen, van Oosterom, Kara & Kalogianni, 2025)**
 - **Part 1 – Generic Conceptual Model**
 - **Part 2 – Land Registration**
 - **Part 3 – Marine Georegulation**
 - **Part 4 – Valuation information**
 - **Part 5 – Spatial Plan Information**

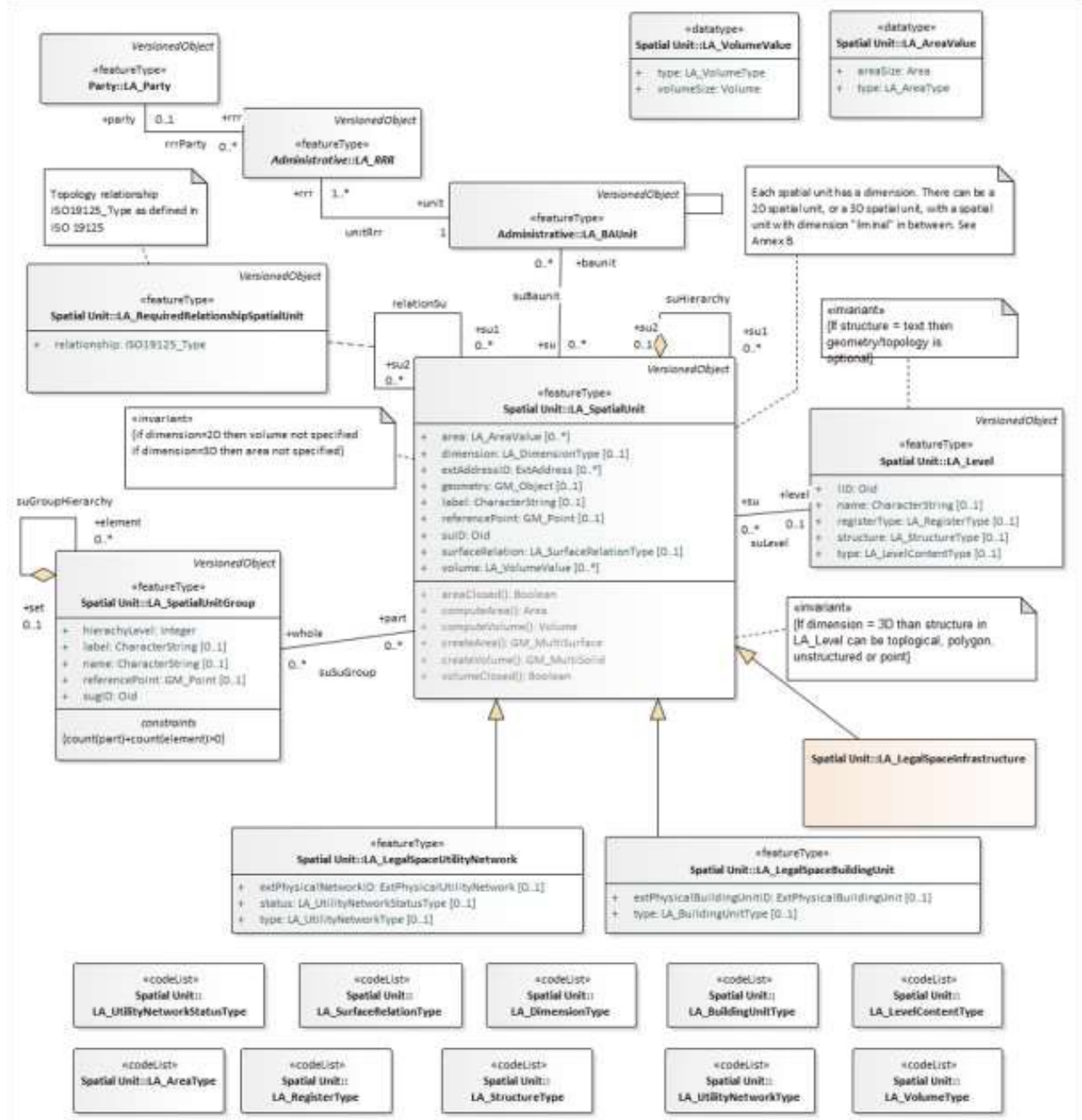
LADM
Edition I

LADM
Edition II

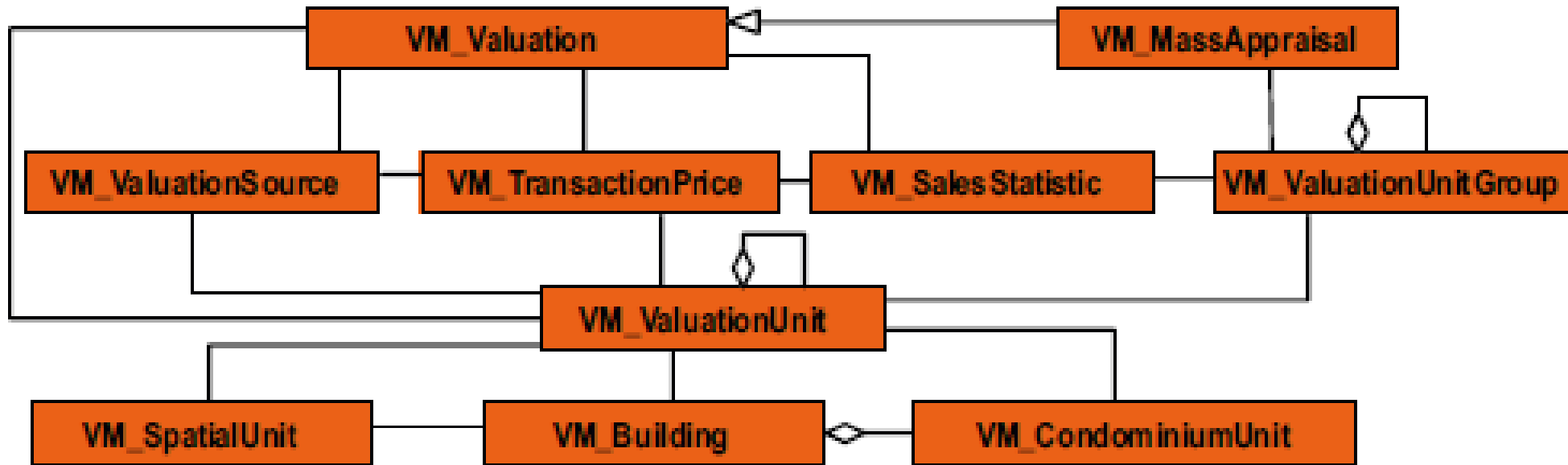


Survey Representation

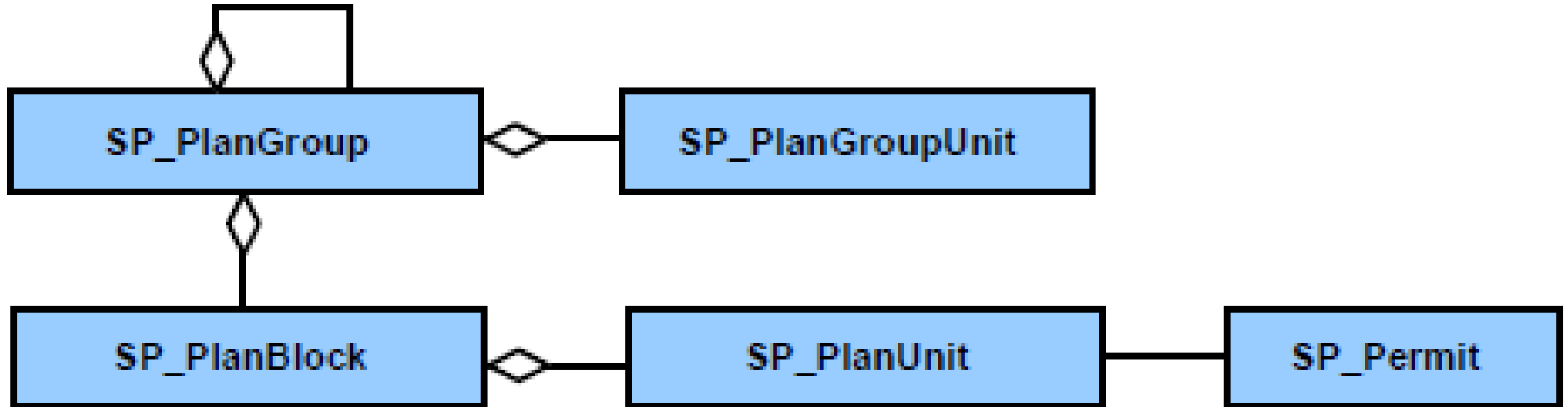




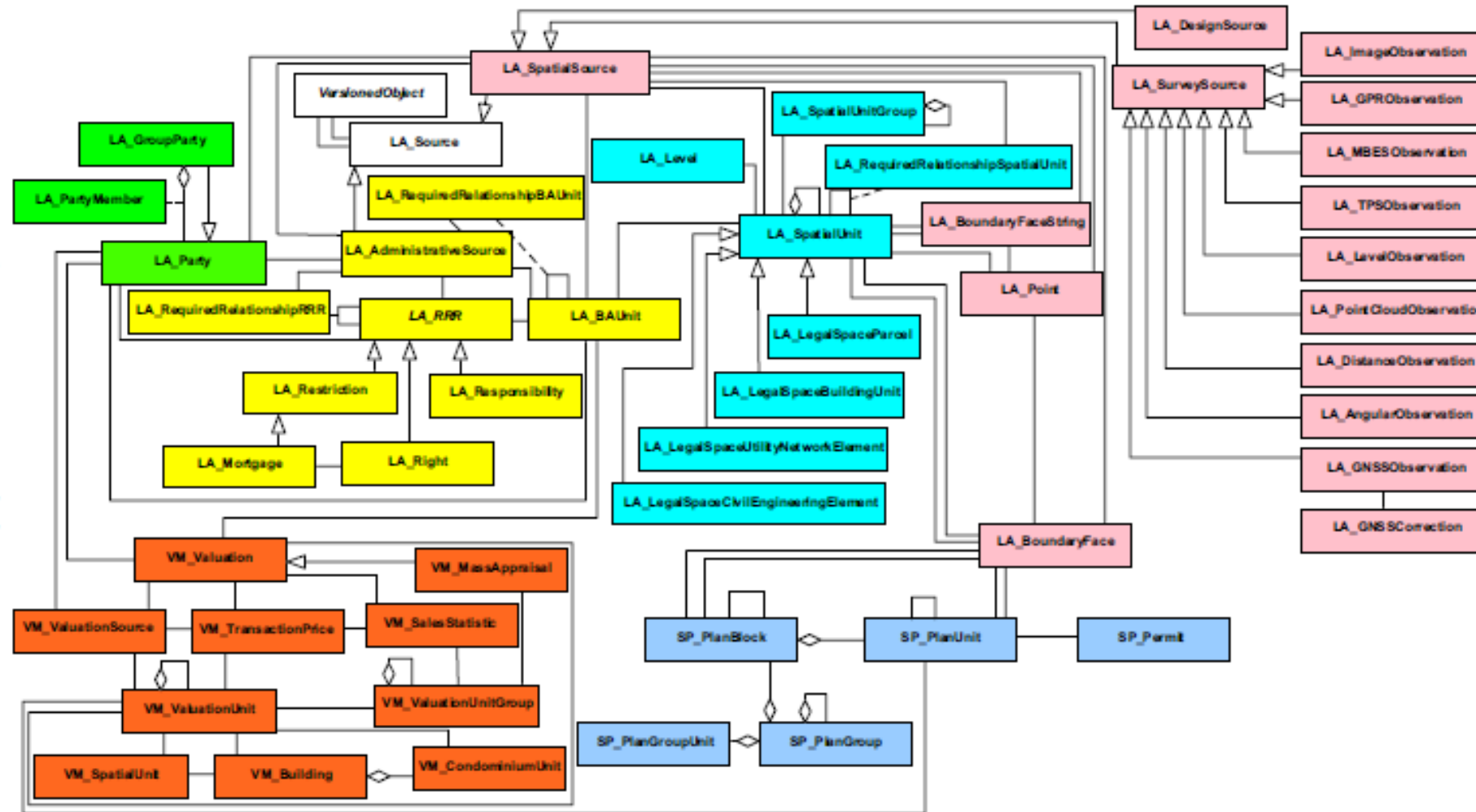
Valuation Information



Spatial Plan Information



LADM II – Revised Edition



Adoption of LADM in Developing Countries Issues

□ Study finding – Nigeria (Azie, Egolum & Emoh, 2024)

1. Institutional issues which must be overcome for effective LADM adoption

- Technical resources,
- Inadequate financing,
- Insufficient policy framework, and
- Interoperability issues.

Adoption of LADM in Developing Countries Issues

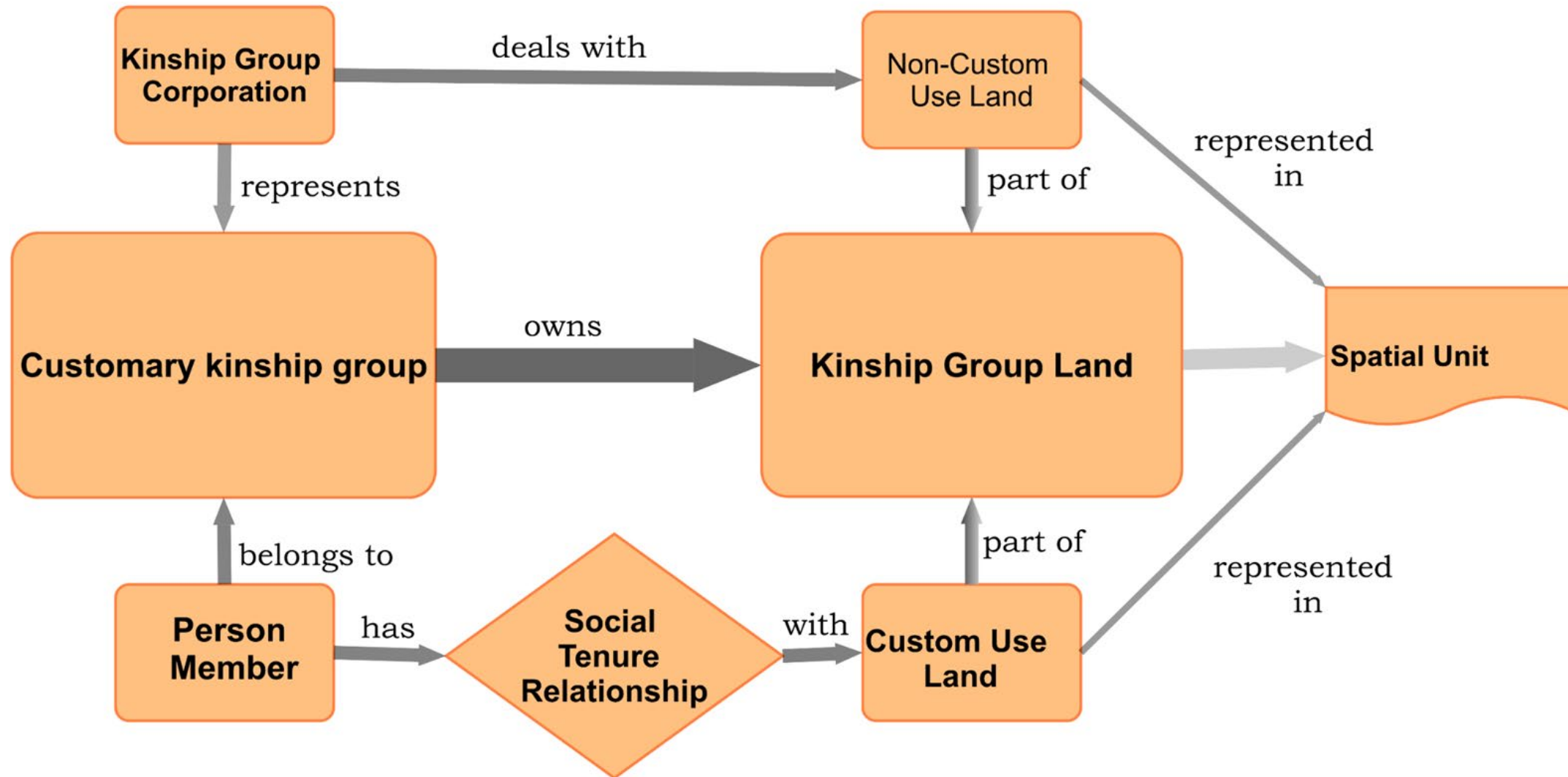
2. Critical Legal Issues

- Amending land laws and,
- Clarifying rights/disputes.

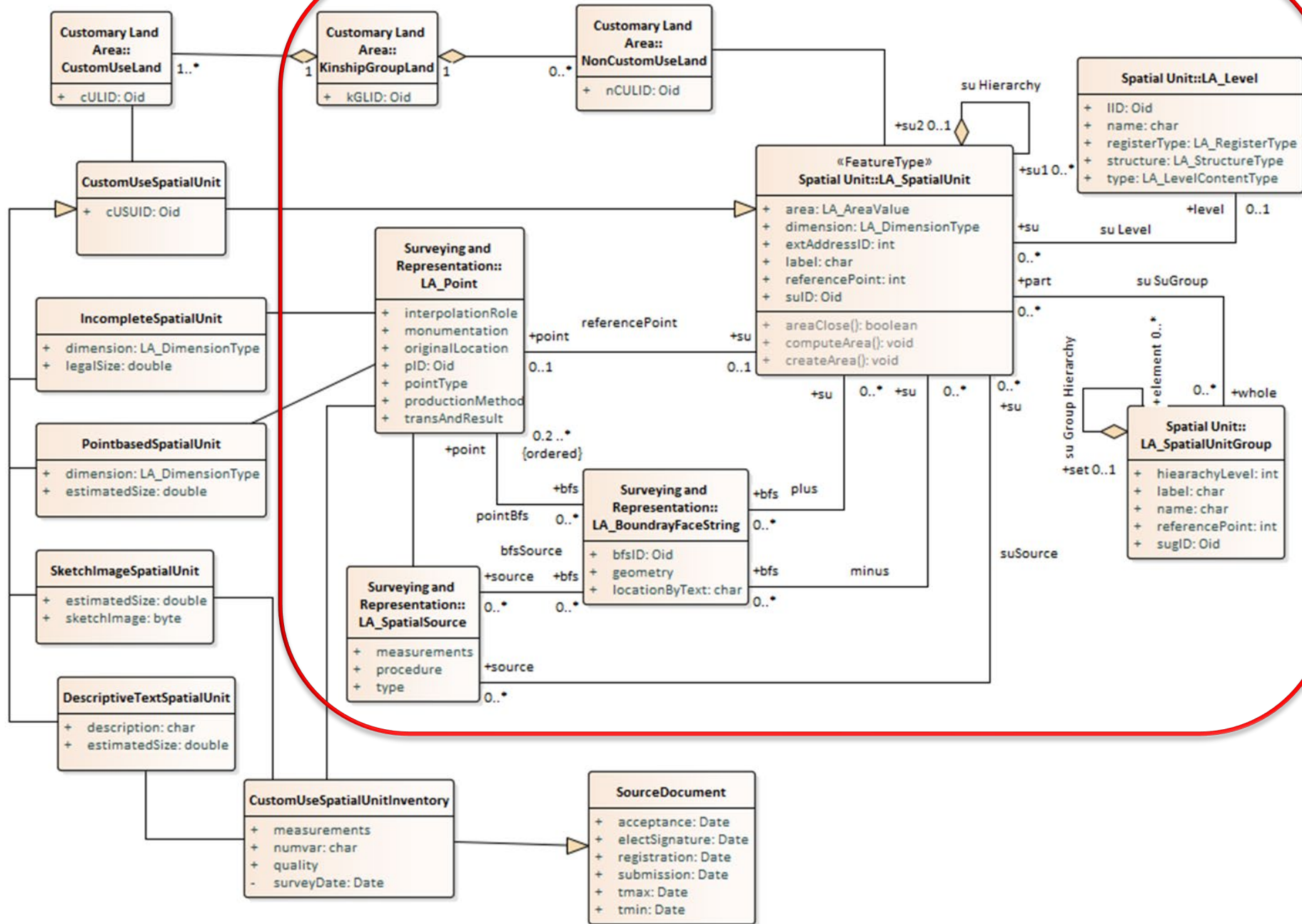
3. Technical Barriers

- Limited GIS infrastructure, and
- Power supply infrastructure deficit.

Customary Land Data – Conceptual Model



class Spatial Unit



Conclusion

❑ Re-look at our Land Administration System

- Incorporate customary land data
- Decentralise it to Provincial Level

❑ Look at the Land Administration Domain Model – Develop an appropriate LADM Profile for PNG.

- Adopt the international Standards to support and facilitate our transitioning to Digital Systems
- Interoperability is essential for effective sharing of Land Data
- Lead to Discussions and plans for e-lodgement of Survey Files

KAGUTOKI!

Thank you!