

# **EXPANDING THE SARAWAK LADM COUNTRY PROFILE WITH VALUATION INFORMATION – TOWARDS A UNIFIED LAND ADMINISTRATION MODEL**

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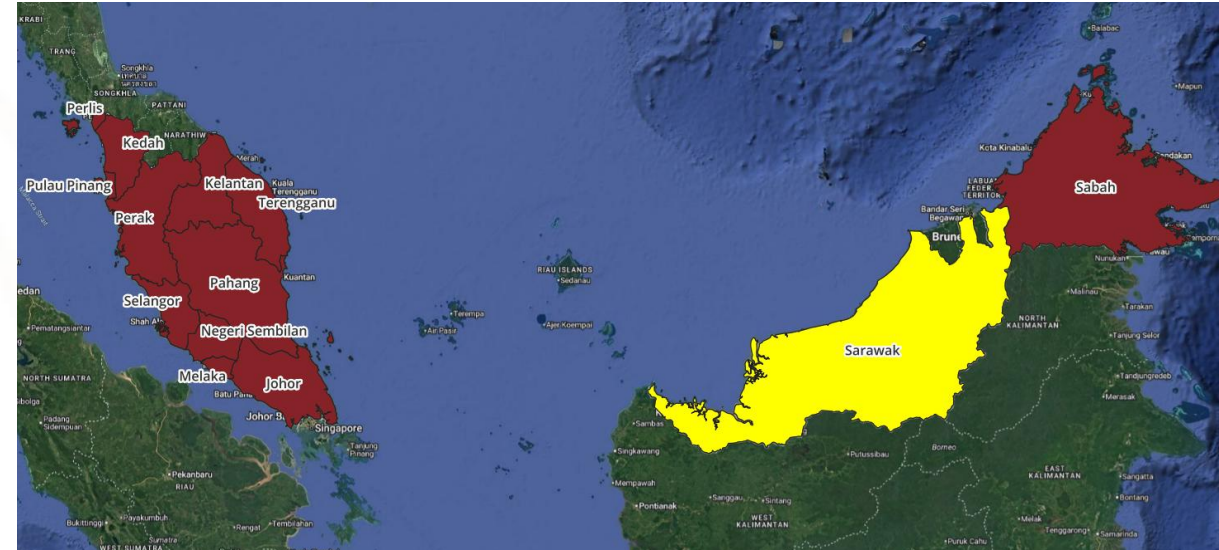
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# BACKGROUND AND MOTIVATION

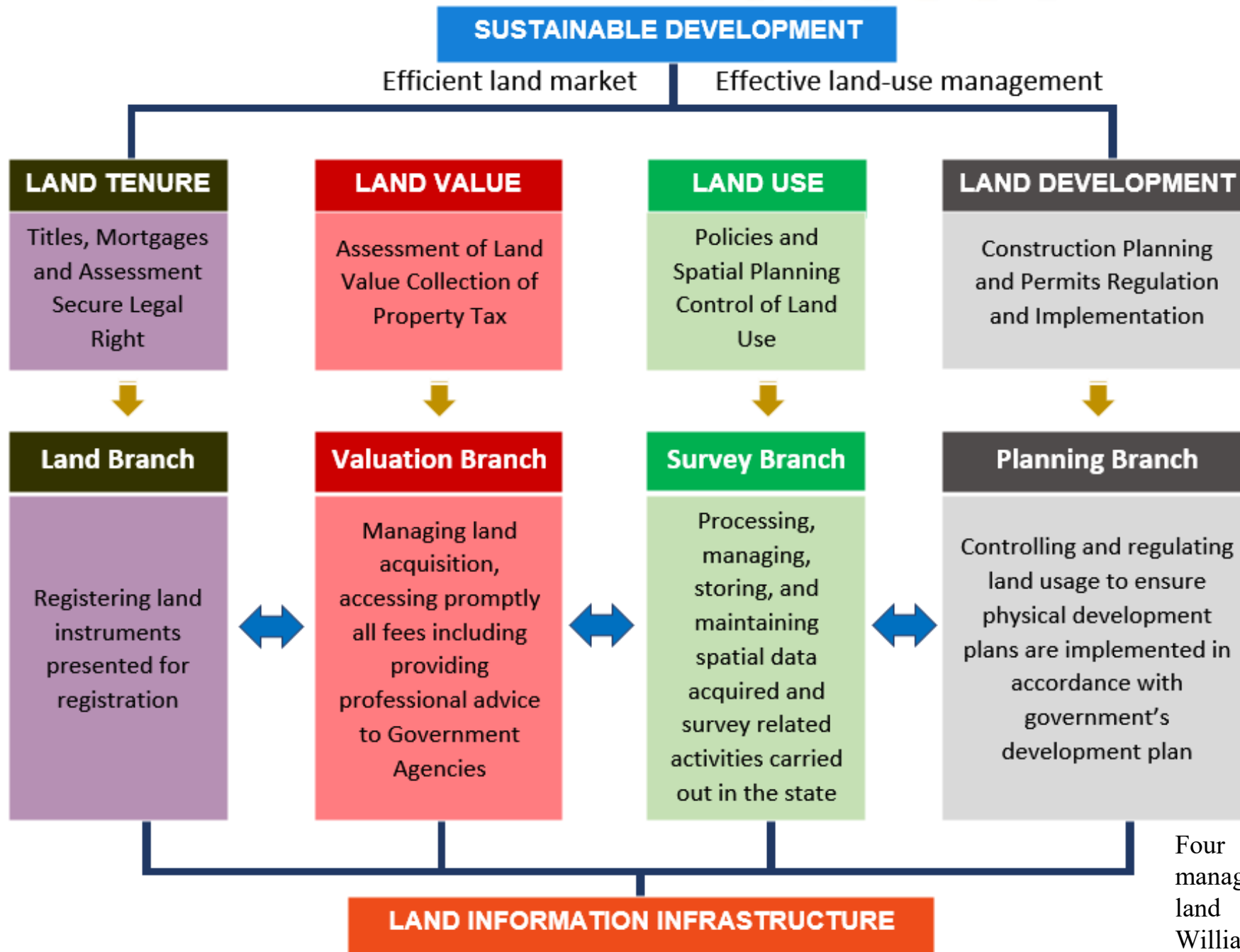
- Fragmented land administration systems in Sarawak
- Disconnected legal, spatial, and valuation information
- Leads to –
  - ✓ Outdated property assessments
  - ✓ Inefficiencies in strata and mixed-use developments
  - ✓ Challenges in transparent taxation
- Aim – Develop a unified digital model integrating these components





# CURRENT SITUATION IN SARAWAK

- Valuation managed by JPPHS, under Department of Land & Survey Sarawak
- Supported by Land and Survey Information System (LASIS)
  - ✓ Integrates survey, title, planning and valuation
- Strata Ordinance 2019 regulates subdivided buildings
- Gaps remain in linking valuation data with spatial / legal records



Four major disciplines of land administration and management under one roof in line with the global land administration perspective (adapted from Williamson et al., 2010; Department of Land and Survey Sarawak, accessed and revised July 2025)

# Valuation Services

For Public



## Section 47 Check

Check if land is under Section 47

For Public



## Section 48 Check

Check if land is under Section 48

For Public



## Transactions of Agricultural Land

For Public



## Land Usage Conversion Calculator (AVTC)

Compute the premium charges for variation of title condition from agricultural to residential land

Internal Use



## Land Acquisition

Internal Use



## Premium and Annual Rent Assessment

53% 17:15



MY PROFILE



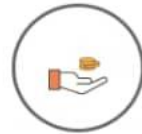
LAND SEARCH



VALUATION SERVICES



LAND SERVICES



RENT & PREMIUM



GENERAL INFO



SUGGESTION



eLASIS



# Land Services

## Land Services



## My Application Check



## Renewal of Land Leases

Apply Renewal of Land Leases



## Proposed Siting

View proposed siting



## Approved Siting

View approved siting



## Section 6 Check

Check Section 6 Native Communal Reserve



## Application Status Inquiry

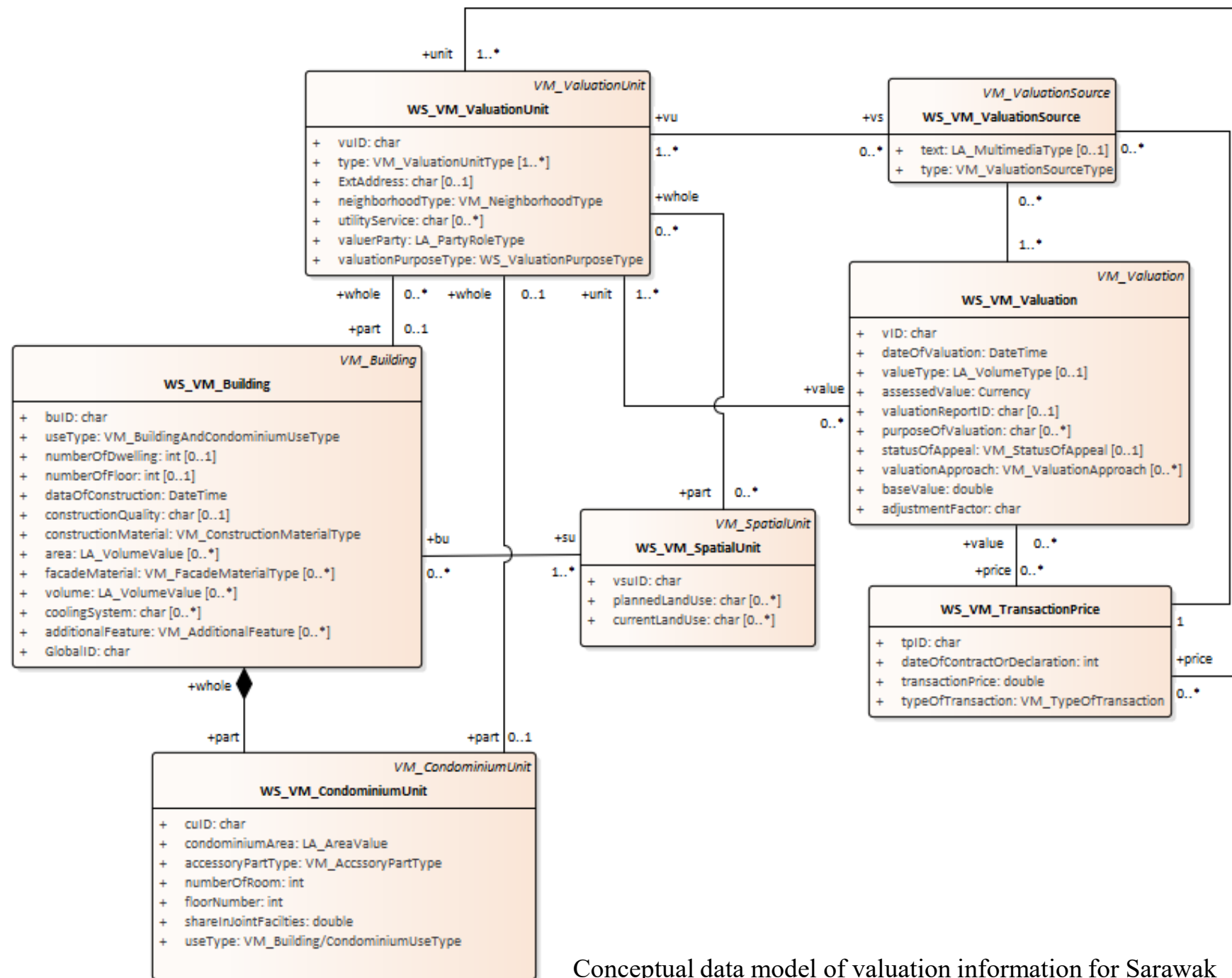
For Internal Use

# INTERNATIONAL CONTEXT

- Countries integrating valuation into LADM
  - ✓ Turkey – LADM Valuation Model (Oracle, INTERLIS)
  - ✓ Serbia – Mass Valuation using LADM
  - ✓ Croatia, Cyprus, Mongolia – Extending cadastral and valuation data
- ISO 19152-4:2025 – introduces unified conceptual schema for valuation

# CONCEPTUAL INTEGRATION FRAMEWORK

- Unified model connects -
  - ✓ WS\_LADM classes (Party, RRR, BAUnit, SpatialUnit)
  - ✓ VM\_Valuation classes (ValuationUnit, TransactionPrice, MassAppraisal)
  - ✓ WS\_BIM\_Physical elements (IfcSpace, IfcBuilding, IfcStorey)
- Purpose – to align 3D legal and valuation units with BIM geometry for accurate valuation



Conceptual data model of valuation information for Sarawak



# EXPECTED BENEFITS

- Unified frameworks for fair and transparent property valuation
- Enhanced taxation and revenue collection
- Improved data consistency and urban planning decisions
- Supports 3D cadastre and digital governance initiatives

# CHALLENGES AND OUTLOOK

- Harmonization of valuation and cadastral databases
- Semantic interoperability between BIM and LADM
- Institutional readiness and capacity building
- Future – full integration with 3D visualization (Cesium / 3DCityDB)

# CONCLUSION & FUTURE WORK

- Conclusion -
  - ✓ Sarawak LADM profile expansion bridges legal, spatial and valuation domains
  - ✓ Strengthens digital land governance through integrated frameworks
- Next steps -
  - ✓ Develop physical schema in PostgreSQL / PostGIS
  - ✓ Pilot implementation using real valuation data
  - ✓ Link to BIM and visualization platforms

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execução



patrocinadores



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