

ArcGIS & LADM (ISO 19152): from Conceptual to Implementation

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SUMMARY

The Land Administration Domain Model (LADM) is a conceptual information model. It provides common ontology and can be used by professionals and consultants that are implementing a physical information model. Transforming the conceptual model into a physical model in a production system is challenging. Beyond the need to have a good understanding of LADM, the system designer has to account for additional requirements that are not covered by the standard. As a result, most country profiles are never implemented in a production system.

ArcGIS has been implemented and is being used in operational systems by thousands of government organizations and by the majority of cadastral agencies. It is a complete geographic approach that enables people to implement the LADM and quickly get up and running – no matter where you fall on the land rights continuum. ArcGIS takes cadastre beyond field data collection and management by enabling data sharing among organizations and with the public. The extendibility and configuration of ArcGIS can be used to implement a cadastral system that conforms to LADM while leveraging and implementing capabilities required in an operational and distributed system.

This paper will discuss in detail how LADM is implemented within ArcGIS in the context of the ArcGIS Parcel Fabric and the context of Fit for Purpose field data collection. Next, migrating, extending, and configuring LADM within ArcGIS will be detailed. Quality management best practices, implementation lessons learned, and suggested implementation patterns will be explained. Finally, the road ahead for LADM and ArcGIS will be addressed.