

FIG WORKING WEEK 2019

22-26 April, Hanoi, Vietnam

Presentation of the FIG Working Week 2019
April 22-26, 2019 in Hanoi, Vietnam

"Geospatial Information for a Smarter Life
and Environmental Resilience"



Extended models

Colombian LADM Profile
as support of land use planning

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Why?



The Land Challenges

COMPLEX INSTITUTIONAL SETTING

many institutions with responsibilities about land issues and Data

LEGAL INDEPENDENCE

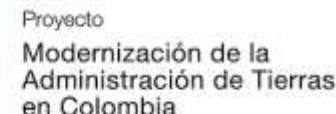
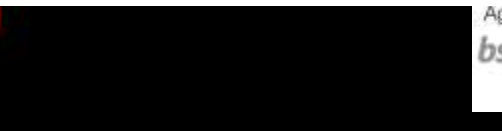
The current legal framework requires legal independence: each theme of land administration must be managed separately from another

INCOMPLETE INFORMATION

The official information does not shows the complete situation of land right and restrictions. (Cadaster 2014)

REDUCED DATA INTEROPERABILITY

Missing standards and inconsistent data. The institutions do not want to exchange land information



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MODULARITY

Core module and extended modules for each topic of land administration.
Each institution its responsible for its own model

Extended LADM_COL models

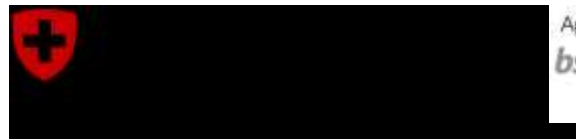
Semantic interoperability through Colombian ISO 19152 profile. It includes informal rights and describes different types of restrictions



Models association

models of different thematic areas are connected through the spatial component.

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What



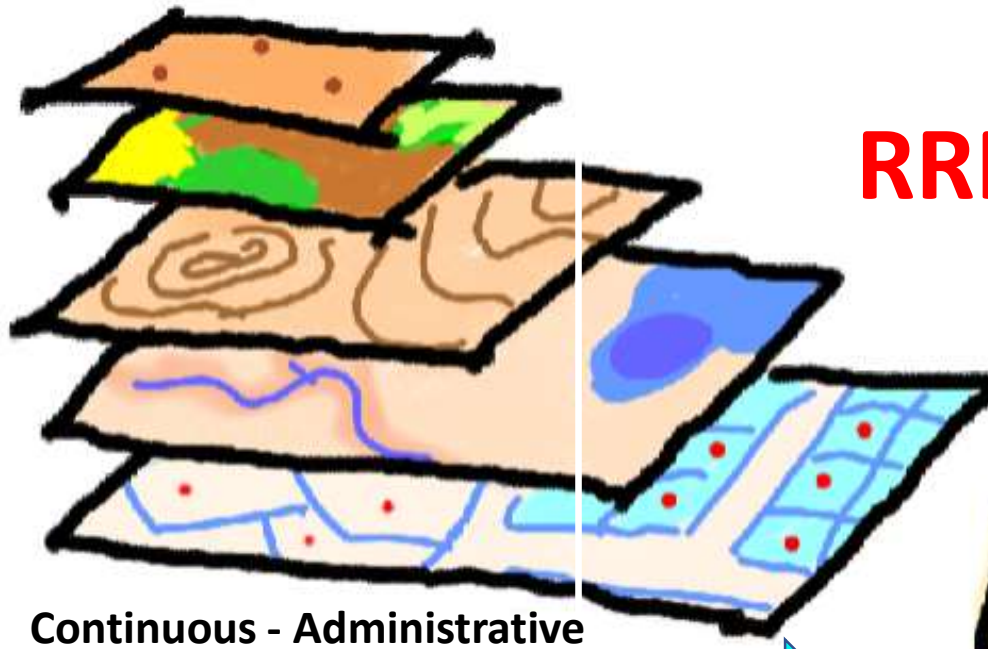
The environment model

What do we need integrate?

Cartography

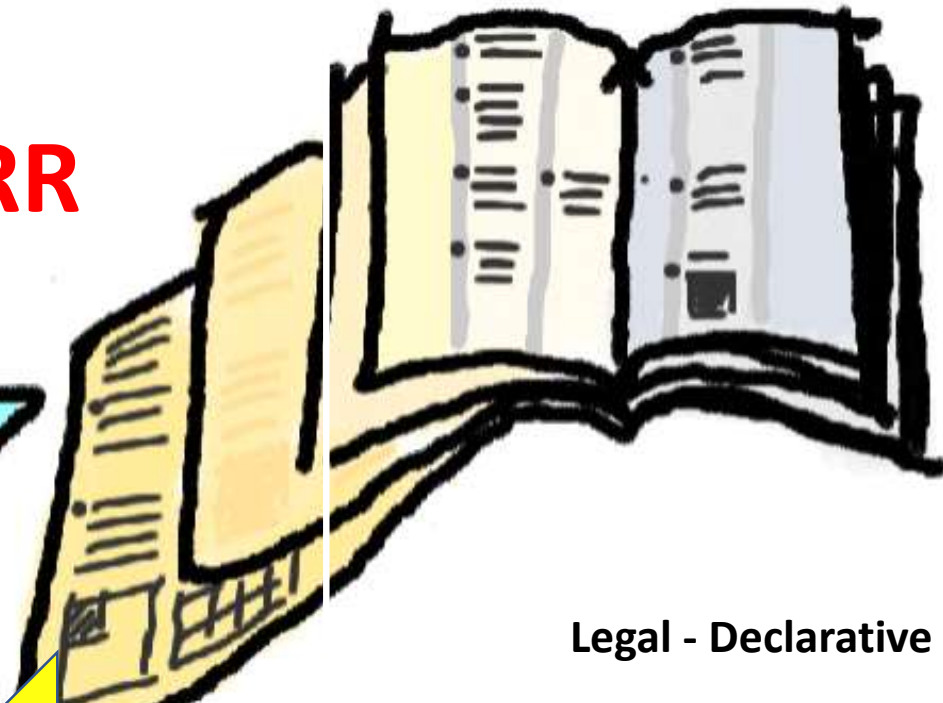
Cadastral

Registry



Continuous - Administrative

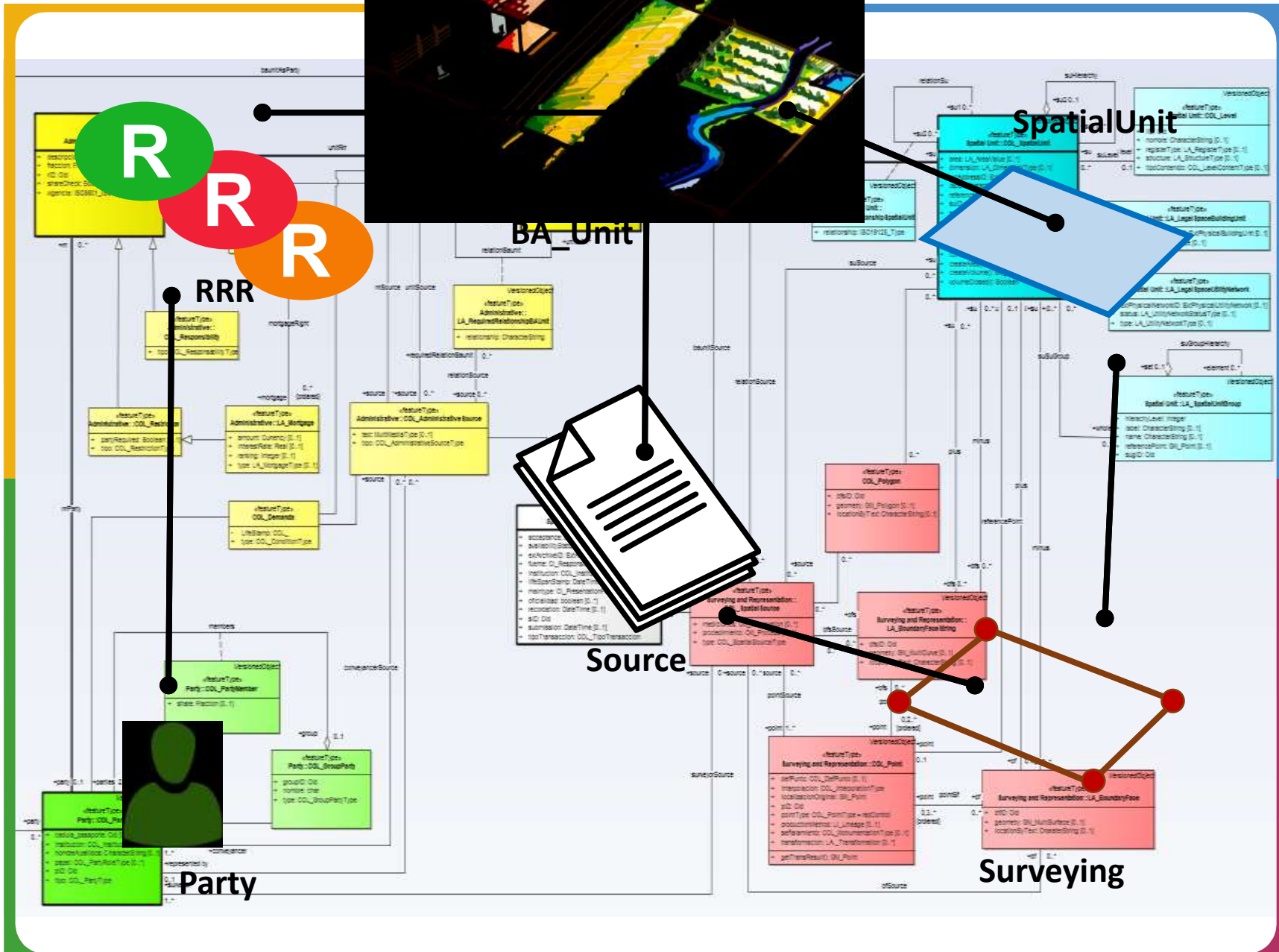
RRR



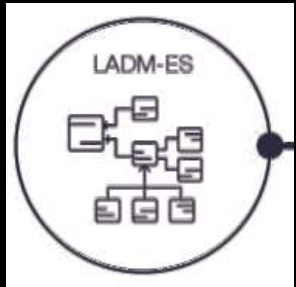
Legal - Declarative

Public Rights

Private Rights

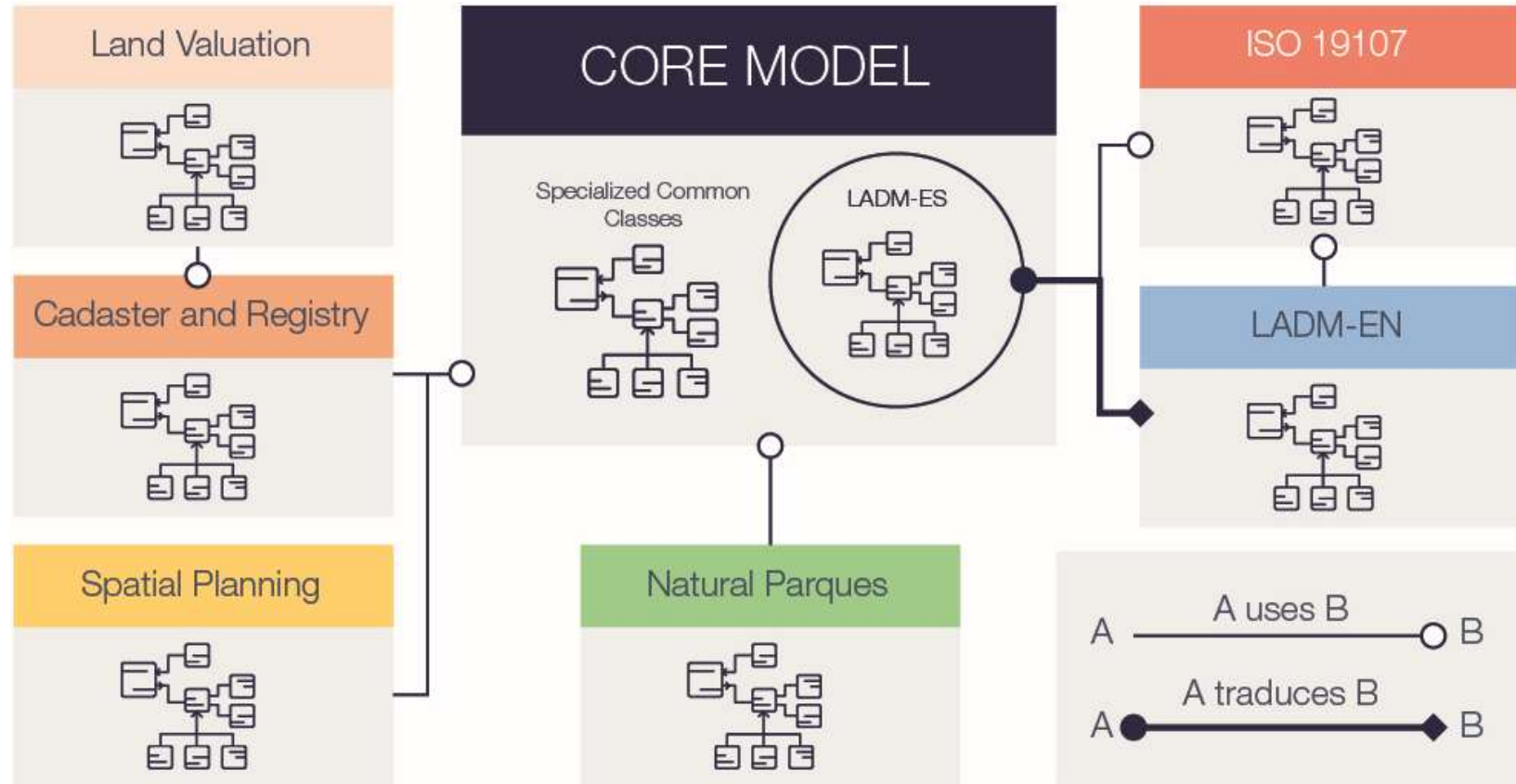


How?



The extended LADM models

Modules of Colombian LADM profile



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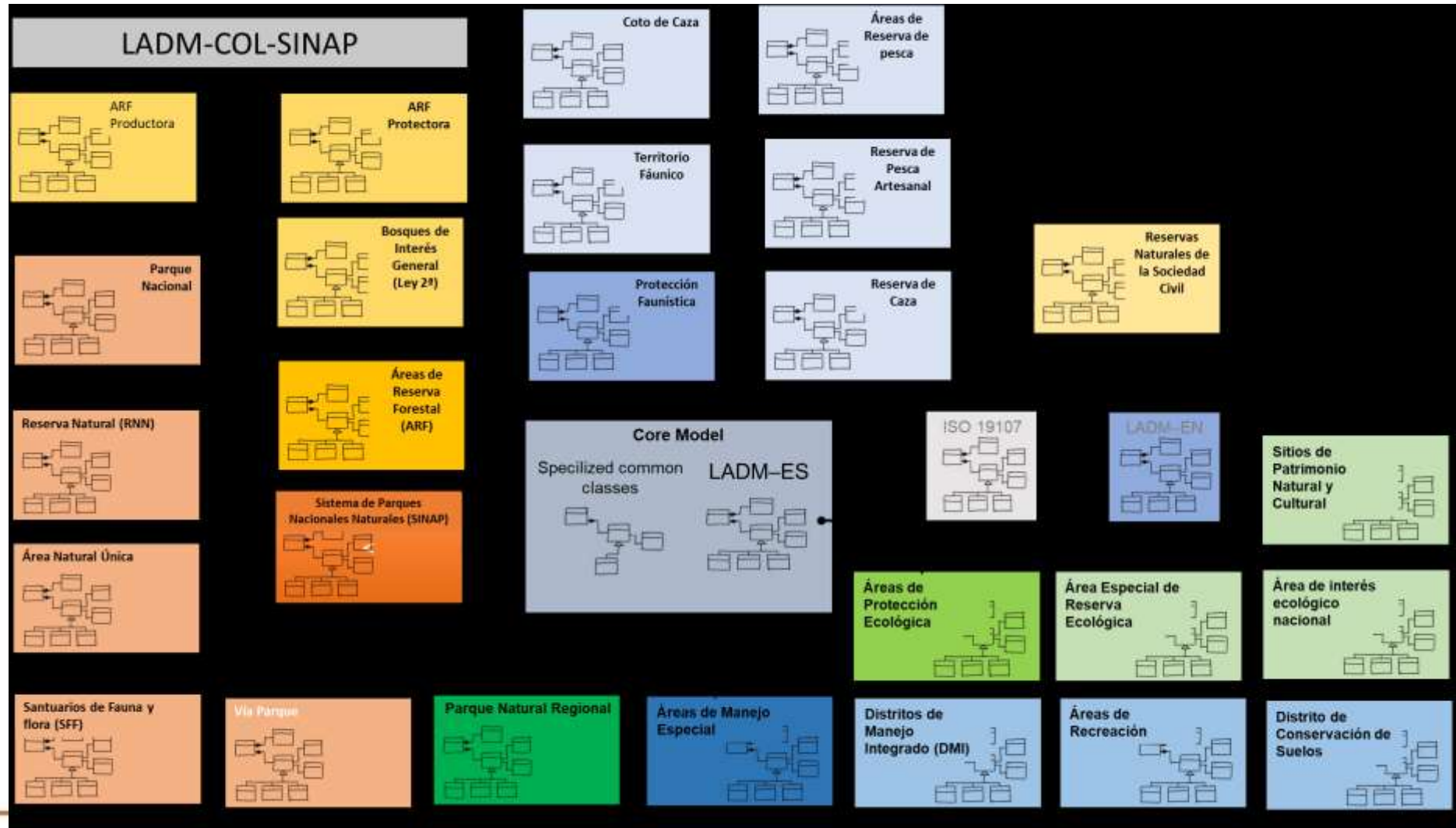
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LADM-Based Models of Protected Areas National System



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How



The model process



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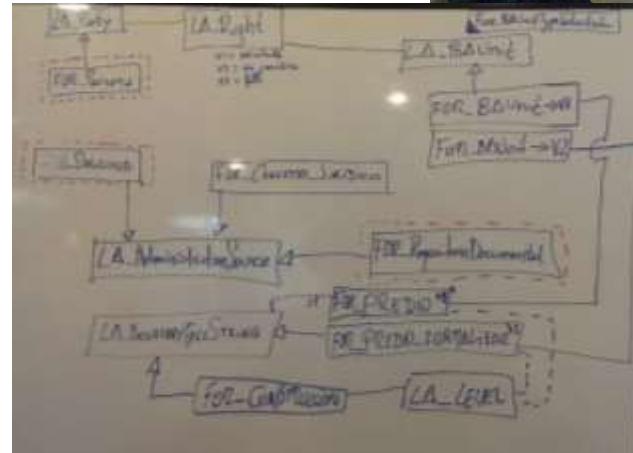
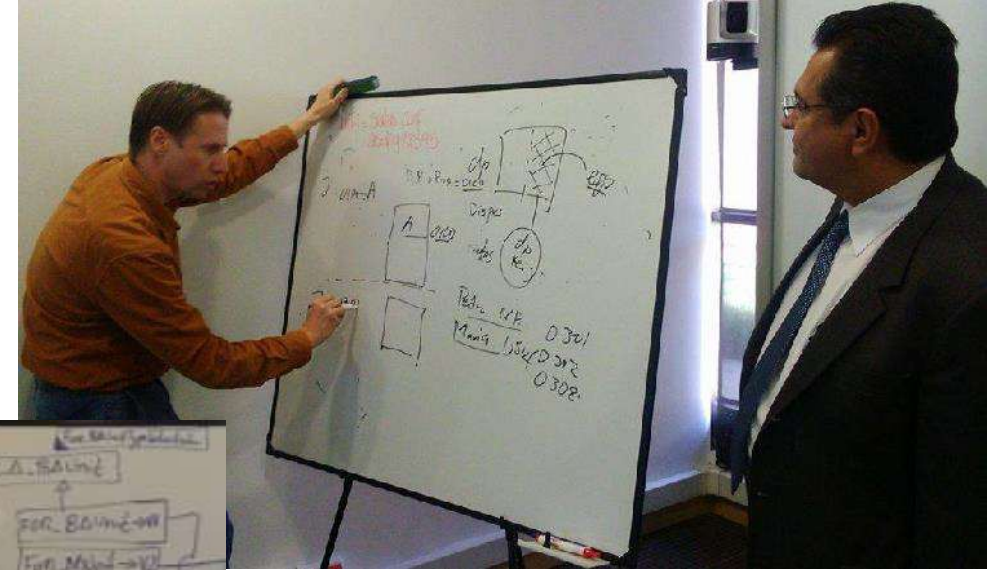
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Modelling methodology

- Interinstitutional meetings
- Workshops with international experts
- Review and permanent adjustments



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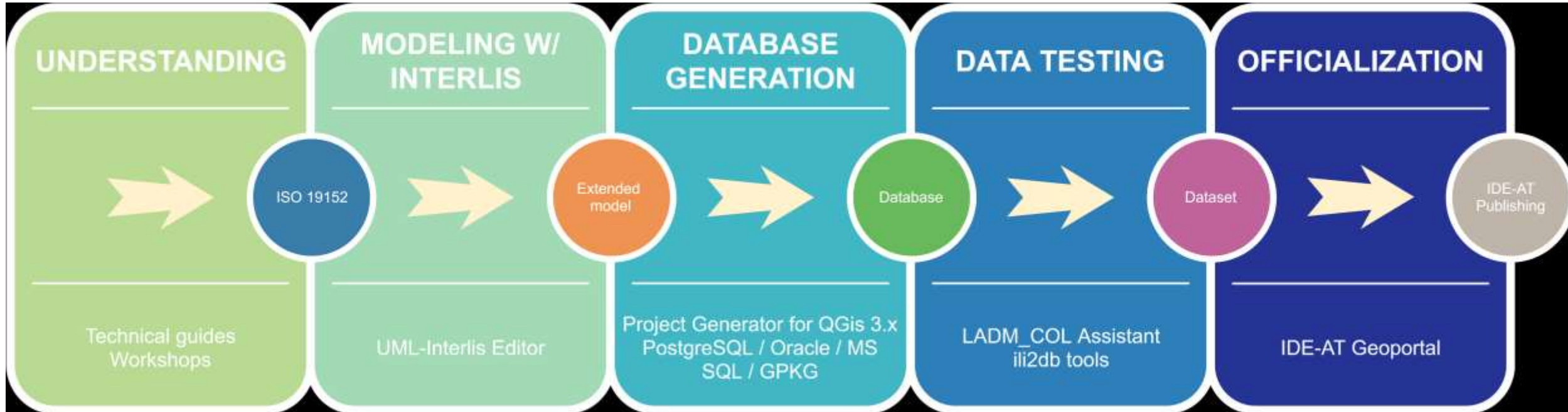
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Models implementation flow



Thematic approach

Technician approach

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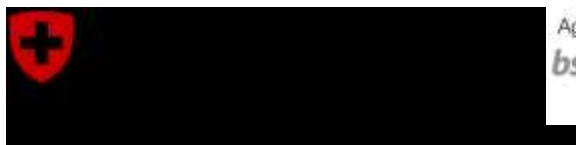
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Spatial Data Infrastructure for Land Administration

The image illustrates a Spatial Data Infrastructure (SDI) for Land Administration. It features a central 'IDE-AT' logo surrounded by icons representing different land administration functions: Land use planning, Cadastral, Taxation, and other services. The background is a satellite map with a GIS interface overlay, including a toolbar on the left and a 'Capas' (Layers) panel on the right. The 'Capas' panel shows loaded layers like 'Manzanas' and 'Transparencia'. Several document thumbnails are overlaid, showing land records, cadastral maps, and tax forms.

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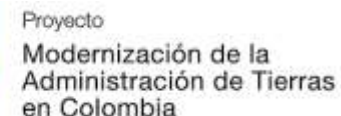
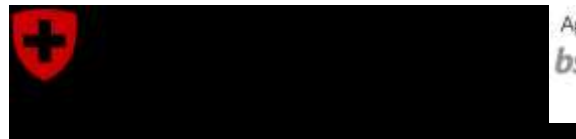
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Conclusions and Recommendations

-  The introduced “**Modularity**” of the LADM-COL helped to meet the required **legal independence**, an institutional reality in Colombia.
-  **LADM-COL-OT** model is currently under validation by the governmental institutions, This model will allow the integration and articulation between the different sectors (environment, housing, agriculture, culture) and its impact on the territory.
-  **Interrelation** between models can be achieved thanks to the use of standardized LADM semantics, it is possible to navigate between the different relationships among the BA-Units and the RRRs defined for each model.
-  The **SDI** for Land Administration allows the exchange between models of different thematic.
-  **Existing tools** allow analysis of issues related to land administration and can be considered as a generic infrastructure **easily deployable** with LADM as a base model.

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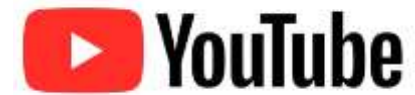
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Links



<https://github.com/AgenciaImplementacion>



<https://youtube.com/agenciaimplementacion>



<https://www.proadmintierra.info/>



<https://ide.proadmintierra.info/>

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THANK YOU



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