



ON THE DESIGN OF A MODERN AND GENERIC APPROACH TO LAND REGISTRATION

kadaster



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KUALA LUMPUR

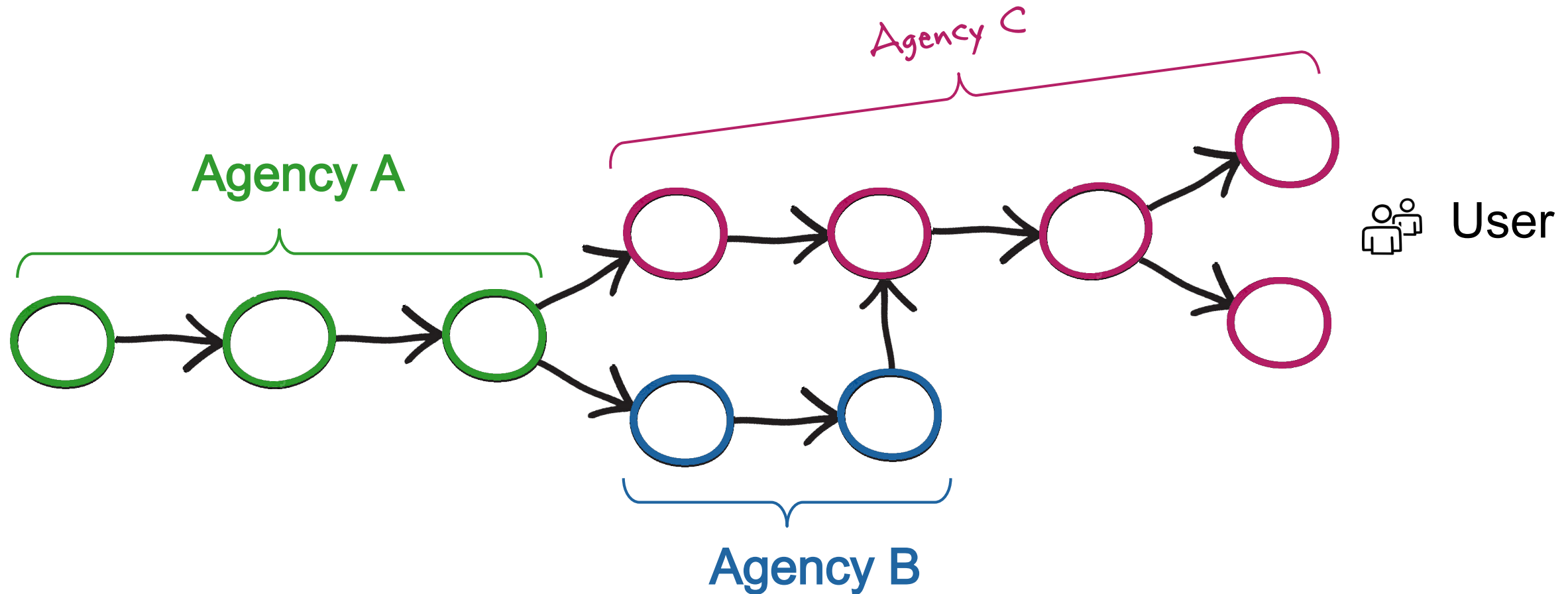
THE STARTING POINT



There exist **millions** of unregistered
people to land relationships

That need to be recorded
in a reasonable time & at an affordable cost

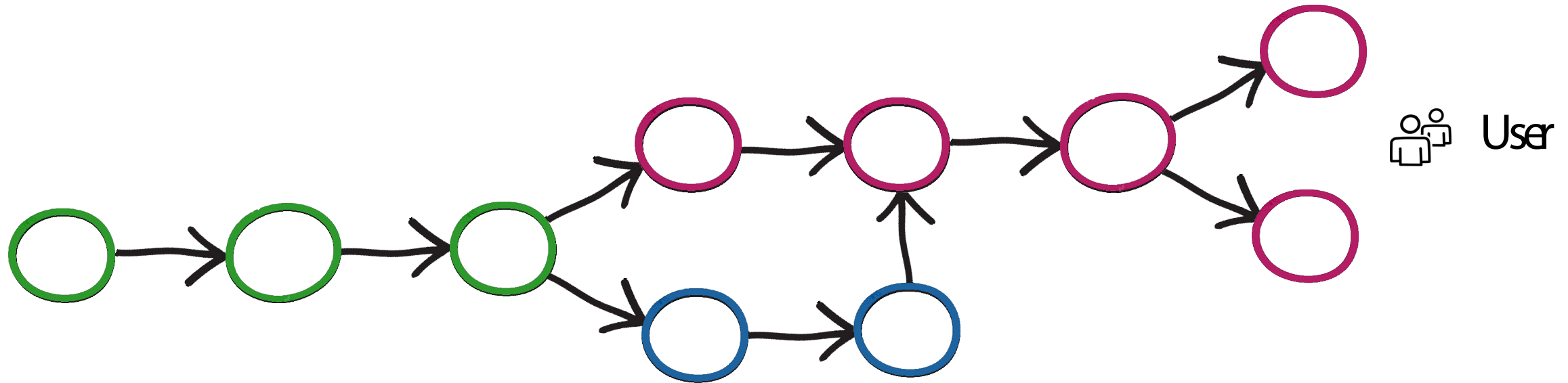
THE PROBLEM – COMPLEX & FRAGMENTED LAND REGISTRATION PROCEDURES



THE PROBLEM – COMPLEX & FRAGMENTED LAND REGISTRATION PROCEDURES

- 100 % traditional, based on millimeter accuracy
- Based on forms & standards & rules &
- Carried out by skilled professionals with sophisticated technology

Slow & Expensive



Develop a land registration method following the principles of the ~~Flow~~ **Purpose** Land Administration

“FIT FOR PURPOSE” – WHAT ARE THE CITIZEN NEEDS?

WHAT ARE THE CITIZEN NEEDS?

Security of Tenure

Registration of People to Land Relationships
Leading to Titles

THE PRINCIPLES

- Total **participatory** the level **rights holders** responsible of parts **the process**
- Physical and legal data **are collected simultaneously** **integrated** in a **form**
- **Transparent** that the data is available to and validated by the **stakeholders**
- Generating **final products** **compliant** with adopted **standards**
- **Leading** land **titles**

Cheap & Fast

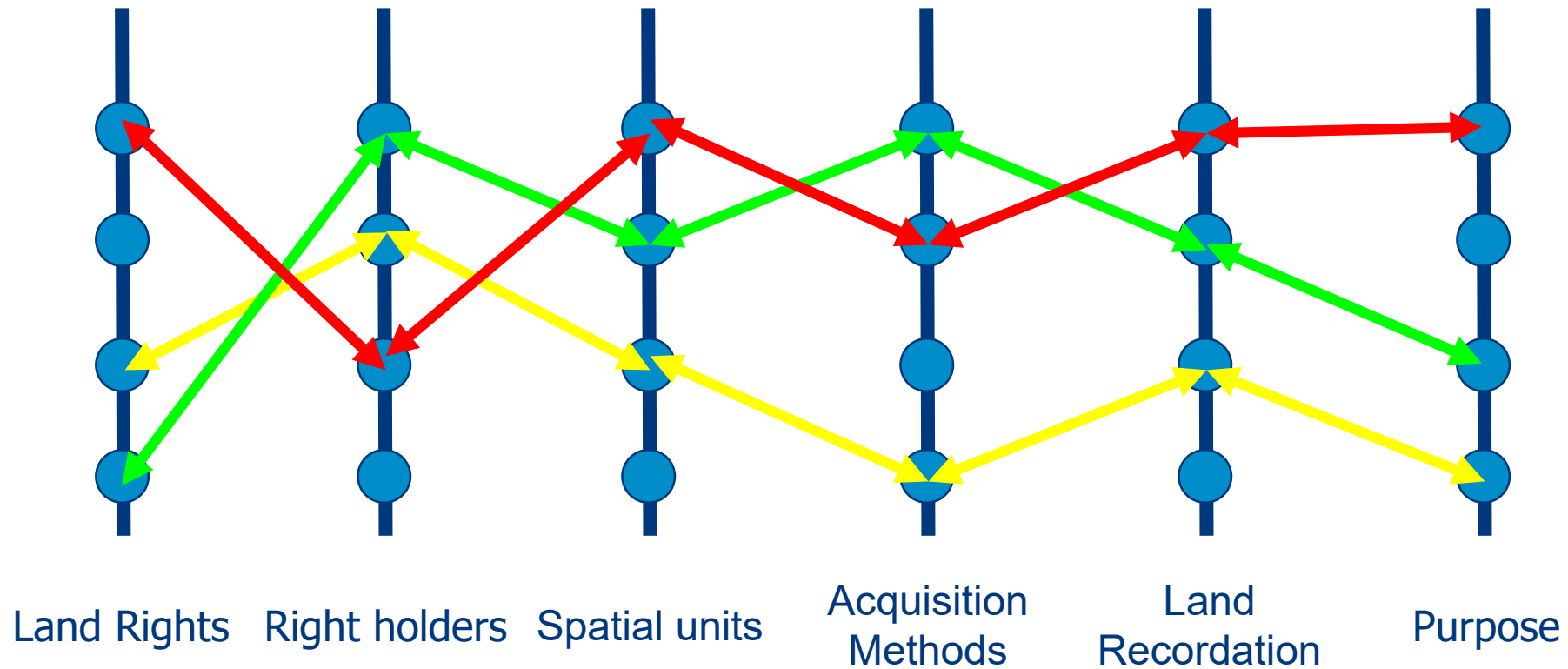
THE SET OF CHOSEN FUNDAMENTAL ATTRIBUTES

- Identity (*per party*)
 - ID document (nit, cc, etc.)
 - Names & gender
 - Annexes – 2 photos (*one of the person and one of the ID*)
- Right
 - Type (ownership, occupation, etc.)
 - Description
 - Annexes – $1..n$ photos
- Land description
 - Geometry & label (name)
 - Land use
 - Annexes – $0..n$ photos

FITNESS FOR PURPOSE 'EQUALIZER'

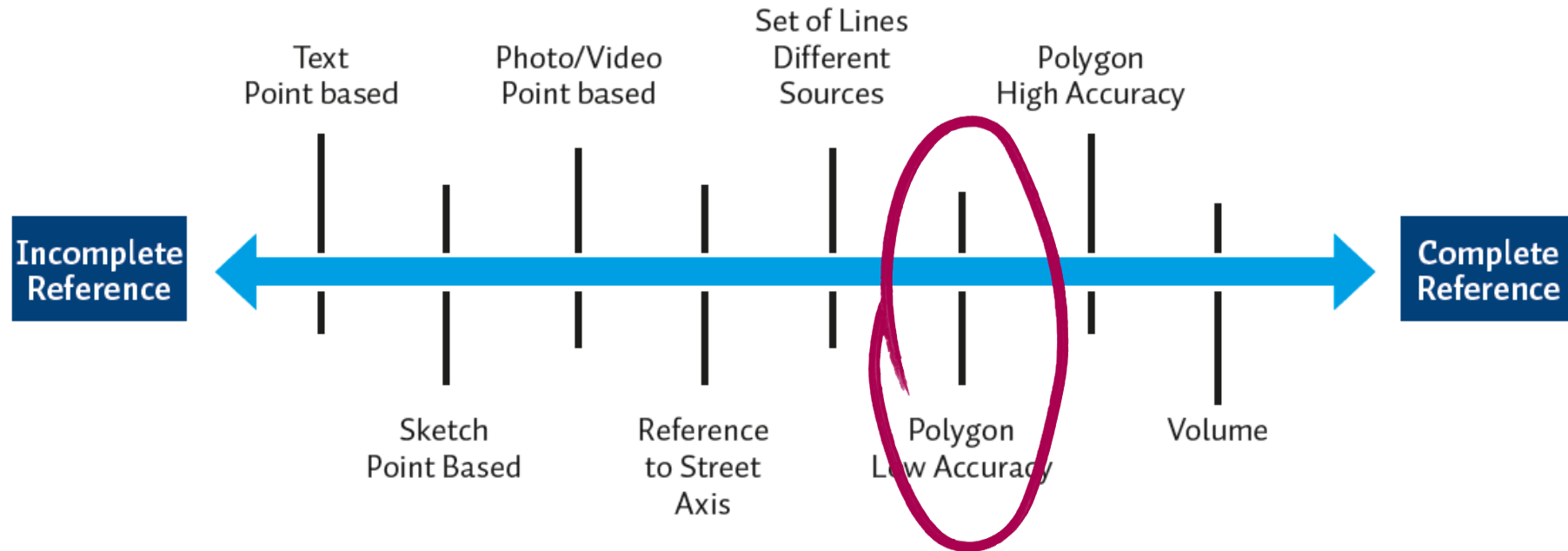
Criteria: Quality, Cost, Time

Requirements: Standards (LADM), Software, Capacity

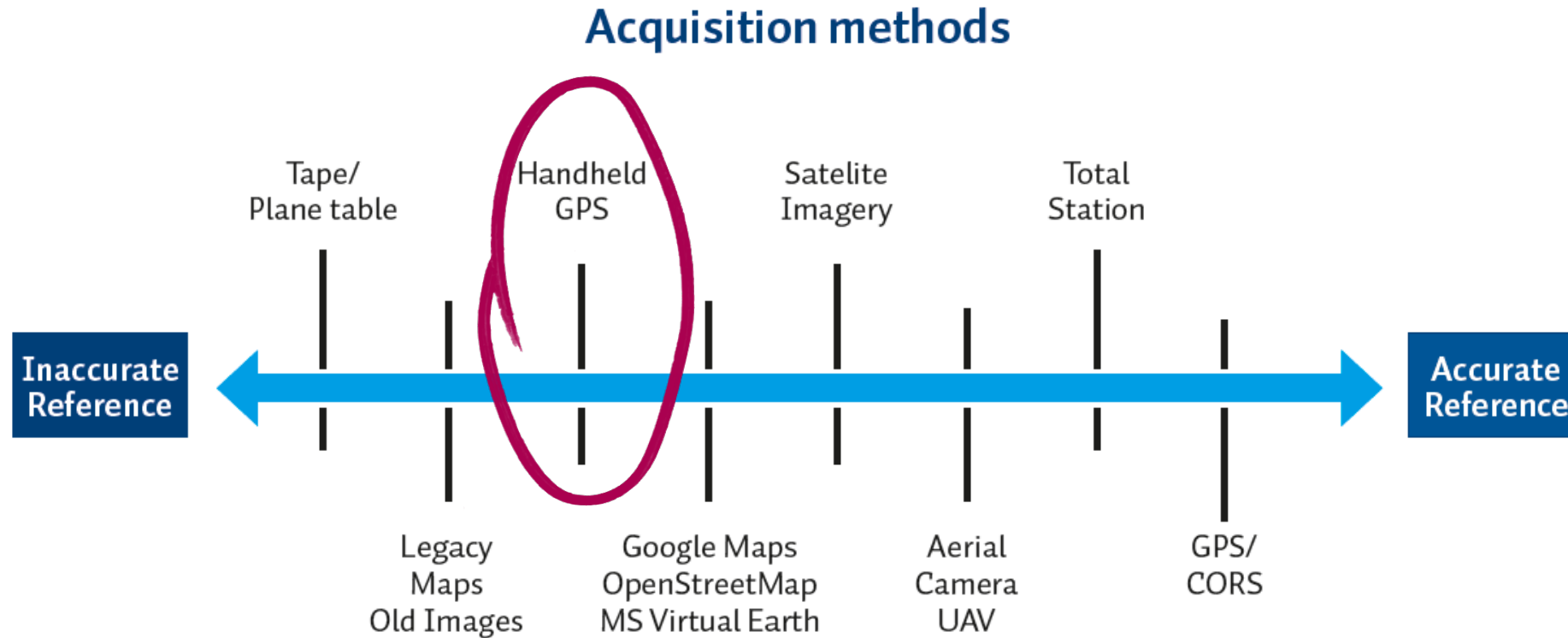


OPTIONS TO REPRESENT A PIECE OF LAND

Representations of spatial units

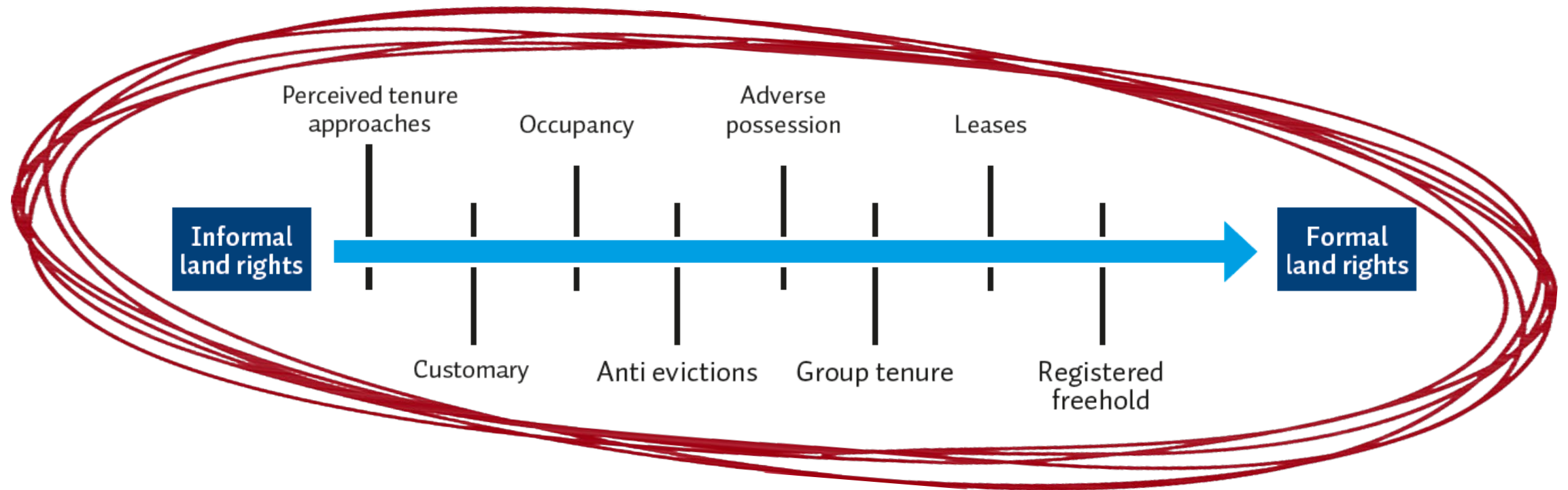


MECHANISMS TO ACQUIRE THE REPRESENTATION OF THE PIECE OF LAND



WHICH PEOPLE TO LAND RELATIONSHIPS DO WE FOCUS ON?

Continuum of land rights



METHODOLOGY STEPS – BASED ON THE SWEEP OF AN ADMINISTRATIVE AREA



Socialization

Inform the community on the activities and responsibilities



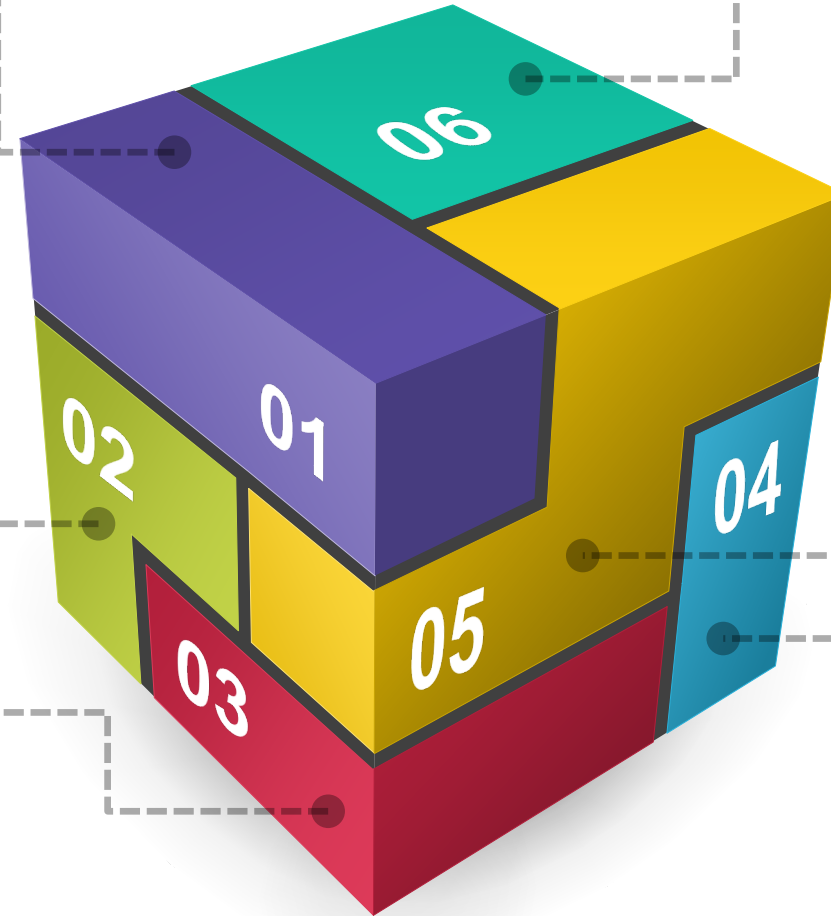
Planning

Identify the rightholders, schedule the visit of their land & train grassroots surveyors



Data Collection

Collect data on land descriptions, identities & rights



Registration

Submit the data to the government for generation of legal documents



Public Inspection

Validate the processed data through community agreements



Post Processing

Generate valid geometries & classify relationships with the land

THE TECHNOLOGY



FFP - Land Registration



SOCIALIZATION & AWARENESS





PLANNING



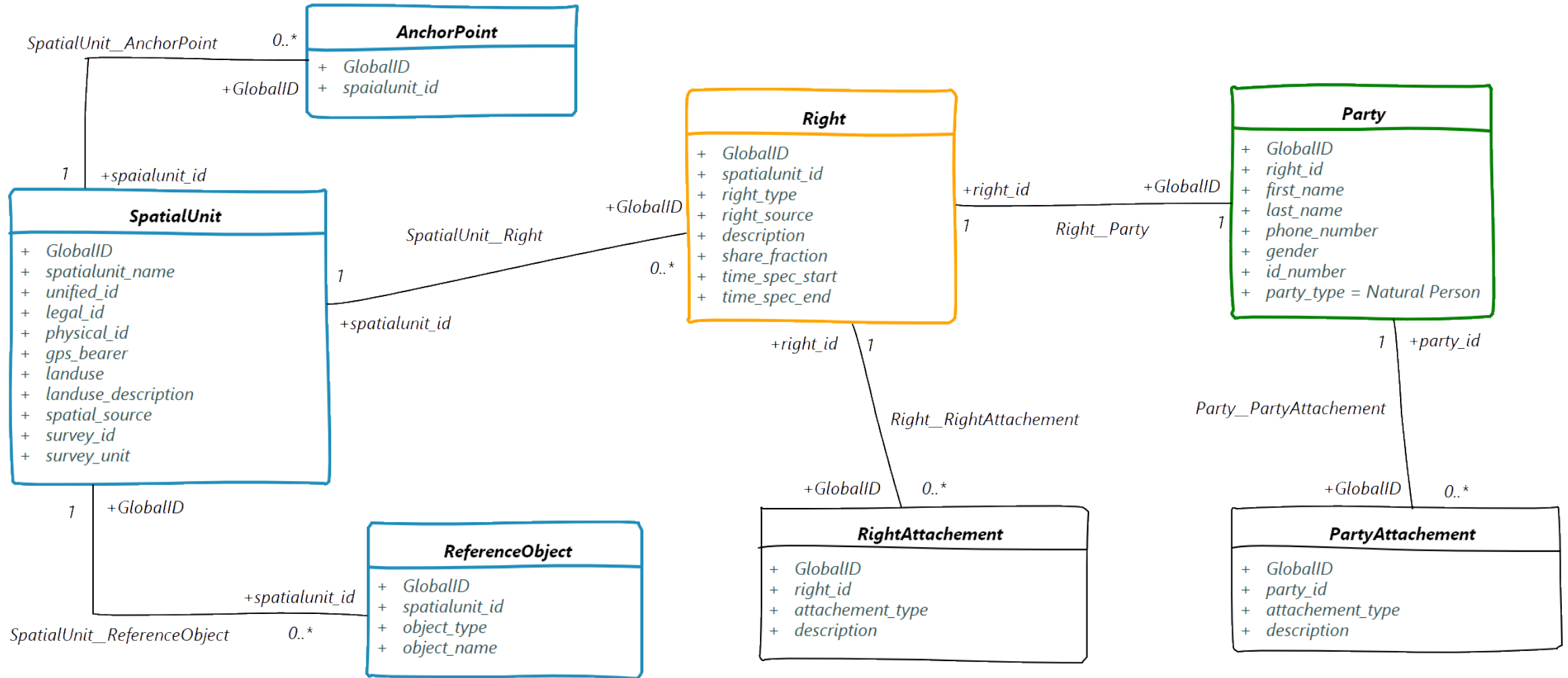


DATA COLLECTION – FIELD SURVEY LOGISTICS

- Staff (a team of 2 people per piece of land)
 - One person with knowledge on the parcel and its boundaries
 - One person capable of using the FFP data collection app
- Equipment
 - A handheld GPS
 - A mobile device (e.g. phone, tablet)
 - A mobile app
- Training sessions per surveyed area (e.g. a village)
 - Groups of 5 or more grassroots surveyors
- One FFP specialist per surveyed area (e.g. village)



MULTI-LEVEL DATA MODEL: STEP 3





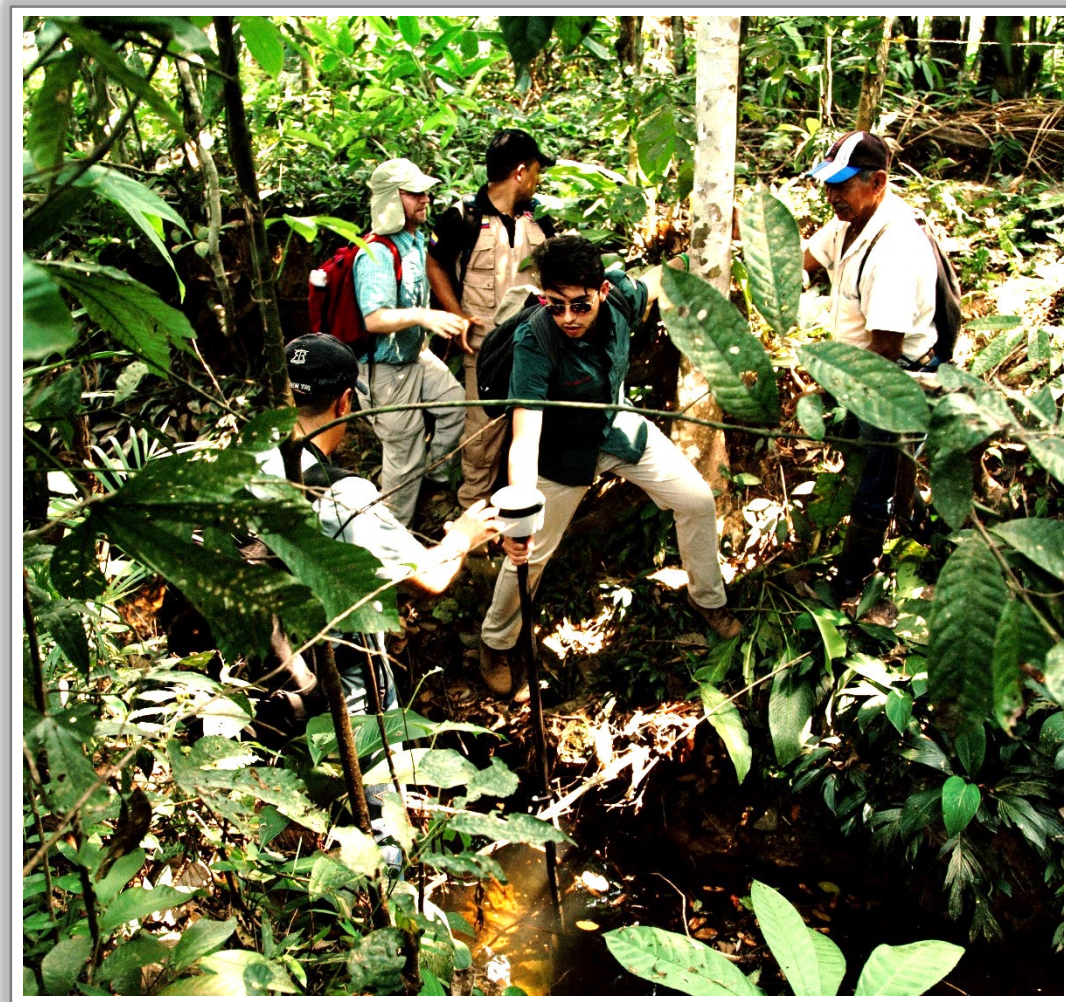
DATA COLLECTION – TRAINING

GRASSROOT SURVEYORS





DATA COLLECTION – FIELD SURVEY



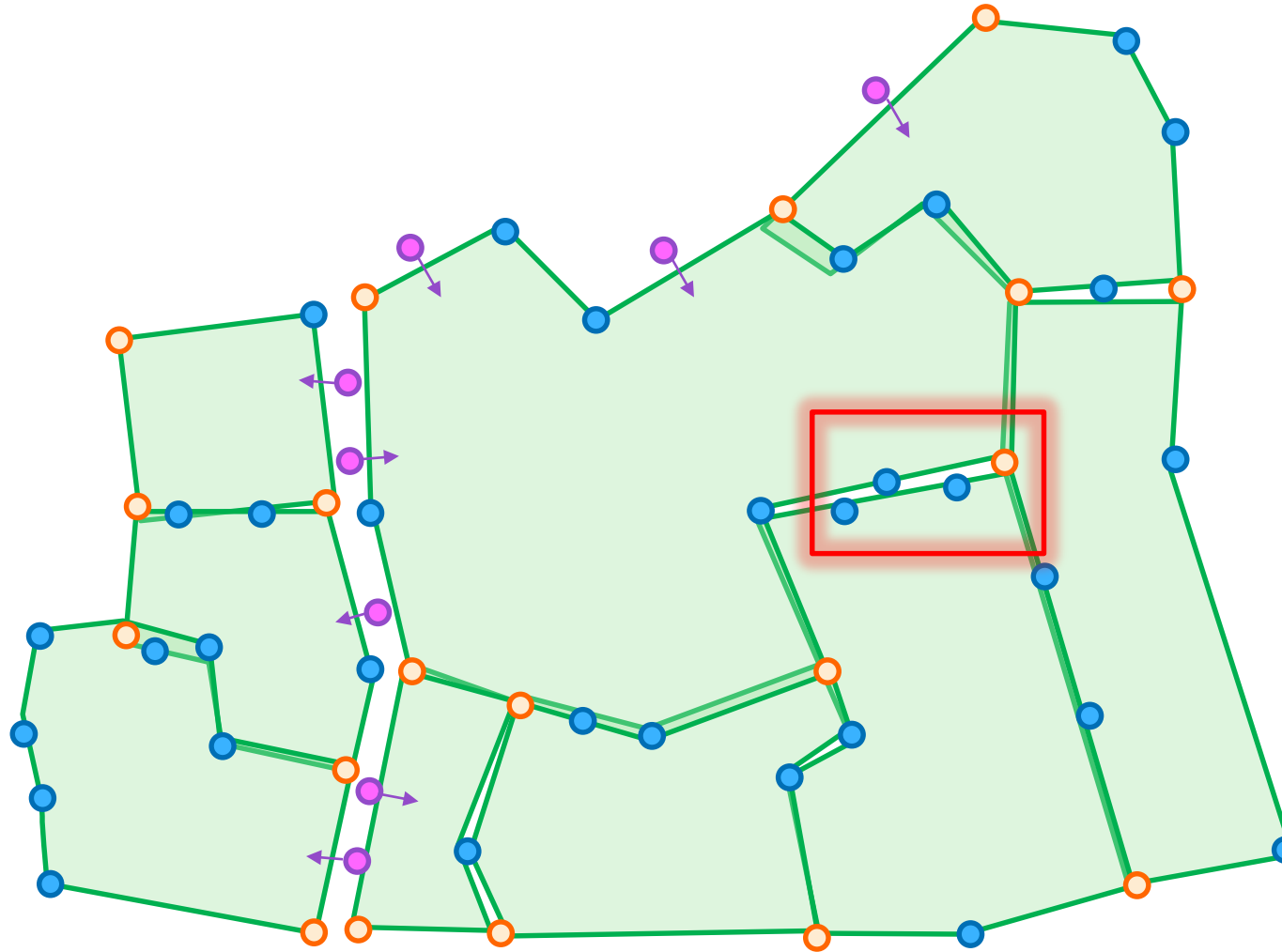


DATA COLLECTION – FIELD SURVEY



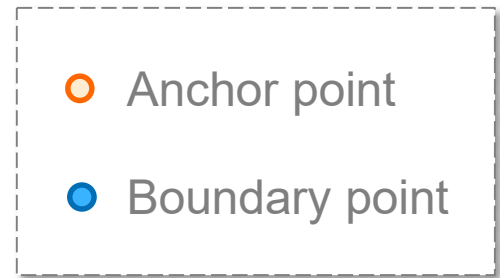
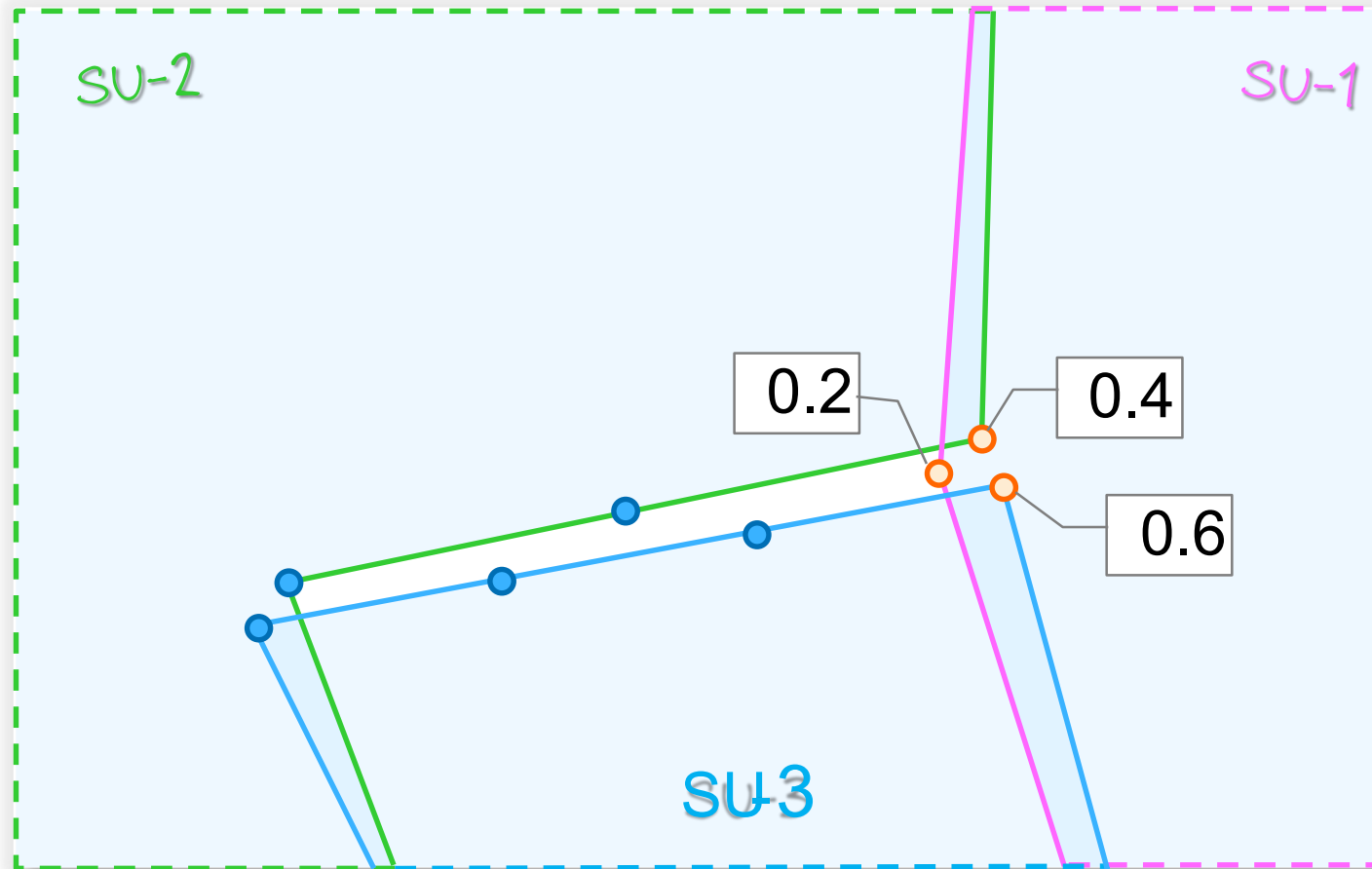


POST-PROCESSING – BOUNDARY/BOUNDARY RECONCILIATION



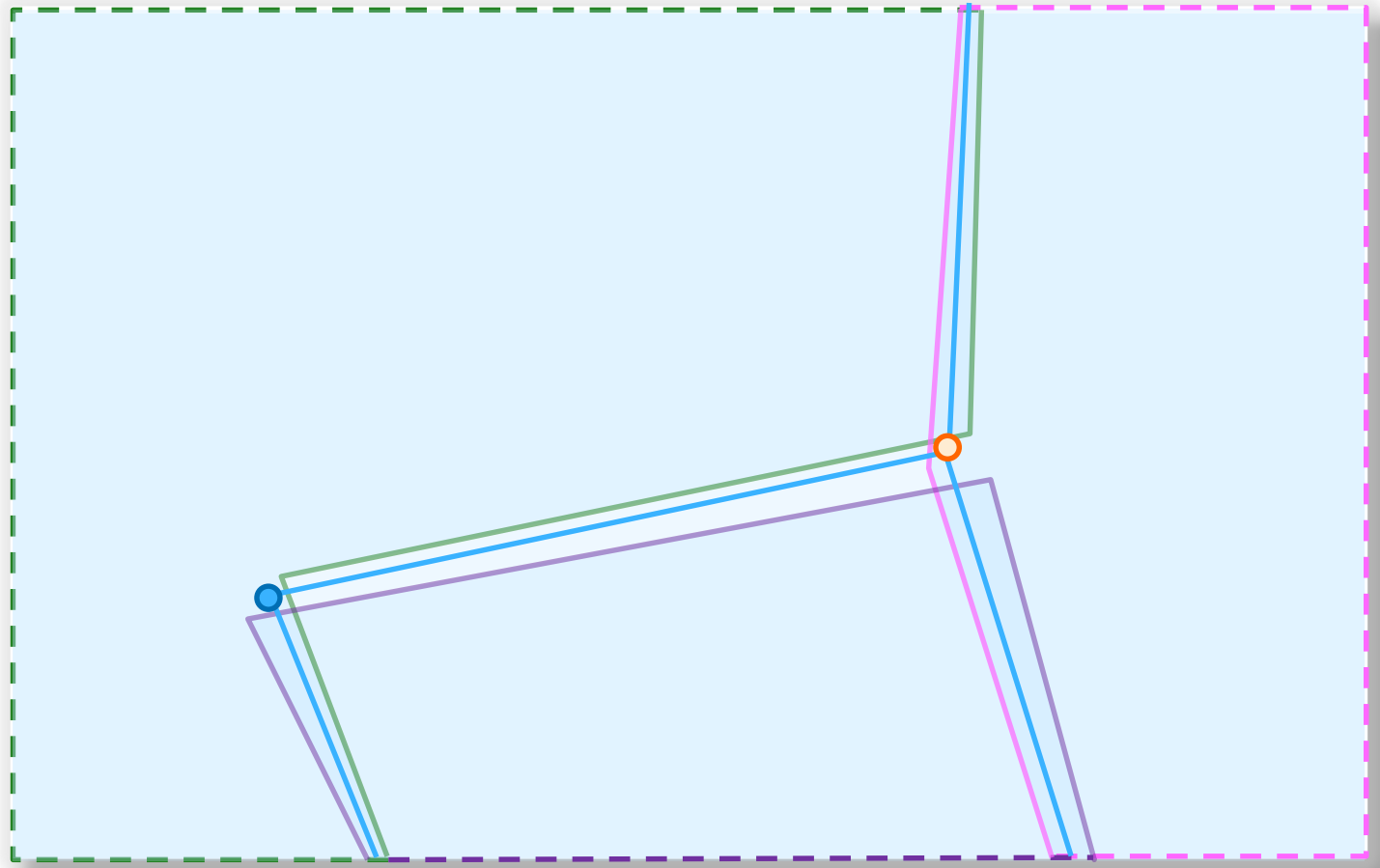


POST-PROCESSING – BOUNDARY/BOUNDARY RECONCILIATION





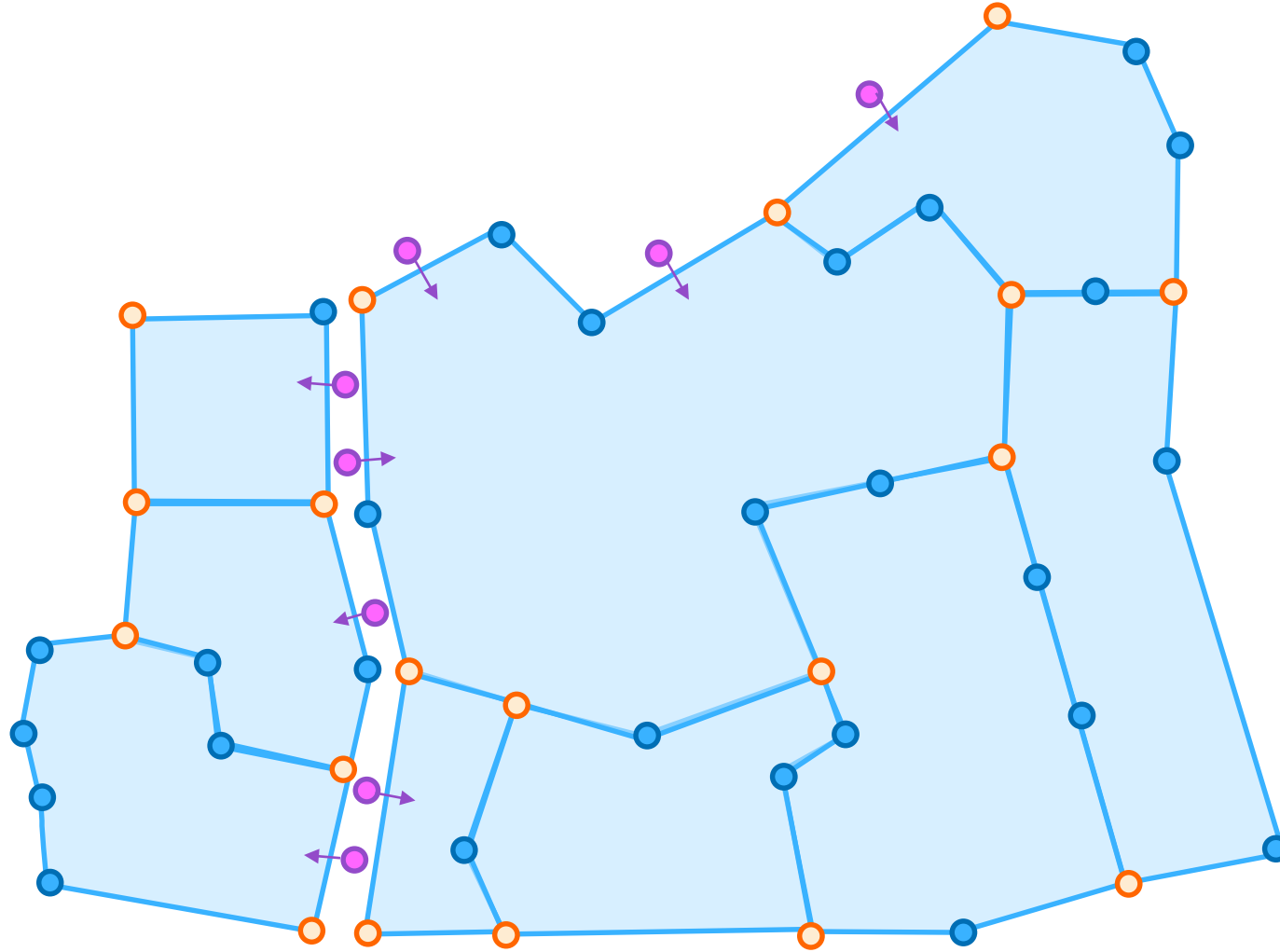
POST-PROCESSING – BOUNDARY/BOUNDARY RECONCILIATION



- Anchor point
- Boundary point



POST-PROCESSING – BOUNDARY/BOUNDARY RECONCILIATION



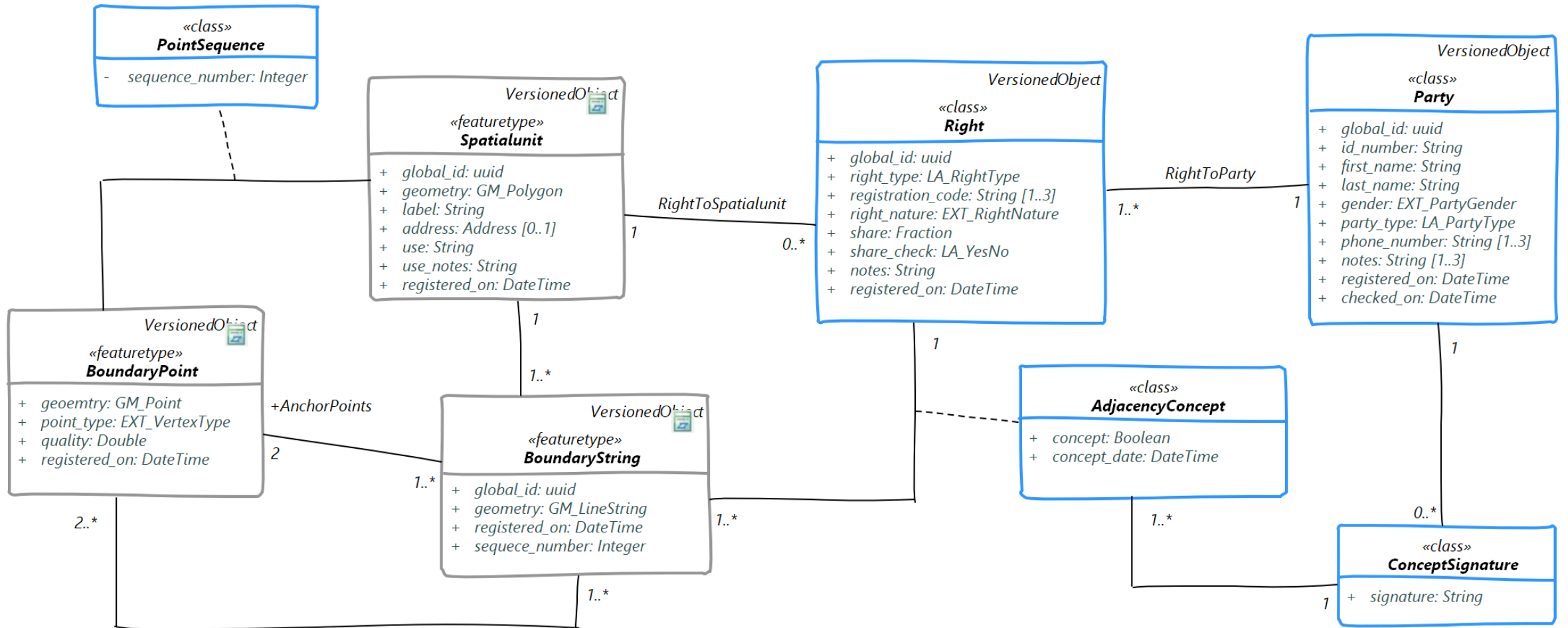


PUBLIC INSPECTION



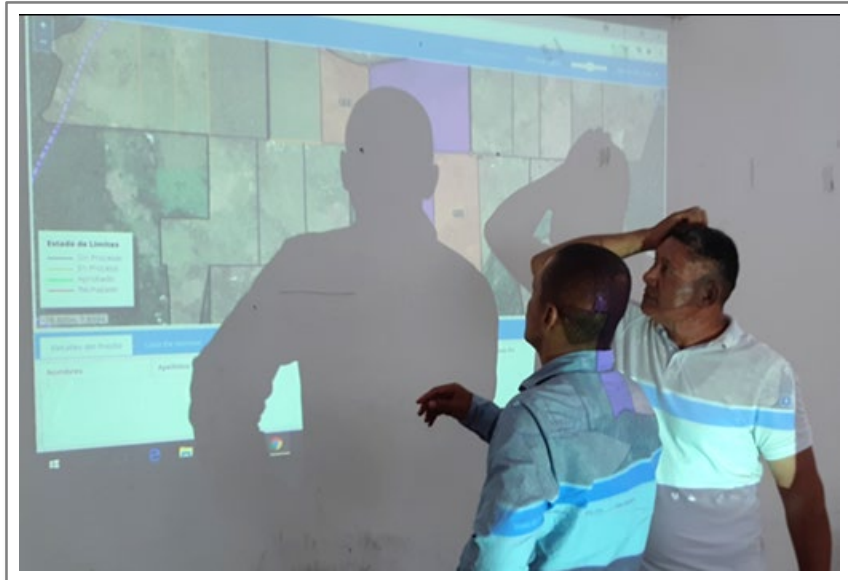


MULTI-LEVEL DATA MODEL: STEP 5





PUBLIC INSPECTION



Viewer Show Parcel IDs Refresh layers Layer Switcher

Boundary Status

- No Data
- In Progress
- Aproved
- Rejected

Spatialunit Details | List of Neighbours | Boundary Status

First Name	Last Name	Citizen #	Gender	Doc. Photo	Face Photo	Registered On
Jorge Enrique	Sanchez Hoyos	6,687,965	Male	Yes	Yes	22-Feb-2018 14:31



PUBLIC INSPECTION

First Name	Last Name	Citizen #	Gender	<i>n</i>
Anastacia	Duncan	42,356,111	Female	Sign
Leroy	Ferguson	1,341,894	Male	Sign



PUBLIC INSPECTION

Rightholders		Spatialunit Details	List of Neighbours	Boundary Status
Parcel ID	Full Name			
11	Lyla Stephenson			
248	Ashley Porter			
226	Ronan Hubbard			
229	Kristina Jenkins			
229	Theodore Lawson			

<

Boundary signature form of → Leroy Ferguson

BOUNDARY RELATIONS APPROVAL:

Identifiers	Neighbour		Date	Remarks
11 - 21201 -	Lyla Stephenson	<input checked="" type="radio"/> Yes <input type="radio"/> No	28-Jan-2019	Remarks ▼
226 - 21204 -	Ronan Hubbard	<input checked="" type="radio"/> Yes <input type="radio"/> No	28-Jan-2019	Remarks ▼
229 - 21206 -	Theodore Lawson	<input checked="" type="radio"/> Yes <input type="radio"/> No	28-Jan-2019	Remarks ▼
248 - 21202 -	Ashley Porter	<input checked="" type="radio"/> Yes <input type="radio"/> No	28-Jan-2019	Remarks ▼

Type in additional remarks...



REGISTRATION & TITLES





REGISTRATION & TITLES



THE TEAM IN WANT OF THE WORK AREAS IN COLOMBIA



LESSONS LEARNT

- Focus on the process and direct it to the needs.
- Use technology and standards to support the process not to define it.
- Simplify to enhance participation
- Do not aim for one-size fits all procedures
- Build trust on the process

WHICH WAY NOW?

