



REGIO

**Beyond Points on a
Map: Maintaining
Address Intelligence
Across the Baltics**

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Riga 2026

Working with spatial data across Baltics

Cartography

- Custom & classic map products



Balti States database

- Addresses** & territories
- Roads & navigation
- POI & AOI
- Landuse



GIS services

- Data collection, enrichment, processing and analysis
- Expert support on spatial data management

Customer address data management



Bridging the Gap



Raw data maintained by public institutions

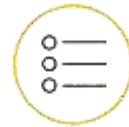
- Address register
- Postal code register
- Cadastral register
- Property register
- Building register
- Territory datasets
- Place name datasets
- Business register
- ...



Clean



Integrate



Standardize



Validate



Update



Enrich

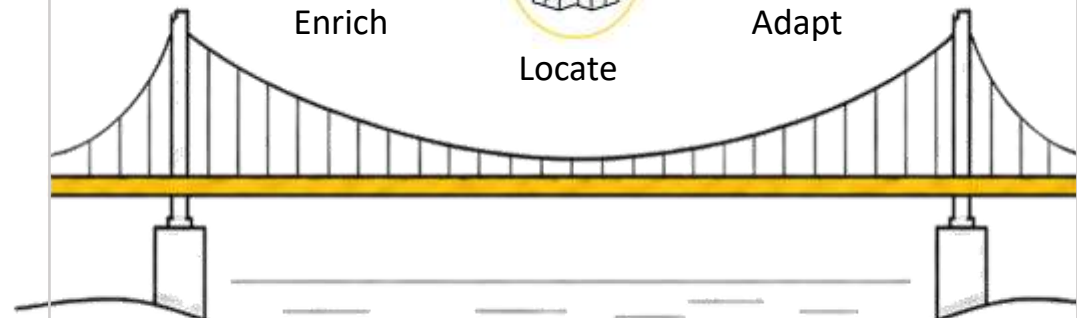


Locate



Adapt

Making data usable



Gap

Public institutions maintain authoritative datasets. The gap is turning them into ready-to-use data for different use cases.

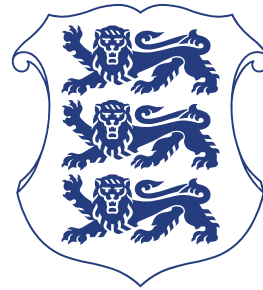


Use of address and related data

- Delivery and navigation services
- Address and place search
- Customer address data management
- Map services
- Spatial analysis
- Location context ...

Integrating datasets

- Raw data from
 - different countries
 - different institutions
- Differences in data
 - formats
 - structures
 - content
 - availability
 - update frequency
 - coverage
 - quality



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Pasts

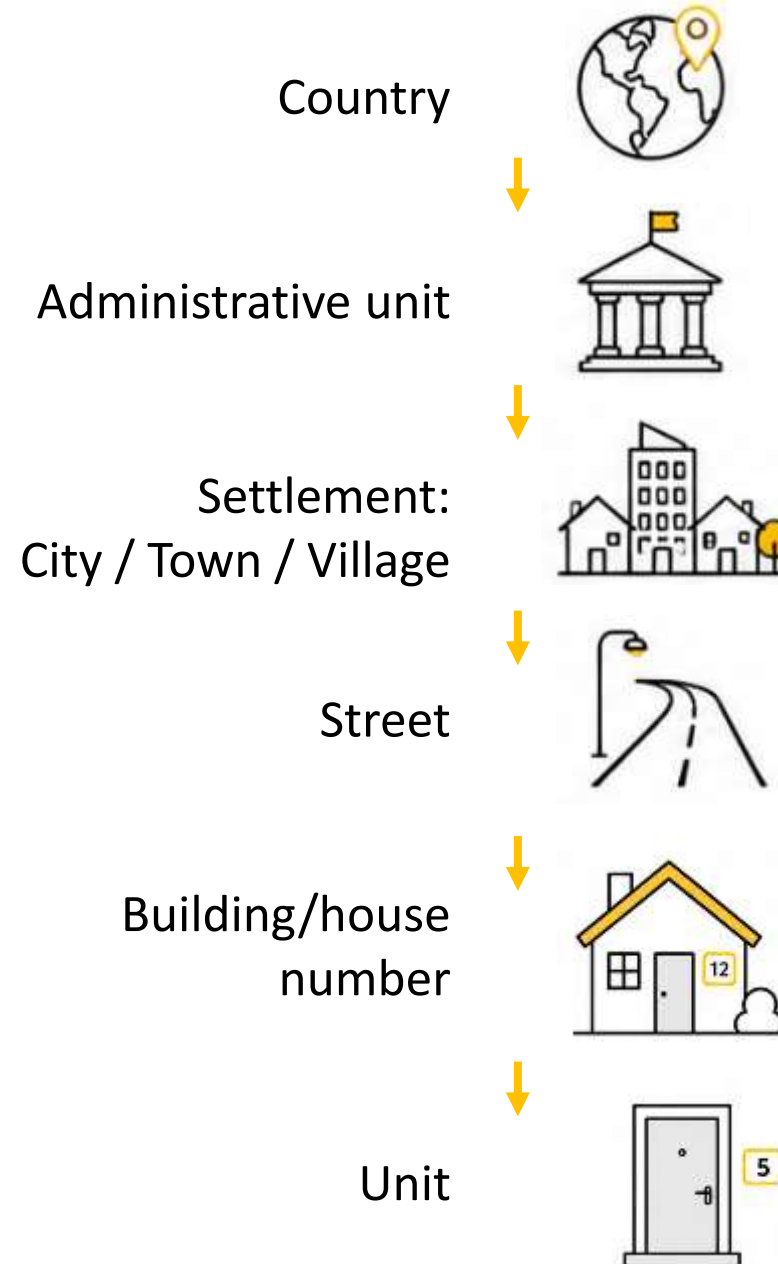


Valsts zemes dienests

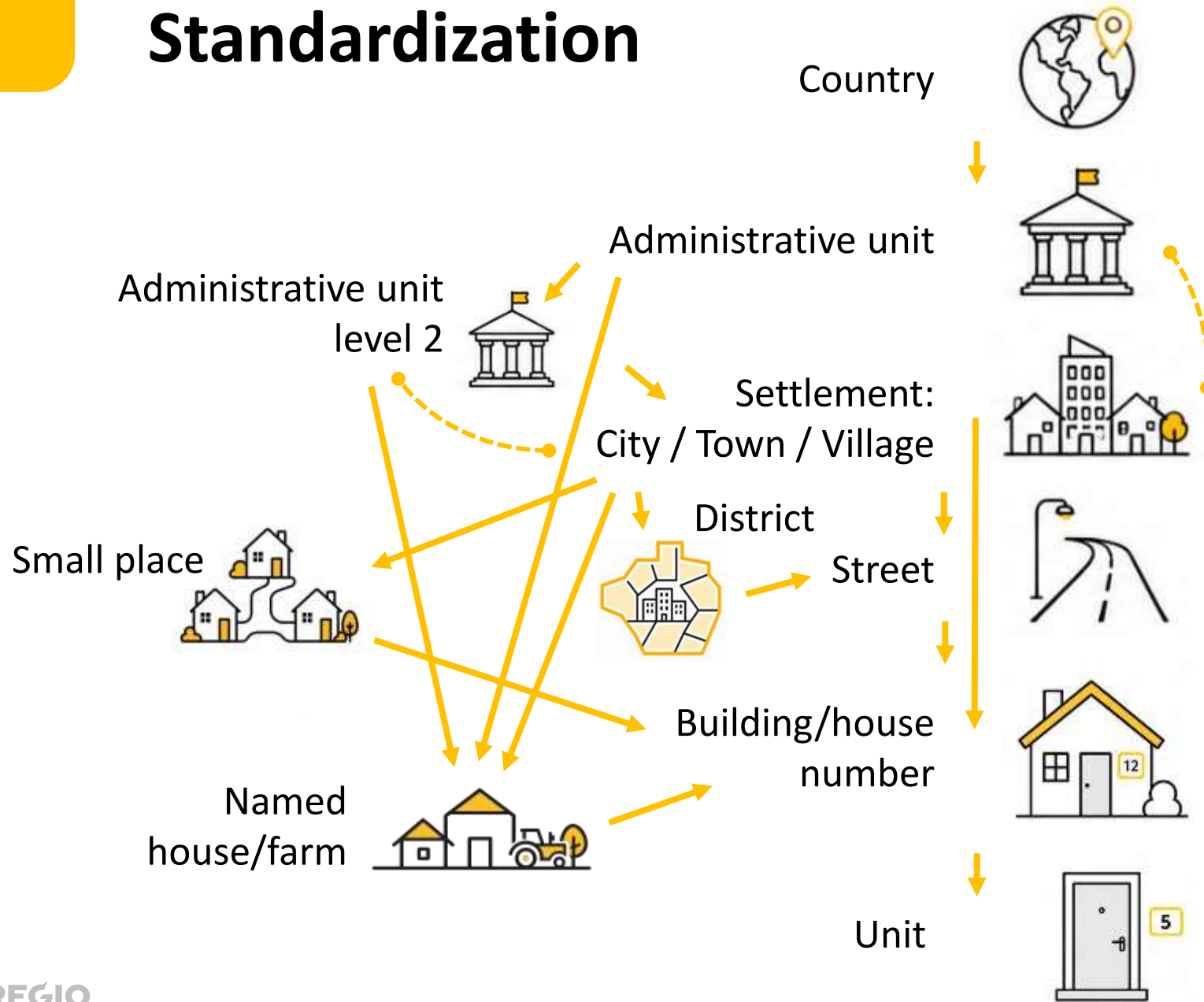


Standardization

- Address levels
 - National systems can have different levels and address components defined in them
- Addressing schemes
 - Street based
 - Estonia ~ 43%
 - Latvia ~ 57%
 - Lithuania ~ 93%
 - Area based



Standardization



One or many official administrative levels?

Can a settlement be also an administrative unit?

Are the districts of a city also part of official addressing?

Where in this system fits:

- 'väikekoht'
- 'talunimi'
- 'viensētas nosaukums'

Can one street be in different settlements?

Can one house have multiple house numbers (e.g. semi-detached houses)?

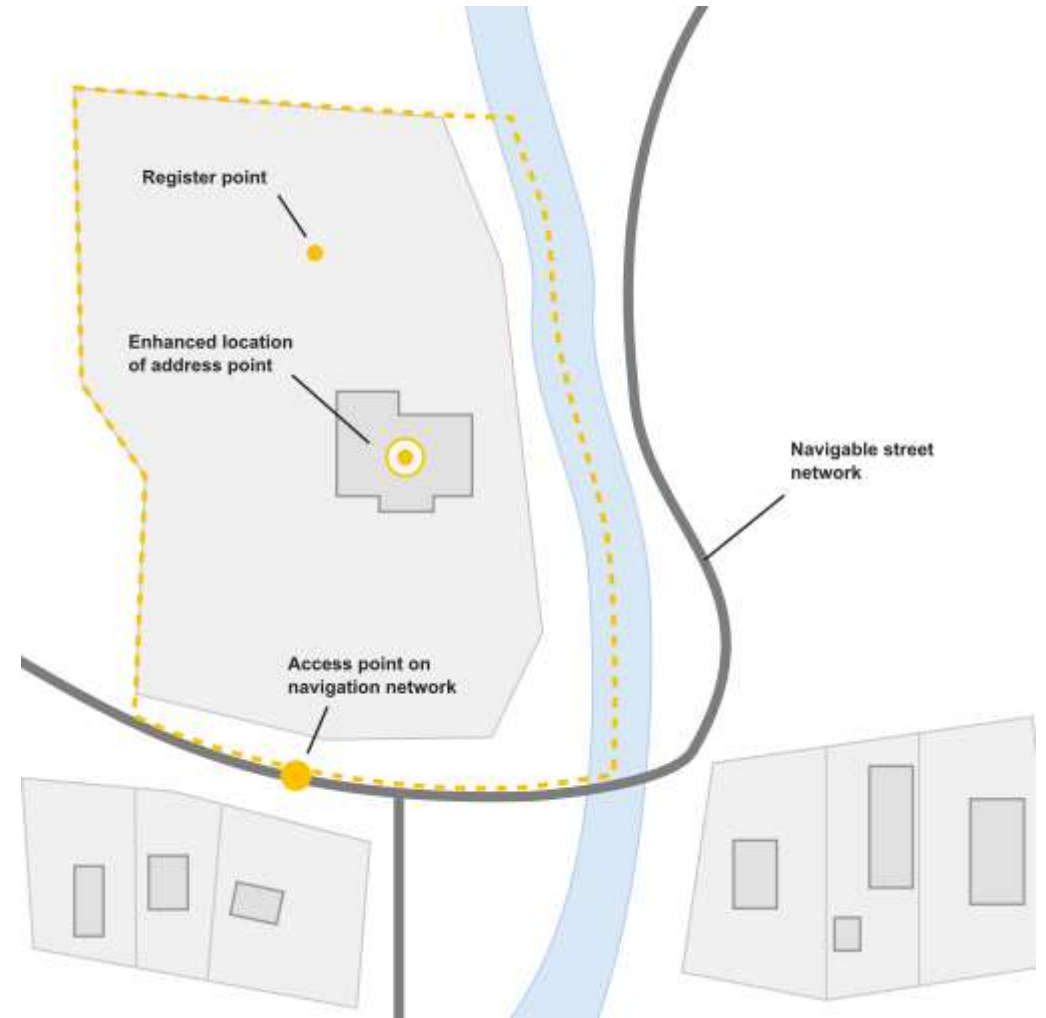
....

Location

■ Points

- coordinates in register
 - May not be always presented on higher levels
- enhanced location
 - Using external data like house footprints, cadastral unit polygons, road network
- access point
 - Important for navigation
 - Point on road to access the address
 - May not be the closest point on road

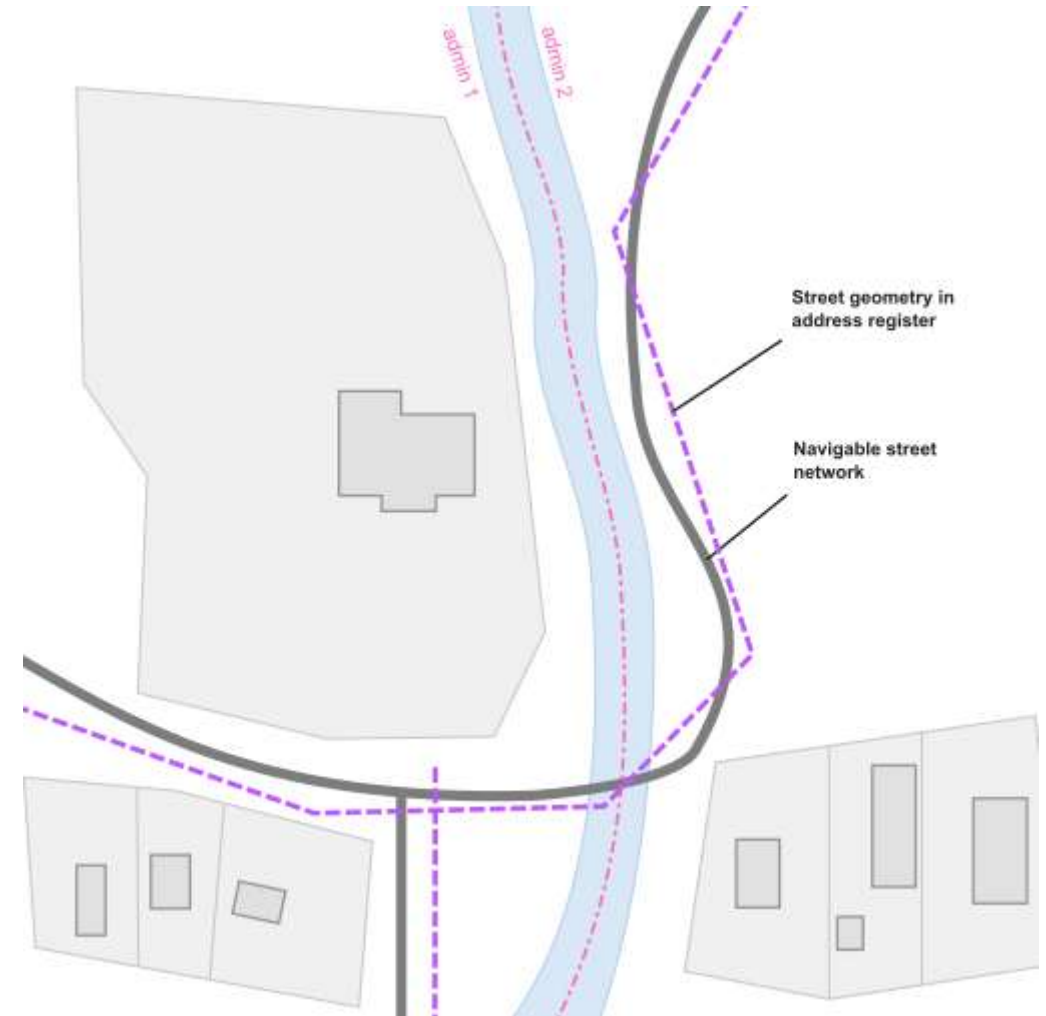
Every address level object has a point representation



Same address different geometries

Location

- Lines
 - road stretch in register
 - road segments in navigable network
 - boundary between administrative units
- Street level address objects
- Higher level territory boundaries

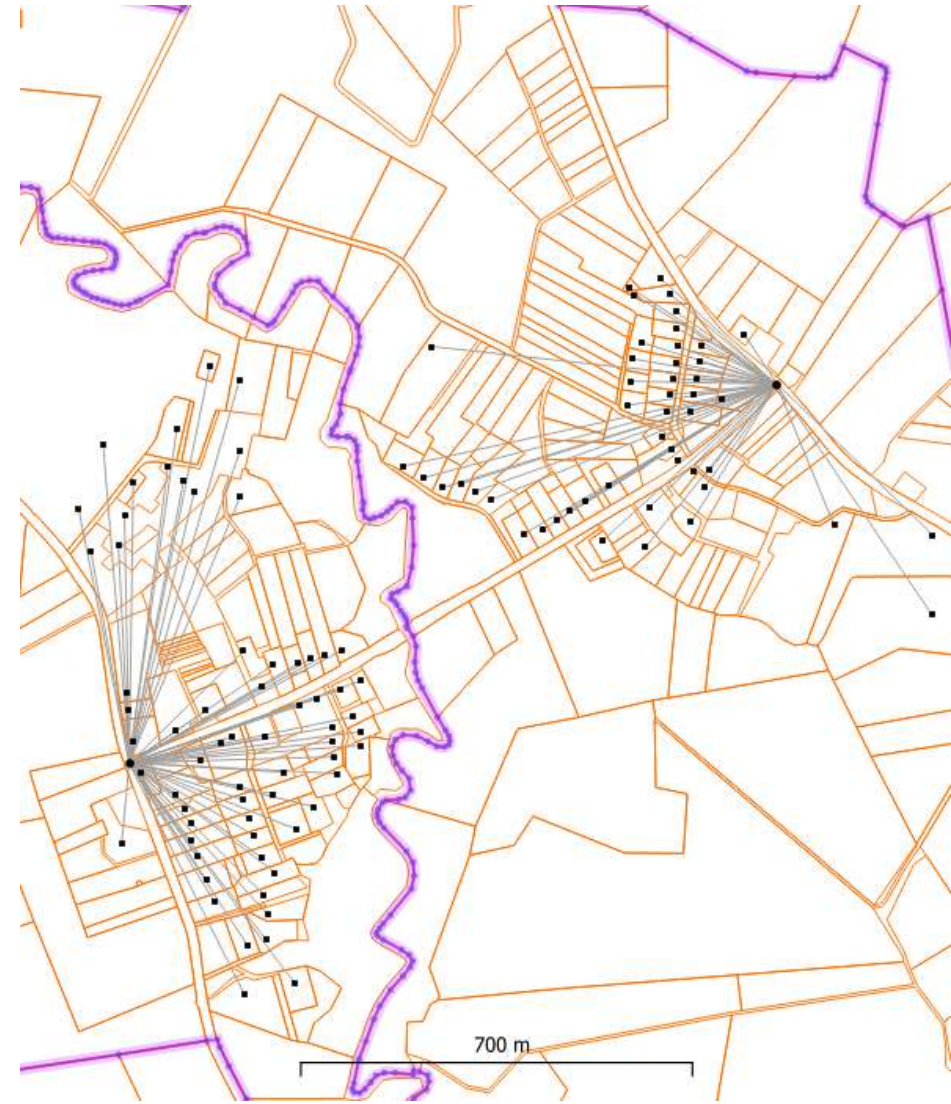


Same address different geometries

Location

- Polygons
 - reverse geocoding
 - map display
 - data from registers
 - unofficial delineations (areas not for display)
 - enhanced boundaries to follow other map features

Most address level objects have aerial representation > territories.



Same address different geometries

Enrichment

- Users need **additional context** > tying address data to other registers and datasets



Examples:

- Population counts
 - Property data
- Building information
- Flood risk assessment
- Landuse information
- Distance to nearest POI

If no other link exist (or it fails)
– the connection can be created
based on location

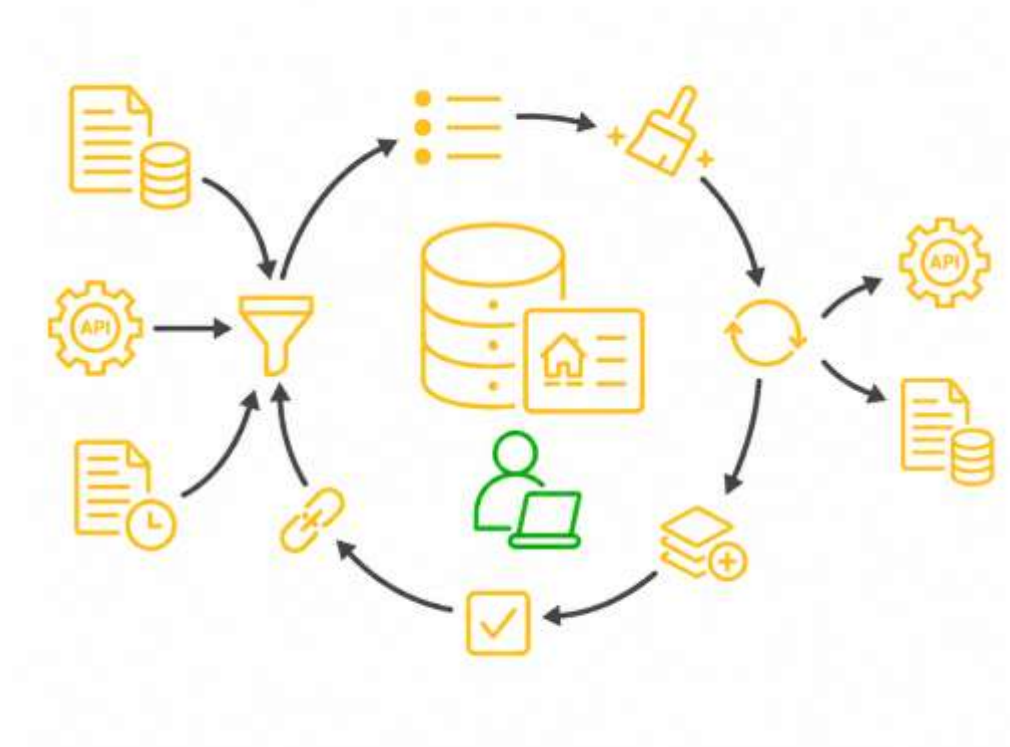
Cleaning and Validating

- Discrepancies between datasets are common
- Implementing logical tests
 - Completeness
 - Attributes present?
 - Relationships valid?
 - Consistency
 - Values follow rules?
 - Geometry
 - Objects are well-formed?
 - Geometric relationships are valid?

> Resolving problems



- Clients expect
 - Regular updates
 - Stable data structure
 - Stable ID-s
 - Only real changes reflected
 - History preserved
- Maintenance is an ongoing task
 - Automated pipelines
 - **Human in the loop:** fixing, validating, resolving
 - Long-term maintenance is where the real work starts



Sources change:

- Content
- Structure
- Update logic
- Dependencies

Addresses link systems



A chain is only as strong as its weakest link

Thank you!

From address data to
address intelligence

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