

# Main learnings from UN-GGIM: Europe core data

## The key questions core data answers (or not)

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# Introduction



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# Core Data definition and objectives

- Core data is **priority data**
  - Geospatial data
  - The most useful to analyse, achieve or monitor the SDGs
  - Directly or indirectly
- Objectives :
  - **Define Core Data** and encourage UN European Member States to produce and supply it
    - Common requirements → common (minimum) content
  - **Define priorities** for producing new data or for improving existing data



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# Phase 1

## Selected Core Data Themes

### Annex I

Coordinate Reference Systems

Geographical Grid Systems

Geographical Names

Administrative Units

Addresses

Cadastral Parcels

Transport Networks

Hydrography

Protected Sites

### Annex II

Elevation

Land Cover

OrthoImagery

Geology

### Annex III

Statistical units

Buildings

Soil

Land use

Human health and safety

Utility and governmental services

Environmental monitoring facilities

Production and industrial facilities

Agricultural and aquaculture facilities

Population distribution - demography

Area management/restriction/regulation

Natural risk zones

Atmospheric conditions

Meteorological geographical features

Oceanographic geographical features

Sea regions

Bio-geographical regions

Habitats and biotopes

Species distribution

Energy resources

Mineral resources

# Phase 2 : Recommendations for Content Principles

Step-wise approach:

- **Core recommendation**: 1<sup>st</sup> priority, achievable, ideally short term action
- **Good practice**: 2<sup>nd</sup> priority, brings added value to core data, to be encouraged
- *Considerations for future: potential core data in long term*

Production  
/enhancement  
of data

Research, cost &  
benefit analysis, ...



# Where?



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# Where?

- Key question for geospatial information
- Where is located each feature of interest?
  - Geometry (data model)
- Where is located the set of features of interest?

Where to capture them?

- Geographic extent



# Geometry (data model)

- Most features have a direct geometry

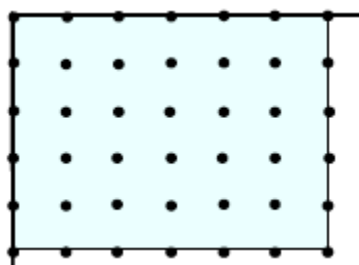
X

point

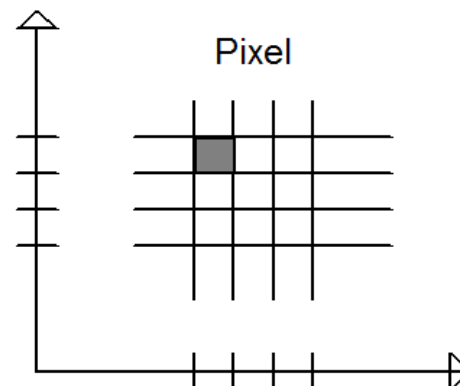
line

Surface (or multi-surface)

Vector data



Grid (Elevation)



Pixels  
(Orthoimagery)



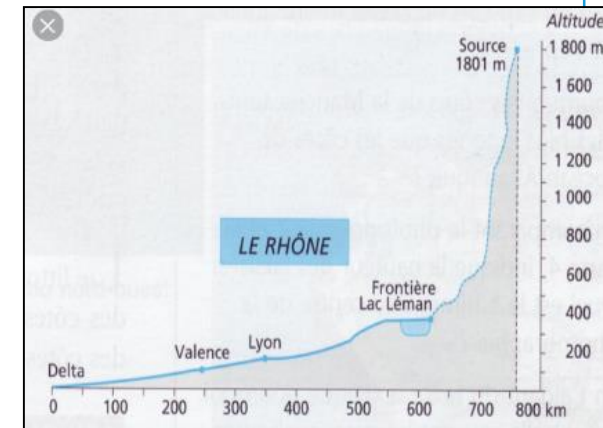
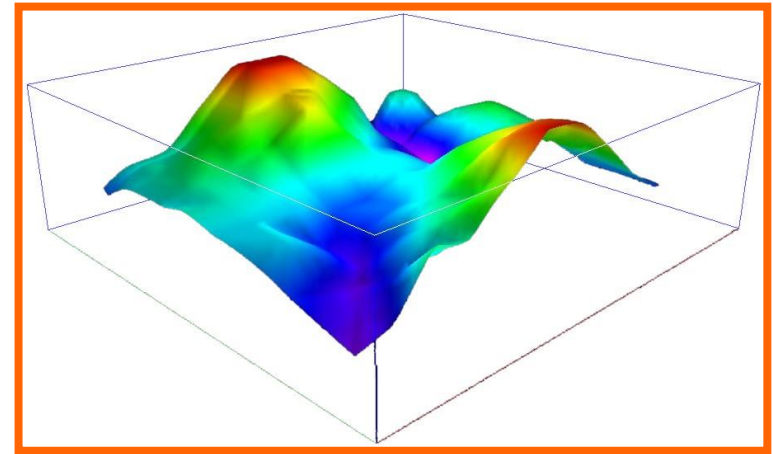
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# Geometry (data model): Z value

- **Priority 1 : 2D data**

- General case
- Exceptions
  - **Elevation (of course)**
  - **Hydrographic Network**
  - A few Regulated Zones (e.g around airports)

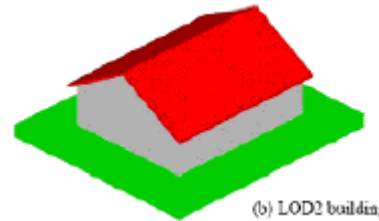


# Geometry (data model): Z value

- Interest for Z value, for other themes

- **Priority 2**

- Buildings
- Transport Network (2,5 D data)



3D data  
(building

- **Considerations for future**

- Cadastral Parcels

- Addresses

-Land Cover

- **Not relevant at all**

- Administrative or Statistical Units

- Orthoimagery

- Geographical Names

- ...



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# Geometry

- Document the reliability of geometry
  - By accuracy (if well defined feature)
  - In the data model else

«codeList» GeometrySpecificationValue
+ postalDelivery
+ utilityService
+ thoroughfareAccess
+ entrance
+ building
+ parcel
+ segment
+ postalDescriptor
+ addressArea
+ adminUnit1stOrder
+ adminUnit2ndOrder
+ adminUnit3rdOrder
+ adminUnit4thOrder
+ adminUnit5thOrder
+ adminUnit6thOrder



Good



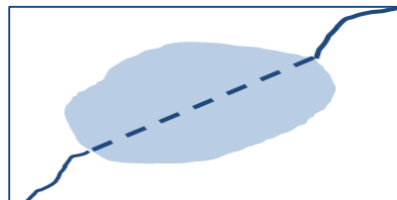
Medium



Undefined

Theme Geographical Names

Theme Addresses



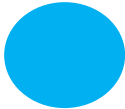


Fictitious  
(Hydrography)



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# Geographic extent

- Minimum common requirement
  - **Whole land territory**
- Interest for sea (or part of sea)

		
Elevation Administrative Units Regulated Areas	Geographical Names Buildings Transport Networks	Cadastral Parcels Orthoimagery Addresses

- More detailed data on “hot spots”

- Elevation

-Orthoimage



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# What?



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- **Classifying**

**Under themes, feature types and attributes.  
Number of attributes varying according themes**

- **Naming**

**If existing in real-world, name(s) are core attributes**

- **Identifying**

**Most features should have a database and/or a thematic identifier**

- **Selecting**

**Data capture rules document priority features ( e.g train > tramway)**

- **Qualifying**

**Quality rules (completeness, thematic accuracy) document the reliability of the “what” information**



# When?

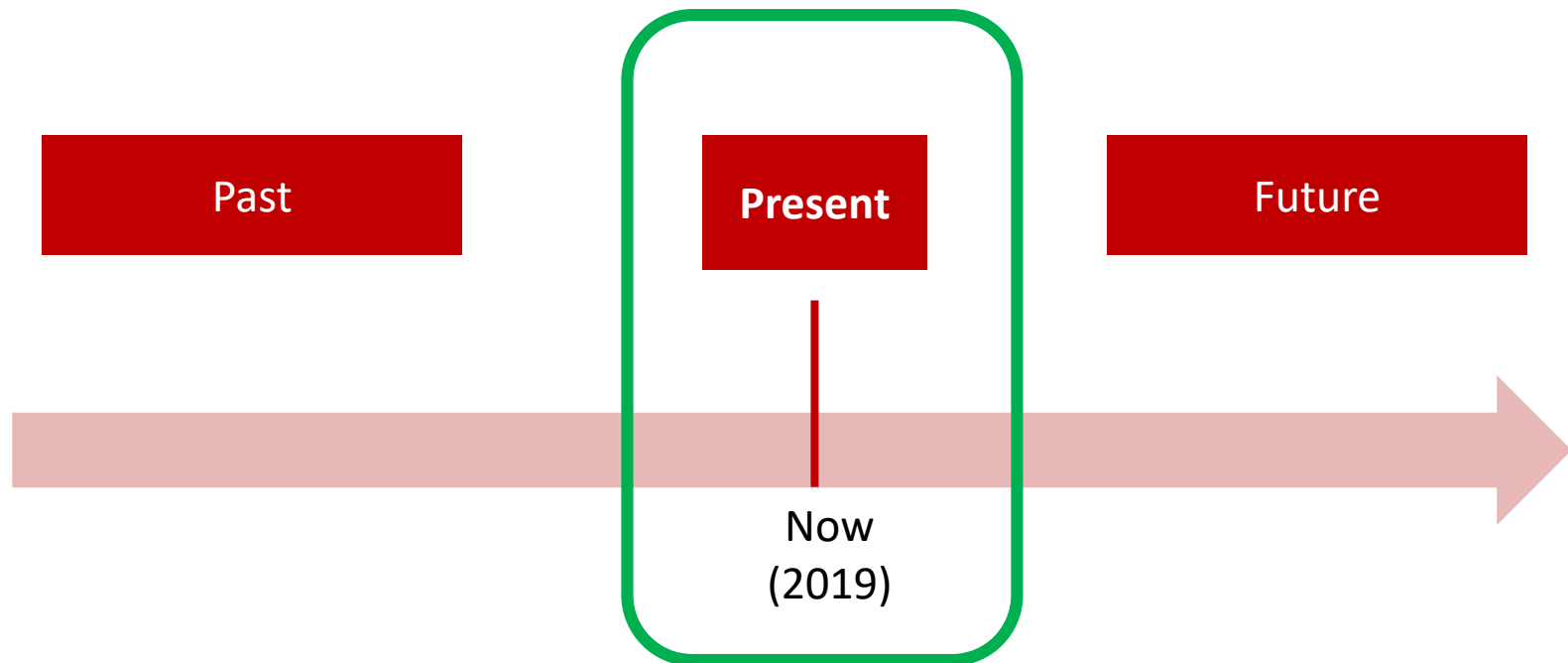


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# Core (temporal) data



**Priority 1 : Capture present features**





# Update frequency

- (Present) data should be captured as fresh
  - as required
  - as feasible

**Continuous update**  
(Cadastral Parcels,  
Addresses,  
Administrative Units,  
Regulated Areas)

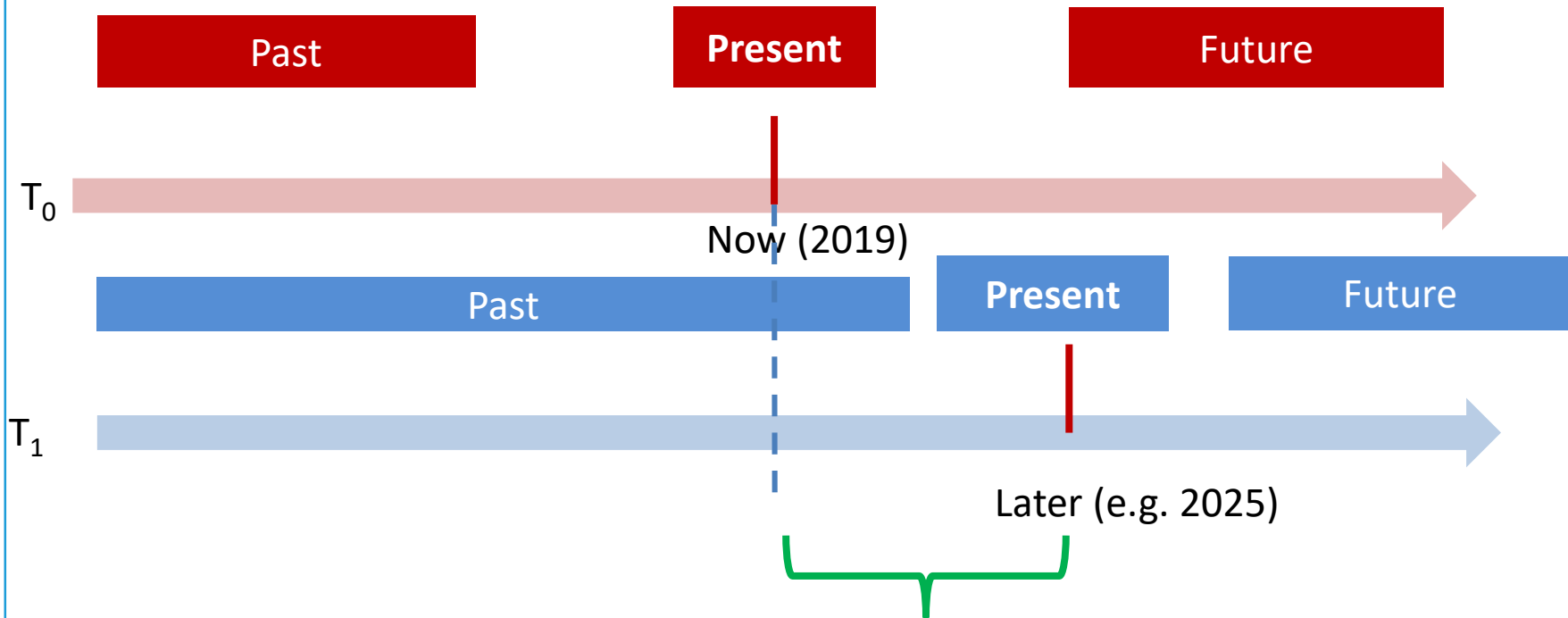
**Yearly update**  
( Buildings, Basic  
services, ...)

**3 years (or more)  
update**  
(Elevation,  
Orthoimagery ....)



# Temporal attributes in database

- Present Data will become Past Data



**Keep core data available for users**

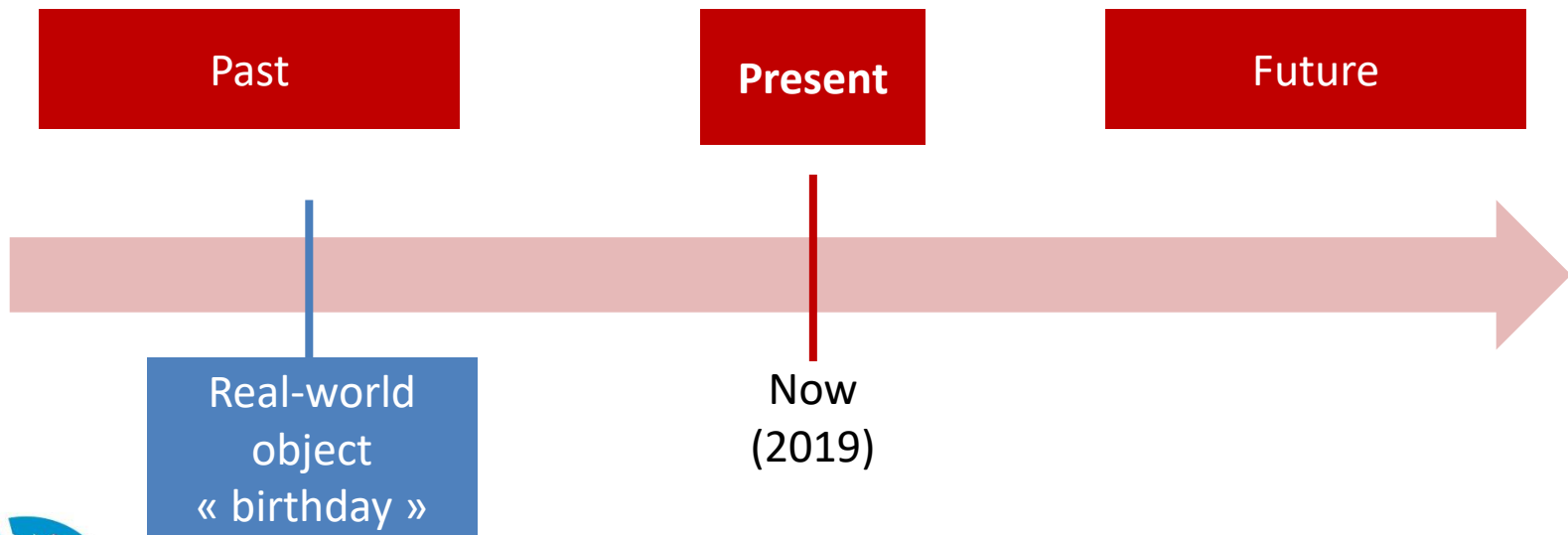
- Vector data: INSPIRE mechanisms (versioning, life-cycle attributes) – temporal attributes in database
- Orthoimage: whole coverages



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# Temporal attributes in real-world

- (Present) data represent real-world object
  - that was “born” in the past
  - That may have a (scheduled) end date

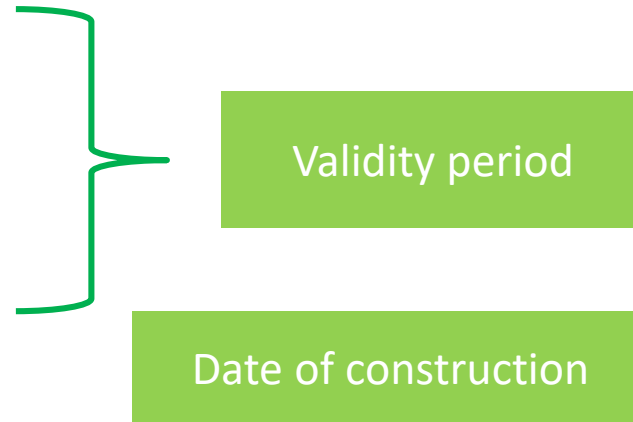


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# Temporal attributes in real-world

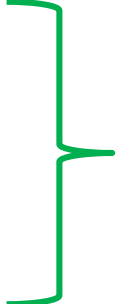
- Real-world temporal information is of interest
- But it is costly to capture
- => priority on few themes
  - Regulated Areas
  - Administrative Areas
  - Statistical Areas
  - Buildings
- => step-wise approach
  - Begin to register “birth” dates of new objects



Then, try to retrieve “birth” dates of old objects

# Capturing data from the past?

- It is of interest mainly for
  - Administrative Areas
  - Statistical Areas
  - Addresses
  - Orthoimage
- But it may be costly
  - => considerations for future



Statistical or administrative purposes

Landscape evolution



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# Why?



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# Why?

- Potential scope :
  - Mainly Regulated or Managed Areas
- Decision
  - Link to the legal text



# Who?



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# Who?

- Potential scope:
  - Cadastral parcel owner
  - Road owner, road manager
  - Person living or working at an address
  - Administrator, manager of
    - Regulated or Managed Zone
    - Administrative Unit
    - Basic Service



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# Who?

- Decision:
  - **“Who” is out of scope of core geospatial data**
  - It has to be managed in other registers / information systems
  - When existing, linking should be easy
  - **Registers of public bodies**
    - Necessary (e.g. for SDG)
    - **But not always existing**



# Conclusions



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# Conclusion

- What and Where
  - Priority 1
- When
  - Good practice – priority 2
- Why
  - Very limited scope (Regulated Zones)
- Who
  - Out of scope of core data

Classification and georeferencing are INSPIRE requirements for the 3 Annexes

