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# UN-GGIM: Europe core data to complement the INSPIRE framework – second step

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# Introduction



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# What is UN-GGIM?

- United Nations initiative on Global Geographic Information Management
- Since 2011
- Strong implication of the **statistical** community
- Activities at :
  - Global level
  - Regional level: **Europe**, Africa, ...



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# What is core data?

- Core data is priority data
  - Geographic data
  - The most useful to analyse, achieve or monitor the SDG (Sustainable Development Goals)
  - Directly or indirectly



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# How is core data complementing INSPIRE?

- INSPIRE is about harmonisation of existing data
  - Common model
  - Still heterogeneous content (no LoD, voidable attributes)
- Core data is about encouraging production of new data (or upgrade of existing data)

**INSPIRE:  
STRUCTURE**

**CORE DATA:  
CONTENT**



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# What was first step?

Selection of 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

# What was first step?

- To know more:
  - Selection of core data themes

<http://un-ggim-europe.org/content/wg-a-core-data>

- Specification of core data themes
  - Next year INSPIRE conference (may be)!



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Last slide of 2016  
presentation



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# Second step



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# Objectives

- Work out 'Recommendations for Content' for the selected themes
- Based on
  - Existing standards: mainly INSPIRE
  - User requirements with focus on SDG related use cases



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# Principles

- Use INSPIRE specification as starting point
  - => common terminology
- Investigate user requirements
  - Bibliography
  - User interviews
  - Questionnaires
  - WG members expertise



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# Principles

- Decide on recommended **levels of detail**
  - Decide on core content
    - Scope
    - Data model
- } By restricting and/or by extending INSPIRE
- Propose **quality rules**



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# First results

- Recommendations for content (almost) ready for themes CP, AD, GN
- On-going work on remaining themes



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# First results

- Different focus / added value according to INSPIRE themes:
  - “well-defined themes” : CP, AD, AU, ...
    - Mainly quality criteria
  - “rich themes” with lots of features of attributes : TN, HY
    - Mainly extracting core information
  - “empty themes”: EL, OI, LC
    - Levels of detail
    - Content (DTM+DSM or just DTM, infra-red or just RGB, ...)



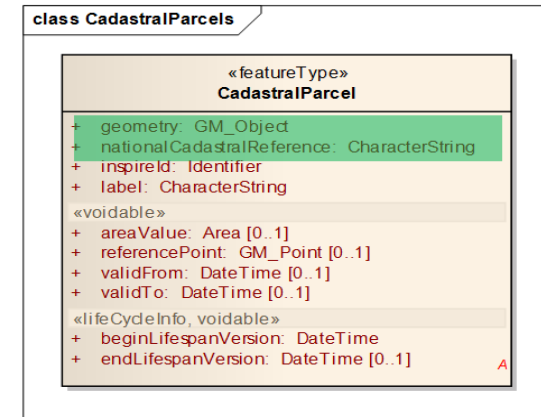
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# First results: examples (CP)

- Encourage cadastral parcels forming a partition of territory
  - Geographic extent: whole (land) territory
    - Cadastration of public domain encouraged
  - Completeness
  - Topology (no gaps or overlaps)
  - Cadastral parcels as single areas
- Encouraging efficient link with land registry
  - Model focus on national cadastral reference
  - Temporal consistency between cadastral map and land registry



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# First results: examples (GN)

- Restricting INSPIRE

- Core data recommendation are for **production**
- To avoid duplication of efforts, scope is limited to GN not in other themes
- But to facilitate use, in **delivery** phase, it is of interest to combine all the Geographical Names of various themes :  
AU, HY, TN, ...

«codeList»	
NamedPlaceTypeValue	
+	administrativeUnit
+	building
+	hydrography
+	landcover
+	landform
+	populatedPlace
+	protectedSite
+	transportNetwork
+	other



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# First results: examples (GN)

- Extending INSPIRE
  - For mapping use case, need of information on the “importance” of a named place
    - Selection according the scale / level of zoom
    - Relevant font for the label



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# First results: examples (GN)

- Extending / improving INSPIRE
  - INSPIRE data model has some information but as **subjective** criteria
  - Core data recommends to focus on **objective** criteria
    - Population (for named places)
    - Area (by representing named place with true geometry not just by a point)

«featureType» NamedPlace
+ geometry :GM_Object
+ inspireId :Identifier
+ name :GeographicalName [1..*]
«voidable, lifeCycleInfo»
+ beginLifespanVersion :DateTime
+ endLifespanVersion :DateTime [0..1]
«voidable»
+ leastDetailedViewingResolution :MD_Resolution [0..1]
+ mostDetailedViewingResolution :MD_Resolution [0..1]
+ relatedSpatialObject :Identifier [0..*]
+ type :NamedPlaceTypeValue [1..*]



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# First results: examples (AD)

- Production of true addresses
  - AD mainly used for geocoding
  - An AD should enable to find the related building
  - But in rural areas, the AD may be limited to the village name
  - Core data recommendation: create “true” AD (e.g. with street name + house number everywhere)

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



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# On-going discussions: examples

- Theme BU:
  - geometric representation: should 3D data be core? Is it key requirement?
- Theme US
  - Name of corresponding core theme: **Basic Services**
  - Restrict INSPIRE scope: only key features of Utility Network (power plants) and of Environmental Management Facilities (e.g. landfill)
  - Extend INSPIRE scope: all Governmental Services, including leisure ones



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# On-going discussions: examples

- Theme AM
  - Extend INSPIRE scope
    - Not only environment related AM
    - But also the AM related to economy and society (other SDG components)
  - Focus on specific areas
    - Generic areas (e.g. applying to all rivers or all buildings) not first priority
  - Add attribute to inform if geometry has legal value or not
  - Manage regulation texts and responsible authorities in other databases



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# Conclusions



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# Core data and INSPIRE

- INSPIRE :
  - (in theory) driven by pan-European or X-border use cases
  - interoperability of existing data => **Common data models**
- Core data:
  - Driven by the SDG => Mainly national or even local use cases (to achieve the SDG)
  - But common requirements => **Common content**

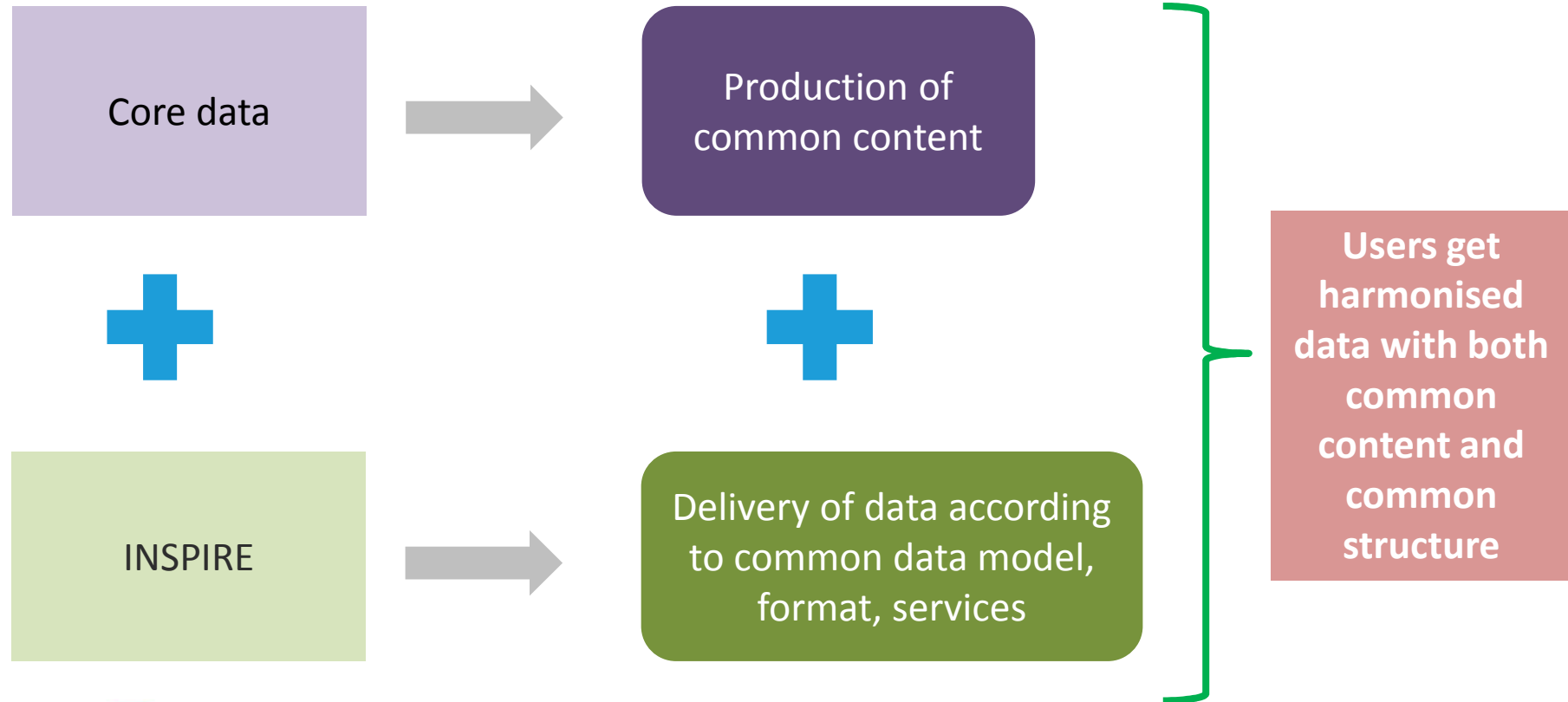


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# Core data and INSPIRE



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# Core data and SDG indicators

- Core data : the most useful data to analyse, achieve or **monitor** the SDG (Sustainable Development Goals)
- Indicators require mainly statistical data but also geographic data
  - To display the results: AU, SU
  - To compute some indicators
    - Accessibility : TN, US, SU/PD, ...
    - Areas of interest and their protection: LC/LU, PS, AM, ...

Several core/INSPIRE themes involved



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