

JOINT UN-GGIM: EUROPE – ESS - UNECE MEETING ON THE  
INTEGRATION OF STATISTICAL AND GEOSPATIAL INFORMATION  
LUXEMBOURG, 18 APRIL 2018

# **UN-GGIM: Europe Working Group on Core Data Report and update**



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# Introduction – Reminder



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# What is Core Data?

- Core data is **priority data**
  - Geographic data
  - The most useful to analyse, achieve or monitor the SDGs
  - Directly or indirectly



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# Objectives of the Working Group on European Core Data

- **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
  - Recommendations for Content: meant for decision-makers and data providers



# The Two Steps of the Working Group on European Core Data

- **First Step**
  - Selecting Core Data Themes
- **Second Step**
  - Defining Content of Core Data Themes



# First Step

## Selecting 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

## Second Step: Defining Content of Core Data Themes Objectives

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



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# Defining Content of Core Data Themes

## Types of Recommendations

- **Core recommendation:**
  - first priority, highly required, achievable
  - ideally short term action
- **Good practice:**
  - second priority, brings added value to core data
  - to be encouraged
- *Considerations for future: potential trends → long term*





# Defining Content of Core Data Themes

## Iterative Process

- Process internal in Working Group A
  - Draft
- Review by whole geo-statistical community
  - Final deliverable



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# **State of Play**

## **Core Theme “Cadastral Parcels”**

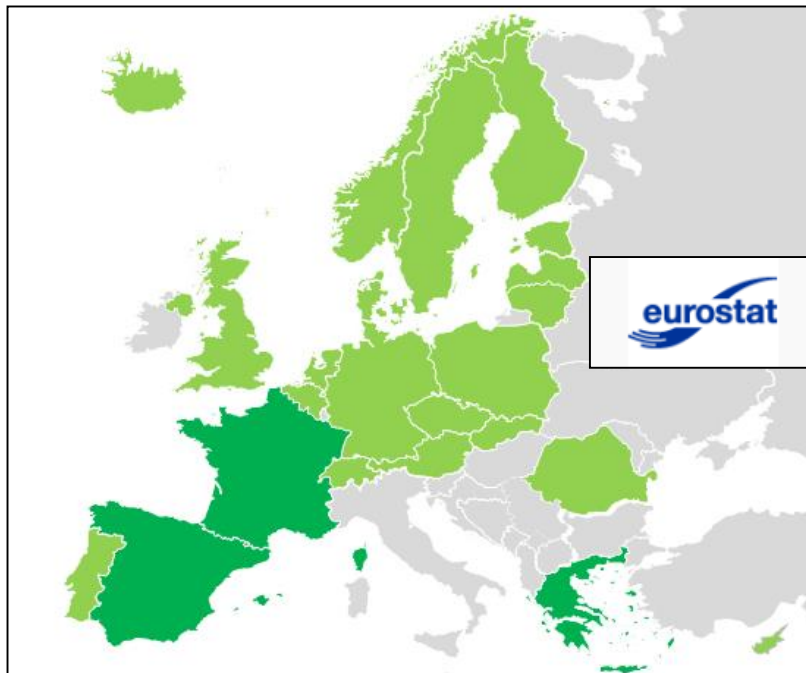


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# State-of-Play 'Cadastral Parcels'



We support all the recommendations of this deliverable - Robert Ballanche - Switzerland

We support the Core recommendations and Good practices and either they are implemented or are useful to be implemented in the future - Bronislovas Mikūta - Lithuania

I truly hope for a general acceptance for your proposals among member states - Jerker Moström - Sweden (GEOSTAT)

The specs are from my perspective very good,- Ekkehart Petri - Eurostat

Wide contribution across Europe  
(WG A, questionnaire, review)

Positive feed-back



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Final version published!

# **State of Play**

## **Core Theme “Addresses”**

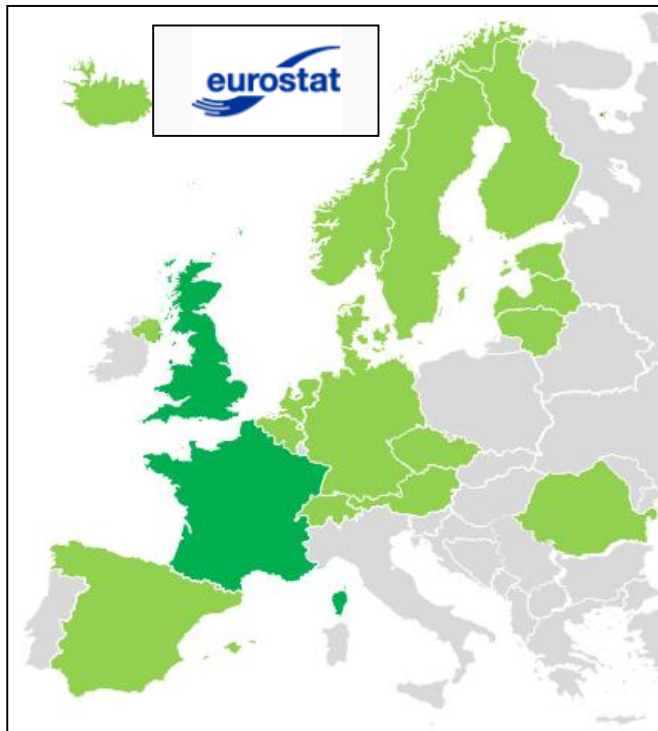


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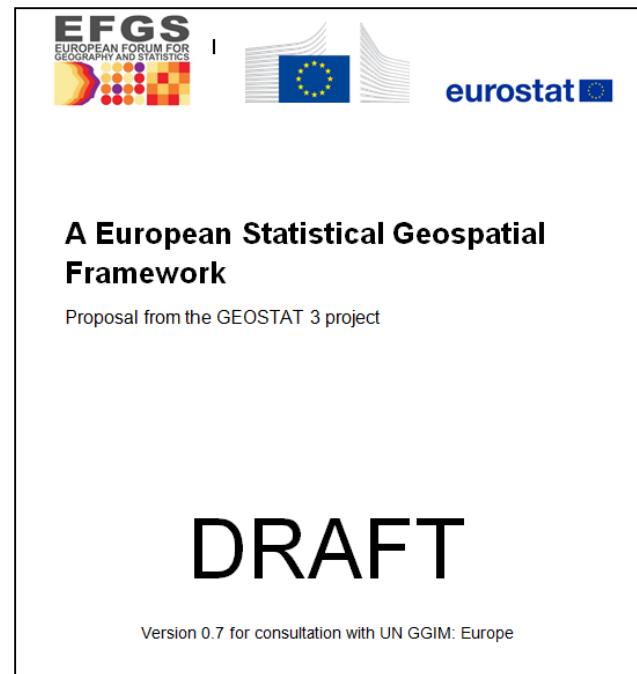
# State-of-Play 'Addresses'



Contribution  
(WG A, questionnaire, review)



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Strong interest from  
statistical community  
Some core recommendations  
integrated in ESGF

Comment resolution  
and final version:  
to be done

# **Recommendation for Content Core Theme 'Geographical Names'**



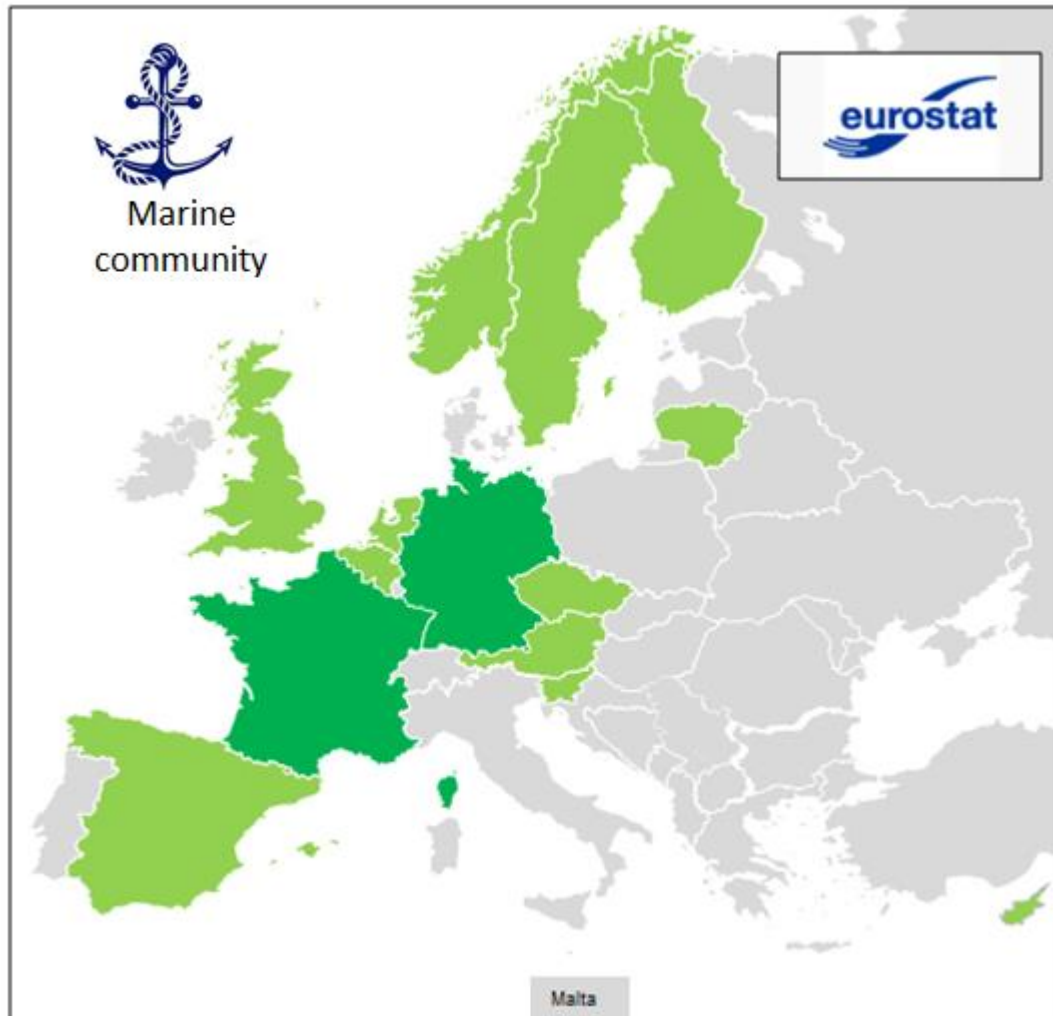
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# State-of-Play

## 'Geographical Names'



Successful review  
(more than 100  
comments from 17  
organisations)

Comment resolution  
and final version:  
to be done

# **Recommendation for Content Core Theme 'Basic Services'**



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# Core Theme 'Basic Services'

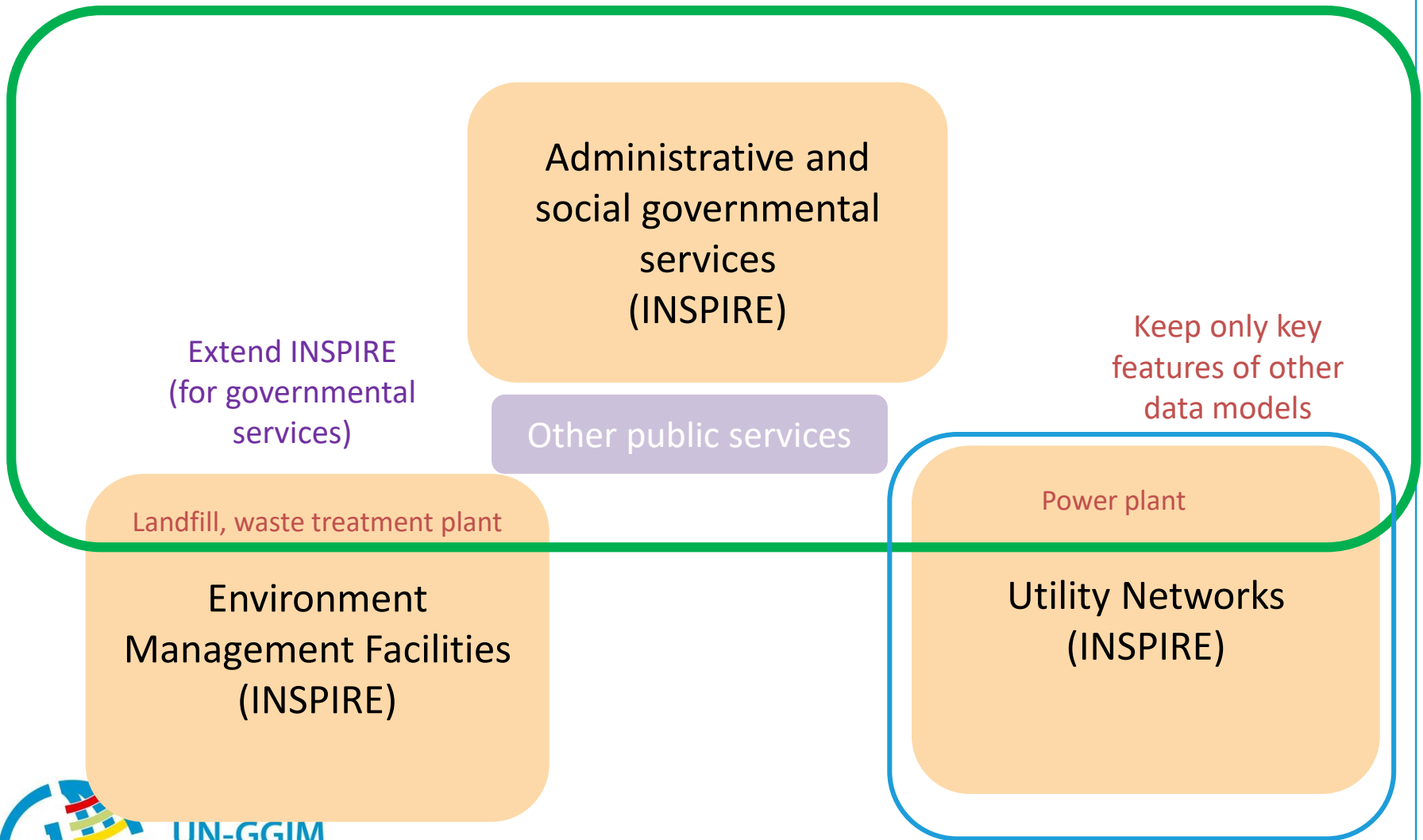
## Why is it required?

- Because of SDGs!
  - Access to basic services often mentioned
  - Places of interest
  - Vulnerable places (risk)



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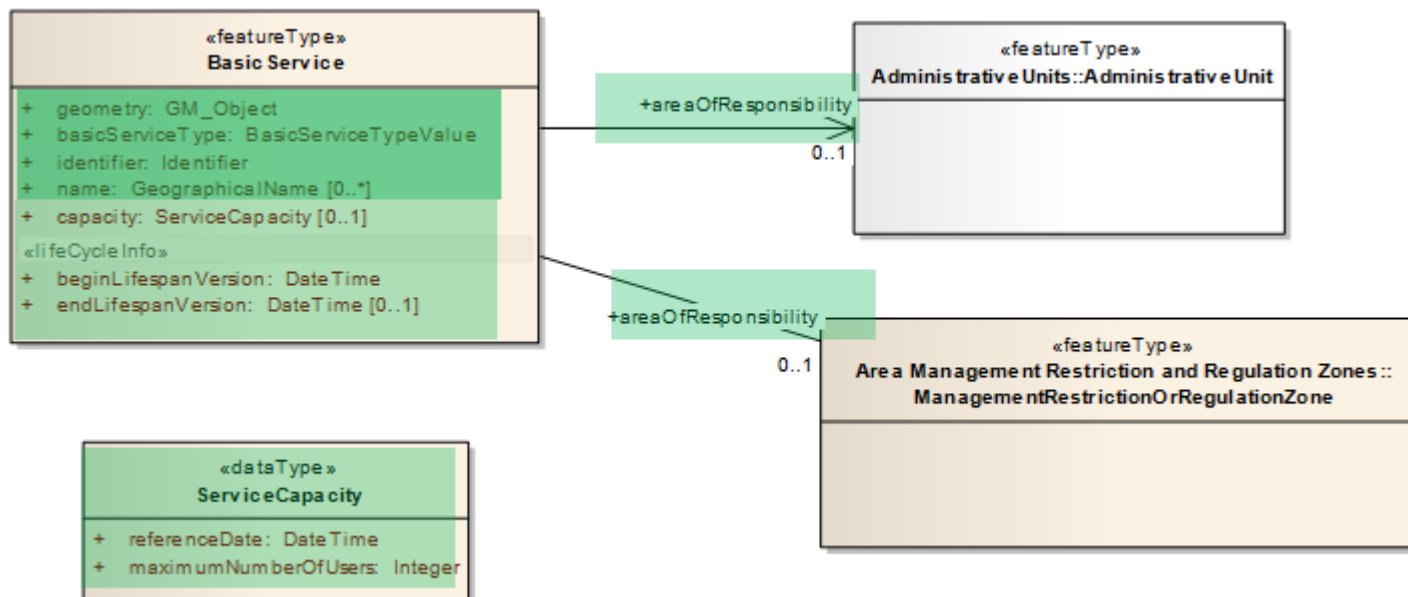
# Core theme '*Basic Services*' and INSPIRE theme '*Utility and Governmental Services*'



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Considerations for future?

# 'Basic Services': attributes



## Core attributes:

- Geometry
- Unique and persistent identifier
- Name
- Classification (type)

## Good practice attributes:

- Capacity
- Temporal attributes
- Area of responsibility



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# 'Basic Services': minimum list

- Extends and simplifies INSPIRE code list
  - Recreation services included
  - Less detailed
- Eurostat code list for Points of Interest taken into account

«code List» Basic ServiceTypeValue	
+	1.energySupplyFacility
+	1.1.nuclearPowerPlant
+	1.2.thermicPowerPlant
+	1.3.hydro-electricPowerPlant
+	2.wasteManagementFacility
+	2.1.disposalSiteOrLandfill
+	2.2.wasteTreatmentPlant
+	2.3.wasteWaterTreatmentPlant
+	3.educationService
+	3.1.preprimarySchool
+	3.2.primarySchool
+	3.3.secondarySchool
+	3.3.tertiarySchool
+	3.4.otherSchool
+	4.healthService
+	4.1.hospital
+	4.2.emergencyMedicalService
+	5.safetyService
+	5.1.policeStation
+	5.2.fireStation
+	5.3.rescueStation
+	5.4.civilProtectionSite
+	5.5.courtOrTribunal
+	5.6.prison
+	6.defenceSite
+	7.recreationService
+	7.1.sportFacility
+	7.2.campingSite
+	7.3.publicPark
+	7.4.zoo
+	7.5.library
+	7.6.culturalCentre
+	7.7.recreationPark
+	7.8.concertHall
+	7.9.theatre
+	7.10.opera
+	8.governmentService
+	8.1.townHall
+	8.2.embassy
+	9.socialService
+	9.1.residenceForElders
+	9.2.residenceForDisabledPersons
+	9.3.cemetery
+	10.economicService
+	10.1.postOffice



# **Recommendation for Content Core Theme 'Buildings'**



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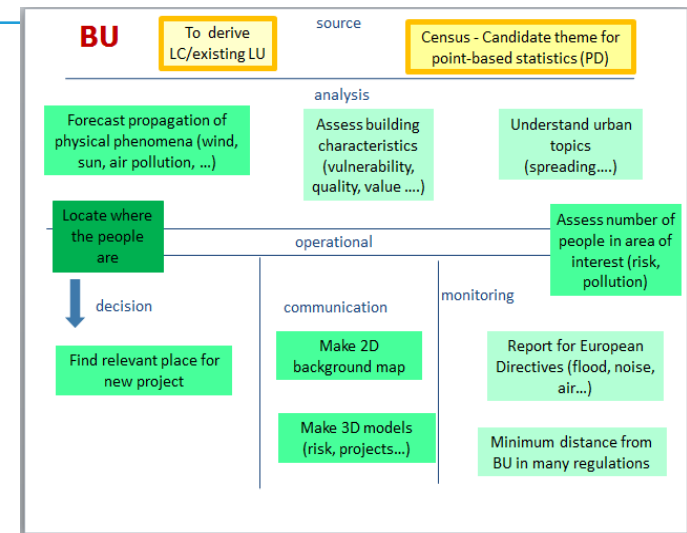


# Why is it required?

- **Buildings are places where people live, work, ....**

- To be protected from risk, pollution, ...
- To be made more efficient (energy, ...)
- To be served by public services
- Etc.

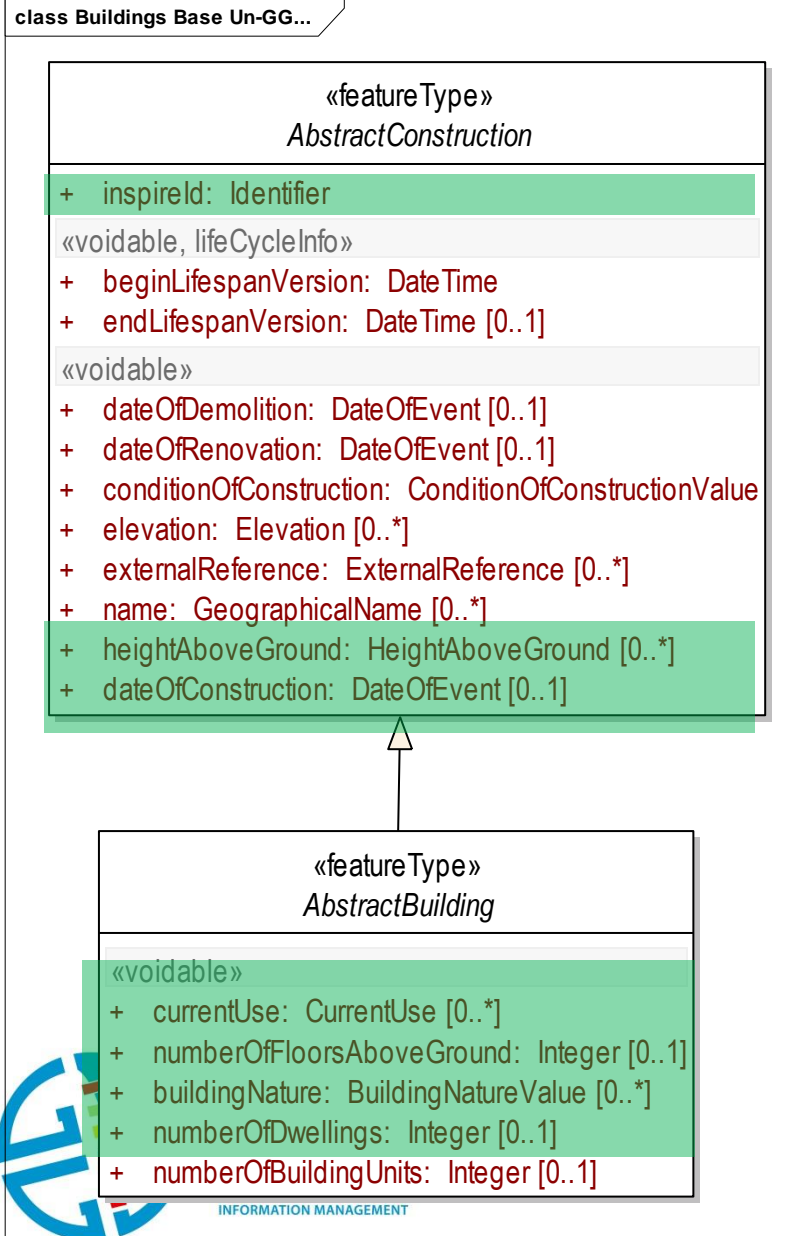
- Buildings are topographic objects (mapping, ...)

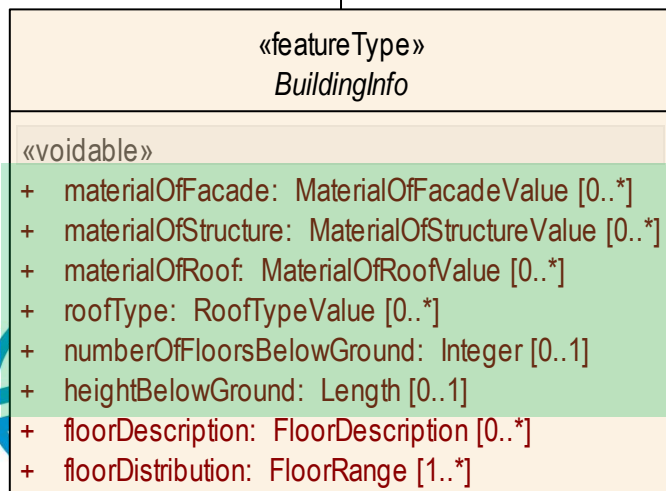
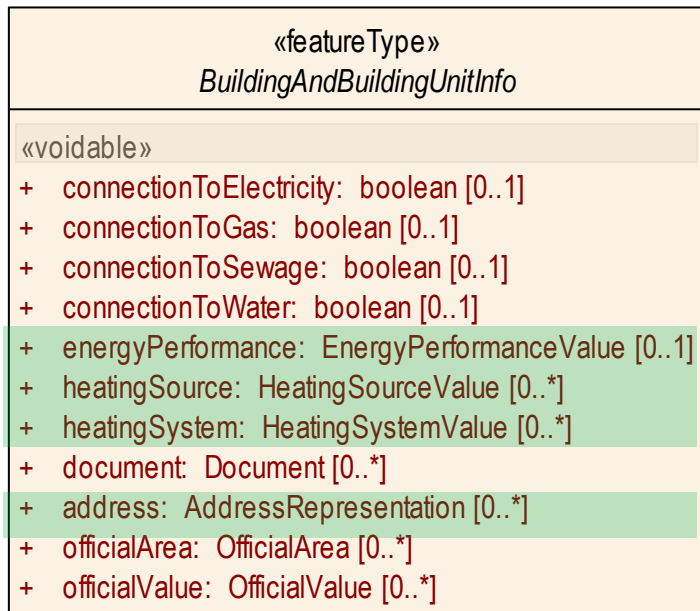


# Semantic content

- **Core attributes**

- Unique and persistent identifier
- Height and/or number of floors above ground
- Current use
- Nature
- Date of construction
- Number of dwellings





# Semantic content

- **Good practice attributes**
  - Linking mechanism (address, external reference)
  - Physical description of building
    - Material(s)
    - Underground
  - Energy information



# Geometry

- A key issue: the geometry

Geometry	Proposal	Comment
2D (or 2.5D)	Core recommendation	
3D – LoD2 of City GML	Good practice	<i>Everywhere or at least in cities?</i>
3D – LoD4 of City GML (building interior)	Considerations for future	<i>City GML or alternative solutions</i> <i>Only for specific buildings</i>



# Data Management

- Building data may be in a single database or in various databases
- Proposal: offer a **centralised service** to provide (at least) core content
  - coordination between data producers
  - research (how to link different views on a building)



# **Recommendation for Content Core Theme 'Statistical Units'**



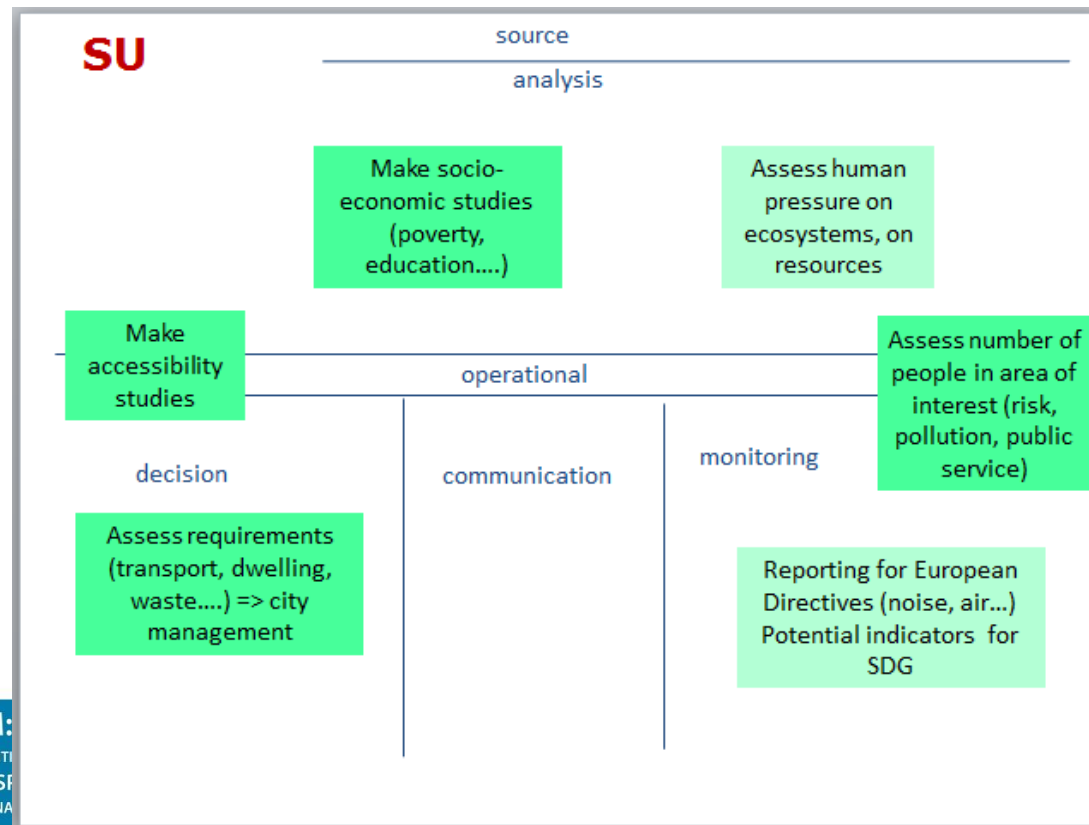
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# Why is it required?

- Statistical units: mandatory bridge that connects the territory and statistical data
- Statistical information: key part of administrative decisions of governments at any level



# Main Features

- Core Recommendations
  - Grid
    - 1000 meters side.
  - Vector
    - Territorial Units for Statistics (NUTS)
    - Urban units for statistics
      - urban zones, functional urban areas
  - Time tracking of changes of statistical units
- Good Practice
  - Enumeration Districts



# Remaining Issue

- UN-GGIM: Europe
    - covers whole geographic Europe
  - NUTS and Urban Audits Units
    - cover only EU and associated countries
- To be further discussed



# Core Theme 'Administrative Units'



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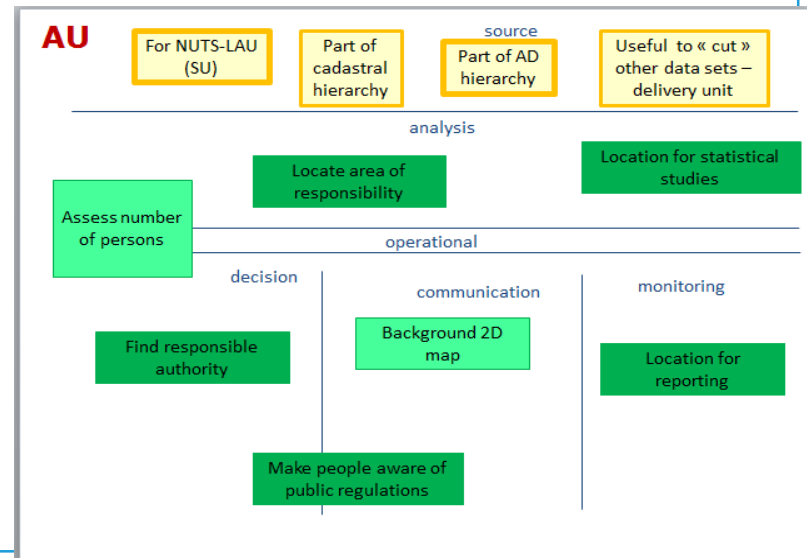
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# Theme 'Administrative Units'

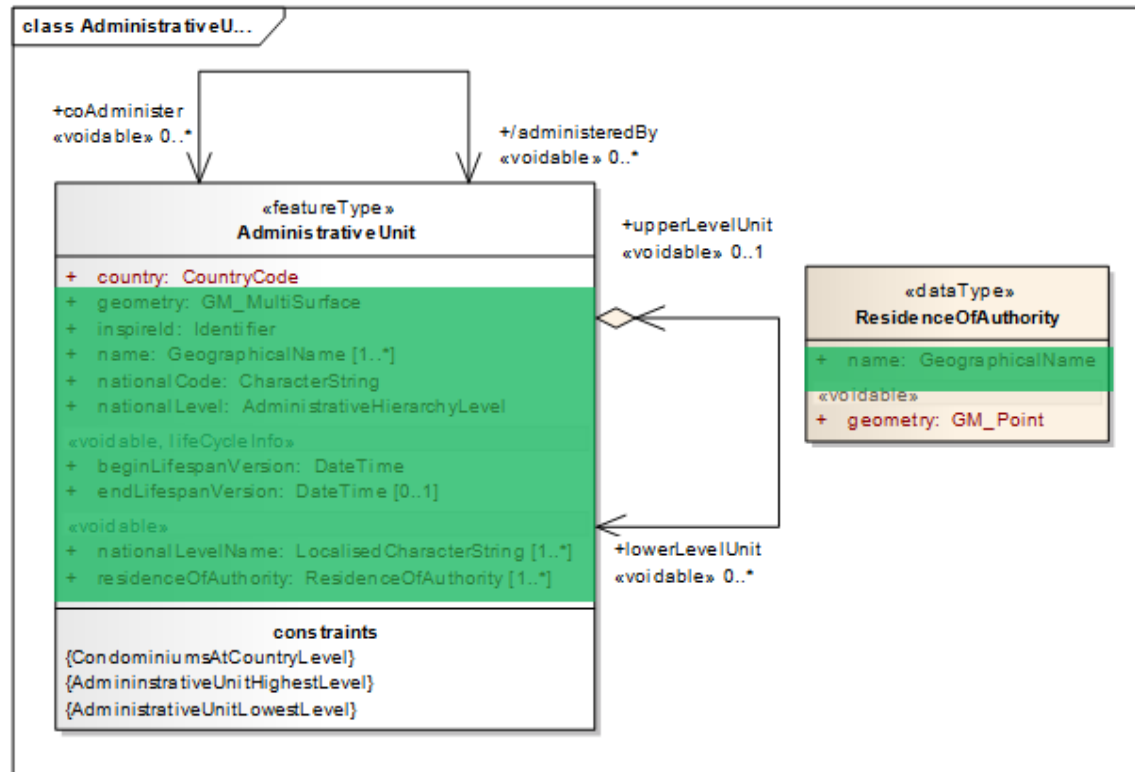
## Why is it required?

- 3 main functions
  - Territory of competent authority
  - Basic geographic equipment of a country
  - Often used as statistical units





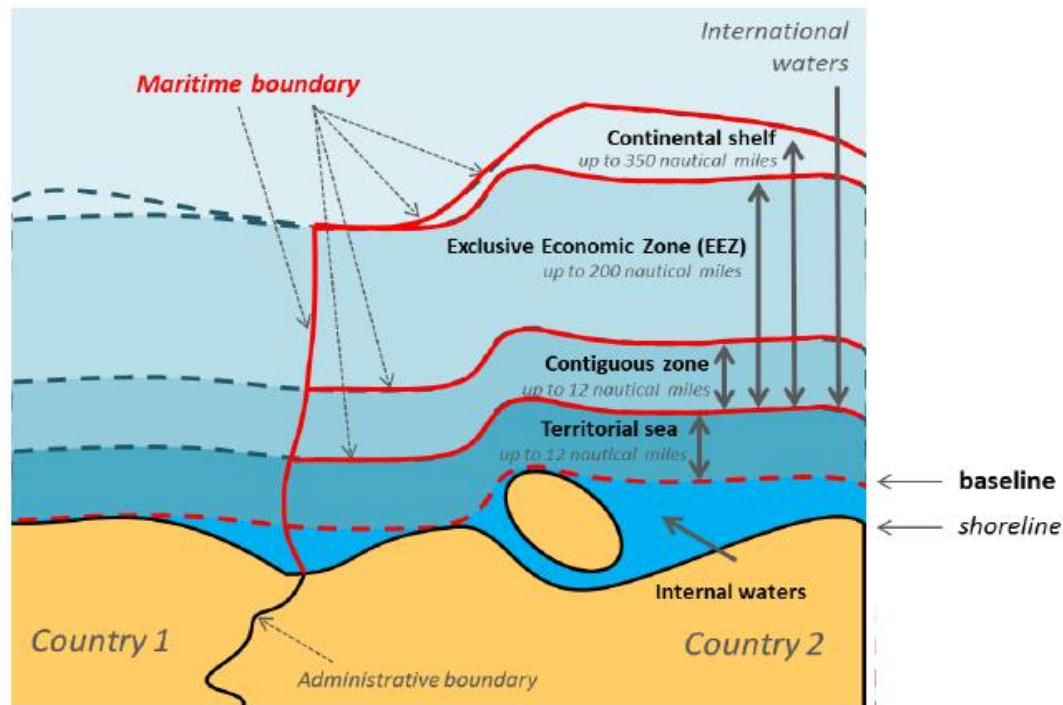
# Land Administrative Units: semantic content



Very close to  
INSPIRE

# Maritime Units: semantic content

- Core recommendation: close to INSPIRE



## class Enumerations and Code...

«codeList» MaritimeZoneTypeValue	
+	contiguousZone
+	continentalShelf
+	exclusiveEconomicZone
+	internalWaters
+	territorialSea



# Maritime Units: semantic content

- Good practice: future standard S121 from IHO
  - Geometry described with more details
    - Points used for base line
    - Distinction between limit and boundary
  - Use of LADM principles to describe the RRR applying to different kinds of Maritime Units
    - LADM: Land Administration Domain Model
    - RRR: Right Restriction Responsibility



# Conclusions



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# Conclusion

- Core Data raises interest of several actors
  - UN-GGIM: Europe Working Group B
    - Policy Paper
  - European Geostatistical Framework
    - Geostat 3 Report
- What is expected soon
  - Reviewing core themes 'Statistical Units' and 'Buildings'



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