



# Workshop EURADIN AM FM Italy

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On behalf of the consortium

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Community programme  
*eContentplus*

# Scope

- ⇒ E-Content Plus project
- ⇒ Running from June 2008 until May 2010
- ⇒ Budget: 4 M €
- ⇒ 30 partners from 16 countries
  - ⇒ Participation across EU is well balanced
  - ⇒ Public Administrations and private companies
  - ⇒ Information providers and information users

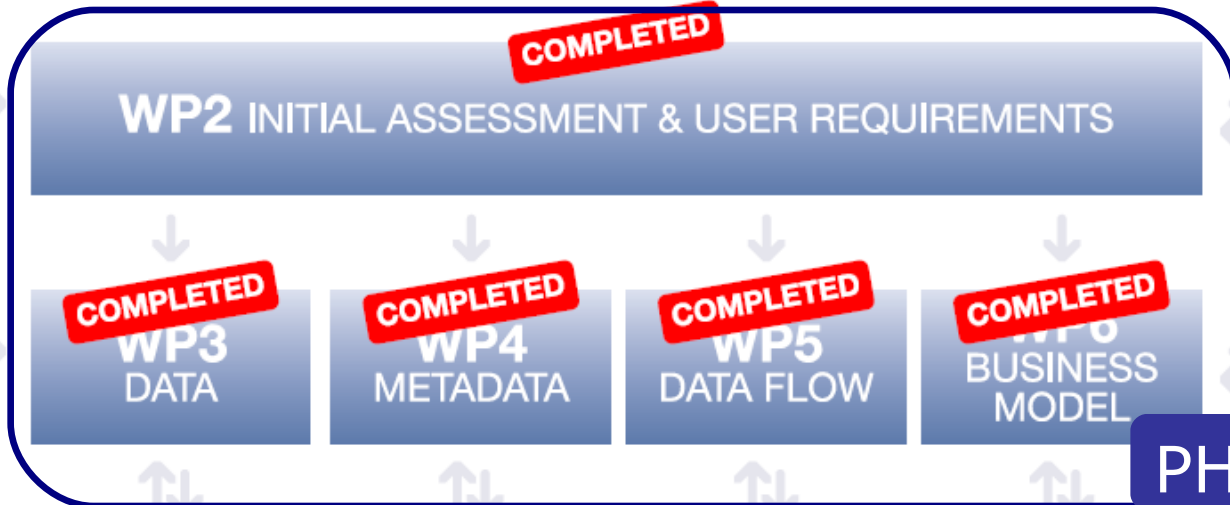
# Main Objectives

- ⇒ To propose a solution for achieving **Address interoperability**: access, reuse and management of address information.
- ⇒ To contribute to the harmonization of European Addresses and
- ⇒ To promote the creation of new added value products and services across Europe



# Working Plan

PHASE I



PHASE II



# Results so far

- ⇒ State of the art
  - ⇒ Big picture about address systems in Europe
  - ⇒ Several Best practices considered
- ⇒ INSPIRE Data Model validated and further elements for EURADIN Data Model considered
- ⇒ EURADIN Metadata Profile prepared
- ⇒ Generalized Data Flow better understood
- ⇒ Business models and economic justification examined
- ⇒ Gazetteer service prototype being developed

**on 1st June 2009**

# Findings

- ⇒ High level of heterogeneity
  - ⇒ Regulation and Law
  - ⇒ Key Definition
  - ⇒ Information (Data Model & Metadata)
  - ⇒ Organization
  - ⇒ Development status
- ⇒ Low level of standardization & interoperability

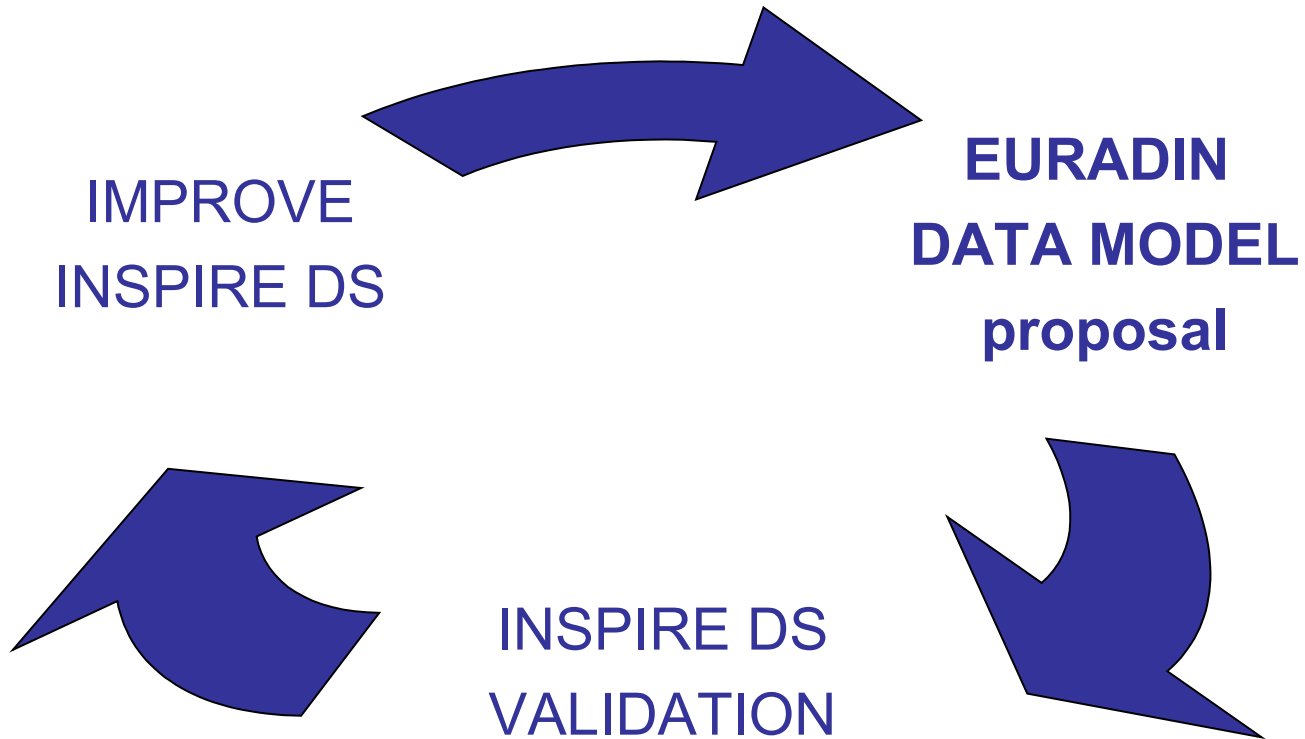
**COMPLEX PROBLEM!**



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# Added Value: Adjustment to INSPIRE

⇒ Synchronising



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## ⇒ M1: Harmonized Address Data Model achieved

- ⇒ Work in parallel with INSPIRE since the beginning
- ⇒ Synchronization with the INSPIRE roadmap: added value and reference material coming from and going to INSPIRE
- ⇒ Technical report and technical proposal provided as INSPIRE Data Specification extension





⇒ Contribution to INSPIRE Testing Phase

⇒ Following INSPIRE methodology

**Data Model fulfil INSPIRE DS**

⇒ From Patterns and case studies to a  
technical **open issues list**

**Experience how to validate DS**

# Findings „Metadata“

## ⇒ Characteristics of the metadata reported by the address systems currently in Europe

- ⇒ Generic profiles, no specific for address theme
- ⇒ The most profiles fulfill ISO 19115/19139
- ⇒ Metadata function: for data discovery



To provide a metadata proposal to improve the current situation:

- ✓ EURADIN Metadata Profile (EMP)
- ✓ CatMDEdit-EURADIN metadata tool



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# Results (I)

## ⇒ EURADIN Metadata profile: Technical Guidelines



- ⇒ Profile specific for **address** data
- ⇒ Fulfill **INSPIRE** (D.S, IR-M) and metadata standards
- ⇒ Based on **15** metadata profiles used in Europe
- ⇒ Proposal for **Evaluation metadata**: detailed data description



⇒ **General** of the whole data base



⇒ **Particular** of each address component





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# Results (II)

⇒ **Metadata tool CatMDEdit-EURADIN software .exe/.jar and its guidelines**



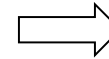
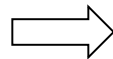
⇒ **Open source** application to facilitate the metadata production according to EMP

⇒ **Automatic** extraction from **GML** fulfilling INSPIRE

⇒ **Edition** functionalities

## Input file

- GML (INSPIRE)
- XML metadata file



## Output file

- XML dataset metadata
- XML feature type metadata



## ⇒ **From EURADIN Metadata profile:**

- ⇒ A detailed description of address data in order to improve the interoperability among address systems
- ⇒ To provide metadata fulfilling INSPIRE and according to the metadata ISO standards

## ⇒ **From CatMDEdit-EURADIN metadata tool:**

- ⇒ Open Source application
- ⇒ Semi-automatic production of metadata

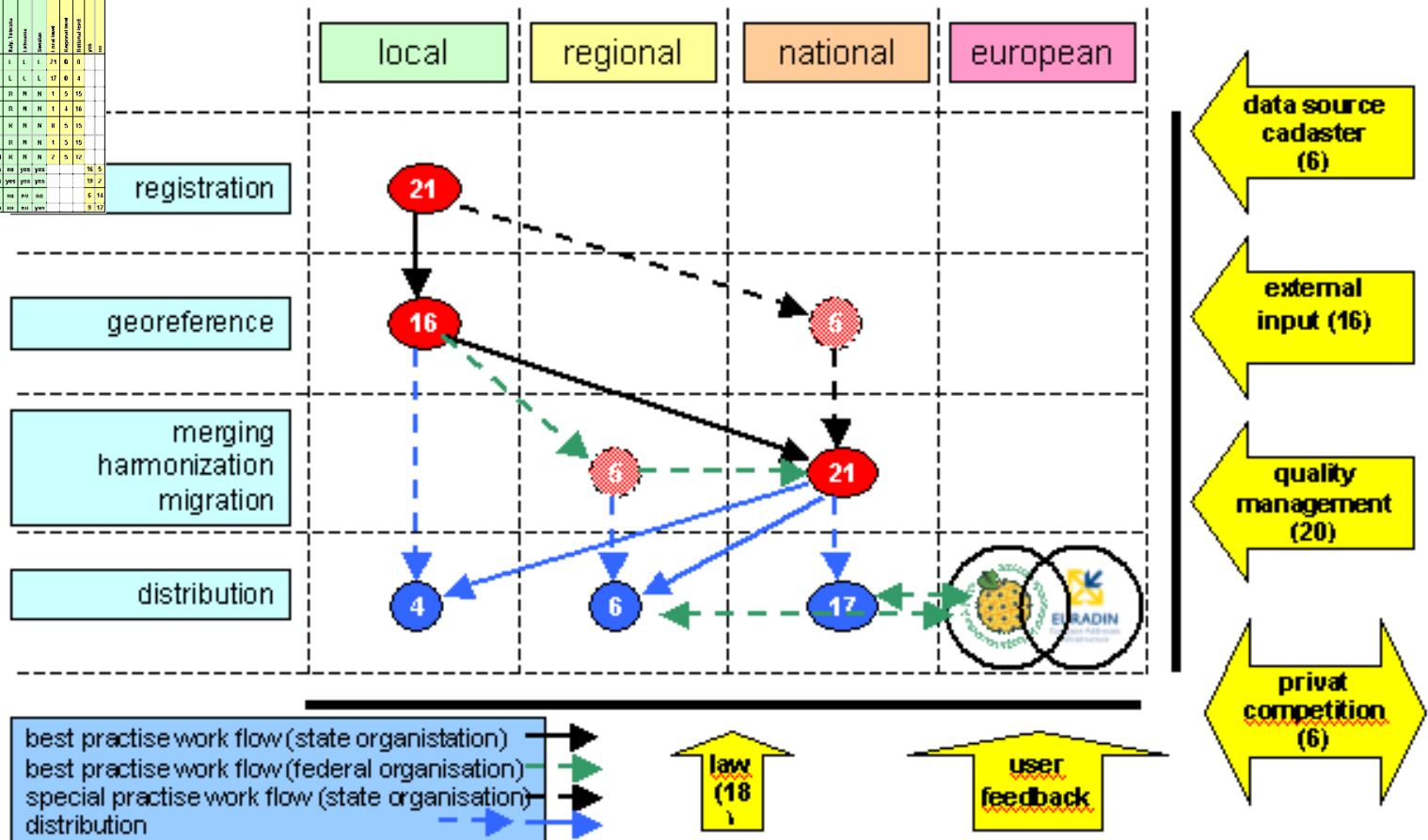


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# Findings

## „Generalised data flow framework“

Region	Albania	Bulgaria	Croatia	Cyprus	Czechia	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Latvia	Lithuania	Malta	Netherlands	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	United Kingdom
Registration	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Georeferencing	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Merging	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Harmonization	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Migration	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Quality Management	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
External Input	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Private Competition	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Best Practice	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



- ⇒ Evaluation
- ⇒ Generalisation
- ⇒ Application
- ⇒ Improvement

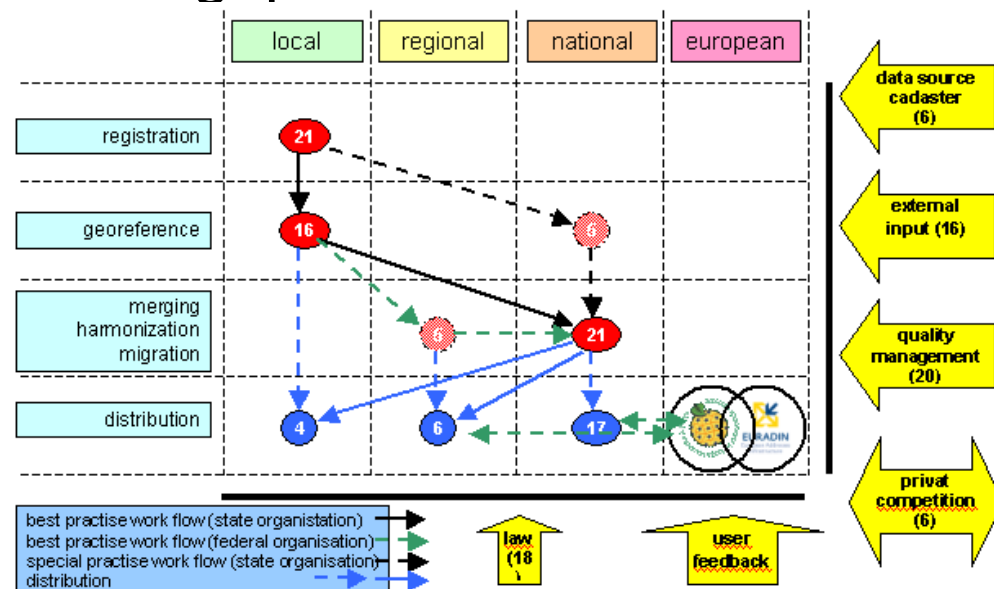


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- ⇒ **Evaluation:** Define keywords/milestones for the European dataflow under consideration of the situation in the MS
- ⇒ **Generalisation:** Derive a generalised data flow *framework*, motivation factors, barriers and gaps
- ⇒ **Application:** Derive a cook book => published
- ⇒ **Improvement**





## Definition of a European prototype workflow (*framework*)

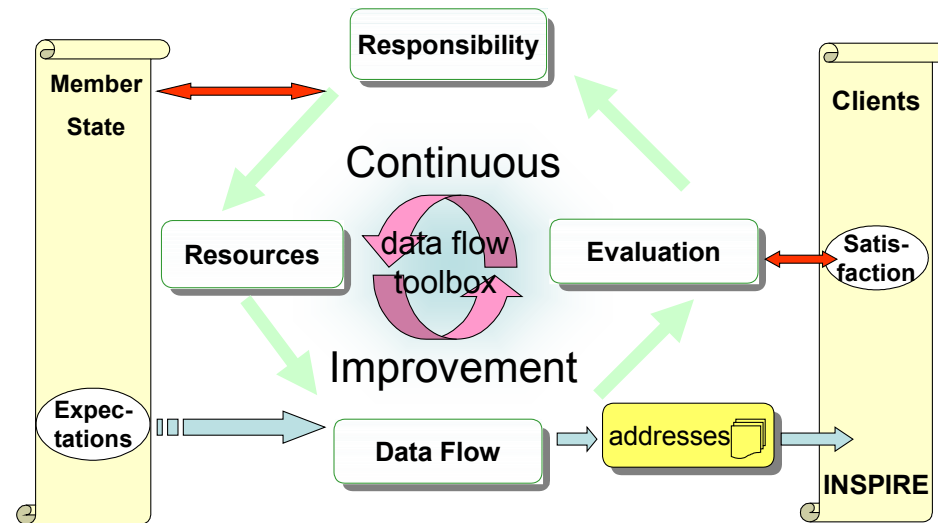
... to realise a national address interface

... to fulfil the INSPIRE directive!

## The data flow framework is a practical toolbox

- to help to establish a data flow or
- to help to improve existing data flows in the Member States.

### Process orientated quality management system for addresses





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# How is the cost justified? „Business Model“

Research showed virtually all respondents felt their data had inaccuracies:

- ⇒ Wrong addresses – 29%
  - ⇒ Missing addresses 27%
  - ⇒ Old addresses 23%
  - ⇒ Ambiguous addresses 19%
- 
- ⇒ 94% stated addresses were important or business critical and virtually all that they were a vital part of the information infrastructure
  - ⇒ About 80% believed their business prospects were sensitive to improvement or degradation in address quality
  - ⇒ 72% felt that poor addressing cost their business money. Half of these (**35%**) reckoned the cost was more than 1% of turnover.
  - ⇒ Most considered addressing was a public sector responsibility



# Analysis of research

Suppose 35% of economic activity improves its efficiency by 1% as a result of obtaining more accurate or comprehensive addressing

Suppose half of 35% (17%) increases its economic activity from better addressing by 1%

**The total EU value would be Euros 63 billion per annum.....**

*absurd? Perhaps but there is supporting evidence*

of extra property tax of Euros 200,000 pa in one local government area from better addressing [total EU area equivalent Euros 554 million pa] and of more efficient refuse collection Euros 134,000pa [EU equivalent Euros 370 million]





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In seven applications alone the total value  
is potentially  
**Euros 6,000,000,000 pa**  
for the EU area



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# Key recommendations for Address business model

- ⇒ There should be a *single national “official” address reference database*;
- ⇒ The process should be *sponsored and controlled by the Public Sector*;
- ⇒ The data should be *owned by the Public Sector and probably the State and fit for the purposes of central and local government*;
- ⇒ *The data must be comprehensive, up to date, capable of national integration and of following the INSPIRE standard for subsequent Pan-European integration*;
- ⇒ There should be *an integrated creation and maintenance process*. Those bodies involved in the creation process should be *encouraged to participate*, preferably by law or possibly by binding contract with associated funding where necessary; and
- ⇒ The basic *data should be free* or available at the marginal cost of distribution.

- ⇒ Existing software not capable of handling complex GML schemas and GML documents (e.g. INSPIRE schemas)
- ⇒ Workarounds must be made
- ⇒ This applies to both middleware and clients

# IMPACT

- ⇒ Already increased knowledge of what already exists
- ⇒ Enabled this knowledge to be shared, now and in future;
- ⇒ Provided a harmonized specification, based on the existing information and best practices at a EU level, upon which European countries can continue to build;
- ⇒ Is creating a network of highly knowledgeable experts and is sowing the seeds for the ongoing Address Forum

# Sustainability

- ⇒ **INSPIRE implementation** EURADIN acts as laboratory for checking INSPIRE implementation requirements using real data
- ⇒ **European Address Forum**: to monitor, debate, and encourage the development of harmonized addresses throughout Europe beyond the life of this eContentplus programme.



# Pan-European Address Conference: Goals

- ⇒ Creating pan-European awareness on the **value** for society and the European Community of a **strong address infrastructure**, of the availability of **high quality address data**, of the dissemination of best practices and of the need for **interoperable data** and services across EU.
- ⇒ Enlarging and underpinning the address network will drive the chance of the EAF to remain sustainable.

# Lessons Learnt

- ⇒ Collaboration PPP: Strong Consortium
- ⇒ Collaboration outside consortium: Efficiency and effectiveness
- ⇒ Collaboration beyond EURADIN: EAF
- ⇒ Good management

# Added Value

From general demand  
to a specific response  
**INSPIRE** → Euradin

From a thematic project  
to a coordinated testing  
Euradin → **INSPIRE**



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We want to learn from your  
suggestions and comments,  
and keep improving

THANK YOU



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