

JGIC - 2014

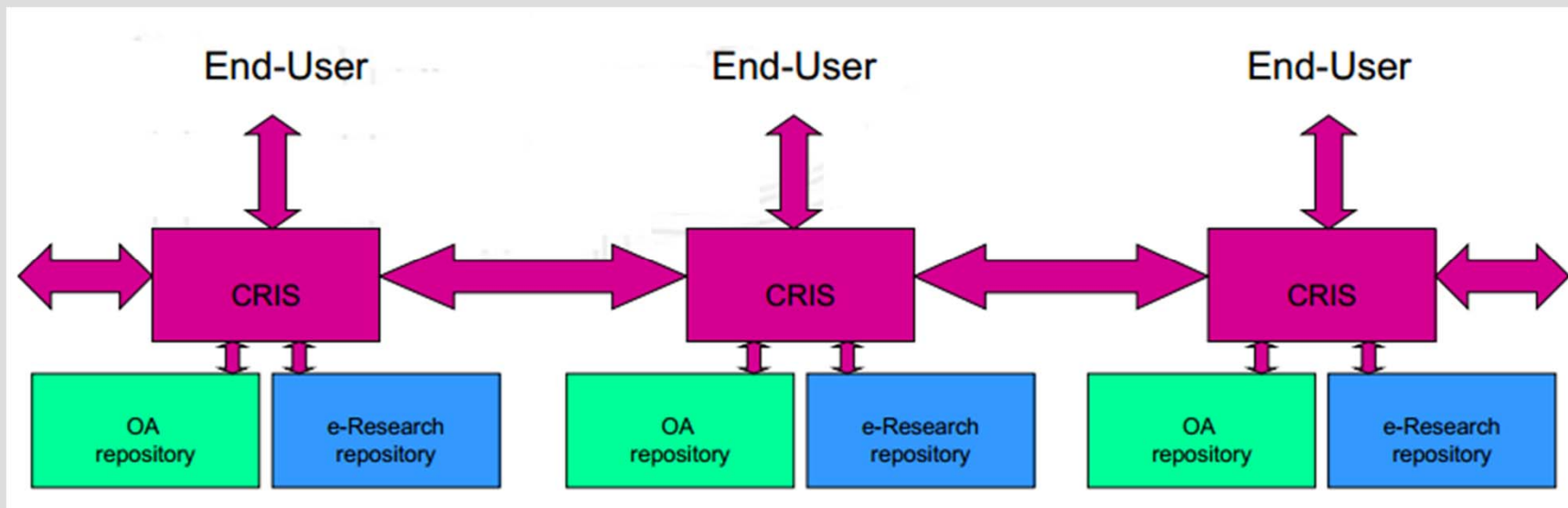
Jornades de Gestió de la Informació Científica 2014, IEC, Barcelona, Apr 24th, 2014

# Global Standards for System Interoperability: CERIF

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## System interoperability: the key concept

- Lots of different institutional systems should feed higher-level aggregations (regional, national, European)
- 'Internal' vs 'external' interoperability (from an institutional viewpoint)



## Global standards a requirement

- We have persistent identifiers like DOIs, handles, DataCite and ORCID iDs, we have metadata standards like CERIF, DC, MODS, etc
- Controlled vocabularies: if systems are to talk to each other, they should speak the same language



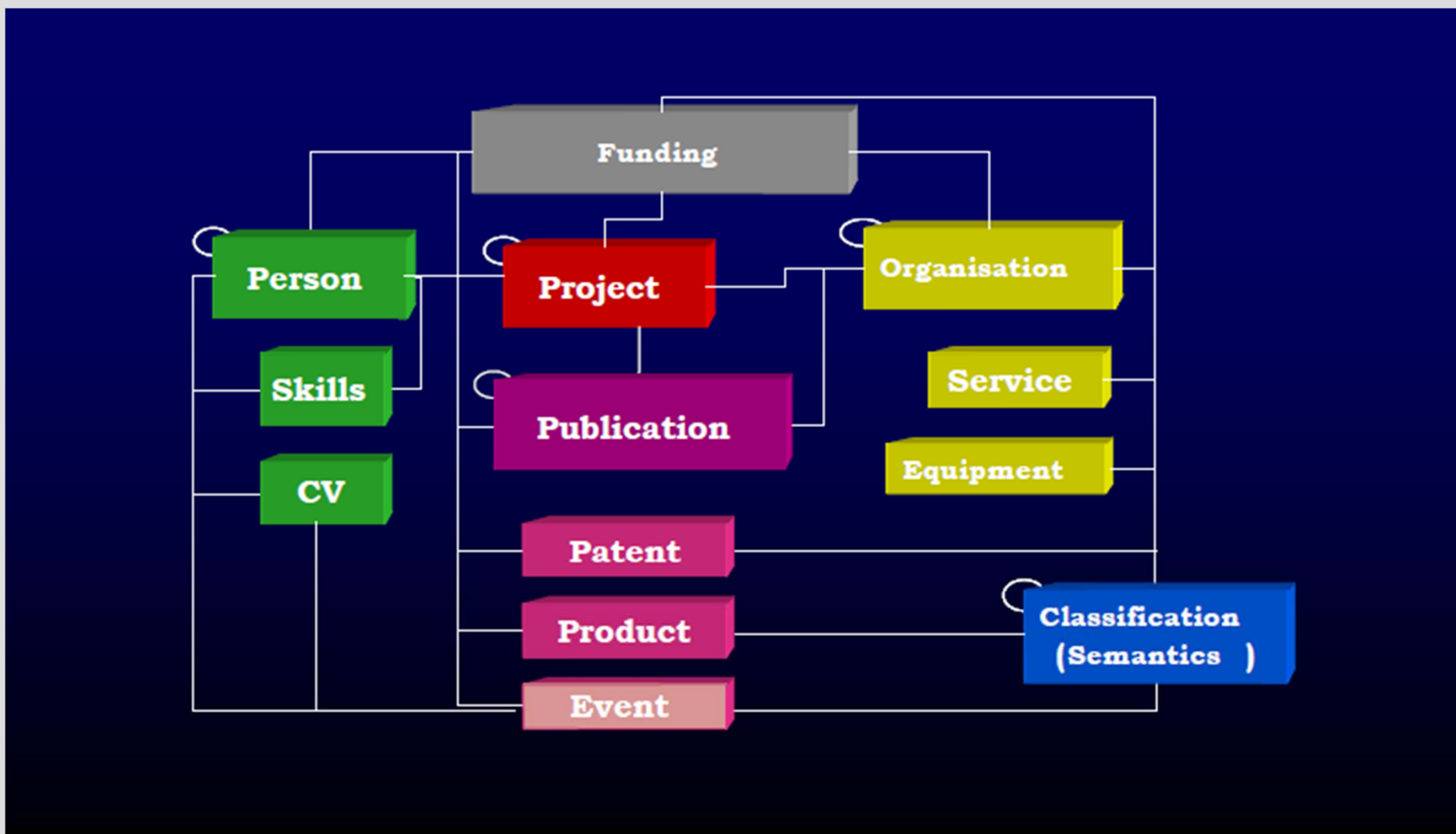
# Common European Research Information Format

## Requirements for a Common Metadata Format

- Complete coverage of research information
- Interlinked – providing the context
- Allow for many perspectives on research information
- Accommodate multilinguality & support translations
- Accept the world keeps changing: record history
- Declared semantics: definitions rather than terms
- Formal syntax – machine processable & understandable

(Source: Jan Dvorak, CERIF Task Group Leader)

# Common European Research Information Format (simplified version)



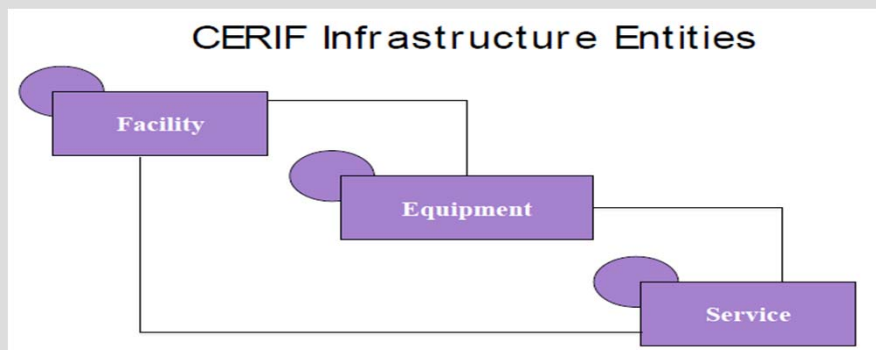
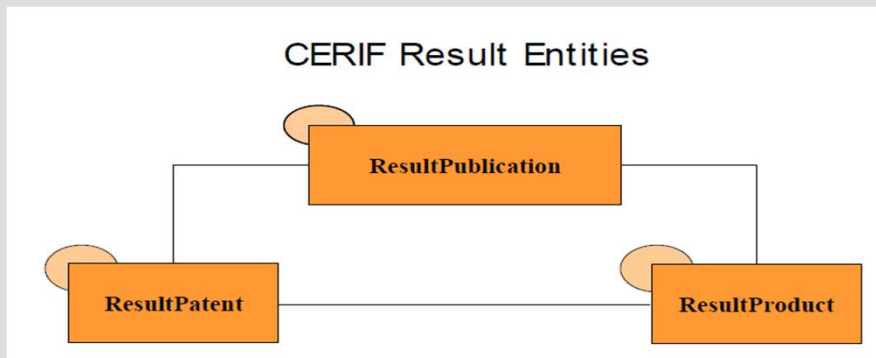
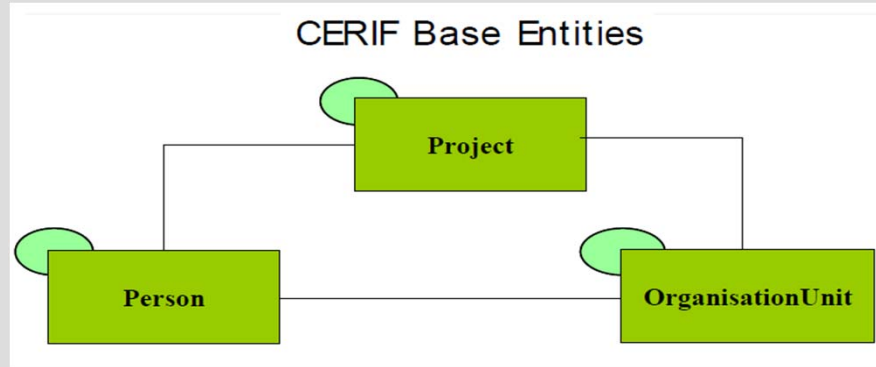
# CERIF Model Structure

## CERIF Entity Types

- Base Entities
- Result Entities
- Infrastructure Entities
- 2nd Level Entities
- Geographic Bounding Box
- Link Entities

## CERIF Features

- Multiple Language
- Semantics
- Measures & Indicators



# CERIF and CRIS Systems: UK

Increasing CERIF implementation in CRIS systems across Europe:

## CERIF CRIS use in UK HE

UK: Driven  
by REF2014  
Research  
Assessment  
Exercise

(slide:  
Rosemary  
Russell)

- Lots of CERIF CRIS procurement in last year - some are in early stages of implementation
- Pure (Atira) - 17
  - St Andrews, Aberdeen, York, Royal Holloway, Strathclyde, Hertfordshire, Lancaster, Aston, Institute of Education, London, Dundee, Heriot-Watt, Glasgow Caledonian, King's College London, Edinburgh, University of the Highlands and Islands, Bath, Queen's University Belfast
- CONVERIS (AVEDAS) - 5
  - Cranfield, Hull, Stirling, MRC Oxfordshire Regional Centre, Brighton
- Symplectic Elements (Symplectic)
  - eg Brunel, Imperial, Queen Mary, Leeds...



[www.ukoln.ac.uk](http://www.ukoln.ac.uk)

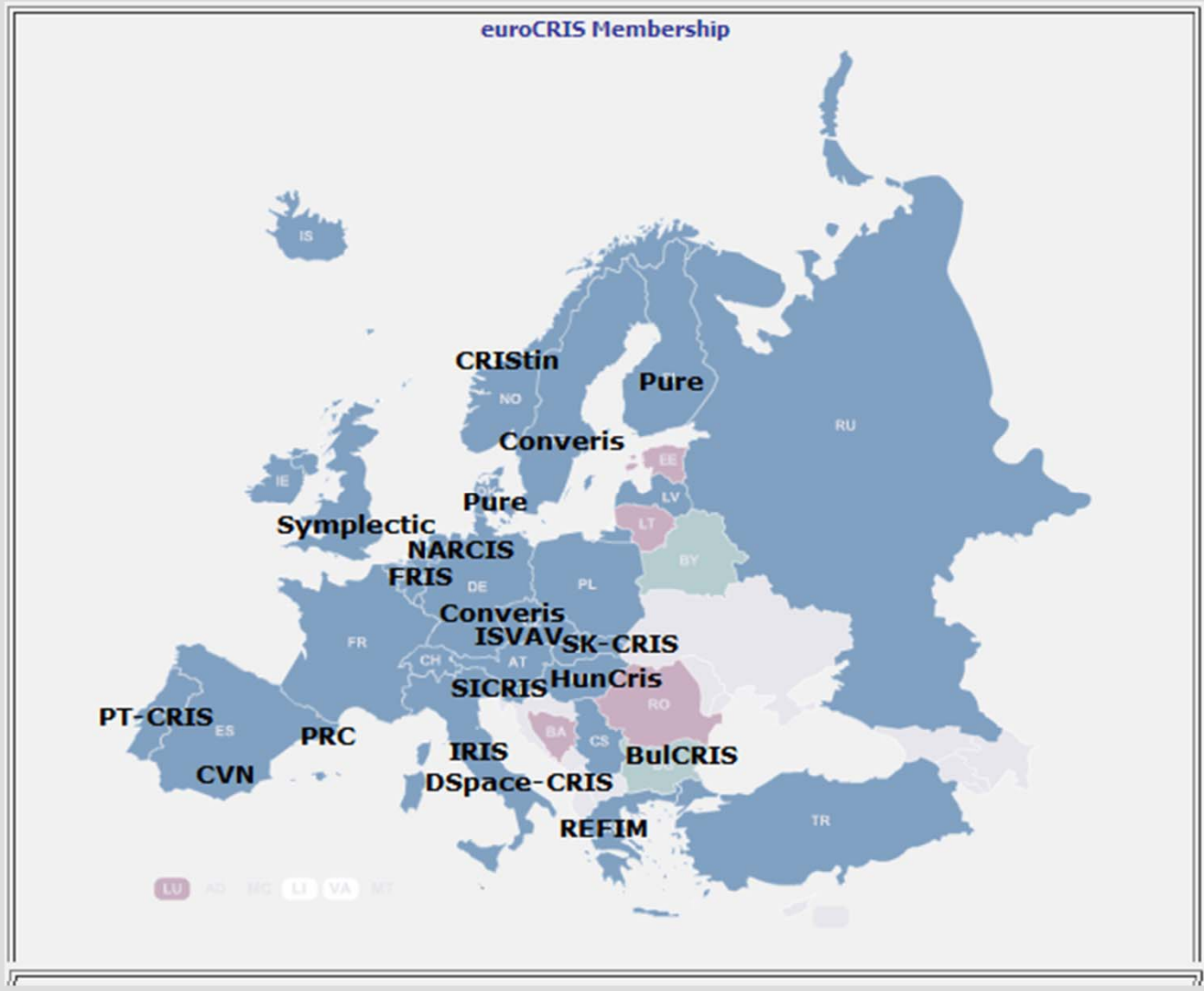
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# CERIF and CRIS Systems: Europe

Increasing CERIF implementation in CRIS systems across Europe: institutional, commercial and national CRISs





## CERIF-compliance in Spain?

### UNIVERSIDADES Y OPIS

Institución o entidad	Sistema	Exportación CVN	Importación CVN
INSTITUTO DE SALUD CARLOS III	SAYS	no	sí (v1.2.5 y v1.3.0)
INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA	INIA-CV	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD AUTÓNOMA DE MADRID	ARGOS	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD CARLOS III DE MADRID	UNIVERSITAS XXI - INVESTIGACIÓN	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD CATÓLICA DE VALENCIA	UCV	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD CATÓLICA SAN ANTONIO DE MURCIA	CurriculumN	<u>Sí (v1.3.0)</u>	no
UNIVERSIDAD COMPLUTENSE DE MADRID	PORTAL INVESTIGADOR	<u>Sí (v1.3.0)</u>	no
UNIVERSIDAD DE ALCALÁ	UNIVERSITAS XXI - INVESTIGACIÓN	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD DE ALICANTE	Campus Virtual	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD DE ALMERÍA	SICA	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD DE BURGOS	UNIVERSITAS XXI - INVESTIGACIÓN	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD DE CÁDIZ	SICA	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD DE CANTABRIA	CampusVirtual	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD DE CASTILLA-LA MANCHA	UCLM	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD DE CÓRDOBA	SICA	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD DE GRANADA	SICA	<u>Sí (v1.2.5)</u>	no
UNIVERSIDAD DE HUELVA	SICA	<u>Sí (v1.2.5)</u>	no

CERIFYing CVN (FECYT) provides some harmonisation level

It would be useful to provide CERIF wrapping to running CRIS systems at institutions

# Some applications for CERIF in the system interoperability domain: OpenAIRE

## OpenAIRE Guidelines for CRIS Managers based on CERIF XML

March 2014  
DRAFT for public review

### Contents

#### Introduction

Aim  
CERIF-CRIS

#### Acknowledgements

#### CRIS information elements relevant for OpenAIRE

Data representation in CERIF XML

CERIF Semantic Layer link entities implementation in Oper

#### OAI-PMH for Harvesting

Metadata Format  
OpenAIRE OAI-PMH Sets  
Transmission of CERIF XML as OAI-PMH payload

#### License

#### Version

#### Appendix

```
<xs:element name="CERIF">
  - <xs:complexType>
    - <xs:choice maxOccurs="unbounded" minOccurs="0">
      - <xs:annotation>
        <xs:documentation>The root element: it allows any mixture of cerif entity
          instances, in any order.</xs:documentation>
      </xs:annotation>
      <xs:element name="cfEquip" type="cfEquip__Type"/>
      <xs:element name="cfFund" type="cfFund__Type"/>
      <xs:element name="cfOrgUnit" type="cfOrgUnit__Type"/>
      <xs:element name="cfPers" type="cfPers__Type"/>
      <xs:element name="cfProj" type="cfProj__Type"/>
      <xs:element name="cfResPubl" type="cfResPubl__Type"/>
      <xs:element name="cfResProd" type="cfResProd__Type"/>
      <xs:element name="cfSrv" type="cfSrv__Type"/>
      <xs:element name="cfEAddr" type="cfEAddr__Type"/>
    </xs:choice>
  </xs:complexType>
</xs:element>
```

# Some applications for CERIF in the system interoperability domain: PT-CRIS

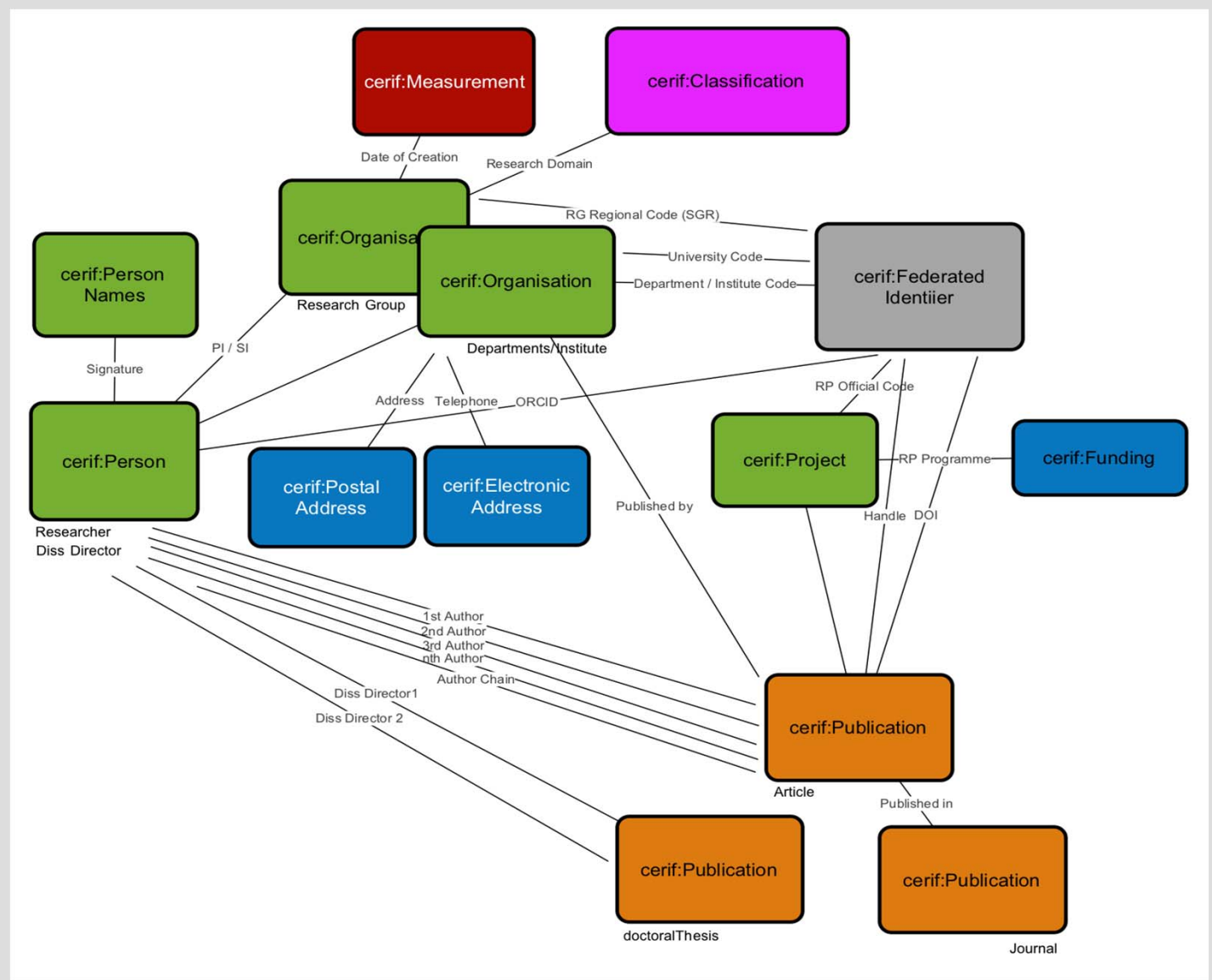
## Survey Eco – Critical analysis (PT)

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- Portugal has a long way to go:
    - Authoritative organizations database
    - Call, grants and project services are obsolete
    - Research portal to be considered
    - Evaluation and stats to be further analyzed
    - CRISs needed
  - Swedish logical architecture seems to be the most comprehensive
  - CERIF seems to be imperative
-

# Some applications for CERIF in the system interoperability domain: PRC

- Simplified data model
- CRIS/DSpace-CRIS interoperability (OpenAIRE-like)
- Opportunities for CERIF wrapping of institutional CRISs





May 13<sup>th</sup>-15<sup>th</sup>, 2014 **CRIS2014 euroCRIS Conference** Rome, Italy

*"Managing Data Intensive Science - The Role of CRIS in realizing the Digital Agenda"*



**CONFERENCE WEB SITE**  
**(CLICK HERE)**

## Thanks

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