

Fondazione **RINASCIMENTO**  
**digitale**  
nuove  
tecnologie  
per i beni  
culturali

FONDAZIONE RINASCIMENTO DIGITALE

**iPres 2009**

**The Sixth International Conference on  
Preservation of Digital Objects**

**Foundation promoted by Ente Cassa di Risparmio of Florence**

**A translation layer to convey  
preservation metadata**

**Angela Di Iorio**

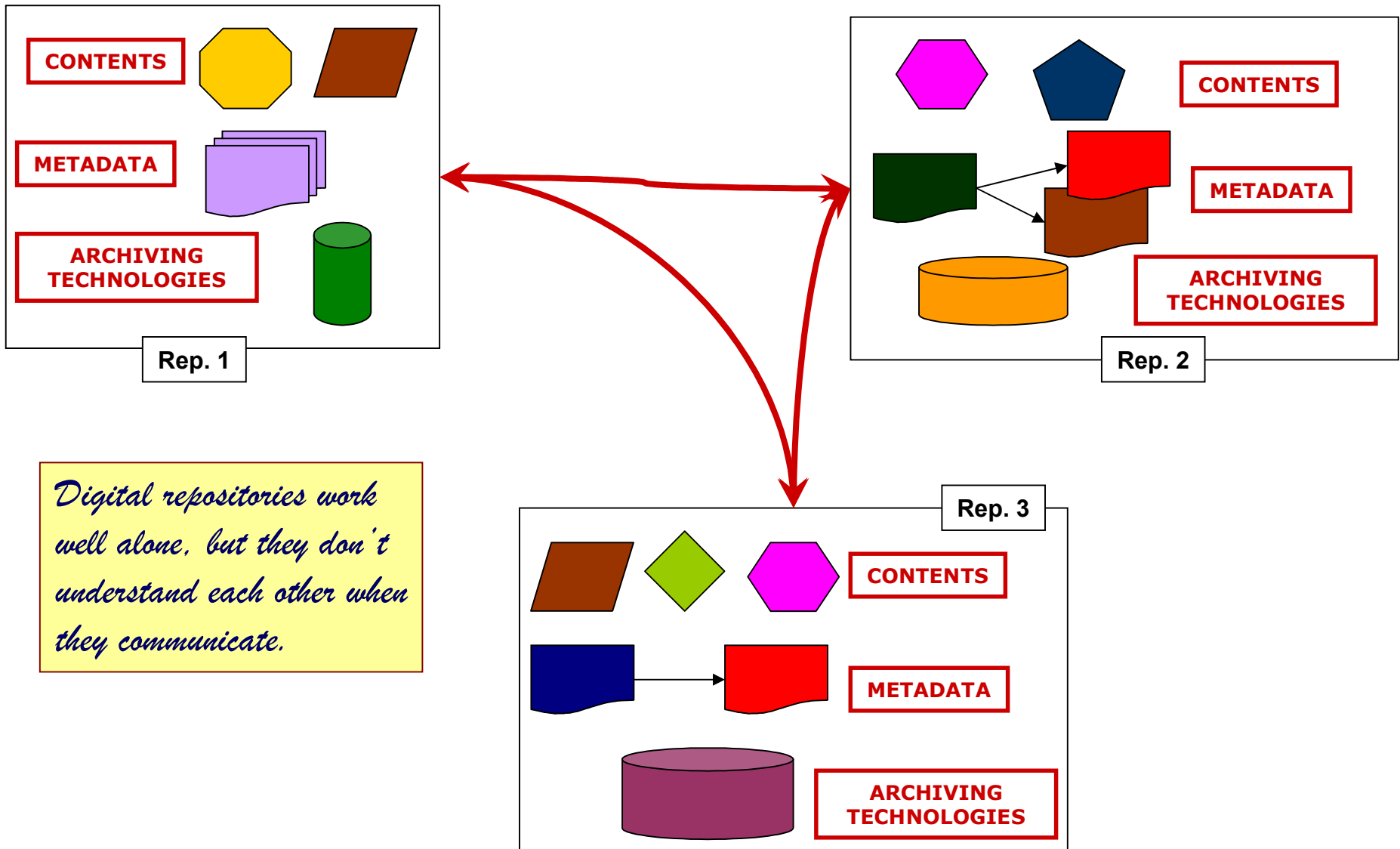
**Robertson Auditorium, Mission Bay Conference Center**

**San Francisco, October 6th, 2009**

## Archives Ready To the AIPs Transmission (ARTAT)

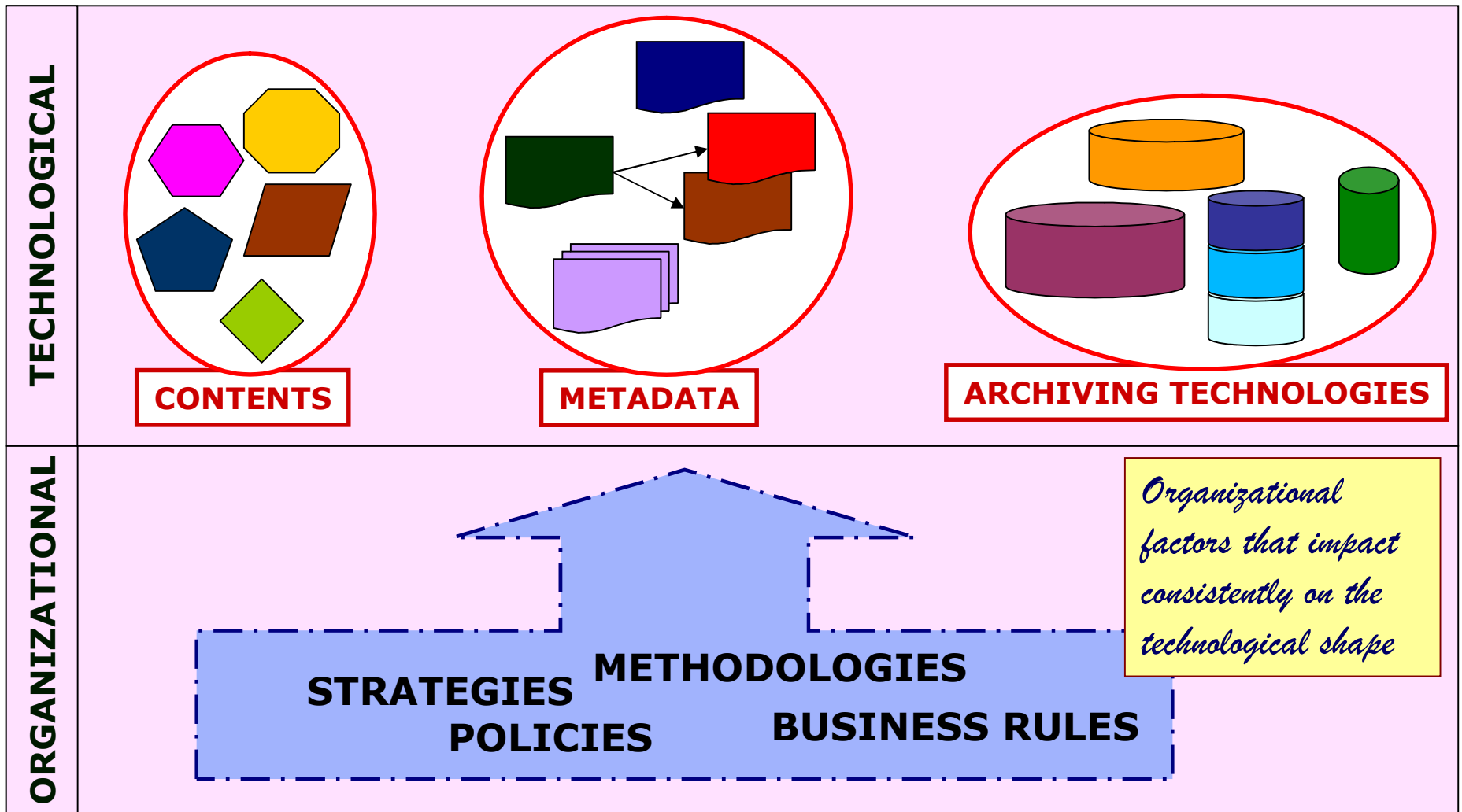
- acts in a cooperative context of an organizations network that have digital repositories with AIPs to preserve in the long term hopefully in a distributed way
- deals with different knowledge base and different multi-faceted architectures
- experiments a solution for harmonizing framework and management of preservation metadata
- increases the strategic importance of preservation metadata by means of spreading awareness and knowledge about it

# It's about a translation...

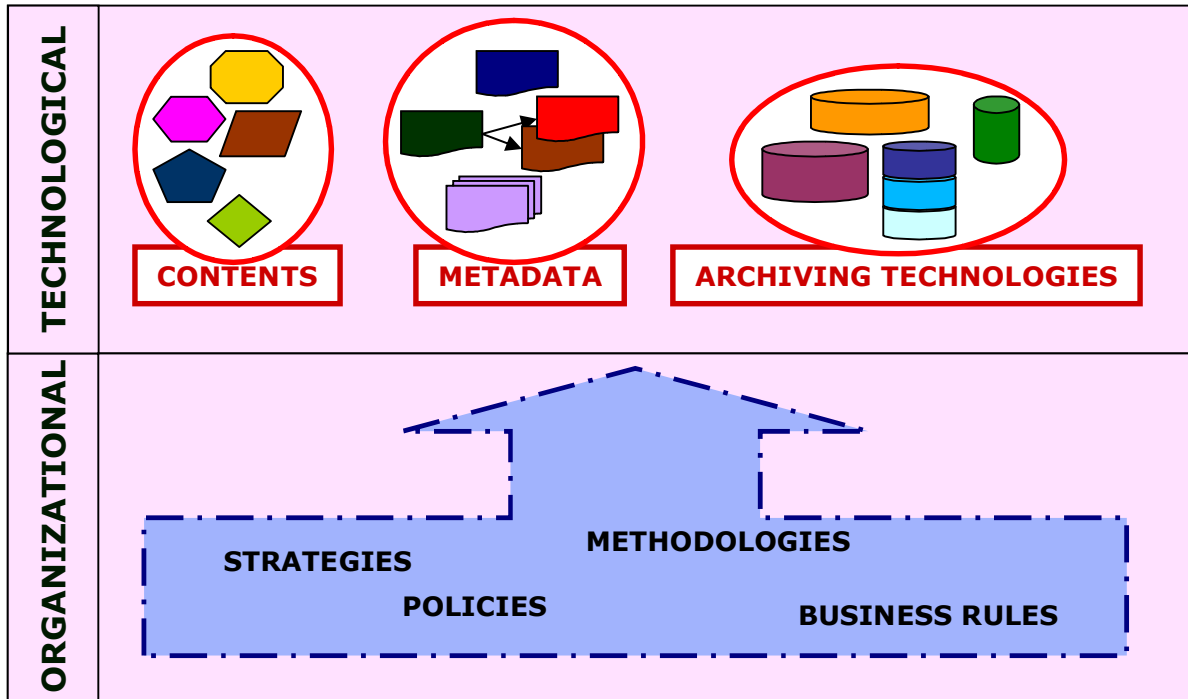


*Digital repositories work well alone, but they don't understand each other when they communicate.*

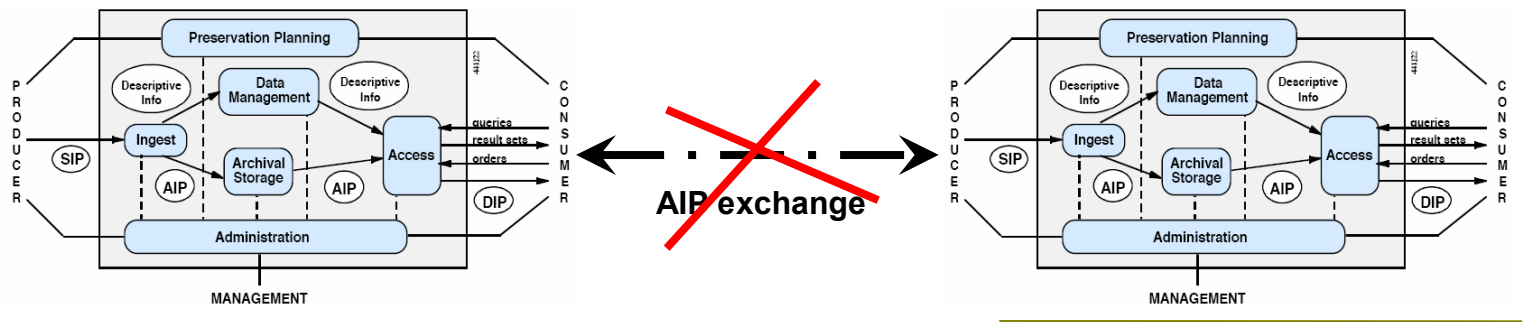
# Looking at existing scenario



# The double-layered interoperability issues consequence



*Organizational and technological interoperability issues break the resources flow among repositories and the opportunities of OAI S Archival Information Packages (AIPs) exchange*



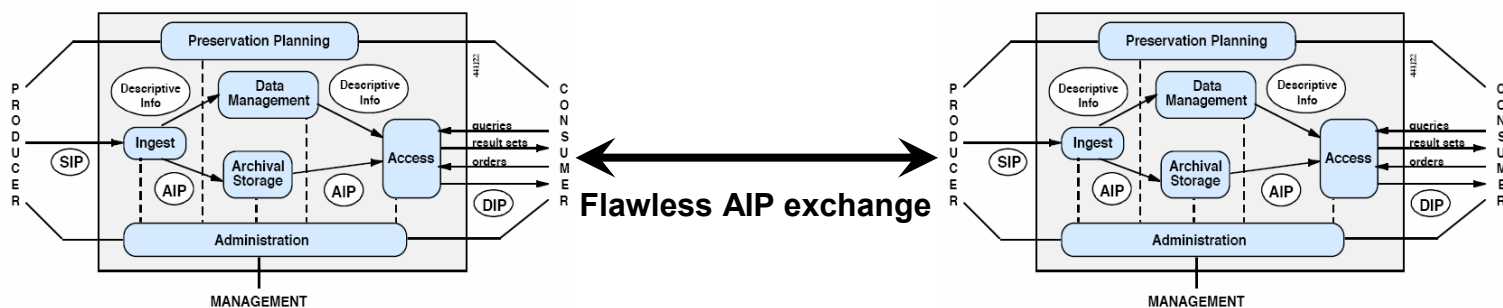
## ARTAT- Aim

**To provide existing digital repository with a layer of preservation metadata exchangeable with other repositories**

It entails to create the ideal conditions for resources exchange, making the Archives Ready To the AIPs Transmission

The focus is not changing existing archival systems, but strengthening their own management with a view to the long term preservation

It works on the sources of transmission that are network participating repositories to make AIP exchange happens in flawless way



## ARTAT- Aim and Objectives

➔ **To provide existing digital repository with a layer of preservation metadata exchangeable with other repositories**

ARTAT is a PREMIS Based Project (PBP) and experiments the arrangement of a Preservation Metadata Layer(PML), encoded in PREMIS standard which will integrate repositories' preservation metadata

➔ **To pick out preservation metadata gaps in the AIPs management processes from participants' repositories**

➔ **To consolidate and to harmonize the preservation metadata framework of participating archival systems into a conforming PREMIS framework.**

## ARTAT- Expected benefits

Because PREMIS has been adopted by an enlarging community is supposed to be more interoperability-oriented and experimenting on it would mean

- increasing opportunities of cooperation in digital preservation
- sharing and spreading the knowledge base about the strategic importance of preservation metadata and technical knowledge
- deepening into PREMIS knowledge, experience and implementation
- improving the conditions for preservation metadata management and good practices in the long term digital preservation



## ARTAT- Partnership and network development

The project is supported by Fondazione Rinascimento Digitale, which has constituted a partnership with

- Union Catalogue of Italian Libraries and Bibliographic Information (ICCU), a representative institution of the Ministry of Cultural Heritage and
- National Library of Florence (BNCF)

The partnership agreement has established a Task Force to manage the start up, the promotion and the coordination activities of the assumed network

The network will include partners that do not necessarily have the capability to sustain the long term preservation strategies, but are willing to submit copies of their own resources into assigned partners' repositories that can provide the commitment for the long term

# ARTAT- Partnership and Application Context

The experiment application will start with three repositories:

The ICCU institutional repository named MAGTECA, which is the grounding archive of the Italian national Digital Library Portal and Cultural-Tourist Network ([www.internetculturale.it](http://www.internetculturale.it)). It contains more than 2.000.000 of digitalized images with the corresponding metadata consolidated in more than 29.000 documents. The metadata framework is encoded in **MAG** (<http://www.iccu.sbn.it/genera.jsp?id=267>).

Magazzini Digitali is a project undertaken by Fondazione Rinascimento Digitale and National Library of Florence (<http://www.rinascimento-digitale.it/index.php?SEZ=28>). The selected objects from the repository are Doctoral Thesis that are harvested by the repository from the Italian universities institutional repositories. The metadata framework is encoded in **MPEG21-DIDL** (<http://www.chiariglione.org/mpeg/standards/mpeg-21/mpeg-21.htm>).

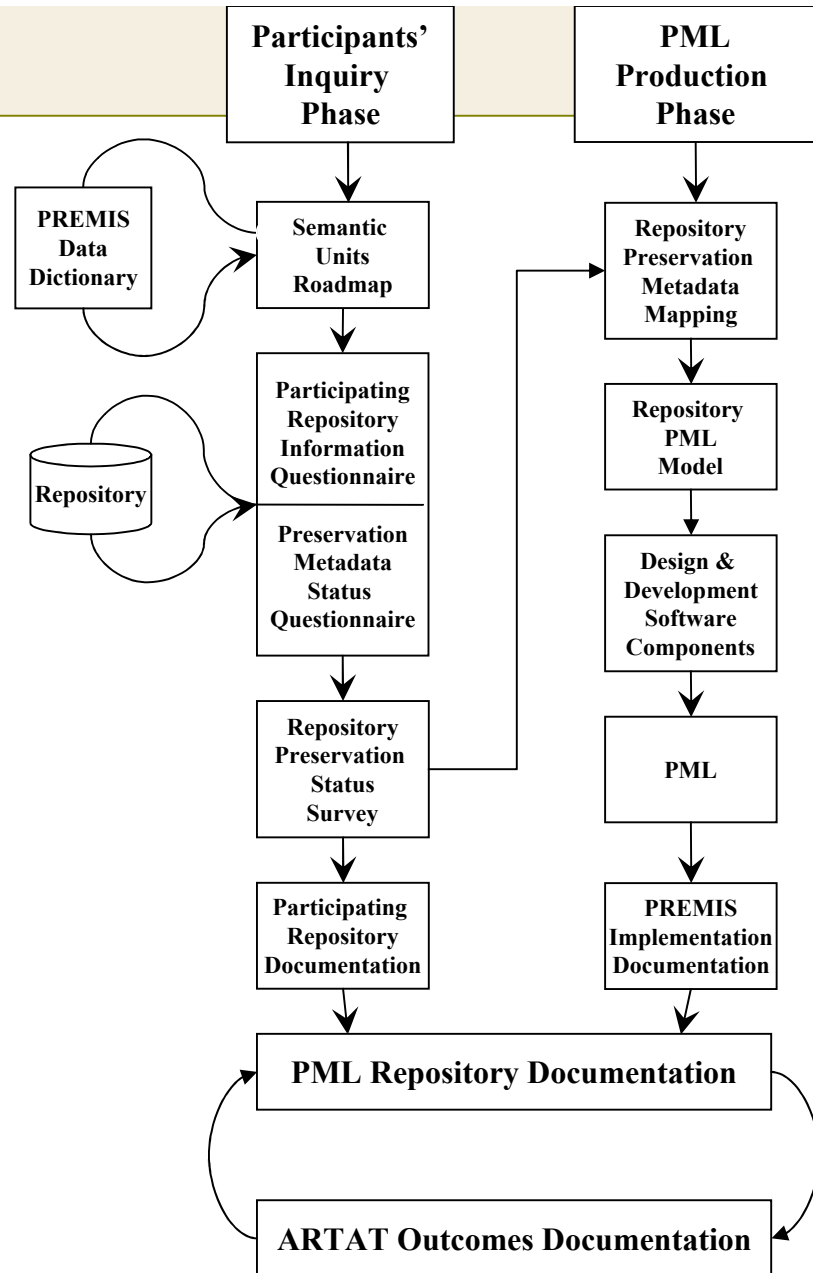
The digital repository of the Library & Archive of the British School at Rome which have digital images of items from the collections of historic photographs, prints and maps. The digitalized collections comprehend around 40.000 images with more than 13.900 metadata documents. (<http://digitalcollections.bsrome.it/>). The metadata framework is encoded in **METS** ([www.loc.gov/standards/mets](http://www.loc.gov/standards/mets)).



# ARTAT- Approach

## → PML production phase

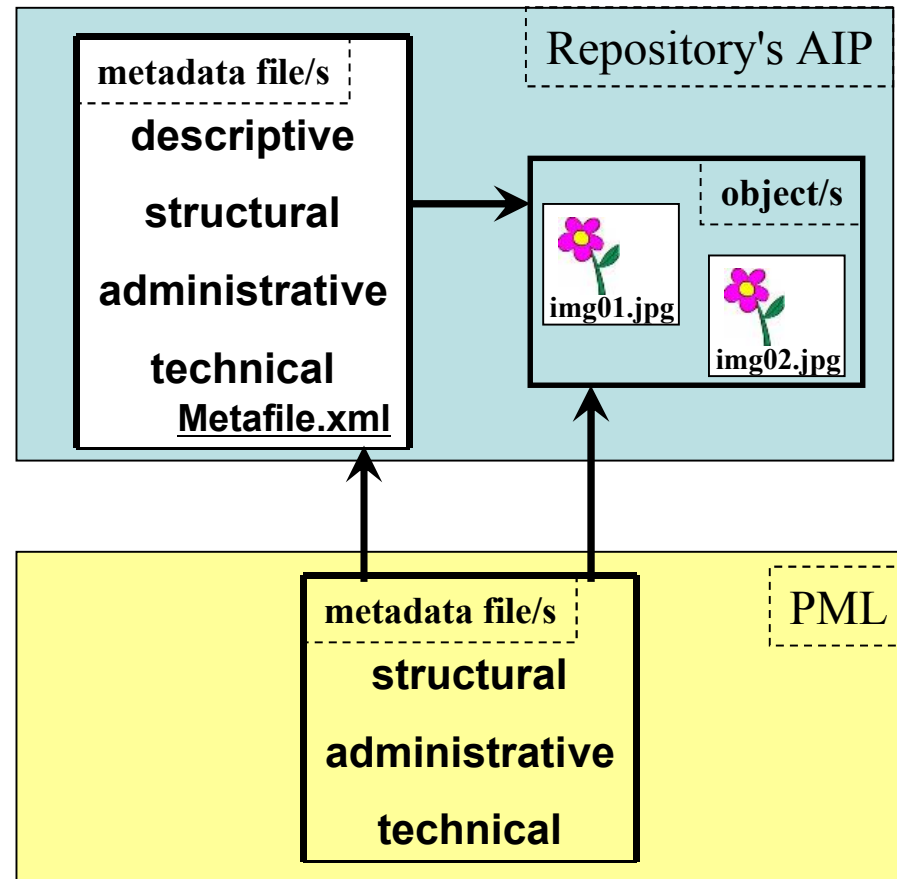
*Essentially can be defined as the realization of a preservation metadata integration derived from an analysis process of the preservation metadata management which will be run at the organizational and technological level of the repository*



# Preservation Metadata Layer (PML)

## ➔ Requirements

- **PREMIS conformance requirement**
- **Comprehensiveness requirement**
- **PML independence from AIPs**



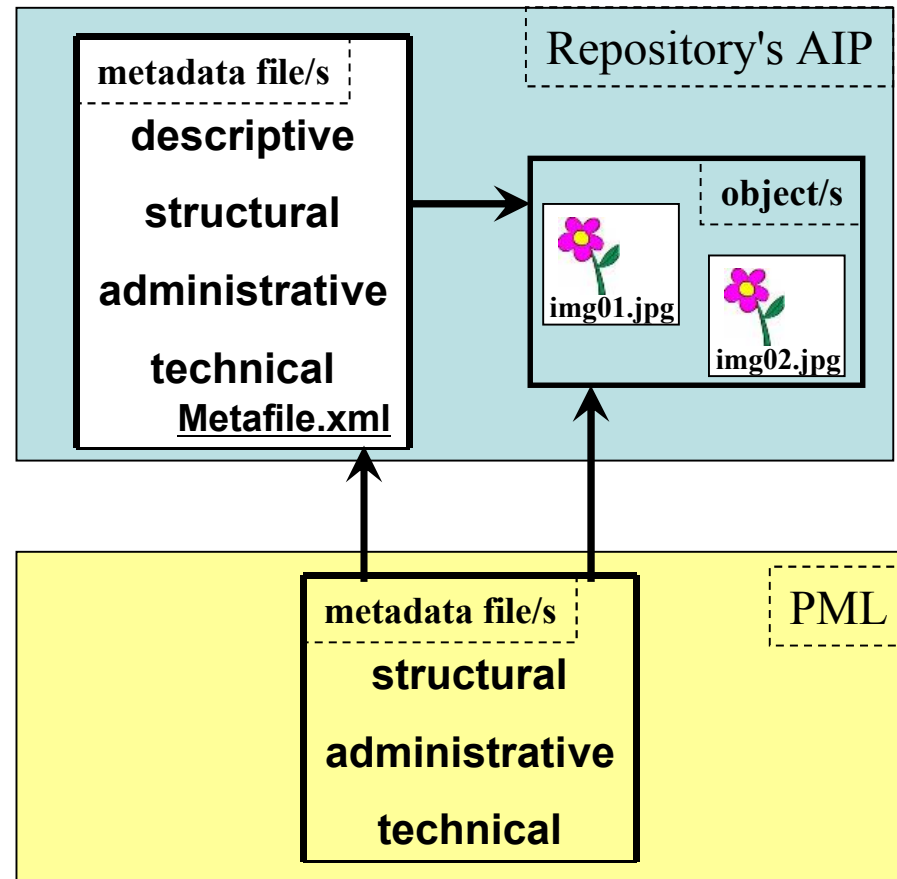
# Preservation Metadata Layer (PML)

## → Structure

Describes technically and structurally the AIPs content

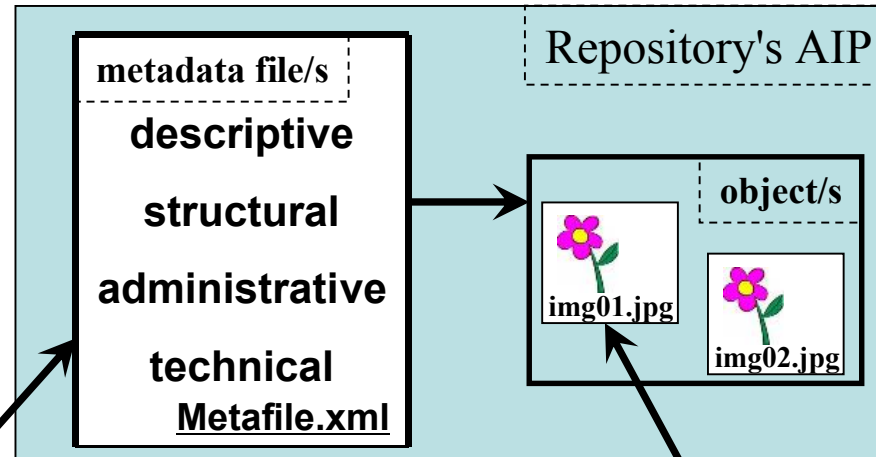
Populates a framework of PREMIS semantic units from repository preservation metadata and from other source of information located by the inquiry phase

The target is not only the objects but the metadata which describes the AIP package.



# Preservation Metadata Layer (PML)

*The part describing the AIP metadata, in other words the meta-metadata, is considered the core of PML.*



objectIdentifier [ metafile.xml ]  
 objectCategory  
 objectCharacteristics  
 significantProperties [coded;METS]  
 significantProperties [content;MODS]  
 significantProperties [content;MIX]  
 storage  
 relationship  
 [description: describing img01.xml ]  
 linkingEventIdentifier[ artat\_e000001]

eventIdentifier [artat\_e000001]  
 eventType [PML production]  
 eventDateTime  
 linkingAgentIdentifier [ARTAT-SW]  
 linkingObjectIdentifier[ metafile.xml]  
 linkingObjectIdentifier[ img01.jpg]

objectIdentifier [img01.jpg]  
 objectCategory  
 objectCharacteristics  
 storage  
 relationship  
 [ description:described by metafile.xml ]  
 linkingEventIdentifier[ artat\_e000001]

## Conclusions

The adoption of a common interchange language will enable to submit and to disseminate packages in understandable way to all of them adopting the same language

The project solutions will succeed if current systems will be able to exchange resources flawlessly.

The experiment contributes to spread awareness about the preservation metadata strategic importance, tests an *a posteriori* implementation of preservation metadata and assesses the impact of such solution on existing systems and on established organizational procedures

The ideal scenario to test the PML solution is disparate application domains

Other partners will be involved during 2010: partners interested in come from different domains like archives, universities and public administrations

First outcomes report will be expected by June 2010



# Thanking

*Thanks for your kind attention*

*....*

*and Questions Time....*

## **contacts information**

**Angela Di Iorio**

Fondazione Rinascimento Digitale

**Researcher**

**angeladiorio[at]gmail[dot]com**

**Maurizio Lunghi**

Fondazione Rinascimento Digitale

**Scientific Director**

**lunghi[at]rinascimento-digitale[dot]it**