

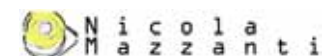


CINEMATEK

## EDCINE Workshop

# The archival perspective

*EDCINE Workshop, Brussels, Cinematek, June 18<sup>th</sup>, 2009*





## The EDCINE project

CINEMATEK

**EDCine – Enhanced Digital Cinema** funded by the European Commission within the 6th Framework Programme FP6/2004/IST/4.1  
It started in July 2006 and it ends in June 2009.  
It is focused on future enhancement of digital cinema technology in three areas:

*Networked content streaming to cinemas*

*Advanced movie experience beyond DCI*

***Digital archives and access to film archives***

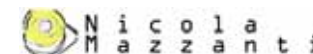
16 partner consortium (4 universities and research centres, 10 companies, 2 end users)

Partners in the **archival section** of the project are:

**Cinémathèque Royale de Belgique** (Brussels, Belgium)

**Fraunhofer Institute for Integrated Circuits IIS** (Erlangen, Germany)

**MOG Solutions** (Oporto, Portugal)



## THE FIRST PROJECT: THE FINAL REPORT

AT THE THRESHOLD, LOOKING IN...

"The question with regard to the collections of cultural heritage institutions is how these treasures can be unlocked into the information and knowledge society."

The work carried out by the FIRST Project in the past two years, as well as its original concept and structure, is profoundly rooted in the more general debate on the 'Digital future' of a European Information and Knowledge Society. Film users as well as cultural heritage institutions can then take full advantage of Digital Technologies, from preservation and restoration to diffusion and access to the European cultural heritage.

This debate, which recognises the already growing role Digital Technologies have in the creation and dissemination of knowledge in our societies and in every European citizen's life, and its largely unexplored potential, has made film archivists all over Europe increasingly aware that the time has come to explore these potentials. This requires them to design and implement new models and technical solutions to help to preserve of this European Film Heritage, and create conditions for accessing this invaluable heritage in a better, easier, and more effective way.

Today, Film Archives and Collections all over Europe are at the threshold of this new era, and for the first time they are seeking to understand the opportunities, the roadblocks, the limiting factors and the actions needed.

Digital Technologies offer opportunities to increase and improve Access

In order to be sustainable Access must be multi-platform

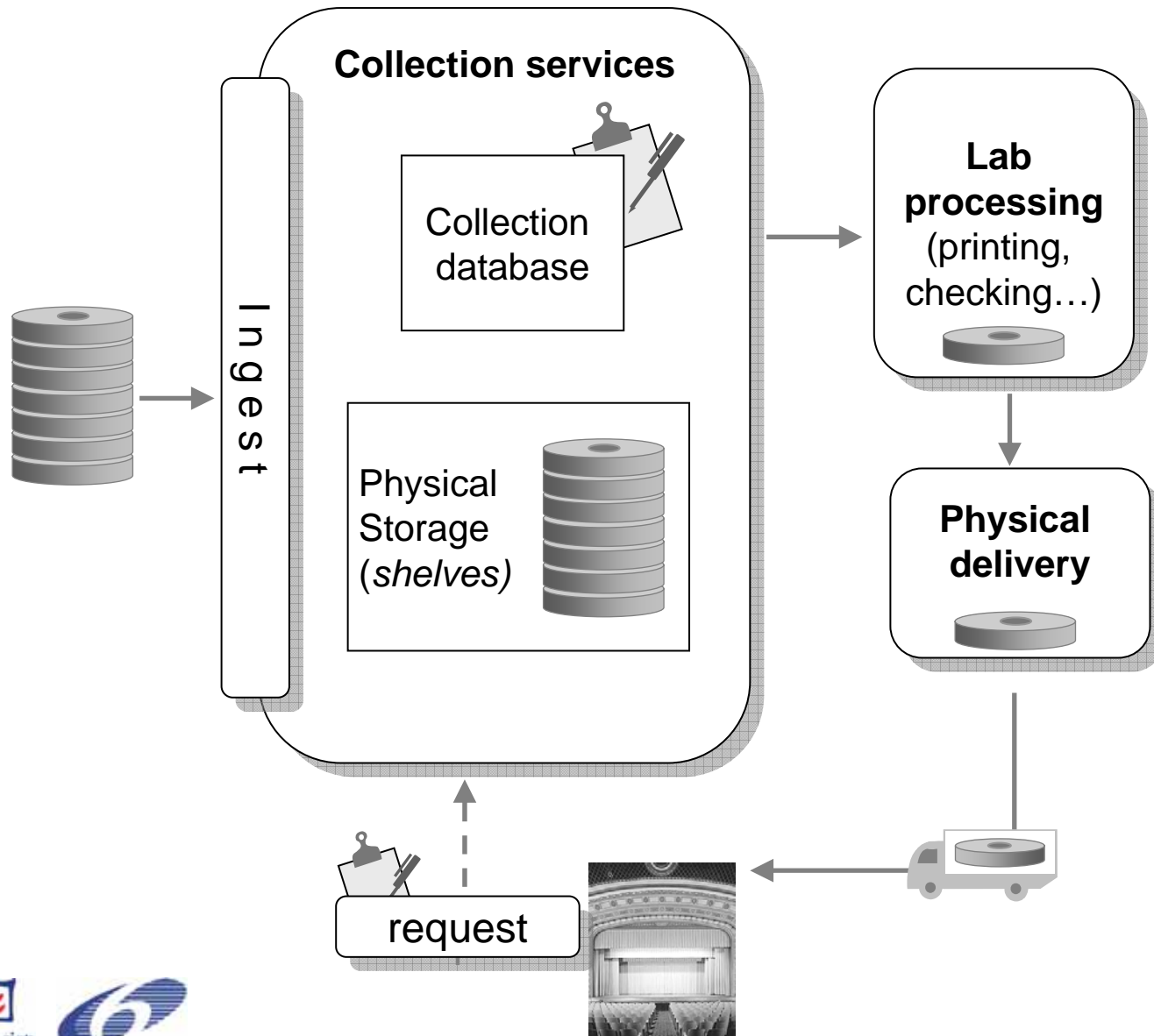
There are not yet solutions for the Long Term Preservation of born digital and digitized works

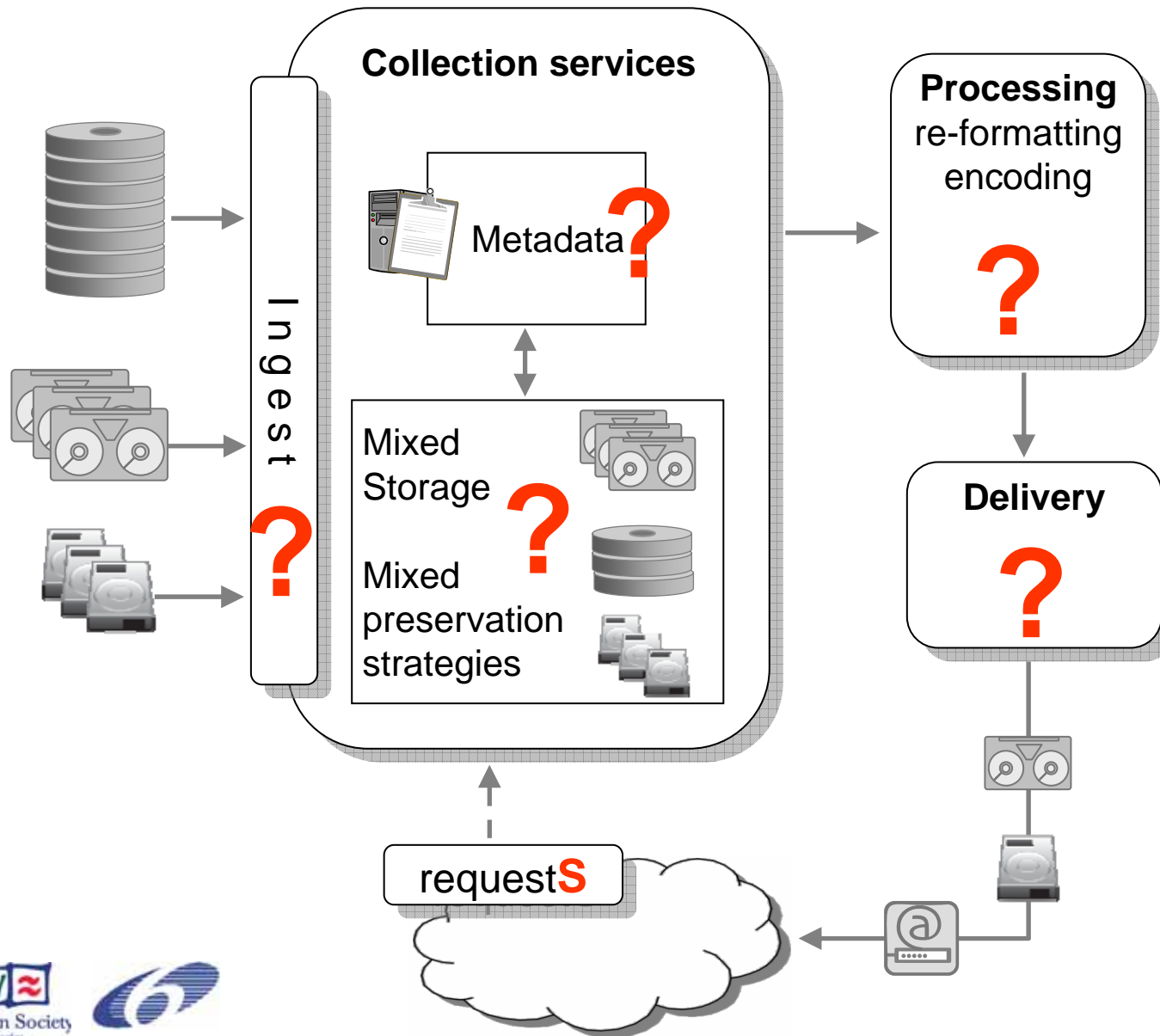
When we look at multi-platform, multi-format Access we see a complex picture:

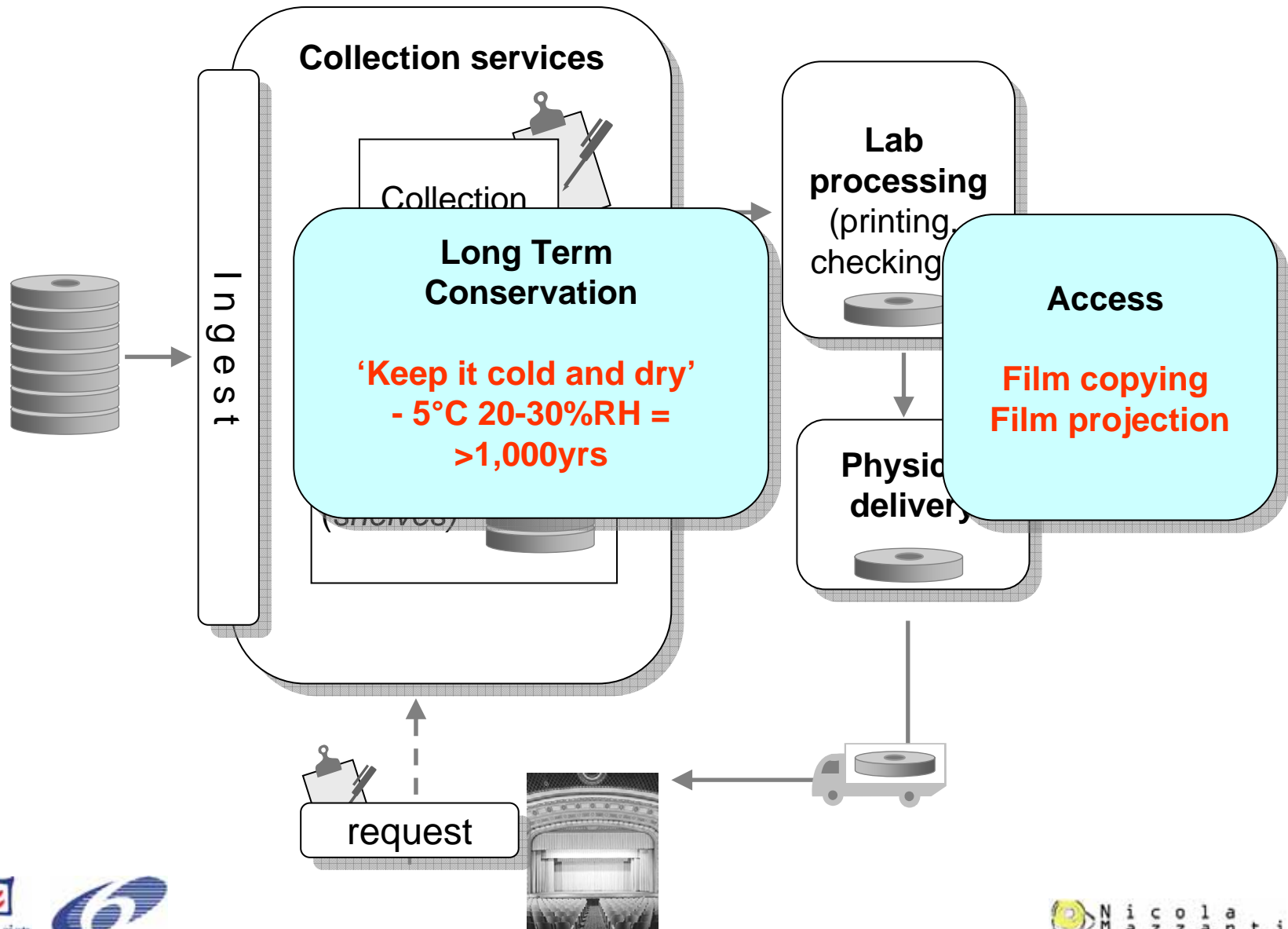
- Multiple formats at ingest (analog *and* digital)
- Multiple delivery channels and formats for multiple purposes and users
- A very complex infrastructure (transcoding, storage, etc.)
- Archives must think 'future': how to take all of this into the future without keep re-digitizing the same content?

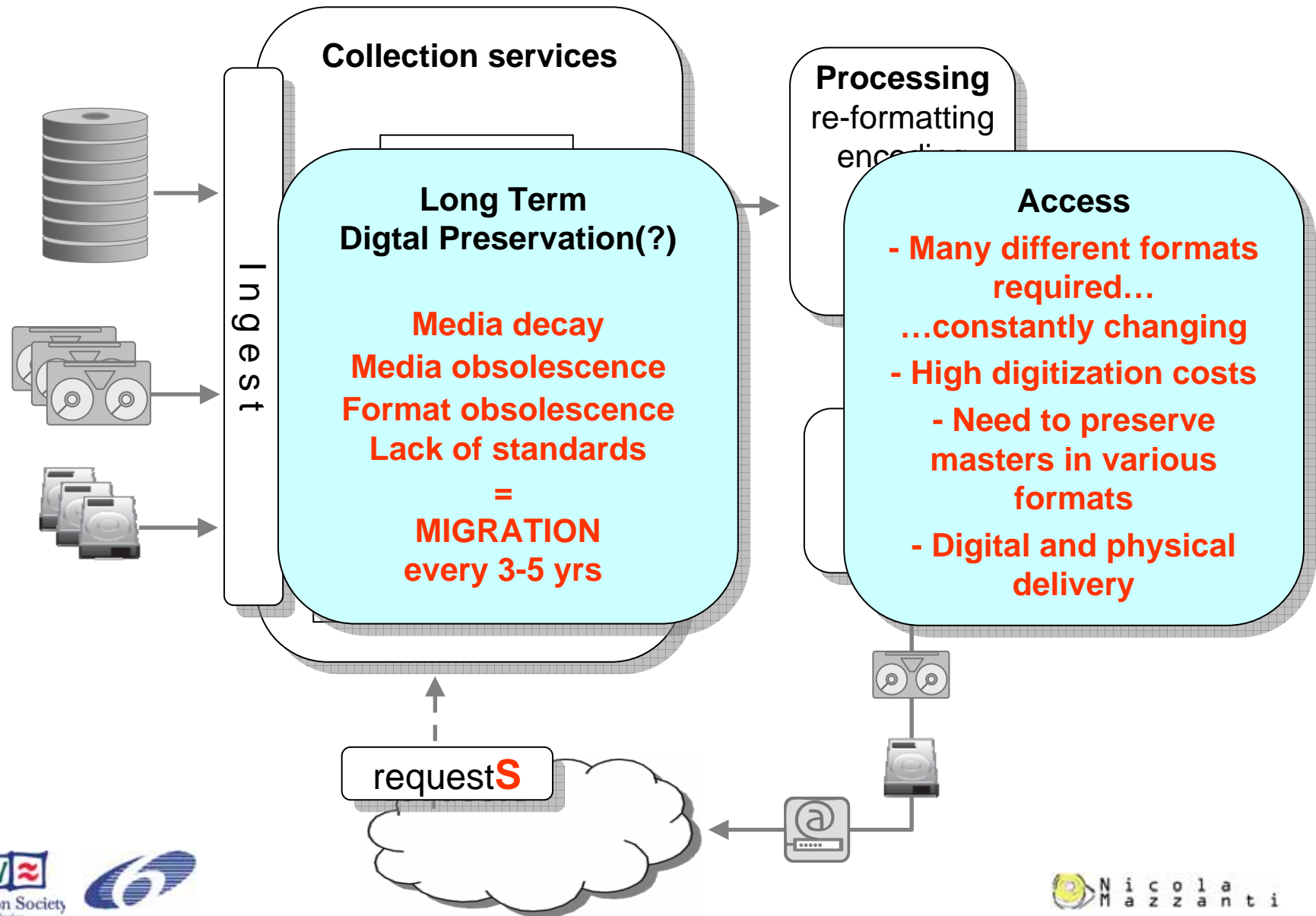
These questions apply to all:

- Public, non profit archives
- Content owners, commercial archives
- The media industry as a whole...

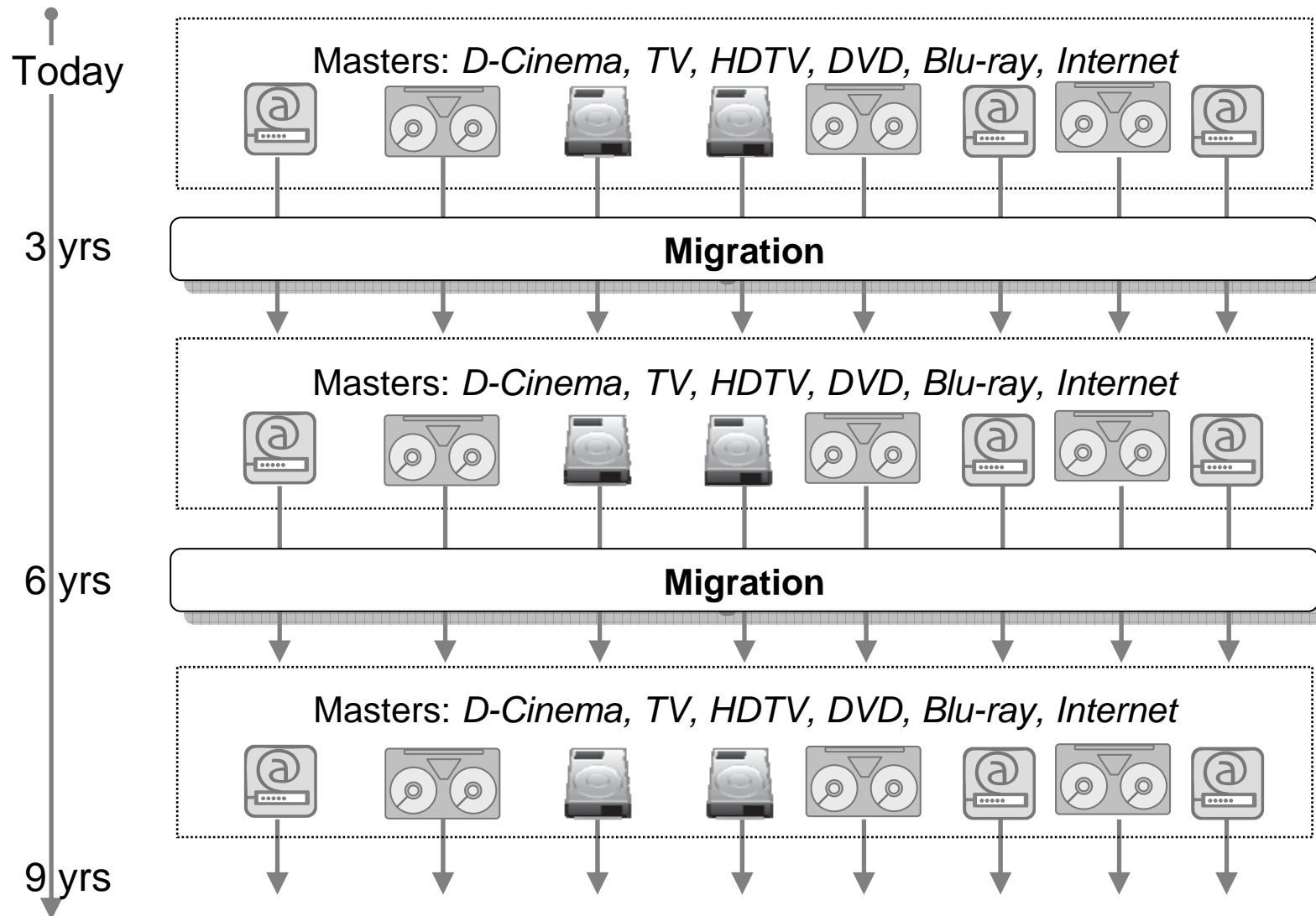






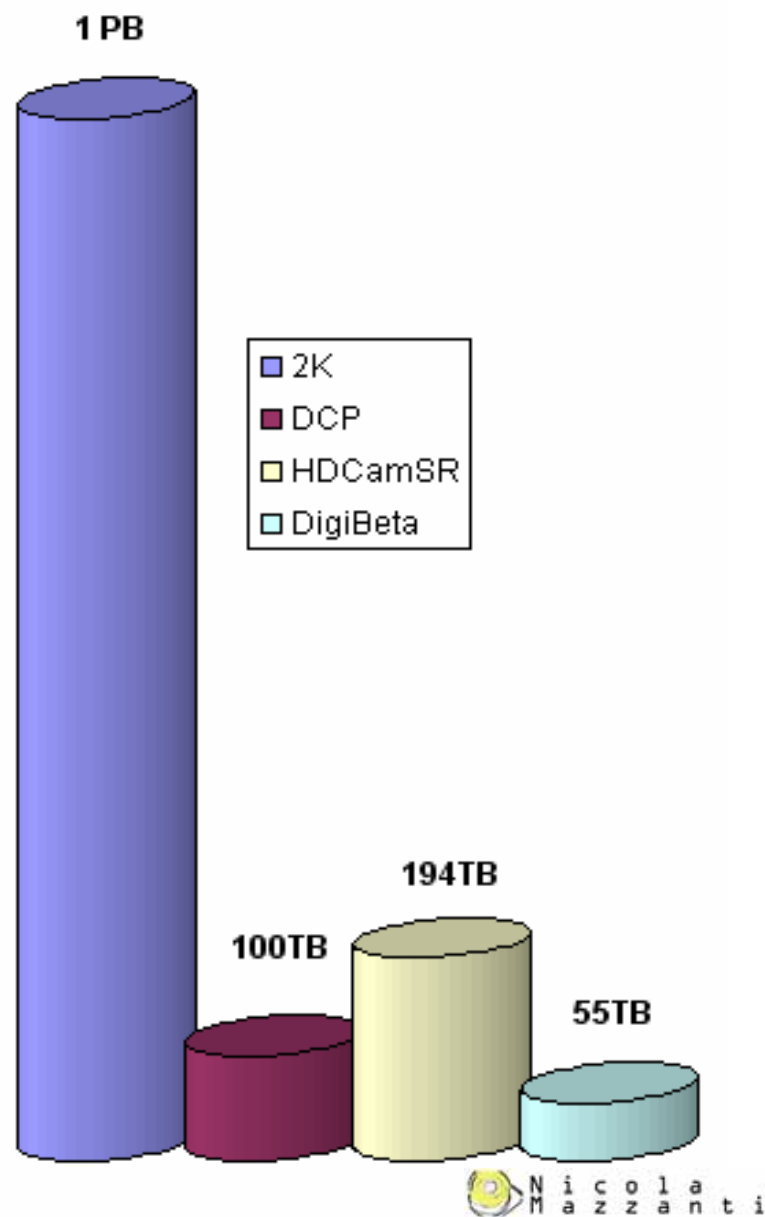






How **BIG** is the problem?

	2-hr FILM	500 FILMS
2K	2 TB	1 PB
DCP	200 GB	100 TB
HDCamSR	288 GB	194 TB
DigiBeta	110 GB	55 TB



## Long Term Digital Preservation requires a systemic approach:

- Media decay and obsolescence
- Format obsolescence
- Lack of standards, guidelines for moving images
- Policies and strategies
- 'Intelligent' storage systems
- Preservation metadata
- Media with high Life Expectancy

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- 'Intelligent' storage systems
- Preservation metadata
- Long Life Expectancy Media

How can we simplify this picture, for Access and for Long Term Preservation?

Looking at other fields as libraries and archives: OAIS, PDF-A

Looking for a suitable format – key features:

- Open, well documented standards, non proprietary
- Efficient compression
- Easy extraction of multiple resolutions, quality levels from one file, reducing computational burden
- Viable for cinema and video content as well
- Appropriate for Long Term Preservation
- Compatible with OAIS asset store approach

All types of metadata are vital to manage Access and make Long Term Preservation possible. Any system must be able to:

- Preserve metadata (OAIS approach)
- Manage historical metadata (also from analog collections)
- Be open to all metadata sets and schemas
- Deliver different metadata sets and subsets
- Preserve and manage multiple metadata schemas for interoperability with other (types of) collections
- Be able to synchronize metadata to the timeline for certain business models (factual footage, documentary archives, etc.)
- Capture, update, synchronize metadata automatically
- If required, store all sort of metadata, including legacy formats (cards as pdf)

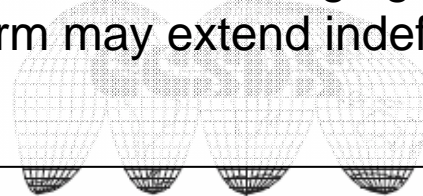
## The OAIS model

### *Consultative*

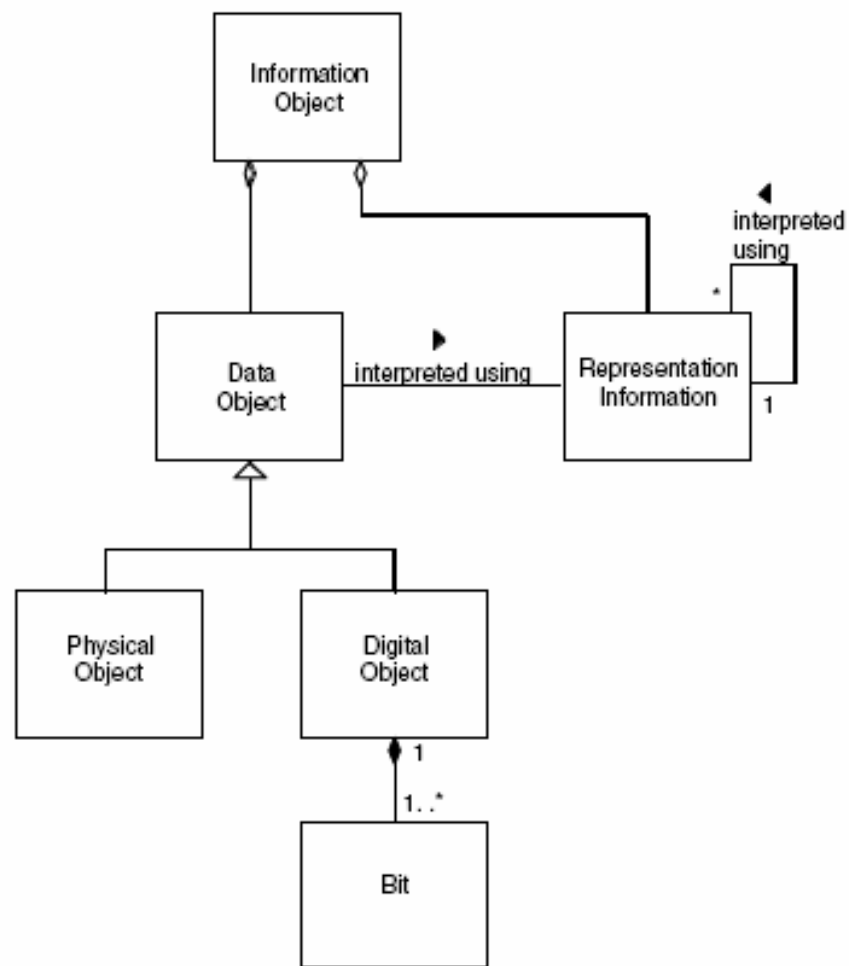
### *Committee for Space Data Systems*

“An OAIS is an archive,  
consisting of an organization of people and systems,  
that has accepted the responsibility to preserve  
information and make it available for a **Designated Community**.”

“The information being maintained has been deemed to need  
**Long Term Preservation**, even if the OAIS itself is not permanent.  
**Long Term** is long enough to be concerned with the impacts  
of changing technologies, including support for new media  
and data formats, or with a changing user community.  
Long Term may extend indefinitely. ”

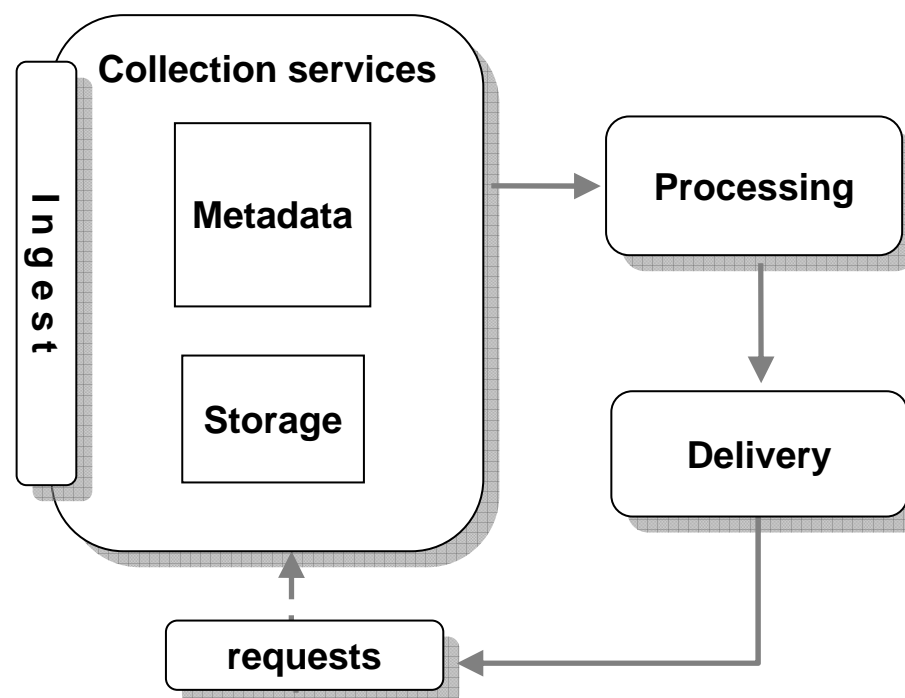


### The OAIS model





In a nutshell this was EDCINE's brief:  
to enable archives to Preserve and provide Access  
by taking advantage of the opportunities presented  
by the new digital environment,  
by offering a concept, a technical solution,  
and the standards to support these activities.





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