InterPARES 3 Project

International Research on Permanent Authentic Records in Electronic Systems

TEAM Catalonia

Transferring vital digital records to a trusted digital repository in Catalan public universities (the iArxiu platform)

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1. Introduction (I)

1.1 Vital records: an overview

- What is a vital record?
  - A file or record that is indispensable for the university's operation (acts of governing bodies, records of marks, student files/records and all those files or records that are considered as such) and that would ensure the continuation of university activities following a disaster.
- What is a vital records program?
  - It is a series of actions that are carried out in order to protect and preserve the vital records of any organisation so that in case of natural disaster (fire, flood, earthquake, etc.) the organisation can continue to carry out its functions and activities.
- Why implement a vital records program?
  - To protect certain types of unique and original records belonging to any organisation by means of the duplication or transfer of the information (content) to different media (or other physical format) and to different repositories in anticipation of the accidental or occasional loss of information.

1. Introduction (II)

1.2 On what is the research focused?

- What are the new challenges and issues in the preservation of vital digital records?
  - From the perspective of the legislation and norms
  - From the perspective of the records management (functions)
  - From the perspective of the technology
- What are the findings and products developed by TEAM Catalonia to resolve this new scenario?
  - Digital transfer procedure
  - Metadata schemas: records management (transfer) and digital preservation
  - The iArxiu platform

2. What are the new challenges and issues in the preservation of vital digital records?

General challenges:

From the perspective of the legislation and norms:

- National Interoperability Schema and National Security Schema:
  - Create authentic digital records.
  - Guarantee the preservation of digital records.
  - Transfer to a trusted digital repositories.
  - Develop metadata schema (records management and digital preservation).
- Establish contracts / agreements between creators and preservers, which must include:
  - Transfer of the responsibilities of digital records management
  - Trusted continuous custody
  - Access privileges
- Every organization needs to design and implement:
  - Rules of digital records transfer, procedures and register transfers

General challenges (cont):

- From the perspective of the records management (functions and procedures of transfer):
  - Design, schedule and implement instruments of records management, which are referenced to transfer procedure: Disposition and retention schedules (calendar), transfers calendar and security and access scheme
  - Design and implement standard transfer procedures for digital records (objective is if the creators of vital digital records use different third-party platforms for long-term digital preservation in their organizations)
  - Define an access system for the vital digital records transferred (permission)
  - Description (metadata schemas)
  - In every transfer procedure it is necessary to document all procedure through the drafting of a technical report

General challenges (cont):

- From the perspective of the technology:
  - Create vital digital records in formats that can operate with trusted digital repositories and that guarantee their preservation in the mid and long term.
  - Use services of a third party that are specialized in digital preservation and digital repositories (i.e., iArxiu platform of CATCert).
  - Multidisciplinary and interdisciplinary advice and collaboration (i.e., creation of SIP, migration and conversion policies, metadata schemes, etc.)
- Also, there are two questions that this study tries to resolve linked to the preservation of vital digital records:
  - How can we describe the vital digital records?
  - Which digital repository(ies) can we use? Where should vital digital records be preserved?

Specific challenges:

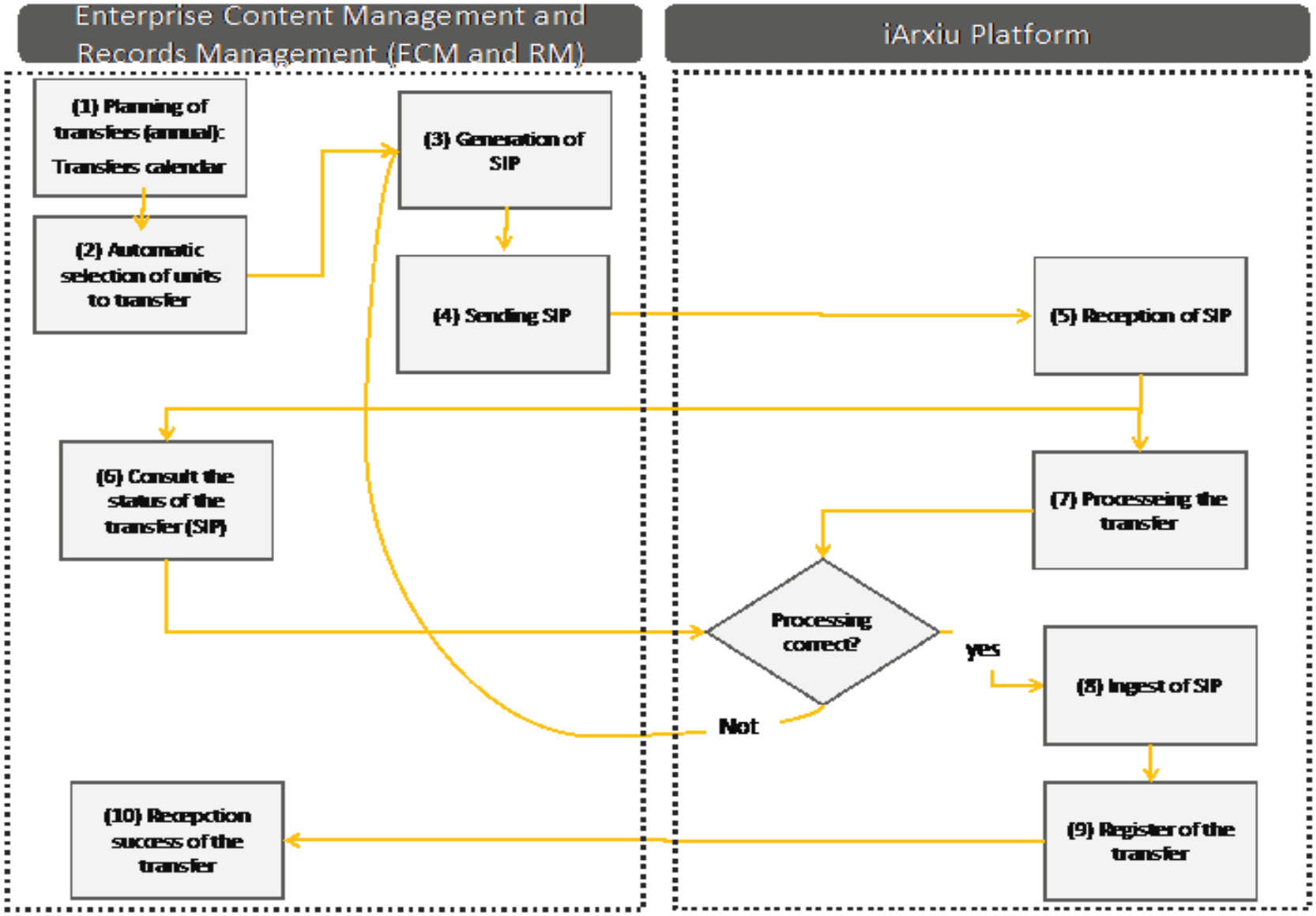
- Some Catalan public universities are now in the process of acquiring/purchasing record management systems applications / software (ECM and RM). Examples: UPF and UPC.
- These universities need to resolve questions linked to the transfer of vital digital records:
  - Develop a digital transfer procedure.
  - Connect and integrate this procedure with the iArxiu platform.

3. What are the findings and products developed by TEAM Catalonia to resolve this new scenario? (I)

- 3.1 Digital transfer procedure:
  - 3.1.1 Automatic
  - 3.1.2 Manual

- **3.1.1 Digital transfer procedures of digital records / vitals e-records from ECM and RM or Information System to a trusted digital repository:**

Diagram (workflow)

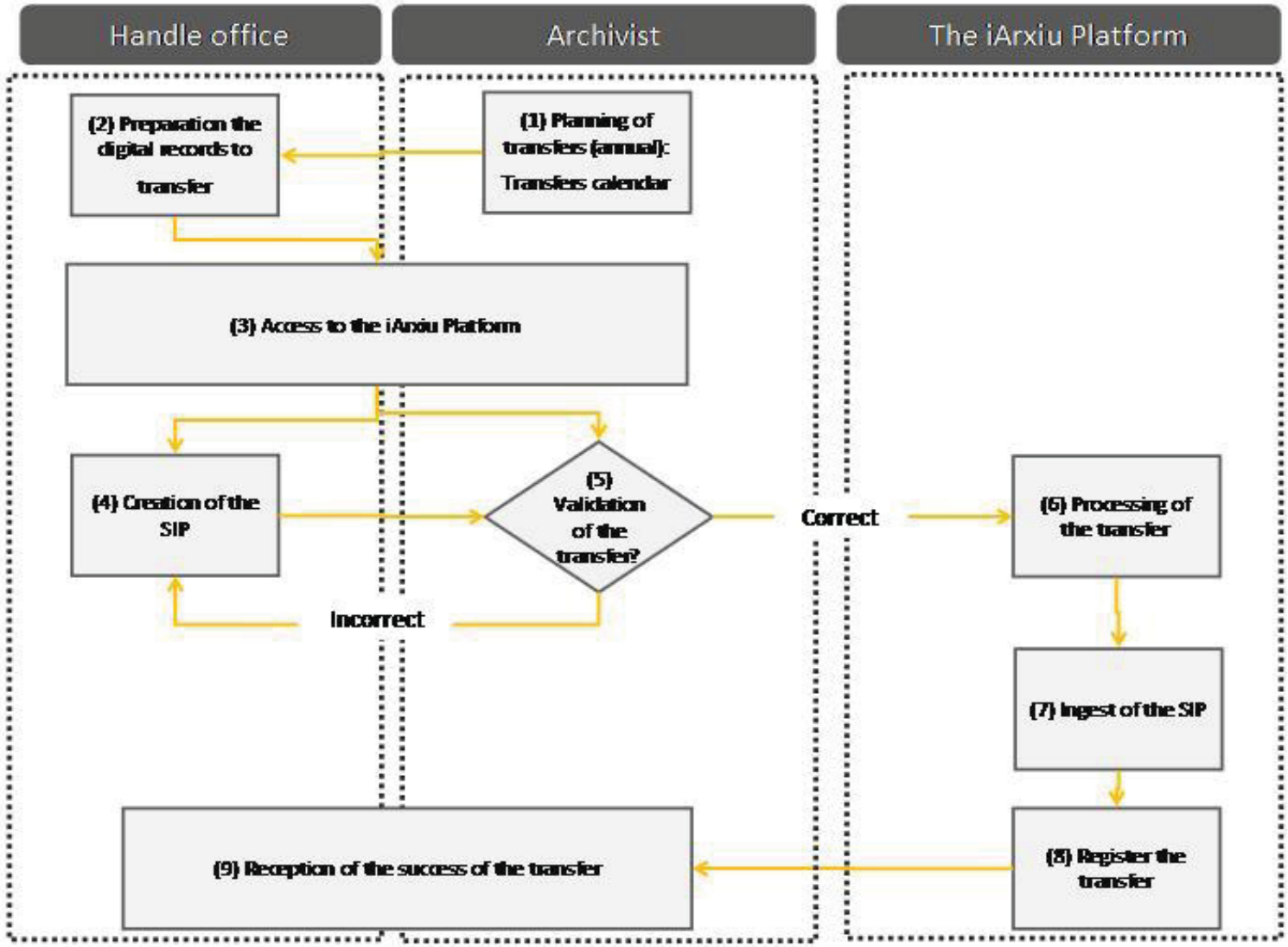


Definition:

ID	Action	Correspondence with the workflow of transfer of the Chain of Preservation Model (InterPARES 2 Project)
1	Planning of transfers (annual): Transfers calendar	
2	Automatic selection of records to transfer	
3	Generation of SIP (Submission Information Package for each of the units to transfer.	
4	Sending the request of transfer	
5	Reception of the transfer requests, previous authentication and authorization.	2. *to confirm the authorization of the transfer* (A4.3.2.2)
6	Query of the transfer status	
7	Processing of the transference and validation and completed tasks	3. *to verify the content of the transfer* (A4.3.2.3) 4. *to confirm the authenticity of the records in the transfer* (A4.3.2.4) 5. *to confirm the feasibility of preserving the transfer* (A4.3.2.5)
8	Ingest of SIP to iArxiu platform	
9	Register the transfer/s	1. *to register the transfer* (A4.3.2.1)
10	Notification of success of the transfer operation to creator of records	

- **3.1.2 Digital transfer procedure of digital records / vitals e-records to a trusted digital repository: (manual procedure)**

Diagram (workflow)



Definition:

ID	Action	Correspondence with the workflow of transfer of the Chain of Preservation Model (InterPARES 2 Project)
1	Planning of transfers (annual) Transfers calendar	
2	Preparation the digital records to transfer	
3	Access to the iArxiu Platform and selection of the body (organization) and fond	2. *to confirm the authorization for the transfer* (A4.3.2.2)
4	Creation of SIP or pre-ingest phase: manual process.	
5	Validation of transfer request	3. *to verify the content of the transfer* (A4.3.2.3) 4. *to confirm the authenticity of the records in the transfer* (A4.3.2.4) 5. *to confirm the feasibility of preserving the transfer* (A4.3.2.5)
6	Processing of the transference and validation and completed tasks	
7	Ingest of SIP to iArxiu platform	
8	Register the transfer/s	1. *to register the transfer* (A4.3.2.1)
9	Notification of success of the transfer operation to creator of records	

3. What are the findings and products developed by TEAM Catalonia to resolve this new scenario? (II)

- 3.2 Metadata:
  - 3.2.1 Records management: the transfer (InterPARES 2 Chain of Preservation model)
  - 3.2.2 Digital preservation (Vocabularies of Metadata model)

3.2.1 Metadata schema (1): digital records transfer - records management, InterPARES model

- Source: InterPARES Project (IPI & IP2)
- Status: First proposal, approval in next Workshop, TEAM Catalonia

Metadata	Source	Function / definition
Transfer registration number	- IP2, Requirements for assessing and maintaining the authenticity of electronic records - IP2, Process records transfers (A4.3.2), COP model	References the number of transfers performed by the administrative units to an Archive. It consists of two counters: general (a global ID that counts all transfers to the archive) and specific (an ID that counts the number of transfers that the specific administrative unit performed to the archive).
Handling office of transfer (code and denomination) and person responsible (position, name and surname)	- IP2, Process records transfers (A4.3.2), COP model	References the code and denomination of the entity performing the transfer and the administrative manager (full name and job title / position).

Metadata	Source	Function / definition
Archivist responsible of transfer	IP2	References the person managing the transfer (name, position and denomination of the organic unit).
Date and time of start of transfer	IP2	References the date and time the transfer began.
Date and time of end of transfer	IP2	References the date and time the transfer ended.
Record series identification and denomination	- IP2, Requirements for assessing and maintaining the authenticity of electronic records	Determines the denomination of the records series and identifies the associated administrative procedure (procedural context).
Classification code/s and record/s series of records transferred	- IP2, Requirements for assessing and maintaining the authenticity of electronic records	

Metadata		Source	Function / Definition
Identification of files and records transferred (title)		- IP2, Requirements for assessing and maintaining the authenticity of electronic records	Determines the subject of the files and records transferred.
Chronological dates of records		IP1	
Access to records		IP1	
Viability	Content	IP2	References the information about the viability of the content of transferred vital e-records.
	Authenticity	IP2	References the information about the viability of the authenticity of transferred vital e-records.
	Preservation	IP2	References the information about the viability of the preservation of transferred vital e-records.

3.2.2 Metadata schema (2): long-term digital preservation, The Catalan model.

- Use and apply the *Vocabularies of Metadata* of Innovation Technological Group of Catalan government
  - Design with the collaboration of CATcert.
  - 4 levels of description and schemas:
    - File
    - Record integrated into a file
    - Record
    - Digital signature
  - Representation of schemas: METS model (XML)

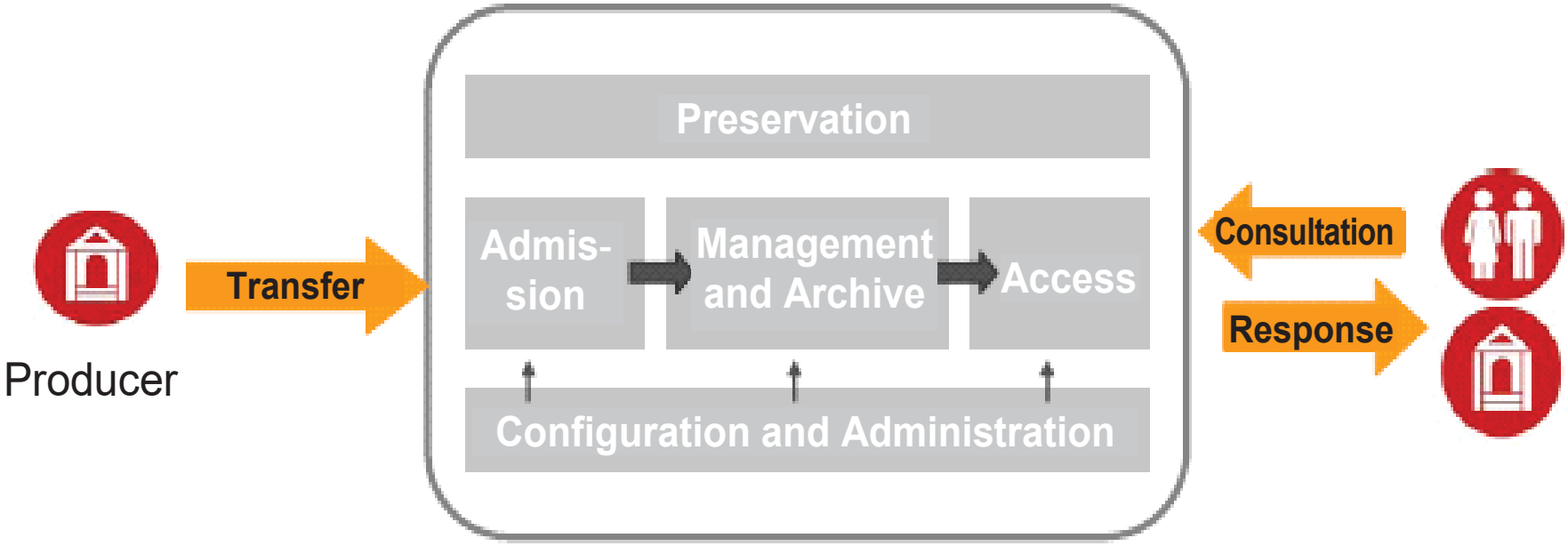
File metadata schema	Record integrated into a file metadata schema	Record metadata schema
Reference code (identifier)	Reference code (identifier)	Reference code (identifier)
File number (identifier)	Record number (identifier)	Record number (identifier)
Classification code		Classification code
Record series		Record series
Description level	Description level	Description level
Title	Title	Title
Start date		

File metadata schema	Record integrated into a file metadata schema	Record metadata schema
	Date of creation	Date of creation
	Medium	Medium
Creator name	Creator name	Creator name
Creator unit / office name	Creator unit / office name	Creator unit / office name
Description	Description	Description
Keywords	Keywords	Keywords
Records linked / assigned		
Type of relation	Type of record	Type of record
Security and access classification	Security and access classification	Security and access classification
Rights Sensibility of data – LOPD (Spanish Organic Law on Personal Data Protection)	Rights Sensibility of data – LOPD (Spanish Organic Law on Personal Data Protection)	Rights Sensibility of data – LOPD (Spanish Organic Law on Personal Data Protection)
	Evidential classification level	Evidential classification level

Digital signature schema
Identifier of signature
Record identifier
Type of signature
Format of signature
Date of signature
Date of verification of signature
Evidence of verification
Name of signatory
Signatory identifier
Organization
Office / Service name
Signature policy

4. Why the iArxiu platform?

The iArxiu platform (which is based on the OAIS model) is illustrated below:



5. The success case in the University of Girona: transfer and long-term preservation of vital digital records (I)

The context:

- The UdG was the first government agency in Catalonia to use the iArxiu platform (December 2009):
  - The University's need for long-term preservation of the authentic records.
  - The need to respond to an assignment from the e-Administration Committee of ACUP (Catalan Association of Public Universities: test the iArxiu platform.
  - The University followed the manual transfer procedure.

5. The success case in the University of Girona: transfer and long-term preservation of vital digital records (I)

The objectives:

- Create authentic electronic records (in compliance with current Spanish and Catalan laws and regulations).
- Create submission information packages (SIPs) that follow the OAIS model.
- Apply the de facto Catalan standard for digital preservation metadata (Vocabulari de Metadades [Metadata Vocabulary] of the Technology Innovation Group).
- Provide long-term digital preservation of academic qualifications certificates.
- Test the iArxiu platform as a technological and functional solution for transferring and preserving digital records from the University of Girona.

5. The success case in the University of Girona: transfer and long-term preservation of vital e-records (III)

Aims:

- This action and initial experiment by the University of Girona will serve as an action plan for the case study being developed in Pompeu Fabra University on the preservation of vital records at that university within TEAM Catalonia of the InterPARES 3 Project.
- Verify and validate the effectiveness of iArxiu, especially as regards maintaining digital signatures and time stamps (electronic evidence service).

Thank you for your attention

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