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1. INTRODUCTION

1.1. Background

As part of the ISA² programme (Interoperability Solutions for Public Administrations), the Historical Archives Service of the European Commission (HAS, OIB.OS.1.002) launched the ‘Standard-Based Archival Data Management, Exchange and Publication’ project in 2017, in cooperation with the Directorate-General for Informatics (DG DIGIT). The purpose of this project is to identify the standards, best practices and IT solutions able to guarantee that the archives are managed, exchanged and opened to the public in an appropriate manner.

The primary objective of the project is to provide the archival community with guidelines and methods to enable a choice of solutions for management and exchange of the archives and publication of archival data. At the same time, the project aims to provide the Historical Archives Service of the European Commission (HAS) with an IT solution that can be integrated into its existing systems (such as the records management system and the preservation system) while enabling it to exchange archives with its partners, including the Historical Archives of the European Union (HAEU) based in Florence (Italy).

The project is divided into three phases:

- Phase 1: the phase covering analysis of the standards, best practices and IT solutions in relation to the management, exchange and publication of archival data was completed in 2017. This phase was aimed at helping the archive services choose solutions appropriate for their needs and providing recommendations to define and establish proof of concept (PoC) so as to evaluate the feasibility of the solutions selected. The outputs from this analysis phase can be consulted online¹.
- Phase 2: this study is being undertaken as part of the PoC phase. On the basis of the recommendations made in the analysis phase, this phase is intended to test the viability of several solutions for management of the archives, exchange of archive data and publication and use of (linked) open data technologies in the particular context of the HAS and its interactions with specific partners, and above all the HAEU at the European University Institute in Florence.
- Phase 3: the forthcoming implementation phase, which aims to implement a solution for the HAS on the basis of the conclusions of previous studies to enable management of archives, exchange of archive data and publication of open data.

This report does not cover the part of the project concerning the implementation of a PoC to publish archival data as Linked Open Data, which will be addressed in a specific report.

1.2. Subject of the PoC

The main objective of the PoC² is to assess one or more archive management systems (AMS) on the market using a method enabling the project owner to obtain the most accurate diagnosis possible of the functional capabilities and characteristics of the products tested.

The method developed and applied by the HAS takes into account the ability to test and compare the functionalities of archive management systems based on different concepts and to measure the deviations in terms of functional, organisational and technical requirements under the operational conditions of a historical archive service. Beyond the specific case of the European Commission, the method and results could be used by any other archive service wishing to deploy an AMS solution in its specific context.

The principal issue driving the acquisition and installation of a new AMS is its level of interoperability with all information systems used to manage documents and electronic and paper data (existing or otherwise). More specifically, this is measured by the ability of the AMS to integrate with records management systems and digital

¹ https://ec.europa.eu/isa2/actions/facilitating-archive-management-across-europe_en

² Generic definition of a PoC: an individual PoC is an installed and configured AMS that enables assessment of its functionalities and its non-functional features on the basis of a list of scenarios.

preservation systems on the one hand and with the systems operated by institutional partners on the other, with a view to increasing cooperation in relation to exchanges of archive data and their optimisation.

The objectives of the PoC are therefore to:

- confirm that the project can be achieved with one or more specialised solutions;
- establish efficient processes for exchanging data with partners;
- validate that the functional coverage of the solutions meets the required level of acceptability;
- determine the complementary development approaches required to make up for functional requirements not covered;
- determine the criteria of the economic model for implementing a high-performance solution.

2. METHODOLOGY

The methodological fundamentals underpinning the development of the assessments are:

- the reference functional model developed during the first phase of ISA² 2017, amended using a functional block nomenclature³;
- the life cycle of the PoC;
- the data architecture diagram, amended using a nomenclature based on flows between HAS systems;
- the glossary provided for consultation in Annex 6.1 FR/EN glossary.

2.1. Reference functional model

The functional model was produced as part of Phase 1 of the project, and is based in part on the OAI model. It describes the main archival functions performed by an AMS: it makes it possible to assess traditional archive management systems, but also covers the requirements of hybrid management (both paper and electronic records), and includes an interoperability layer for archival data exchange with partners. The functional scope of the model is represented by 22 functional blocks. The reference to the functional blocks is retained during all phases involved in evaluating an AMS, making it possible, in particular, to use a single model to compare systems based on very different concepts.

The functional model, described in Figure 1, is used to structure the activities and analyses undertaken at each stage of the PoC, specifically:

- organising the functional requirements;
- selecting the AMS software in preparation for the performance of functional tests;
- developing the functional scenarios to be tested;
- evaluating the functionalities run during tests.

³ ISA² action 2017.01 standard-based archival data management, exchange and publication, study final report, 15 June 2018, p. 26.

Figure 1: AMS, ISA² Action 2017.01 – functional model

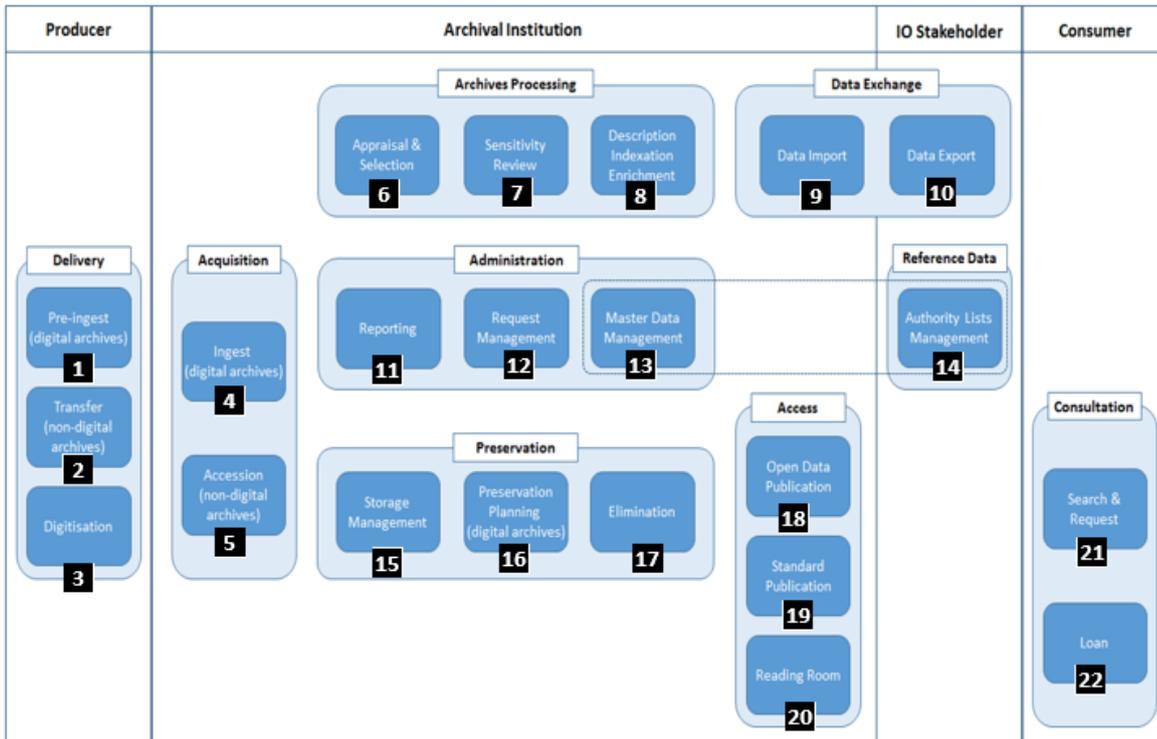


Table 1 is a nomenclature of the 22 entities representing the functional blocks (FB) and the various stakeholders:

- the Producers equipped with a corporate records management system (RMS);
- the HAS (Archival Institution), one of the stakeholders involved in ownership of the project;
- the External Audiences (Consumer) with access to archives when they are opened after 30 years with the cooperation of the HAEU in Florence (InterOperability (I/O) Stakeholder) for access to and optimisation of the EU's historical data.

Table 1: AMS, ISA² Action 2017.01: FB.Key⁴, Nomenclature for functional blocks

Functional	FB.Key	Entity ISA ² FB
Producer		
Bloc group		Delivery
Functional block	1	Pre-Ingest (digital archives)
Functional block	2	Transfer (non-digital archives)
Functional block	3	Digitisation
Archival Institution - I/O Stakeholder		
Bloc group		Acquisition
Functional block	4	Ingest (digital archives)
Functional block	5	Accession (non-digital archives)
Bloc group		Archival Processing
Functional block	6	Appraisal & Selection
Functional block	7	Sensitivity Review
Functional block	8	Description Indexation Enrichment
Bloc group		Data Exchange
Functional block	9	Data Import
Functional block	10	Data Export
Bloc group		Administration
Functional block	11	Reporting
Functional block	12	Request Management
Functional block	13	Master Data Management
Bloc group		Reference Data
Functional block	14	Authority List Management
Bloc group		Preservation
Functional block	15	Storage Management
Functional block	16	Preservation Planning (digital archives)
Functional block	17	Elimination
Bloc group		Access
Functional block	18	Open Data Publication
Functional block	19	Standard Publication
Functional block	20	Reading Room
Consumer		
Bloc group		Consultations
Functional block	21	Search & Request
Functional block	22	Loan

⁴ FB.Key: Identifier for the functional blocks in the model.

2.2. PoC life cycle

The life cycle of a PoC is described by the diagram of key stages organised into three main sequences:

- **Sequence 1: Selection of an AMS:** using the results of Phase 1, this first sequence makes it possible to define the functional scope. It compares the context of a change of AMS with the context in which various solutions are used. It is made up of two secondary sequences:
 - Subsequence 1.1: Concept – Definition of basic properties;
 - Subsequence 1.2: Solution – Selection of a solution for a PoC.
- **Sequence 2: Configuration of test scenarios:** the purpose of this sequence is to define the preparatory operations required from the project owners (the HAS and the EC's informatics department, DIGIT) and from the AMS supplier to configure the software for performing tests. It comprises two sections:
 - a. **Preparation of content by the HAS.DIGIT team:**
 - Business Scenario List (BS list): preparation of 'business scenarios' in a list of functional tests to be performed during the PoC;
 - Personae: definition of standard roles for officials using an archive management system;
 - Data Set: identification and extraction of data from the current archive management system, making it possible to tackle the issue of data migration.
 - b. **Definition of the services required from the supplier for performance of the PoC:**
 - 'Level 1' services: installation of versions of the system in the DIGIT data centre;
 - 'Level 2' services: services and support from the supplier during performance of the tests;
 - 'Level 3' services: development approach for cases of interoperability between internal (RMS, DPS) or external (I/O stakeholders) systems and the AMS.
- **Sequence 3: Performance of tests and analysis of results:** when the AMS is correctly configured and supplied with the content defined by the HAS, the HAS.DIGIT team and the supplier will jointly perform tests on the solution to evaluate the following:
 - the relevance of the proposed functionalities in terms of implementing a business scenario that represents an actual archive services management reality, and identifying a development approach if the functions are not covered;
 - the relevance of the AMS in response to changes in HAS services;
 - the complementary non-functional and technical characteristics making it possible to refine the economic model of effort and risk to implement an efficient solution.

The sequence is divided into two secondary sequences:

- Subsequence 3.1: Management – Performance of tests;
- Subsequence 3.2: Management – Analysis of test results.

Table 2 : PoC life cycle

Table 2 describes the life cycle of the PoC⁵:

Step		Definition of the sequences and steps of a PoC
Sequence 1: Selection of an AMS		
1	3	Subsequence 1.1 Concept – Definition of basic properties
	1	Identification of solutions by model (M)
	2	Formulation of a principal PoC hypothesis
	3	List of PoC objectives
4	10	Subsequence 1.2 Solution – Selection of a solution for a PoC
	4	Identification of solutions (S)
	5	Identification of Back-End and Front-End products (PR)
	6	Definition of a list of system configurations (SYS) based on the solution
	7	Definition of a list of system configurations based on a selection of products
	8	Selection of a system (Your SYS.A) for a PoC (Decision)
	9	Definition of technical specifications and services for the supplier for performance of a PoC
	10	Contracting with the supplier (SUP) for a system (SYS)
Sequence 2: Configuration of test scenarios		
	11	Integration of the list of functional requirements previously established by the service (FR ⁶)
	12	Drafting of the functional scenarios (BS ⁷)
	13	Recording of the functional scenarios in the list – (BS List, Version 2)
	14	Definition of Personae (PE) for performance of the tests
	15	Linking of Personae and functional scenarios in the BS List
	16	Identification of Data Sets (DS)
	17	Linking of Data Sets and functional Scenarios in the BS List
	18	Configuration of Level 1 services: Installation of the system in the DIGIT data centre
	19	Configuration of Level 2 services: Support from the supplier for performance of functional acceptability tests (FT ⁸) Configuration of Level 3 services: Development approaches for interoperability
	20	Validation of the operational configuration for test start-up (PoC)
Sequence 3: Performance of tests and analysis of results		
21	26	Subsequence 3.1 Management – Performance of tests
	21	Performance of functional tests using the BS List (FT)
	22	Performance of functional tests after requalification (modification or addition) of a scenario (Optional)
	23	Identification of a gap implying a request for a change to the configuration
	24	Analysis of a development approach to fill the gap

⁵ To simplify the diagrams, numerous acronyms are used throughout the document. These are based on the English version of the document. Full translations and definitions can be found in the glossary provided in Annex 6.1.

⁶ Functional Requirements.

⁷ Business scenarios.

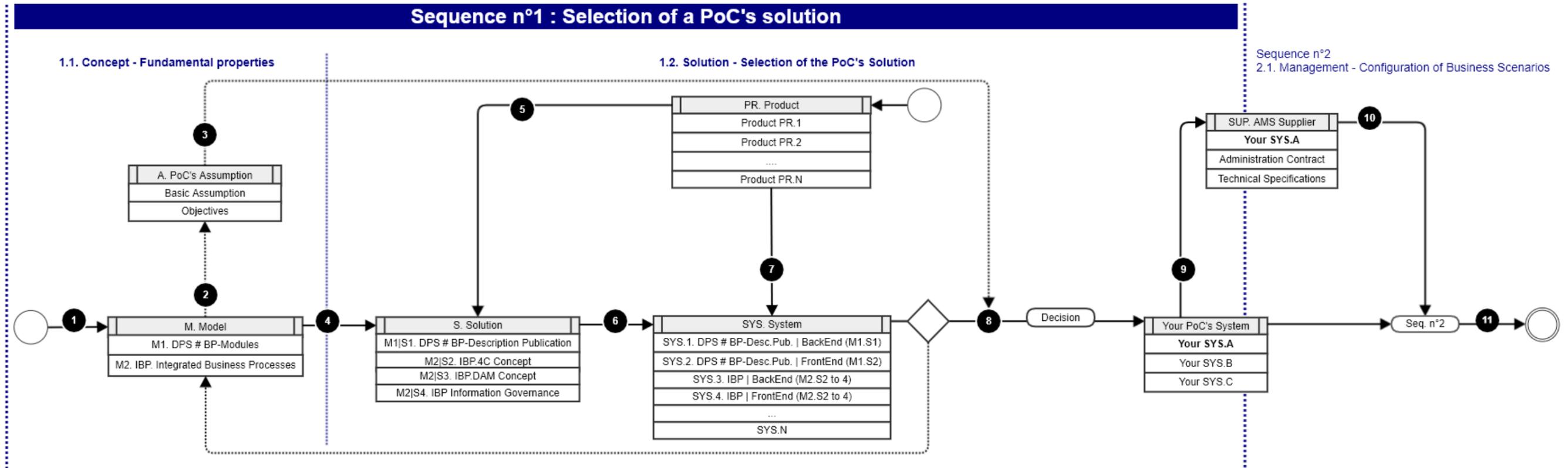
⁸ Functional Tests.

	25	Repeat performance of functional tests on a modified configuration (Optional)
	26	Completion of functional tests (Validation)
27	29	Subsequence 3.2 Management – Analysis of test results
	27	Analysis of the functional test results
	28	Risk assessment
	29	Assessment of complementary non-functional features delivered by the supplier

Figure 2: PoC diagram – Sequence 1: Selection of an AMS solution⁹

DIGIT.OIB-HAS - Archival Management System

Sequence n°1. Selection of a PoC's Solution
 PoC Logigram. Model, Solution, Product, System
 Version: 1.0, 25.04.2019
 Use Case: Generic Workflow



⁹ The diagrams are based on the English version of the document. Full translations and definitions of the terms can be found in the glossary provided in Annex 6.1.

Figure 3: PoC diagram – Sequence 2: Configuration of test scenarios – BS List

DIGIT.OIB-HAS - Archival Management System

Sequence n°2. PoC Logigram. Management, Configuration of Scenarios to test
 Version: 1.0, 25.04.2019
 Use Case: General workflow

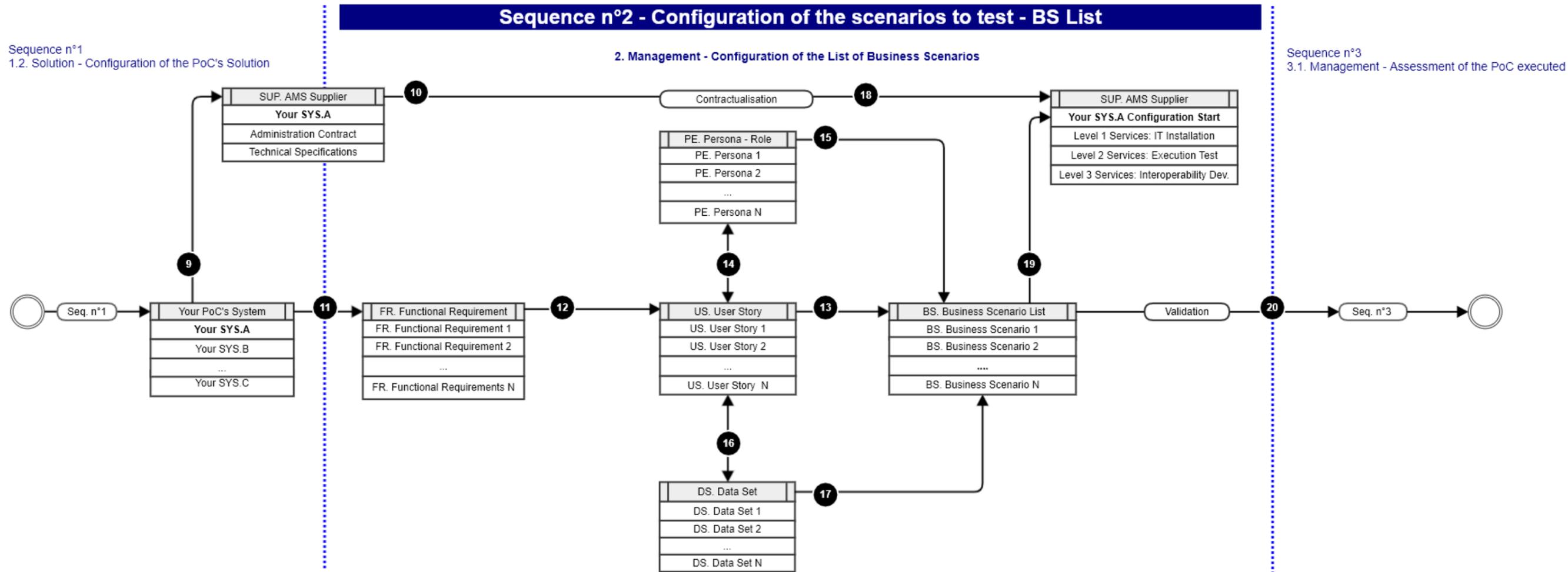
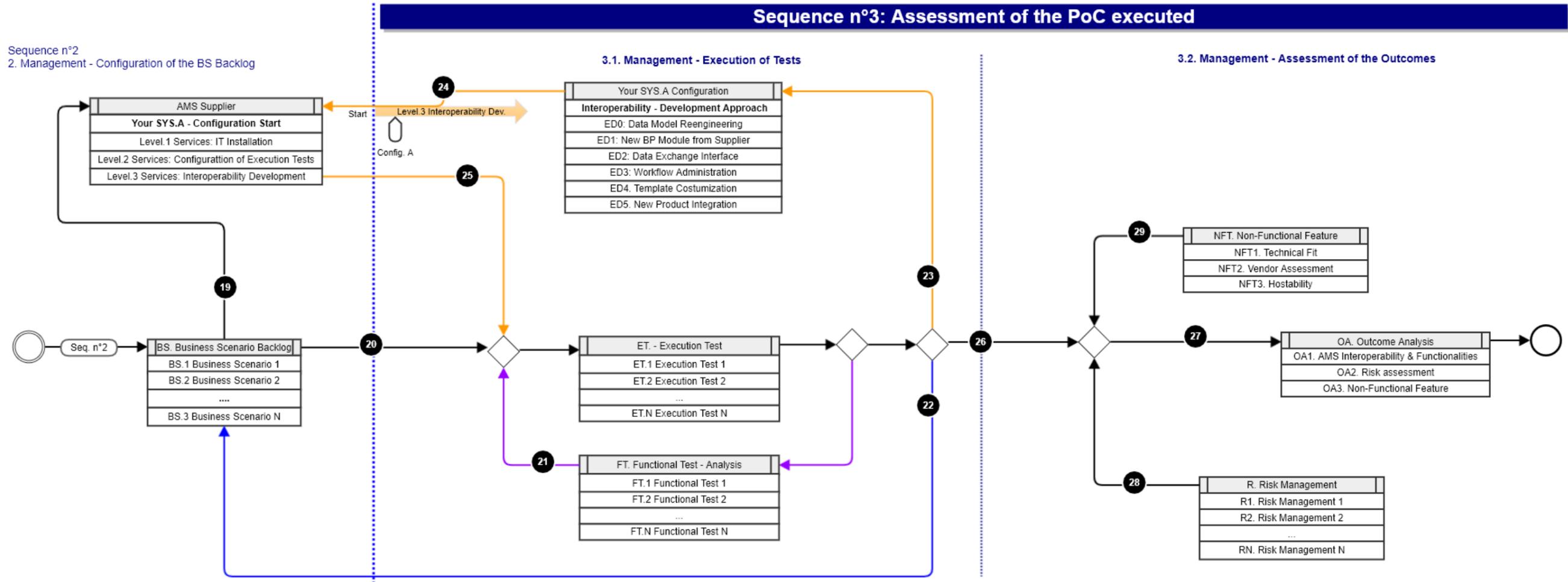


Figure 4: PoC diagram – Sequence 3: Performance of tests and analysis of results

DIGIT.OIB-HAS - Archival Management System

Sequence n°3. PoC Logigram 2019. Management - Execution of the PoC's Tests
Version: 1.0, 25.04.2019
Use Case: General Workflow



2.3. Integration of the AMS solution with HAS systems

The nomenclature of the dependencies between the AMS and the other HAS systems is determined in Table 1 and Figure 5 below:

- Table 3 shows a general nomenclature of data flows that already exist or are to be determined for implementing the future AMS.
- Figure 5 below describes the HAS systems.

The 'Archis System' column specifies whether there is a data exchange relationship between Archis, the current HAS archive management system, and the other HAS systems. The values are: YES / NO

The 'Future AMS' column indicates whether there is a dependency to be provided directly or indirectly during implementation of the future AMS solution. The values are: PRIORITY / IMPORTANT / N/A¹⁰.

The acronyms for the various systems existing within the European Commission are defined in the glossary provided in Annex 6.1.

Table 3 Nomenclature – Integration of the AMS system with HAS systems

ID-DEP	Third-party systems exchanging with the AMS	Data flow	Archis System	Future AMS
1	a-REP ¹¹	a-REP → AMS	NO	PRIORITY
2	a-REP	AMS → a-REP	NO	PRIORITY
3	HAN ¹²	HAN → AMS	NO	PRIORITY
4	HistOrga ¹³	HistOrga → AMS	YES	PRIORITY
5	HistOrga	AMS → HistOrga	YES	IMPORTANT
6	ARCHIS-Scanning ¹⁴	ARCHIS-Scanning → AMS	YES	IMORTANT
7	DOI (from the Publication Office) ¹⁵	AMS → DOI/URI (PO)	N/A	N/A
8	DOI (From the Publication Office)	DOI/URI (PO) → AMS	N/A	N/A
13	HAEU	AMS → HAEU	NO	PRIORITY
14	HAEU	HAEU → AMS	NO	PRIORITY

¹⁰ Not applicable.

¹¹ a-REP: long-term electronic document preservation repository created by the European Commission.

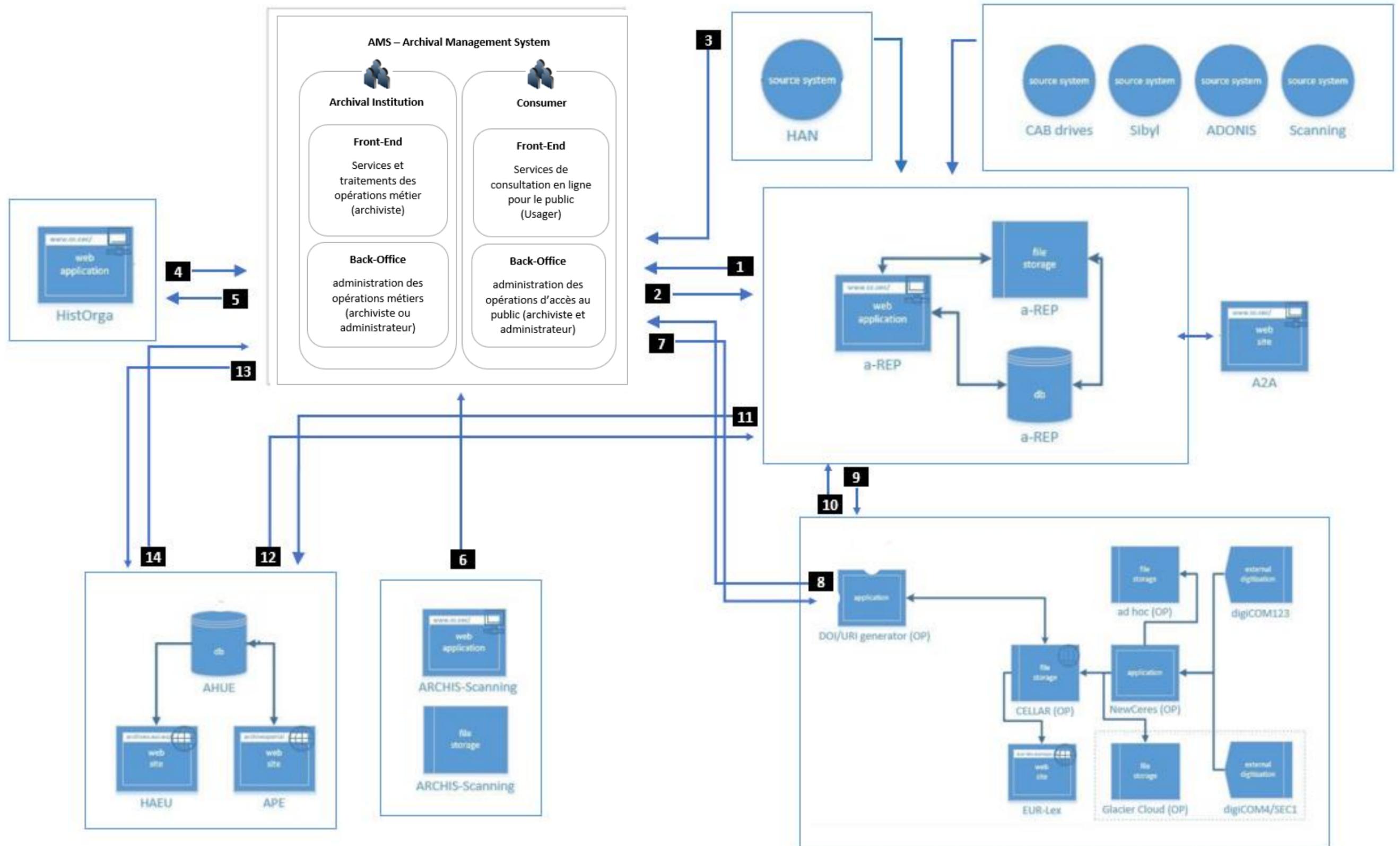
¹² HAN: records management system of the European Commission.

¹³ HistOrga: reference system for managing the history of the European Commission organisation charts.

¹⁴ Archis-Scanning: system used to manage the internal digitisation (scanning) process.

¹⁵ DOI : Digital Object Identifier: system for publication of permanent URIs managed by the European Commission's Publication Office.

Figure 5: Architecture of HAS systems and partner systems



3. SELECTION OF AN AMS SOLUTION FOR PERFORMANCE OF A POC [SEQUENCE 1]

3.1. Components of the PoC

The AMS solution to implement the PoC is made up of the following:

- software supplied by a publisher or integrator, differentiating between Back-End products used by the 'Archival Institution' and Front-End products used by the 'Consumer';
- a test configuration created by the project owner:
 - content – BS List, Data Set and Personae – delivered to the supplier for integration into the PoC AMS system;
 - use cases on interoperability with other HAS systems, with supply, where necessary, of a complementary development approach.

The implementation of a solution for a PoC is based on four core phases (which are in turn subdivided into steps):

1. identification of a solution oriented according to various architectural models (see following point) [Steps 1-3];
2. pre-selection of the IT products [Steps 4-5];
3. selection of the solution following demonstration [Steps 6-8];
4. configuration of the system ready for the performance of tests [Steps 9-10; 18-20].

The performance of the tests also assumes that a list of functional requirements and test scenarios has been established, including data sets [Steps 11-17].

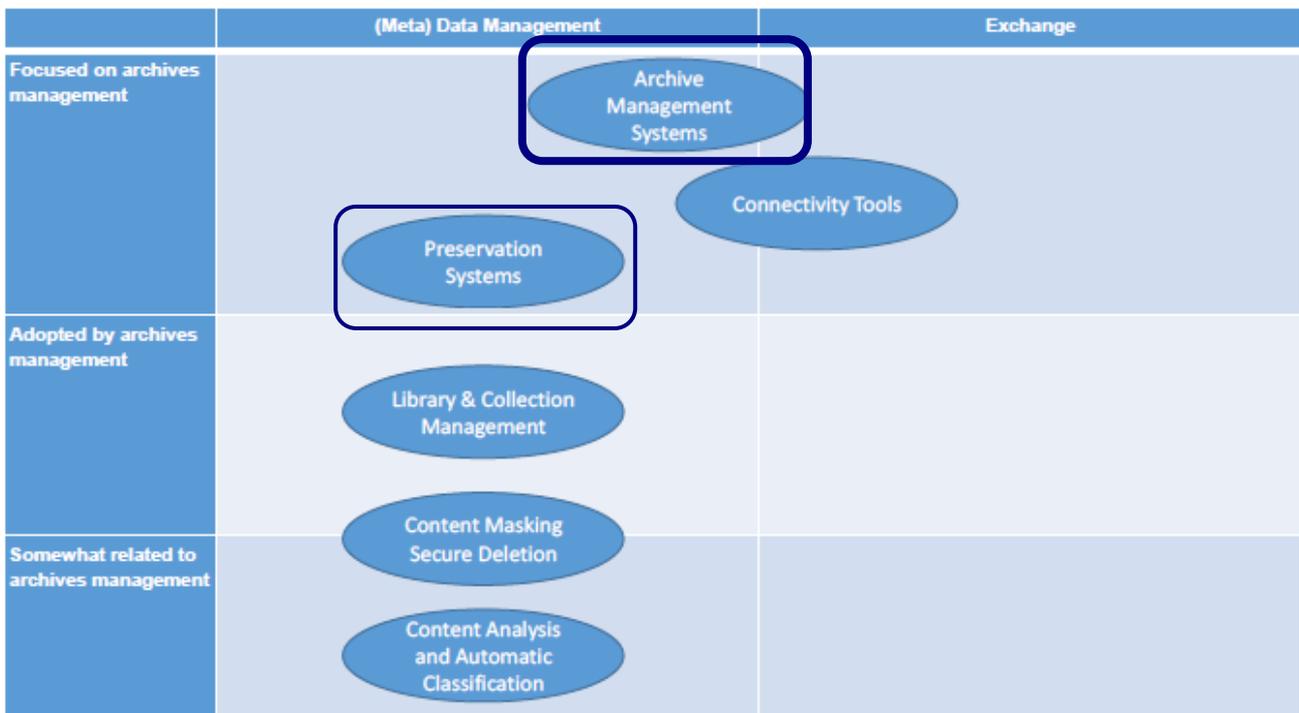
3.2. Identification of solutions by model [Steps 1-3]

3.2.1. Target category

Figure 6¹⁶ below shows various categories of systems: the IT tools selected for the purposes of a PoC are focused on the Archives Management Systems (AMS) category.

¹⁶ Taken from Section 6.4.2 Cartography of IT Tools, *Study on Standard-Based Archival Data Management, Final Report*, p. 39.

Figure 6: Cartography of IT Tools



The existence of the digital preservation system (DPS – a-Rep) means we need to clarify the dependency relationship that could exist between that system and the future AMS solution: in terms of fundamental properties, we can distinguish two architecture models based on two levels of interdependence — strong and weak — between the DPS and AMS systems.

3.2.2. Model M1: DPS # BP-Module

Model 1 considers a **strong level of interdependence** between the digital preservation system (DPS) and the archive management system (AMS): the DPS represents an internal functional block within the AMS solution onto which archive management modules will be grafted. The most common version involves software (open-source) specialised in describing and publishing archival data in line with ISAD(G)/ISAAR (BP-Module) installed on a DPS. The resulting criteria for a PoC are the following.

- **Conversion between two architecture models:** the standardised management functionalities for describing, indexing and publishing archival data enabling conversion of data from other HAS systems into historical data that can be exchanged in ISAD(G) and ISAAR(CPF) format.
- **Limitation on functionalities:** Functionalities covering at least one reference functional block above, required to define the product as being a business process module (BP-Module).
- **Capability for two-way synchronisation of data exchanges:** the system must have dynamic data exchange capabilities making it possible to graft the product onto the digital preservation system using exchange protocols for each of the two systems, and enabling the development of complementary interfaces. These operations may be facilitated using open-source IT tools, or using IT tools adopting API Rest, CMIS, etc., protocols.
- **Multimodal configuration:** Powerful technical and functional characteristics to integrate the systems into both an ‘Archival Institution’ Back-End and a ‘Consumer’ Front-End.

The AMS solution representing model M1 is selected during Sequence 1 (1.2. Selection of a solution for a PoC):

- **S1. DPS # BP-Module Description Publication:** solution for describing and publishing archive data installed on (grafted onto) the preservation system (DPS).

3.2.3. Model M2: IBP – Integrated Business Processes

Model 2 assumes that a market-based AMS solution covers the functional requirements of the reference functional model: it offers functionalities expected to meet all (or at least most) of the functional requirements, for each of the functional blocks, and has a rules engine compatible with HAS requirements, including the ISAD(G) data model and providing a complete archive management service. In this case, the AMS solution may function on a stand-alone basis, and may also receive and transfer archival data from and to other HAS systems: the DPS is represented as a system external to the AMS solution. Consequently, a **weak level of interdependence** is possible between the AMS and DPS systems. Nonetheless, the development of exchanges between the solutions must be seen as a priority for the future AMS: it would be appropriate to develop dynamic exchanges between the two systems. As a minimum, the DPS must be able to transfer archive data classified as ‘semi-active’ to the AMS solution for managing data classified as ‘historical’.

To represent model M2, the PoC targets solutions specialised in the integrated management of business processes dedicated to the overall operation of archive services.

Three AMS system concepts are possible:

- **S2. IBP.4C Concept:** solution for integrated management of archive services developed using a **traditional business process** architecture based on four core archival functions: collection, classification, conservation and communication.
- **S3. IBP.DAM Concept:** Digital Asset Management (DAM) solution, specialised for management of the digital resources of an archive service. By definition, Digital Asset Management (DAM) is a technology that allows companies to store, organise, enrich and share digital resources intuitively, from a secure, centralised source¹⁷. In the context of archive services, a DAM solution **makes it possible to organise, describe and enrich the descriptions of archival data (born-digital files and records, descriptions of paper archives, digitised) in an ISAD(G)/ISAAR(CPF) data model, prepare them for publication** and disseminate them to users.
- **S4. IBP3 Information Governance:** governance solution for paper and digital archives (hybrid). This type of system makes it possible to apply conservation policies, to make the transition from the records management data model to an ISAD(G)/ISAAR(CPF) data model for processing of fonds. In the context of archive services, the **solution makes it possible to increase interoperability with the records management system, to manage aspects relating to logistics** and security in the archiving of large volumes of data from collection to conservation, and to process fonds for the purpose of publication. The solution offers rights administration capabilities and highly flexible interfaces to manage and communicate archives internally.

The solution has similarities with the 4C concept but can be differentiated primarily on the basis of the following points:

- the solution can be used to strengthen internal relationships between producers and the Archives Management Service in the case of a complex organisation with a large number of departments submitting documents (producers);
- it may require recourse to third-party solutions to ensure compliance of ISAD(G)/ISAAR(CPF) fonds processing for the purposes of publication and dissemination to the public.

3.3. Pre-selection of the IT products [Steps 4-5]

3.3.1. Identification of products

Pre-selection of AMS systems considers three categories of criteria:

- the context of the HAS, by means of performance indicators that illustrate the dynamics and prospects;

¹⁷ Translation of French Wikipedia definition

https://fr.wikipedia.org/wiki/Gestion_des_ressources_num%C3%A9riques.

- the fundamental characteristics of the PoC defining the scope and the framework for evaluating the solutions;
- the origin of the pre-selected products on the basis of the results of Phase 1 or newly identified.

Each category is detailed below.

1. The context and prospects of the HAS on the basis of key indicators (see Annex 6.2) of the performance of the services, namely:
 - a. a substantial network of users directly involved in archive management, who require an appropriate configuration of the interface and access rights in the AMS solution:
 - the officials working for the HAS (38 officials);
 - the correspondents in the European Commission Directorates who work with the HAS, involving a minimum of 140 Document Management Officers (DMO) and 40 Document Management Correspondents (DMC), and potentially up to 500 DMC;
 - the direct partner of the HAS, the HAEU at the European University Institute in Florence;
 - b. management of a large volume of archives stored in paper format (140 linear kilometres) with enhanced options for containing the growth of those archives to around a ratio of 1/1: annual regulation of ingests/accessions and eliminations at 1,800 linear metres;
 - c. the prospect of a doubling of the annual increase — 1.4 T to 2-5 T/year — in the digital archives to be processed, to be combined with management of 16 T of digitised paper archives;
 - d. advanced, dynamic technological capabilities to organise and describe data using a hierarchical classification of fonds with several hundred ISAD(G) classes – eight groups of fonds, 192 fonds, 370 sub-fonds – and to match these with digitised resources equivalent to an estimated 1,633,000 pages and 9,700 files per year;
 - e. evaluation capabilities that can be automated, using statistical and analytical algorithms to optimise eliminations and permanent conservation estimated as 750 linear metres per year;
 - f. declassification processes for approximately 250 linear metres per year;
 - g. prospects of an increase in transfers to the HAEU of 200 to 1,000 linear metres per year;
 - h. prospects for an improvement in online search services internally for all European Commission officials;
 - i. online access tools accessible for the public to promote traffic and consultation and search services using a web portal.
2. The fundamental characteristics of the PoC, represented by the primary hypothesis and basic objectives, defining the scope of the AMS systems and in line with the conceptual models defined previously.
 - a. A functional interoperability model covering as many of the functionalities of the reference functional model as possible (Figure 1) (primary hypothesis);
 - b. specialised management of archival data classified as ‘semi-active’ and of the transition to the ISAD(G)/ISAAR(CPF) data model for historical archive management;
 - c. data exchange capabilities (import/export format, protocol, connector, interface) with internal and external systems for integrating the AMS into the architecture of the HAS systems;
 - d. dependency of the AMS system with the preservation system;
 - e. service interfaces focused on business and non-business users, user-friendly (UX/UI), to facilitate adoption during deployment of the solutions.
3. The origin of the pre-selected products: a distinction is made between products originating from the results of the Phase 1 study and those originating from new proposals.
 - In relation to the Phase 1 study

- The AtoM (PR1) and ArchivesSpace (PR2) products, coupled with a digital preservation system, are mentioned in that study in the recommendations issued for a PoC. These products are proposed here as a model *M1 – DPS # BP-Description Publication*. As the a-REP DPS is the preservation system already used in the production environment by the European Commission, the other preservation systems (Archivematica, Roda) are automatically discounted.
- The Archeevo solution obtained a higher score in the ranking of the solutions evaluated. Archeevo is classified here as a solution of the type *M2/S3 - IBP.DAM Concept*, combining the management product Backoffice (PR3) and the dissemination product Frontoffice (PR4).
- The following are new proposals as part of a broadening of the categories of solutions based on the model *M2 – IBP*, representing the two remaining categories:
 - Ligeo Archives products, which make a clear differentiation between the management product (PR5) and the dissemination product (PR6) identified in class *M2|S2: IBP.4C (Concept)*.
 - The products in the SparkArchives range identified under class *M2|S4: IBP.Information Governance (Concept)*.

Table 4: Pre-selection of a solution – Suggested AMS system configurations

The seven pre-selected products are:

PR ID	Product designation	<ul style="list-style-type: none"> ▪ Provider (publisher/integrator) ▪ PoC integrator (supplier) 	<ul style="list-style-type: none"> • Solution • PoC System 	Technical Documentation
PR.1	ArchiveSpace	<ul style="list-style-type: none"> ▪ LYRASIS (USA) ▪ DOCUTEAM (SW) 	<ul style="list-style-type: none"> • M1 S1: DPS # BP Description Publication • SYS.1: Preservica #ArchiveSpace PR1 [Back-End] 	Table S1
PR.2	AtoM	<ul style="list-style-type: none"> ▪ ARTEFACTUAL (CAN) ▪ DOCUTEAM (SW) ▪ KLEE Group (FR) 	<ul style="list-style-type: none"> • M1 S2: DPS # BP Description Publication [Back-End] • SYS.2: Preservica # AtoM [Back-End] 	Table S2
PR.3	ARCHEEVO 5 Backoffice	<ul style="list-style-type: none"> ▪ KEEP Solution (PT) ▪ As above. 	<ul style="list-style-type: none"> • M2 S3: IBP.DAM Concept – Integrated Business Processes – Concept of DAM - Digital Asset Management • SYS.4: Archeevo 5 Backoffice [PR3 – Back-End] + Frontoffice PR4 [PR4 - Front-End] 	Table S3
PR.4	ARCHEEVO 5 Frontoffice			
PR.5	LIGEO Gestion	<ul style="list-style-type: none"> ▪ EMPREINTE DIGITALE (FR) ▪ As above. 	<ul style="list-style-type: none"> • M2 S4: IBP.4C Concept – Integrated Business Processes – Concept of 4C – Collection – Classification – Conservation – Communication • SYS.5: LIGEO Gestion [PR5 – Back-End] + Diffusion [PR6 – Front-End] 	Table S4
PR.6	LIGEO Diffusion	<ul style="list-style-type: none"> ▪ EMPREINTE DIGITALE (FR) ▪ As above. 		
PR.7	SPARK Archives SAFE First Edition SAEE Advanced Edition	<ul style="list-style-type: none"> ▪ KLEE Group (FR) ▪ As above. 	<ul style="list-style-type: none"> • M2 S5: IBP. Information Governance • SYS.5: SPARK Archives [Back-End] 	Table S5

- PR ID: product code.
- Product Designation: product name.
- Publisher: company responsible for the development of the product.
- PoC integrator: company proposed for implementation of the product into a PoC.
- Solution: code and name of the solution.
- PoC system: product suggested before configuration for the PoC.
- Technical documentation: reference to the table of technical information (see annexes in point 6).

3.3.2. Macro-evaluation of the product functionalities

The functionalities of the pre-selected AMS products are assessed on the basis of the criteria of **expectation level applied by functional block**: this involves measuring, for comparison purposes, the capabilities of each AMS product in terms of meeting the maximum functional requirements. In other words, the expectation level represents the estimated value of the potential of the functionalities of an AMS system product in terms of the functional requirements imposed by the project owner.

The expectation levels are intentionally limited to three final values (80%/50%/20%) to enable comparison of trends for products of different origins. A fourth value, N/A, indicates that the functional block probably cannot ever be covered by the software.

The criteria for each value are defined in the following table:

Table 5: Pre-selection – Criteria for functional macro-evaluation

- Rate: value of the expectation level resulting from evaluation of the functionalities of an AMS system
- Criteria: mechanism for evaluation of the expectation level.

Rate	Criteria
80%	<p>The current expectation level of the service provided is classified as: Almost satisfactory – Adaptable to full HAS requirements</p> <p>The product meets the functional requirements and makes it possible for the business areas to perform the services almost satisfactorily:</p> <p>but:</p> <ul style="list-style-type: none"> - either the functional block must be configurable - or the process in which it is involved must be parametrised <p>so:</p> <ul style="list-style-type: none"> - parameter-setting without major development makes it possible to configure the functional block to cater fully to business services.
50%	<p>The current expectation level of the service provided is classified as: Flexible for configuring new processes and parametrising interfaces – Powerful for developing data exchange processes and interfaces</p> <p>The product partially meets the functional requirements implemented in several functional blocks. It has good potential to develop the services satisfactorily:</p> <p>but:</p> <ul style="list-style-type: none"> - an essential functional block is absent or is not satisfactorily meeting expectations <p>and:</p> <ul style="list-style-type: none"> - the product’s data model is sufficiently evolved to develop a new functional block or integrate the product with another product <p>so:</p> <ul style="list-style-type: none"> - a development approach may make it possible to address the shortcomings.
20%	<p>The current expectation level of the service provided is classified as: Not user-focused – Closed to data exchange protocols – Not possible to automate in a production environment</p> <p>The product offers processing functions in the ISAD(G) data model (minimum requirement)</p> <p>but:</p> <ul style="list-style-type: none"> - they are too limited, or: - they do not satisfactorily meet expectations for one of the following reasons: <ul style="list-style-type: none"> - either functionalities vital for managing an archive service are absent - or, at best, it uses only technical characteristics diverted from their initial function to perform a limited or minimally satisfactory service <p>so:</p> <ul style="list-style-type: none"> - either the development of a functional block may improve the product

	- or the product may be integrated into a product or system that performs better in terms of functional requirements.
N/A	Outside the scope of the AMS system Outside the scope of the AMS – Absence of the minimum prerequisites for an AMS.

The **expectation levels** applied to products in the pre-selection phase¹⁸, estimated using the technical documentation from suppliers, are described in the following table:

Table 6: Pre-selection – First functional macro-evaluation

Table removed due to commercial interest.

PR.1 = | PR.2 = AtoM | PR.3 = Archeevo Management | PR.4 = Archeevo Access | PR.5 = Ligeo Management | PR.6 = Ligeo Access | PR.7 = Spark Archives.

¹⁸ The estimation of the level is reapplied at the 'selection on demonstration' stage.

3.4. Selection of an AMS system on the basis of demonstrations [Steps 6-8]

3.4.1. Suppliers identified

The suppliers, publishers and/or integrators that have submitted their solutions during a demonstration in a managed format are:

Table 7: Selection of a supplier - Demonstration

ID	Provider suggested to implement the PoC	Product Designation	Vendor Status
FO.1	 Docuteam (SW) CH-1400 Yverdon-les-Bains, Switzerland	PR1 - ArchivesSpace	Integrator
		PR2 - AtoM – Access to Memory	Integrator
FO.2	 KEEP Solution (PT) 4710-429 Braga, Portugal	PR3 - ARCHEEVO 5 Backoffice	Editor / Integrator
		PR4 - ARCHEEVO 5 FrontOffice	Editor / Integrator
FO.3	 Empreinte Digitale (FR) Groupe V-Technologies 49000 Angers, France	PR5 - LIGEO Gestion	Editor / Integrator
		PR6 - LIGEO Diffusion	Editor / Integrator
FO.4	 KLEE Group 92350 Le Plessis Robinson, France	PR7 - SPARK Archives SAFE First Edition Or SAEE Advanced Edition	Editor / Integrator

3.4.2. Selection on demonstration

The AMS are selected following a managed demonstration by the pre-selected supplier. The purpose of the demonstrations is to:

- display the capabilities of the products in relation to the functional coverage requirements;
- compare solutions based on different concepts;
- establish initial direct contact by the supplier with the project owner;
- verify the interests of the project owner and the supplier in engaging in the performance of a PoC.

Prior to the demonstration session, the suppliers receive a table of 20 use cases representing the various functional blocks, a description sheet of the key indicators of the archive service, the reference functional model and a link to the Phase 1 report. The ArchivesSpace product was not considered in the demonstrations by the integrator Docuteam.

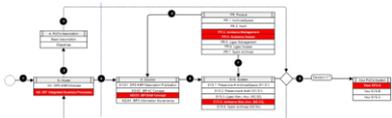
Table 8: Selection of the AMS system – Use cases for scoping the demonstration

The following is a list of the 20 use cases, organised by theme, representing the coverage of the functional blocks and used by the pre-selected suppliers to develop their demonstrations:

ID	Description
ID	Use Case
	Capacity to integrate with the digitisation system
1	Interaction with the processing workflow: archives 'blocked' for digitisation
2	Update the AMS with descriptive metadata generated during the scanning process
3	Update the AMS with references/links to the digital objects
	Accession of paper archives
4	Create a new accession record
5	Update metadata of basic inventories (list of items as provided by the producer)
6	Associate the new archives to an archives producer and an archival fonds
	Archives Processing – Archival description
7	Add fonds to an existing filing plan
8	Create/Edit an existing fonds
9	Add new series to an existing fonds
10	Create/Edit an archives producer (ISAAR)
11	Archives Processing – sampling/elimination of archives already stored at the HAS
	Storage management
12	Reference levels (buildings, rooms, cupboards, shelves, etc.)
13	Barcoding
14	Link item to location
	Data exchange
15	Import/export ISAD/ISAAR descriptions
16	Version management of archival descriptions
	Reference data
17	Management of authority lists, thesauri.
18	Functionalities related to linked data.
19	Publication through a front-end portal
20	Management of search requests & reading room & loan

3.4.3. Solution qualified for a PoC

The solutions qualified to take part in the contracting phase for the purposes of a PoC are shown in the form of an 'identity card'. The model of solution preferred by the project owner will be a solution of the type M2: IBP – Integrated Business Processes, because this will cover a maximum of business processes.

Designation			
FO2		PR3: Archeevo BackOffice PR4: Archeevo FrontOffice	ARCHEEVO 5
Vendor	F02: Keep Solution (PT), editor and integrator		 <p>Appendix 6.5: Solution S3 – Archeevo 5 Management and Access – Sequence 1, Diagram of Your SYS.A</p>
M.Model	M2: IBP – Integrated Business Processes		
S.Solution	S3: IBP DAM Concept – Digital Asset Management		
PR.Product	PR3: Archeevo Management PR4: Archeevo Access		
SYS.System	SYS5: Archeevo Management Access		
Your PoC's System	Your SYS.A		

Designation			
FO3		PR5 - LIGEO Management PR6 - LIGEO Access	
Vendor	F03: Empreinte Digitale, Groupe V-Technologies (Fr), editor and integrator		 <p>Appendix 6.7: Solution S2 - Ligeo Archives – Sequence 1, Diagram of Your SYS.B</p>
M.Model	M2: IBP – Integrated Business Processes		
S.Solution	S2: IBP 4C Concept		
PR.Product	PR5: Ligeo Management PR6: Ligeo Access		
SYS.System	SYS3: Archeevo Management Access		
Your PoC's System	Your SYS.B		

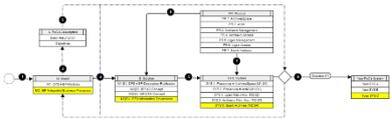
Designation			
FO4		PR7 - SPARK Archives	
Vendor	F04: Klee Group (Fr), editor and integrator		 <p>Appendix 6.10 : Solution M2.S4, Spark Archives Ajantâ – Sequence 1, Diagram of the SYS.C</p>
M.Model	M2: IBP – Integrated Business System		
S.Solution	S4: IBP Information Governance		
PR.Product	PR7: Spark Archives		
SYS.System	SYS6: Spark Archives		
Your PoC's System	Your SYS.C		

Table 9: Selection of an AMS system – Second functional macro-evaluation - Comparison

The comparative evaluation of the AMS systems performed by functional block provides the following results:

Table removed to protect commercial interest.

Comment on evaluation methods: depending on the evaluators, the rates applied originate from one of the following two methods:

- Method 1: the evaluation method developed in Phase 1
- Method 2: the macro-evaluation method described in Table 6:

Each demonstration has been evaluated by four evaluators, who have applied the rates for each functional block using one of two methods:

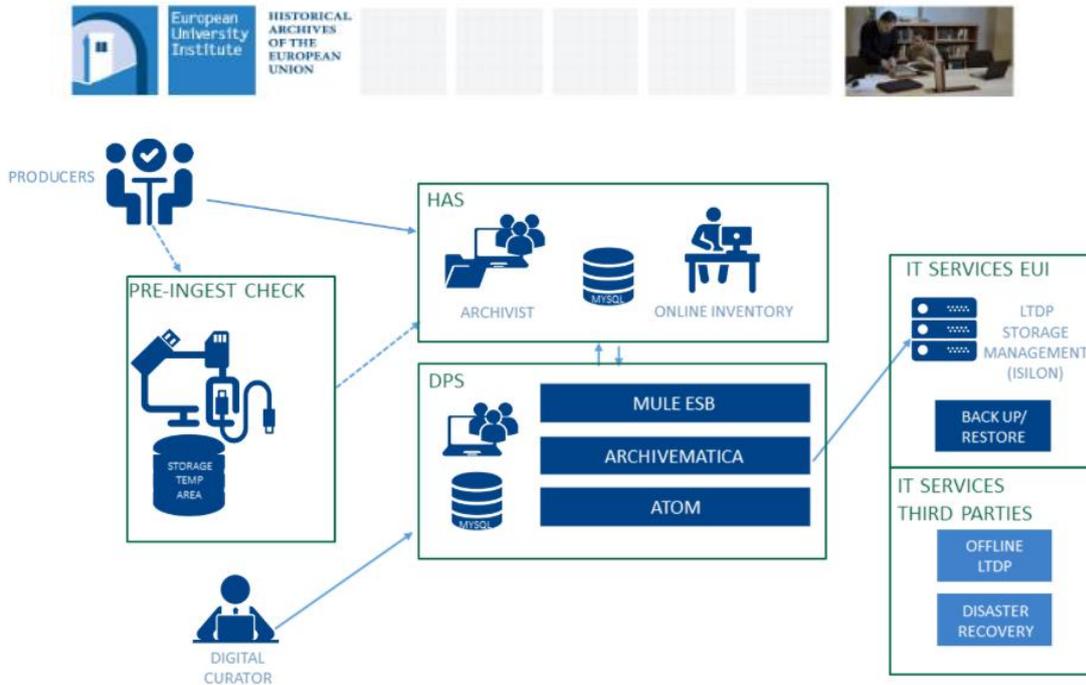
- Evaluator 1 - Office for Infrastructure and Logistics (OIB): Method 1
- Evaluator 2 - Secretariat-General (SG): Method 1
- Evaluator 3 - Directorate-General for Informatics (DIGIT): Method 1
- Evaluator 4 - Consultant Numen (GLG): Method 2

3.4.3.1. Summary of the analyses following demonstration

The comparative analysis of the four demonstrations leads to the following conclusions.

- 1) Products supported by the model M2. IBP – Archeevo, Ligeo and SparkArchives – seem to meet the European Commission’s functional requirements for archive management.
- 2) Content removed to protect commercial interest.
- 3) Content removed to protect commercial interest.
- 4) Content removed to protect commercial interest.
- 5) The scores relating to integration of digitisation are not significant at this stage: a more detailed definition of digitisation processes and exchanges is required to discern the actual capabilities of each product.
- 6) In the case of the Archeevo, SparkArchives and Ligeo products, particular care needs to be taken when running the scenarios, in relation to requirements that need the configuration of key processes: 2. Transfer (non-digital archives), 6. Appraisal & Selection, or even 17. Elimination.
- 7) Concerning consultation (18-20. Access or 21-22. Consumer), the Back-End ‘Archival Institution’/Front-End ‘Consumer’ architecture of the IBP products is not comparable, and thus difficult to test in the context of the PoC.
- 8) With regard to integration with other HAS systems, each product has data exchange components, but their capabilities are difficult to assess at this stage, given the lack of a more precise view of dependencies. The interoperability capabilities should be clarified by specific scenarios relating to exchanges between systems.
- 9) In terms of AchivesSpace, the supplier Docuteam, which is specialised in open-source archive management solutions, was not able to conduct a demonstration of the product.
- 10) Docuteam also provided a demonstration of the AtoM software that it integrates into its solutions, and it seems that AtoM only partially meets the requirements of the conceptual model: AtoM is primarily an open-source archive management solution focused on description and publication in ISAD(G) and ISAAR-CPF format (ISA², Functional Block No 8). AtoM enriches systems by seeking publication functionalities for archival data. AtoM may be of related interest in the case of the European Commission’s archives for the following reasons.
 - a) The development of AtoM is supported by the ICA and is evolving with international archival standards. Thus, maintaining an AtoM pilot would enable the European Commission to develop interoperability of ISAD(G) and ISAAR archival data with other partner systems in the long term, and should make it possible to assert its position during interoperability choices by involving all notions of interoperability.
 - b) Combined with a digital preservation system (DPS: Preservica, Archivematica), it may offer a viable description and publication solution for certain institutions (proposal for the model M1. DPS # BP-Module). It also addresses information governance solutions such as SparkArchives (model M2, Integrated Business Process – S3, IBP Information Governance).
 - c) Cooperating directly with the HAEU by pooling vital tools and knowledge to ensure easier maintenance of specific EAD and EAC formats for data publication. This would make it possible in particular to engage with the HAEU as part of any data exchanges between the Preservica (EC) and Archivematica (HAEU) DPS. The following figure provides a view of the architecture of the systems being developed within the HAEU:

Figure 7: HAEU – DPS Workflow Architecture



3.4.4. Adjustment of PoC objectives

To conclude the selection phase by implementation of three PoC (Archeevo, Ligeo Archives and SparkArchives), the essential complementary characteristics are:

1. comparison of concepts to identify the most suitable solution to computerise the HAS:
 - a. DAM concept – Digital Asset Management: Archeevo
 - b. 4C concept – Collection – Classification – Conservation – Communication: Ligeo Archives
 - c. Information Governance: SparkArchives;
2. the balance of the complementary developments proposed by each AMS system to cover the functional scope and integration of the future AMS with HAS systems;
3. discussion on the dependence of the future AMS with the Preservica DPS to determine how the architecture of the HAS systems will evolve.

3.5. Specifications and configuration of the PoC AMS system [Steps 9-10, 18-20]

Each supplier was asked to submit a proposal detailing the procedures for the services to be performed to implement the PoC:

- the provision of a loan AMS system for the duration of the PoC;
- Level 1 services: Installation and configuration of the system;
- Level 2 services: Support for the performance of tests;
- Level 3 services: Functional development approaches and interoperability.

3.5.1. General specifications of the AMS system made available

The general specifications for the PoC are:

- the AMS must make it possible to evaluate the services and processing operations permitted for the management of archives classified as semi-active and inactive in both paper and electronic form;
- the PoC covers the management of documents in electronic and paper form, the metadata associated with digitised objects and the interoperability conditions for exchanges between non-uniform internal and external systems;
- the AMS system must enable evaluation of the management processes for the various users distributed across the following five categories:
 - **Archivist:** HAS personnel responsible for processing operations and archive management services representing the functional requirements;
 - **Administrator:** DIGIT and/or HAS personnel;
 - **User:** external audiences for historical archives in their capacity as citizens of the European Union;
 - **Official - Internal Partner:** officials of the institution of a producer service running the services of the AMS system;
 - **Archivist, Professional - External Partner:** representative of another EU organisation linked by the archive management regulation or an agreement such as the Archive Service of another EU institution, or the HAEU in Florence;
- the AMS system makes a distinction between two functional areas, management of the AMS system linked to business processes (Archivist and HAS Administrator) on the one hand, and management of the system linked to External Audiences on the other, namely:
 - **'Archival Institution' area:** system for managing processing operations on the archives for the purpose of their publication and access to the public;
 - **'Consumer' area:** system of online access for external audiences to archival data following opening up after 30 years and publication;
- the AMS system, represented in **Error! Reference source not found.**, may be modelled in the form of the following four subsets:
 - **'Archival Institution' Front-End:** functionalities for the processing of business operations (HAS Archivist and Internal Partner);
 - **'Archival Institution' BackOffice:** functionalities for the administration of business operations (Archivist or Administrator);
 - **'Consumer' Front-End:** functionalities for online consultation (Search & Request) for researchers or the general public;
 - **'Consumer' BackOffice:** functionalities for administration (Archivist and Administrator) of functionalities for access by external audiences.

This modelling takes into account the realities of the general concepts of AMS systems that distinguish the management product (Archival Institution) from the dissemination product (Consumer).

- The AMS system involves at least three subsets. The numbering of the functionalities is linked to the code of the reference functional model (see Figure 1).

Subset 1: The AMS system must be configurable for management of an 'Archival Institution' Front-End providing the following functionalities:

	ID ISA ²	EN - Functionality	FR - Fonctionnalité
Functional Block		ACQUISITION	VERSEMENTS
Functionality	4	Ingest (Digital archives)	Versement d'archives électroniques
Functionality	5	Accession	Versement d'archives papier
Functional Block		ARCHIVES PROCESSING	CLASSEMENT & DESCRIPTION
Functionality	6	Appraisal & Selection	Evaluation, Tri
Functionality	7	Sensitive Review	Déclassification et examen des informations sensibles
Functionality		Description – Indexation – Enrichment	Inventaire, Description & Indexation
Functional Block		PRESERVATION	STOCKAGE & CONSERVATION
Functionality	15	Physical Storage Management	Stockage en magasin papier
Functionality	15	Digital Storage Management	Stockage en magasin électronique
Functionality	16	Preservation Planning (Digital archives)	Préservation électronique à long terme - Pérennisation
Functionality	17	Elimination	Elimination physique et électronique
Functional Block		ACCESS	
Functionality	18	(Linked) Open Data - Publication	Publication aux normes du (Linked) Open Data
Functionality	19	Standard Publication (Web portal)	Publication traditionnelle des Inventaires en accès libre (portail Web)
Functionality	20	Reading Room	Salle de lecture

Subset 2: The AMS must be able to administer business processes enabling management of an 'Archival Institution' BackOffice providing the following functionalities:

Status		EN - Functionality	FR - Fonctionnalité
Functional Block		Reference Data	Référentiels Métiers
Functionality	14	Authority List Internal or External	Listes d'autorité interne ou partenaire: Thésaurus, Mot-clé, Liste simple
Functional Block		Master Data management	Référentiels de Gestion
Functionality		Benchmark	Référentiel
Functional Block		Reporting	Business Intelligence
Functionality	11	KPI - Reporting	KPI - Tableau et graphique des indicateurs
Functional Block		Data Exchange	Echanges des données

Functionality	9	Data Import	Import de données
Functionality	10	Data Export	Export de données

Subset 3: the AMS system must enable interoperability of subsets 1 and 2 with management of an ‘Access to the Public’ Front-End providing the following functionalities:

<i>Status</i>		<i>EN - Functionality</i>	<i>FR - Fonctionnalité</i>
Functional Block		Search & Request	Consultation en ligne
Functionality	21	Web Portal FrontOffice	Archives en ligne FrontOffice
Functionality	21	Web Portal BackOffice	Archives en ligne BackOffice
Functional Block		Loan	Prêt et exploitation des documents en ligne
Functionality	22	Loan FrontOffice	Gestion des Prêts en ligne - FrontOffice
Functionality	22	Loan BackOffice	Gestion des Prêts en ligne - Loan BackOffice

3.5.2. Level 1 services: Installation of a version of the AMS in the Data Centre

The Level 1 services cover the deployment of a version of the AMS in a basic configuration:

- the installation of a version of the AMS system in a data centre;
- a basic configuration to run the functional tests;
- the integration of data sets (DS) to perform tests in a real situation;
- basic training required to take charge of the AMS system, and an understanding of the concepts required for the performance of the tests;
- performance, support and maintenance in operation of the AMS systems for the performance of the tests;
- supply of the configuration documentation in the event of developments during the PoC;
- decommissioning of the AMS system during deinstallation at the end of the PoC.

3.5.3. Level 2 services: Support for the performance of PoC tests

The Level 2 services cover the support operations required during:

- configuration of the AMS system by content (BS List, Personae and Data Sets);
- a proposal for integration of the AMS with HAS systems;
- performance of the tests and provision of analysis relating to complementary development approaches to cover functional shortcomings.

3.5.3.1. General principles

The general principles for operations between the supplier and the project owner for satisfactory completion of the tests are as follows.

1. The implementation of the PoC involves three evaluation categories: functional acceptability tests, risk analysis and non-functional features.
2. During the preparatory phase for the PoC, the project owner (Owner) produces a list of functional requirements (FR) organised by functional blocks (Figure 1). The project owner also defines the standard roles (PE. Persona) and extracts the data sets (DS. Data Set) from its systems so the AMS system can be evaluated under conditions similar to its archive management context.
3. The tests are performed on the basis of scenarios (BS) organised by functional blocks in a business scenario list (library) for performance of functional tests (BS List). The scenarios are described using User Stories (US), and each User Story is associated with at least one executive role (PE. Personae) and points to the data taken from the data sets (DS. Data Set).
4. The supplier (FO. Supplier) has the functional test library (BS List) before the test phase: it configures its AMS system (Your SYS.A configuration Start) using the scenarios, data sets (DS), Personae (PE) and any technical parameters necessary for start-up of the tests.

5. The functionalities of the AMS system are evaluated during performance of the scenarios (FT) resulting from requalification of the functional requirements (FR) as User Stories (US) in a datagrid of functional acceptance tests. The processing order is the order of the Business Scenarios List (BS List).
6. The specific interoperability scenarios may be mentioned in the BS List, where the functional requirements involve data flows from or to a partner system.
7. The supplier is asked to submit an analysis of complementary development approaches identified during the tests to address any missing functionalities and increase the interoperability capabilities of the AMS system.
8. The project owner also evaluates the non-functional features delivered by the supplier as a complementary factor for analysis of the results.
9. The scales and tools for evaluating the tests are produced and operated by the project owner.

3.5.3.2. Support operations by the supplier

Support from the supplier during the performance of the tests covers the functional evaluations (FT). The supplier is involved in the following sequences:

- **Sequence 2: Configuration of the list of scenarios to be tested:** the sequence represents the operations resulting in the production of the scenarios to be tested, developed on the basis of the HAS functional requirements. The BS List sent to the supplier constitutes the framework of functionalities expected from the AMS solution. The supplier configures the AMS system in a version (*Your SYS.A Configuration Start*) ready for the performance of the tests. This phase is coordinated with the Level 1 services involving implementation of an AMS version in the data centre.
- **Sequence 3.1: Performance of the tests:** this covers a major step in the PoC. The supplier performs the tests in front of the project owner. The live analyses are entered in the evaluation datagrid FT. Acceptance Tests Datagrid, in the order of the User Stories (US). Scenarios showing gaps are identified and discussed during the test session.

3.5.4. Level 3 services: Functional development approaches and interoperability

The development approach is applied at this stage:

- **Sequence 3.2: Evaluation of results:** The supplier contributes to the analysis of the scenarios that are not satisfactory when the tests are performed (functionalities partially covered and not covered). It determines the new or compensatory development approaches to be applied to the AMS system to adapt it to the institution's functional requirements, in terms of functional coverage and integration with HAS systems. These may relate separately to the following:
 - minor modifications to the AMS system without major effort and in line with coming developments from the supplier;
 - major modifications guiding the AMS towards a specific configuration for the purposes of the institution.

Lastly, the supplier is asked to submit non-functional information entered in the evaluation datagrid 'NFT. Non-Functional Features'. Measurement of interoperability capabilities.

The future AMS system must have powerful interoperability characteristics to enable integration with the architecture of the HAS systems. These capabilities are proven during running of the specific scenarios involving the following:

- the internal HAN system dedicated to Records Management;
- the internal a-REP system dedicated to long-term preservation of digital archives;
- the internal Archis-Scanning system dedicated to digitisation of paper archives;
- the internal HistOrga system dedicated to management of the history of EC organisation charts;
- the external HAEU system dedicated to management of the historical archives of the various European institutions transferred to Florence and also published through the HAEU portal.

Specific scenarios are run during the functional acceptance tests. Table 10 describes the principal scenarios involved:

- ID-DEP: number of the dependent relationship represented in: Figure 5: Architecture of HAS systems and partner systems;
- HAS System: name and attributes of the partner system involved in the integration with the future AMS system
- Functional Requirement (FR) / User Story (US): description of the scenario by number, associated functional block, functional requirement and user story.

Table 10: Scenarios for integration of the AMS system with the HAS systems¹⁹

ID-DEP	HAS System	Functional Requirement (FR) – User Story (US)
3	EDRMS, Records management system HAN	FT. 2.2 – Transfer (non-digital archives) FR: In the case of HAN paper archives, the AMS will be aware of any ingest created, and it will create the associated transfer records. US: In NomCom, when the <PE.10 - Document Manager Officer (Producer)> submits, a transfer containing physical items to the HAS, an <PE.3 - Archivist (Acquisition)> will see the afferent transfer and its physical items directly in AMS.
1.2	DPS, Digital Preservation System a-REP	FT. 4.1 – Ingest (Digital Archives) FR: Regardless of the source system, when an ingest is accepted by the HAS (a-REP), the AMS will be informed about the transfer request and include the transfer metadata into the AMS. US: The <PE.9 - Digital Preservation Manager> who accepts file transfers to a-REP during the first review (in the case of HAN) or any other ingest type, should also be able to consult a weekly list of transfers accepted from the AMS.
6	Digitisation Centre Archis-Scanning	FT. 3.1 – Digitisation FR: Archis-Scanning will communicate to the AMS the statuses of the physical item (ex: digitisation process on-going / digitised). US: When paper files are being processed in the digitisation service, the <PE.8 - Scanning Manager> is able to follow in AMS all the statuses of digitisation workflow.
4.5	Authority List HistOrga	FT. 8.6 – Description Indexation Enrichment FR: The Archival management system will connect to HistOrga to retrieve information about the organisational entities to be connected to a described archive producer. US: <PE.4 Archivist (Processing)> uses the integration of AMS with the corporate HistOrga application to retrieve and import information in order to enrich the producer’s description.

ID-DEP	HAS System	Functional Requirement (FR) – User Story (US)
15	<p>Authority List</p> <p>EuroVoc</p> <p><i>External Office Publications</i></p>	<p>FT. 13.7 – Master Data Management</p> <p>FR: The AMS will be able to connect to external sources for importing the standard values for the needed attributes (e.g. EuroVoc, HistOrga, Publication Office – country names under the ISO standard etc.).</p> <p>US: To allow the use of authority lists when indexing, the <PE.1 System Administrator> will be able to integrate standardised external vocabularies such as EuroVoc, HistOrga, User Repository, ISO Country, ISO Date or the ones being collaboratively managed outside the AMS.</p>
13.14	<p>HAEU System</p> <p>Historical Archives of the European Union, Florence</p>	<p>FT. 13.5 – Data Exchange</p> <p>FR: Depending on the architecture of the archives management solution, various types of users will have to be defined going from within the institutions to outside (other EU institutions and the HAEU).</p> <p>US: A <PE.1 System administrator> must be able to set up the visibility of functional blocks, to set up the access level of the archival holdings according to their access status and set up the user rights on archival holdings (creation, modification, reading).</p>
13.15		<p>FT. 14.2 – Authority Lists Management</p> <p>FR: The AMS must be organised in such a way that the management of the master data can be distributed over several stakeholders (like other EU institutions and the HAEU).</p> <p>US: A <PE.1 - System Administrator> will be able to set up access (view and/or edit) to master data (controlled vocabularies) for specific users outside the EC with the objective to manage data in a shared and collaborative way (probably outside the AMS).</p>

3.5.4.1. Types of development and changes in the configuration

The expected outcome of the analysis of developments is, as a minimum, a design note defining the potential new functionalities of the AMS system and their impact on the configuration of the AMS system. If the development results in a functionality integrated during the PoC, it may be submitted for the performance of tests.

In general terms, particular attention should be paid to reusable systems that the HAS wishes to deploy for archival data exchange and shared management, in particular vocabularies monitored with the HAEU.

4. CONFIGURATION OF SCENARIOS FOR A POC TEST [SEQUENCE 2]

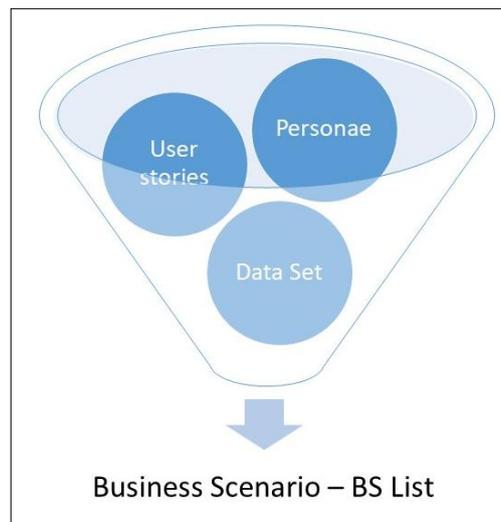
4.1. Development of scenarios based on User Stories [Steps 11-13]

The purpose of the production of the list of business scenarios (BS List) is to create an environment for testing functionalities during evaluation of the AMS system. The scenarios are developed on the basis of the User Stories, to which the role of users (Personae - PE) and data sets (Data Set - DS) are attached. In summary, the three components of a scenario are:

- **User Stories:** functional scenarios selected and drafted on the basis of the functional requirements;
- **Personae:** the roles of users of the system developed in the form of standard profiles;
- **Data Sets:** data sets selected and extracted from current HAS systems, and integrated at different specific ingest points into the AMS systems before the tests are run.

Figure 8 illustrates the three components of the BS List:

Figure 8: BS List – Components of a scenario



The structure of the BS List is described in the following table, and the content used to perform the tests can be consulted in Annex 6.12 Content of the Business Scenario List – Version 1 and 2

Table 11: BS. List – Criteria

Column	Description	Step
FB.Key	Code number of the functional bloc. Table 1: AMS, ISA ² Action 2017.01: FB.Key, Nomenclature for functional blocks	
FR.Key	Code number of the functional requirement.	
ID.ISA²	Code number key of the scenario (FR.Key.FR.Key).	
ISA² Business Process	Name of the functional block from the 1 st phase reference model.	
FR. Functional Requirement	Description of the functional requirements.	
FR.Ranked	Priority of the functional requirement to be transformed into a User Story for the PoC. Scale of the priorities, 0 to 5 stars: Highest = Star.5; Lowest = Star.1; Candidate = Star.0	11
US.Certified	User Story written in INVEST standardised format. <u>Limited to FR scoring 4 or 5 stars</u>	12.13
PE.Persona	Role of the user in the management of the archives management system. <u>Executive (E): build and/or run a US.Certified</u>	14.15

	<u>Observer (O) (optional)</u> : not active in the US, but can be implicitly implicated	
DS.Data Set (Data Pointer)	Pointer on the data repository of the archival data set	16.17

The BS List takes the form of a table developed in two versions²⁰ on the basis of the initial version. This is made up of the functional requirements (FR) organised by functional blocks of the reference functional model. The two versions are distinguished by the following characteristics:

- **Version 1, Prioritisation of functional requirements:** this results from the selection and organisation of the functional requirements according to a priority scale from 1 (lowest priority) to 5 (highest priority).
- **Version 2, Production of user stories:** this results from the writing of the User Stories on the basis of the priority functional requirements, namely the functional requirements listed under priorities 4 and 5, for which one or more Personae are associated.

4.2. Association of Personae to scenarios [Steps 14-15]

The standard roles (PE.1 to PE.15) are defined in a list of Personae, representing all users interacting with the archive management system. Each scenario is populated by at least one Persona from the BS List.

The Personae are described in the following table:

Table 12: PE. Personae (Role) – Criteria

ID-PE	Persona - Role	Description	Business Unit
PE.1	System Administrator	The <i>System Administrator</i> provides internal support to guarantee that the functionalities are available to HAS Archivists, the <i>Producer</i> and the <i>Consumer</i> .	DIGIT
PE.2	Product Owner	The <i>Product Owner</i> performs support operations and services ordered for performance of the scenarios throughout the life cycle of the PoC.	FO
PE.3	Archivist (Acquisition)	The <i>Archivist (Acquisition)</i> performs functional operations associated with management of paper or digital acquisition scenarios, of HAN or non-HAN origin.	HAS
PE.4	Archivist (Processing)	The <i>Archivist (Processing)</i> performs functions associated with classification, description and indexation until the fonds are published. The <i>Archivist (Processing)</i> also manages transfer to the HAEU.	HAS
PE.5	Archivist (Physical Storage)	The <i>Archivist (Physical Storage)</i> performs operations associated with physical management of physical storage.	HAS
PE.6	Archivist (Access)	The <i>Archivist (Access)</i> undertakes processing of internal communication requests from the European Commission.	HAS
PE.7	Reading Room Manager (Access)	The <i>Reading Room Manager</i> manages the reading room for communications for External Audiences.	HAS

²⁰ The versions of BS Backlog are in Annex 11.

PE.8	Scanning Manager (Processing)	The <i>Scanning Manager</i> performs management of digitisation (scanning) operations.	HAS
PE.9	Digital Preservation Manager	The <i>Digital Preservation Manager</i> performs management of transfers between a-REP and the AMS.	HAS
PE.10	Document Manager Officer (Producer)	The <i>Document Manager Officer (DMO)</i> performs processing operations on Documents/Records/Archives in cooperation with the Archivists (Acquisition).	HAN
PE.11	Archivist (HAEU)	The <i>Archivist (HAEU)</i> receives the fonds transferred in cooperation with the <i>Archivist (Processing)</i>	EUI
PE.12	Reading Room Consumer	The <i>Reading Room Customer</i> uses the reading room consultation services.	PUBLIC
PE.13	Web Portal Consumer	The <i>Web Portal Customer</i> uses the Commission's online consultation services.	PUBLIC
PE.14	Document Management Officer	The <i>Document Management Officer</i> works with the HAS archivists, assisting during archival processing operations (description, application of barcodes for location of items in physical storage, etc.).	HAS
PE.15	Archivist (Sensitivity review)	The <i>Archivist (Sensitivity review)</i> has specific rights for the review of sensitive information (including declassification).	HAS

4.3. Association of Data Sets to scenarios [Steps 16-17]

The extraction of the Data Sets from the various HAS systems represents a preliminary approach for migration of the data to the future AMS system.

As part of the PoC, the purpose of configuring the AMS system with the Data Sets is to evaluate the functional coverage and the non-functional features using a more precise approach of the practices of the European Commission’s archive management service. This approach makes it possible to estimate the specific services such as operations to review sensitive information and transfer of archives to the HAEU. Lastly, it makes it possible to estimate an initial analytical approach for the technical specifications for exchanges between the HAS systems.

To achieve this configuration, the archival data are taken from the following systems:

- Archis PB, the current archive management system;
- Archis HistOrga, the database describing the history of the European Commission’s organisation charts;
- a-REP, implemented on the Preservica product and dedicated to the long-term preservation of digital archives.

Each Data Set is:

- Characterised by the original archival concept in the HAS system: a note drafted by the HAS describes the concepts.
- Associated with a pointer referenced by functional block in the reference model: Table 13: DS. Data Set – Criteria below describes the structure of the Data Sets. The reference to the ‘Data Set Pointer’ is a file containing all Data Sets provided to populate the AMS system.

Table 13: DS. Data Set – Criteria

Organisation	ID ISA ²	Functional Block	Data Set Pointer
Archival Institution - I/O Stakeholder			
Functional Block		Acquisition	
Functionality	3	Digitisation	DS.3
Functionality	4	Ingest (digital archives)	DS.16
Functionality	5	Accession (non-digital archives)	DS.5
Functional Block		Archival Processing	
Functionality	6	Appraisal & Selection	
Functionality	7	Sensitivity Review	DS.7
Functionality	8	Description Indexation Enrichment	DS.8
Functionality	13	Master Data Management	DS.13
Functionality	14	Authority List Management	DS.14
Functional Block		Preservation	
Functionality	15	Storage Management	DS.15
Functionality	16	Preservation Planning (digital archives)	DS.16

The data are extracted in a structured format for metadata sets, with priority for csv format for data from Archis PB, xml format for data from the DPS, and PDF consultation format for scanned documents.

5. EVALUATIONS OF THE AMS SYSTEM: PERFORMANCE OF TESTS AND ANALYSIS OF THE RESULTS FOR A POC [SEQUENCE 3]

5.1. Evaluation criteria and templates

The analysis criteria and templates for input or synthetic overviews are defined for three evaluation categories:

- Functional evaluations (FT);
- Risk analysis (R);
- Non-functional or technical information (NFT);
- Vendor assessment (VA).

5.1.1. Functional evaluation table

The functional acceptance criteria are applied during a test on functionalities run for each scenario. It should be noted that a scenario (BS) is based on a user story (US) representing a functional requirement (FR). Thus, the evaluation of a scenario may cover a simple functionality or a sequence of functionalities that are more or less complex depending on the scenario.

The OS1-1 Template below details the evaluation information and the stage during which the criterion is evaluated:

Template 1: OS1-1: FT. Test Acceptance Datagrid - Criteria

Column	Description	Step
CATEGORY	Category of the tested scenario. Only two values available: FT (Functional test), NFT (Non-Functional test).	Step 19 Prefilled
ID-ISA²	Identifier of the tested scenario In the case of a functional test, the identifier is based on the user story.	Idem
DESCRIPTION	Brief description of the scenario. For the FT - the User Story.	Idem
DATA SET (Data Pointer)	Reference to the data sets that will be used in the tested scenario.	Idem
CAPABILITY	Optional description of the specific capability that is tested. Needed mostly in the cases where the description of the tested scenario is covering more business capabilities.	Idem
CAPABILITY IMPORTANCE RATE	Multiplication factor to be used for the promotion of capabilities of higher importance. By default, the rate of the user story can be considered as follows: <ul style="list-style-type: none"> • Priority 4 -> weighted rate: 1.00 • Priority 5 -> weighted rate: 1.25 	Idem
LIVE TEST ANALYSIS	LIVE analysis of the test during the test execution.	Step 21 Test Execution
COVERAGE RATE	Scoring of the actual coverage of the tested scenario by the solution. List of values: <ul style="list-style-type: none"> • Covered • Partially covered • Will be covered by further development • Not covered 	Idem
USABILITY	Description of the capability in terms of user experience. Available values: Easy, Medium, Complicated, impossible to use. To be filled in only when the Coverage status is 'Covered' or 'Partially covered'.	Idem

Column	Description	Step
GAP COVERAGE STRATEGY	Description of the way the gap will be closed. To be filled in when the Coverage status is 'Partially covered' or 'Not covered'. List of values: <ul style="list-style-type: none"> • EC • EC + VENDOR • VENDOR 	Step 27 Outcome assessment
EC EFFORT	Level of effort needed to close the gap identified during the test. List of values: <ul style="list-style-type: none"> • HIGH • MEDIUM • LOW 	Idem
VENDOR EFFORT	Level of effort needed to close the gap identified during the test. Possible values: HIGH, MEDIUM, LOW	Idem
GAP COVERAGE BY DEVELOPEMENT APPROACH	Description of a development approach to close the gap linked to the category of needed developments (below)	Idem
DEVELOPMENT REFERENCE	Category of needed developments. Values: <ul style="list-style-type: none"> • ED0: reengineering of data model • ED1: adding module from the supplier • ED2: adding data exchange management interface • ED3: administration of a business workflow • ED4: configuration of a specific interface • ED5: Integration of a new product 	Idem
RISK MAGNITUDE	Criticality in case of inability to close a gap by a development approach. List of values: <ul style="list-style-type: none"> • LIMITED • MODERATE • SIGNIFICANT • CRITICAL 	Step 28 Risk assessment
PROBABLITY (RISK)	Assessment of the risk probability List of values: <ul style="list-style-type: none"> • LOW • MEDIUM • HIGH 	Idem
IMPACT (RISK)	Assessment of the risk impact List of values: <ul style="list-style-type: none"> • LOW • MEDIUM • HIGH 	Idem

5.2. Performance of tests on the PoC [Steps 20-26]

5.2.1. Acceptance of the test launch configuration

The tests are engaged when the configuration obtained following the steps in Sequence 2, Configuration of test scenarios, makes it possible to run the scenarios under satisfactory operational conditions. The project owner validates the following operations by the supplier:

- Step 19: integration of the scenarios into the BS List and operation of the AMS in the data centre;
- Step 20: the operational conditions for launching performance of the tests.

5.2.2. Performance of the functional and interoperability tests

Table 14 describes the three test circuits (violet, blue, yellow) represented on an extract of the life cycle of the PoC (Figure 4 – Sequence 3.1):

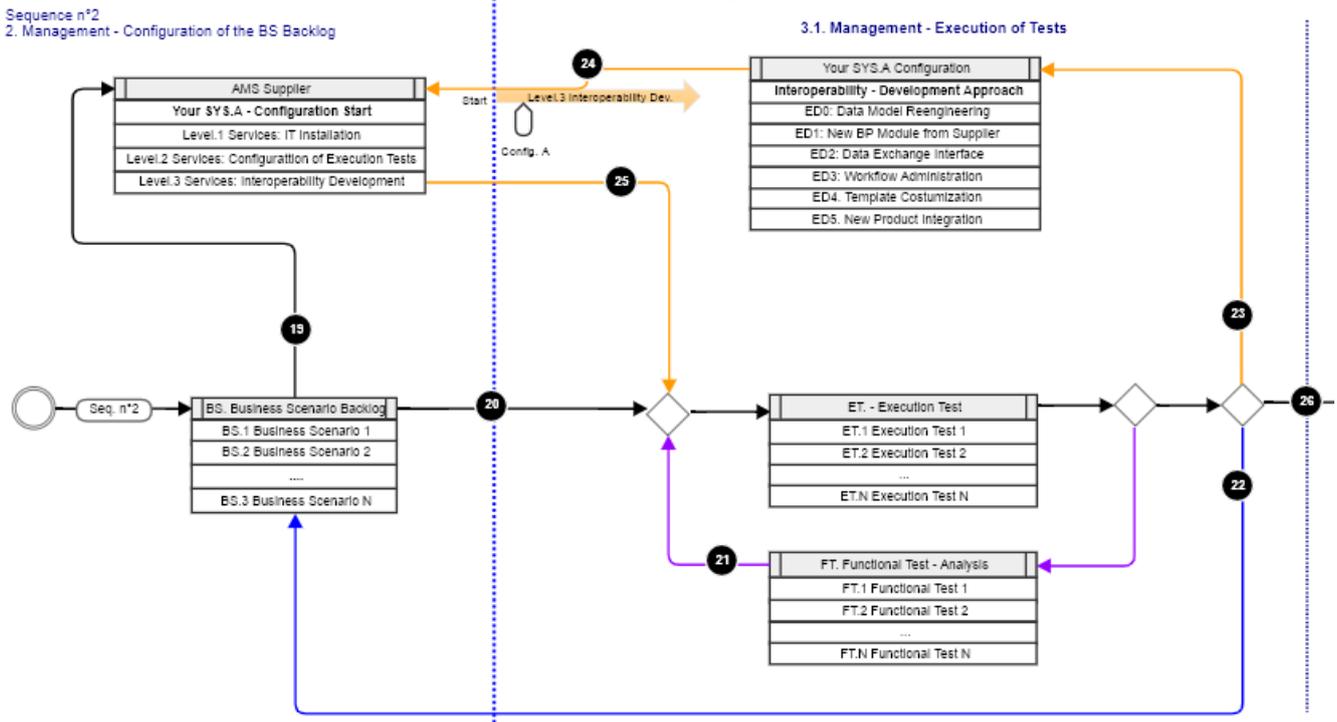
Table 14: ET. Procedures for performance of functional tests (FT)

Track	Step	Description
	22	Performance of functional acceptability tests (FT) - Mandatory The functionalities of the AMS are evaluated in Template 1 OS1-1: FT. Test Acceptance Datagrid - Criteria when the tests are performed (ET) in the order in which the scenarios are iterated (BS).
	23	Performance of functional acceptability tests on a requalified scenario - Optional²¹ During the tests, it may be determined that a scenario needs to be adapted (breakdown into sub-tasks, clarification, etc.). In such a case, the User Story is reformulated or detailed; a new User Story may also be suggested. The requalified scenario may be run again and evaluated.
	24	Change of configuration of the Your SYS.A Configuration Start system developed in Configuration A. – Optional²² When a functionality is not covered or partially covered, the project owner requests a development approach from the supplier, which results either in a concept note or in a change to the parameters of the AMS system resulting in a new operational configuration.
	25	Performance of a new iteration of a functional test with a new configuration - Optional During the duration of the PoC, if the supplier proposes a new operational configuration in the case of a highly important scenario that has not provided a satisfactory result, the project owner tests the scenario once again.

²¹ Optional: only if the scenarios have been modified during the test phase. The CAPABILITY zone is intended for requalification of a scenario.

²² Optional: only if a new configuration of the AMS has been implemented following a development as part of the PoC.

Taken from Figure 4: Sequence 3.1 - Management – Performance of tests



5.3. Analysis of results [Steps 27 to 29]

An analysis report produced for each PoC details the evaluation of the test results and complementary non-functional information delivered by the supplier. It is divided into three categories:

- OA1. Interoperability | Business Functionality;
- OA2. Risk Management;
- OA3. Non-Functional Features.

5.3.1.OA1. Interoperability - Business Functionality

Analysis of the functional acceptability rate for the AMS system makes it possible to identify shortcomings during examination of the results. The level of interoperability of the AMS system results from the three levels of integration observed during running of the scenarios:

- a. **Internal:** richness of the specific functionalities of each AMS depending on the concept of the solution (DAM, 4C, Information Governance).
- b. **External:** capability of the AMS for integration with other HAS systems.
 - i. **EC Institution:** integration with the European Commission's internal information management systems (HAN, a-REP, HistOrga and Archis-Scanning).
 - ii. **EU Partner:** integration with external partner systems (HAEU, EuroVoc).

In practice, the results are analysed directly in the table Template 1: OS1-1: FT. Test Acceptance Datagrid - Criteria in three steps:

- **Step 1 – LIVE ANALYSIS:** a live analysis is performed on the tests run, with the 'LIVE TEST ANALYSIS', 'COVERAGE RATE' and 'USABILITY' columns being completed.
- **Step 2 – COVERAGE RATE:** the scenarios are classified in two categories; on the one hand, the satisfactory scenarios in the 'COVERED' category, resulting in an initial 'COVERED' synthetic overview, and, on the other hand, the 'PARTIALLY COVERED' and 'NOT COVERED' scenarios for which the functionalities need to be improved or developed, grouped in the second 'TO BE COVERED' synthetic overview.

Table 15: OA1. Interoperability, Business Functionality – Synthetic overview of the coverage rate – Criteria

COVERAGE RATE (Scenario))		SYNTHETIC OVERVIEW (BS List)
	COVERED	COVERED
	PARTIALLY COVERED	TO BE COVERED
	NOT COVERED	

- **Step 3 – DEVELOPMENT APPROACH:** a development approach is estimated for each scenario with a detailed description of the gap in the ‘GAP COVERAGE BY DEVELOPMENT APPROACH’ and ‘DEVELOPMENT REFERENCE’ zones. The values are described in Table 16 below:

Table 16: OA1. Interoperability, Business Functionality – ED. Development Approach – Criteria

Develop. Category	Title	Description
ED0	Reengineering of data model	<p>It may happen that the data model on which the business processes are based is significantly shifted/distant from the required ‘ISAD(G)/ISAAR’ model. However, the model is still pertinent because a substantial number of the core functions (acquisition, elimination, consultation request, conservation, management of physical storage, etc.) meet the functional requirements. This is the case for an AMS system covering the total life cycle of the archives.</p> <p><i>Example 1: Adaptation of the functionalities of an IBP Information Governance AMS system to which an ISAD(G) description module must be added for publication of historical data.</i></p>
ED1	Adding module from the supplier	<p>When a module (functional block) is necessary, the supplier is able to provide developments that are compatible with the product roadmap or specific for the institution.</p> <p><i>Example 1: module for management of acquisitions between a submitting service (Producer) and the HAS.</i></p> <p><i>Example 2: module for management of physical storage.</i></p>
ED2	Adding data exchange management interface	<p>When the AMS system needs to be connected to enable dynamic data exchange with another system, the supplier may propose the development of a new data exchange interface.</p> <p><i>Example 1: Interface for digital acquisitions from a producer (HAN) into the AMS system using a standardised connector – SIP-AIP procedure</i></p> <p><i>Example 2: Interface for transfer of a-REP files for processing of a fonds to the AMS – SIP-AIP procedure</i></p> <p><i>Example 3: Interface for transfer of publications from the AMS to a-REP – DIP procedure.</i></p>

ED3	Administration of a business workflow	<p>When the modification relates to a business process to be adapted for the functioning of the institution, the AMS system may be configured without major difficulty.</p> <p><i>Example 1: Steps for acceptance of an acquisition from a producer (HAN) into the AMS system.</i></p> <p><i>Example 2: Management of the status of files that cannot be transferred for consultation during the digitisation phase.</i></p>
ED4	Configuration of a specific interface	<p>When an interface for management of functionalities needs to be modified, the AMS system provides flexible, advanced, parameter-setting capabilities.</p> <p><i>Example 1: Setting of parameters for a form for entry of a description or publication</i></p> <p><i>Example 2: Setting of parameters for an elimination sheet.</i></p>
ED5	Integration of new product	<p>When it appears that a new complementary external system needs to be identified to meet a functional block requirement.</p> <p><i>Example 1: Integration of AtoM, the open-source solution for description and publication compliant with ISAD(G), into the Preservica DPS.</i></p>

- **Step 4 – SYNTHETIC OVERVIEW:** synthetic overviews are output:
 - **OA1. Synthetic Overview COVERED:** the synthetic overview of the functionalities satisfied during performance of the tests. Template 2 is a synthetic overview presented with examples:

Template 2: OA1-2: Synthetic Overview COVERED – Datagrid examples

Functional Block	ID-ISA ²	PR5 AMS BackOffice PR6 AMS FrontOffice
1. Pre-Ingest (digital archives)	N/A	
2. Transfer (non-digital archives)	FT-2.1 FT-2.4 FT-2.6	PR5
4. Ingest (digital archives)	FT-4.1 FT-4.5	PR5
5. Accession (non-digital archives)	FT-5.1 FT-5.3 FT-5.4 FT-5.5 FT-5.6	PR5
6. Appraisal & Selection	FT-6.2 FT-6.4 FT-6.15	PR5
8. Description Indexation Enrichment	FT-8.1 FT-8.5 FT-8.8	PR5
10. Data Export	FT-10.1 FT-10.3 FT-10.6	PR5
11. Reporting	FT-11.2 FT-13.1	PR5
13. Master Data Management	FT-13.5	PR5
14. Authority List Management	FT-14.2	PR5 PR6
15. Storage Management	FT-15.1 FT-15.2 FT-15.3 FT-15.8	PR5
17. Elimination	FT-17.8	PR5
19. Standard Publication	FT-19.3 FT-19.8	PR5 PR6
21. Search & Request	FT-21.19	PR5 PR6
22. Loan	FT-22.1 FT-22.6 FT-2.8 FT-22.14	PR5 PR6

- **OA1. Synthetic Overview TO BE COVERED:** the synthetic overview of the scenarios concerned by a development approach grouped by category (ED) includes:
 - ED: the title of the development approach determined previously (see Table 16:);
 - Functional Block: the functional block reference for the reference functional model resulting from Phase 1 (see Figure 1);
 - ID: the number of the scenario;
 - the functionality to be covered: the title of the functionality to be covered by a development approach.

Template 3: Template OA1-3: OA1. Synthetic Overview TO BE COVERED – Datagrid examples

ED0 – Functional reengineering of the data model		
Functional Block	ISA ² ID	Functionality to be covered
N/A	N/A	N/A
ED1 – Development of a module by the supplier		
Functional Block	ID	Functionality to be covered
7. Sensitivity Review	FT-7.1	Management of the declassification process
	FT-7.2	
	FT-7.6	
	FT-7.9	
	FT-7.14	
8. Description Indexation Enrichment	FT-8.9	Versioning of EAD search tools (IR)
	FT-9.1	
21. Search & Request	FT-21.1	Internal consultation of the archives for all EC officials
	FT-21.3	Thread of exchanges between archivist and researcher during a request
	FT-21.18	Stored multi-criteria search generator
ED2 – Development of an interface for management of data exchanges		
Functional Block	ID-ISA ²	Functionality to be covered
2. Transfer (non-digital archives)	FT-2.2	Workflow for an acquisition from the Producer to the HAS
3. Digitisation	FT-3.1	Integration into Archis-Scanning
	FT-3.2	Record of eliminations
6. Appraisal & Selection	FT-6.22	
7. Sensitivity Review	FT-7.1	Management of the general declassification process
	FT-7.2	
	FT-7.6	
	FT-7.9	
	FT-7.14	
8. Description Indexation Enrichment	FT-8.6	Integration into HistOrga
	FT-8.12	Inter-institutional exchanges of authority lists
10. Data Export	FT-10.7	Updates to EAD search tools between the HAS and the HAEU
13. Master Data Management	FT-13.7	Inter-institutional exchanges of authority lists
14. Authority List Management	FT-14.6	Updating of IR between the HAS and the HAEU

Cont'd

ED3 – Advanced administration of a business workflow		
Functional Block	ID-ISA ²	Functionality to be covered
8. Description Indexation Enrichment	FT-8.6	Integration of HistOrga during classification
	FT-8.9	Versioning of EAD IR
9. Data Import	FT-9.1	Versioning of EAD IR
10. Data Export	FT-10.11	Workflow for transfers to the HAEU, Acquisition of physical archives and fonds metadata
13. Authority List Management	FT-13.7	Integration of HistOrga during classification
14. Master Data Management	FT-14.5	Connection and importing of MDM benchmarks
17. Elimination	FT-17.1	Audit trail of eliminations
19. Standard Publication	FT-19.1	Flexibility of publication of IR (Partial, Total, Inventories)
20. Reading Room	FT-20.1	Online registration of readers
ED4 – Configuration of a processing interface		
Functional Block	ID-ISA ²	Functionality to be covered
2. Transfer (non-digital archives)	FT-2.10	Barcode function available in the submitting service module
3. Digitisation	FT-3.1	Integration of Archis-Scanning with AMS
	FT-3.2	
5. Accession (non-digital archives)	FT-5.2	Multiple comments stored between the submitting service and the archivist in the acquisition workflow
8. Description Indexation Enrichment	FT-8.3	Adaptation of AMS forms in the classification module
17. Elimination	FT-17.1	Audit trail of eliminations
	FT-17.4	General consultation of all eliminations processed
20. Reading Room	FT-20.1	General consultation of all requests processed in the reading room
21. Search & Request	FT-21.2	Tracking basket for a query request
	FT-21.20	Synthetic overview of the item
ED5 – integration of a third-party product		
Functional Block	ID-ISA ²	Functionality to cover
7. Sensitivity Review	FT-7.6	Declassification
8. Description Indexation Enrichment	FT-8.12	Inter-institutional exchanges of authority lists
10. Data Export	FT-10.7	Updating of IR between the HAS and the HAEU
11. Reporting	FT-11.7	Statistics and reports
14. Authority List Management	FT-14.6	Inter-institutional exchanges of authority lists

5.3.2.OA2. Risk management

A risk assessment is conducted for each PoC to identify the potential risks of the AMS system with a view to its selection for the third phase, dedicated to implementation. This involves measuring the risk of functional incapacity observed during performance of the test by scenario: this risk is defined by the level of criticality in the event that the supplier is not able to complete a configuration and/or the developments required to provide a response to a functional requirement.

The scale for calculation of criticality levels is described in Table 17 below:

Table 17: OA2. Risk assessment – Criteria

PROBABILITY of covering the functional gap	HIGH	Moderate	Relevant	Critical
	MEDIUM	Limited	Moderate	Relevant
	LOW	Limited	Limited	Moderate
		LOW	MEDIUM	HIGH
	IMPACT If the functionality never exists			

In practice, the synthetic overview of the risk assessment is obtained in three steps:

- **Step 1 – PROBABILITY/IMPACT:** only the scenarios in the ‘TO BE COVERED’ synthetic overview are selected, and then in Template 1: OS1-1: FT. Test Acceptance Datagrid - Criteria, the ‘PROBABILITY’ and ‘IMPACT’ are entered on the basis of the development approach already formulated during previous steps.
- **Step 2 – RISK MAGNITUDE:** the criticality level of the risk is determined from among the values in the **Error! Reference source not found.** above (Critical, Relevant, Moderate, Limited) in the ‘RISK MAGNITUDE’ area.
- **Step 3 – ANALYSIS OVERVIEW:** the synthetic overview calculated is output:
 - **OA2. SYNTHETIC OVERVIEW ‘RISK ASSESSMENT’:** the synthetic overview of the at-risk functionalities identified by order of criticality extracted from Template 1: OS1-1: FT. Test Acceptance Datagrid - Criteria, made up of zones:
 - ISA² FT: designation of the functional block;
 - SCENARIO: the number of the scenario;
 - COVERAGE RATE: reminder of the coverage rate (partially covered or not covered) estimated during performance of the tests;
 - DEVELOPMENT CATEGORY (CAT.DEV.): reminder of the development approach estimated to cover the gap;
 - RISK: designation of the function subject to a risk that a supplier might not be able to complete the configuration or development;
 - PROBABILITY: estimation of the probability that the risk will materialise;
 - IMPACT: estimation of the seriousness if the risk actually materialises;
 - RISK MAGNITUDE: criticality level of the estimated risk.

Template 4: Template OA2. Risk Assessment – Synthetic Overview – Datagrid examples

ISA ² FT	SCENARIO	COVERAGE RATE	DEV.CAT.	RISK	PROBABLY	SERIOUSLY	RISK MAGNITUDE
Sensitivity review	FT. 7.6	NOT COVERED	ED1ED5	Management of the declassification process	HIGH	HIGH	CRITICAL
Authority List Management	FT. 14.6	NOT COVERED	ED5	Inter-institutional exchanges of authority lists	HIGH	HIGH	CRITICAL
Search & Request	FT. 21.18	NOT COVERED	ED1	Stored multi-criteria search generator	HIGH	HIGH	CRITICAL
Transfer (non-digital archives)	FT. 2.2	PARTIALLY COVERED	ED2	Workflow of an acquisition originating from HAN or a-REP in the AMS	MEDIUM	HIGH	RELEVANT
Description Indexation Enrichment	FT. 8.6	NOT COVERED	ED2ED3	Use of HistOrga authority terms in the classification and description module	MEDIUM	HIGH	RELEVANT
Description Indexation Enrichment	FT. 8.9	NOT COVERED	ED1ED3	Versioning of EAD search tools (IR)	MEDIUM	HIGH	RELEVANT
Description Indexation Enrichment	FT. 8.12	PARTIALLY COVERED	ED5	Inter-institutional exchanges of authority lists	MEDIUM	HIGH	RELEVANT
Data Export	FT. 10.7	NOT COVERED	ED2ED5	Updates to EAD (IR) search tools between the HAS and the HAEU	HIGH	MEDIUM	RELEVANT
Search & Request	FT. 21.3	NOT COVERED	ED1	Thread of exchanges between archivist and researcher during a request	MEDIUM	HIGH	RELEVANT
Digitisation	FT. 3.1	PARTIALLY COVERED	ED2ED4	Integration of Archi-Scanning with AMS	MEDIUM	MEDIUM	MODERATE
Accession (non-digital archives)	FT. 5.2	PARTIALLY COVERED	ED4	Multiple comments stored between the submitting service and the archivist in the acquisition workflow	LOW	MEDIUM	MODERATE
Transfer (non-digital archives)	FT. 2.10	PARTIALLY COVERED	ED4	Barcode function available in the submitting service module	LOW	MEDIUM	LIMITED
Elimination	FT. 17.1	PARTIALLY COVERED	ED3ED4	Audit trail of eliminations	LOW	MEDIUM	LIMITED
Reading Room	FT. 20.1	PARTIALLY COVERED	ED3ED4	Online registration of readers	LOW	MEDIUM	LIMITED
Search & Request	FT. 21.2	PARTIALLY COVERED	ED4	Tracking basket for a query request	LOW	MEDIUM	LIMITED

5.3.3.OA3. Non-functional feature

Non-functional evaluations cover three aspects:

- Technological Fit
- Hostability
- Data migration

Table 18 below describes the content of a spreadsheet comprising 18 information zones entered by the supplier
 Template 5: Template OA3.NFT. Assessment of Non-Functional Features – Datagrid.

Table 18: OA3. NFT. Assessment of Non-Functional Features – Criteria

Column	Description
ID	Identifier of the non-functional feature
Group	Categorisation of the feature List of values: Technical Fit Hostability Data migration
Feature Description	Detailed description of the assessed feature.
Importance	Importance level of the criteria for DIGIT and HAS
Evaluation	Scoring of the criteria List of values: 1 to 5
Complexity to full compliance	Evaluation on the complexity to adapt the solution to be fully compliant with the criteria List of values: None, Low, Medium, High
Final score	Multiplication of the score to be used for promoting the level of importance and complexity to full compliance fields
Textual evaluation	Analysis provided by the supplier

Template 5: Template OA3.NFT. Assessment of Non-Functional Features – Datagrid example

ID	Group	Feature Description	Importance (L, M, H)	Evaluation (1-5)	Complexity to full compliance	Final score	Textual evaluation, justification
NFT 1	Technological Fit	Compliance to archiving standards	M	3	High	3	
NFT 2	Technological Fit	Solution scalability	M	5	None	10	
NFT 3	Technological Fit	Ease of integration with information systems of EC (see HighLevel TA diagram)	M	3	High	3	
NFT 5	Technological Fit	Multi-language capabilities - user interface	M	5	None	10	
NFT 6	Technological Fit	Multi-language capabilities - data model	M	2	High	2	
NFT 7	Hostability	Installation procedure maturity (standard procedures, simple tools/GUI/scripts, install documentation preciseness and completeness, upgrade capability and simplicity, possibility to install without the solution vendor help or intervention, ...)	M	4	None	8	

NFT 9	Hostability	Compliance of the solution (including the installation procedure) with DIGIT PUAC & SECMON security policies (no need for root, no need for DBA, no need for "ANY" grants, no "clear text" passwords stored, possibility to change passwords frequently, define passwords complexity rules, successful/unsuccessful login auditing, support for data & traffic encryption/SSH/...)	H	2	High	3	
NFT 10	Hostability	Process audit : the critical processes have to be audited in the application DB; webservices exchanged with different systems have to be stored in order to be audited.	H	4	None	12	
NFT 11	Hostability	Vendors/Technology independence of the solution (availability on different hardware/platforms/OSes/Distributions/64 bits/Virtualization, support for several application/database servers, ...)	H	3	None	9	
NFT 12	Hostability	Deployment scenario "simplicity" ("limited/reasonable" number of components to deploy, "limited/reasonable" number of servers/machines/storage/DC resources requirement, no mixing of unnatural technologies combinations, no mandatory requirements for technologies not yet offered at the data centre,...)	H	3	None	9	
NFT 13	Hostability	Follow-up of technologies releases roadmaps: commitment and "limited/reasonable" delays to support new releases of used technologies (OS, DB, App servers, Dev Framework, ...).	L	5	None	5	
NFT 14	Hostability	Automation capabilities: exhaustive API availability for install, administration, maintenance, inventory (CMDB), ... Automation	L	1	None	1	

NFT 15	Hostability	Maturity of the Solution support (Online support availability, Online Knowledge base, online access to patches and upgrade, "professionalism" of the support contract and team, 24/7 support, SLAs per request/incident priorities, capability to support on-site in cases of crisis/disaster, support of multiple versions of the solution like n-1, n-2, ..., n-x and not only the latest one, ...)	M	5	None	10	
NFT 16	Data Migration	Complexity of performing the data migration according to our model	H	3	High	4,5	

5.3.4.OA4. Vendor assessment

Vendor assessment included a list of 9 criteria that EC considered to be relevant to be taken into consideration for the Selection procedure of the AMS provider. This section is not part of the gap analysis report prepared by each provider. The evaluation is based on the feedback identified from the PoC sessions and from other information sources (eg: references, etc)

Table 189 below describes the content of a spreadsheet for Vendor assessment

Template 5: Template OA3.NFT. Assessment of Non-Functional Features – Datagrid.

Table 199: OA4. VA. Vendor assessment

Column	Description
ID	Identifier of the criteria
Group	Categorisation of the criteria
Feature Description	Detailed description of the assessed criteria.
Importance	Importance level of the criteria for business stakeholders
Evaluation	Scoring of the criteria List of values: 1 to 5
Final score	Multiplication of the score to be used for promoting the level of importance
Textual evaluation	Comments of the business stakeholders (OIB, SG and DIGIT) to support the evaluation

Template 6: Template OA4.VA. Vendor Assessment – Datagrid example

ID	Group	Feature Description	Importance (L, M, H)			
VA 1	Vendor assessment	Knowledge about archiving business	H	3	9	
VA 2	Vendor assessment	Level of understanding of EC needs, ability to deliver expected features	H	3	9	
VA 3	Vendor assessment	Market share of the evaluated product, existence of user community (public sector archive business)	M	2	4	
VA 4	Vendor assessment	General attitude during the PoC implementation (flexibility, level of cooperation, etc)	H	4	12	
VA 5	Vendor assessment	Existence and quality of proper user and admin documentation, quality of trainings	M	4	8	
VA 6	Vendor assessment	Availability to make & maintain customisations on the standard product according to our needs/particularities	M	3	6	
VA 7	Vendor assessment	Ergonomy, ease of use	M	4	8	
VA 8	Vendor assessment	Setup costs: costs in terms of time, human resources and money for building the required hosting services around this new Information System (trainings, additional ressources in various teams, new technologies to hosts, etc)	M	1	2	
VA 9	Vendor assessment	Effort of the provider in preparing the PoC (e.g. import of data, analysis of the user stories, etc.)	H	1	3	

5.4. Content of the final report

The final report is made up of the following:

- Analysis of each PoC on the basis of the criteria and templates established above;
- The conclusions of the PoC in the form of recommendations.

5.4.1. Analysis report by PoC

The analysis report for each PoC is made up of four sections:

- I. **Solution:** the 'identity card' for the AMS showing the principal information developed during sequence 1, selection of an AMS, in the form of overviews:
 - Overview 1: identity card (see s.3.4.3 Qualified solution for a PoC)
 - Overview 2: identity of the AMS system in Sequence 1 (see Annex 3-10)
- II. **Functional evaluation:** analysis of the results following performance of functional tests, including the following overviews:
 - The table of results and analyses drafted using the evaluation datagrid Template 1: OS1-1: FT. Test Acceptance Datagrid - Criteria
 - The synthetic overview of the functionalities satisfied by the AMS system, represented by the scenarios covered by the system, in the form of a calculated overview: **Error! Reference source not found.** Template 2: OA1-2: Synthetic Overview COVERED – Datagrid examples
 - The synthetic overview of the functionalities partially satisfied and not satisfied, represented by the scenarios partially covered or not covered, in the form of a calculated overview: Template 3: Template OA1-3: OA1. Synthetic Overview TO BE COVERED – Datagrid examples
 - The documentation provided by the supplier stating its specific proposals.
- III. **Risk evaluation:** an analysis of risks of the AMS system on the basis of tests for which the scenarios are only partially covered or not covered. This includes:
 - The synthetic overview of the functionalities to be covered entered on the basis of an estimation of the criticality in the event that the supplier is not able to cover the functionality by a development approach. The overview is provided in the form of an overview as shown in Template 4: Template OA2. Risk Assessment – Synthetic Overview – Datagrid examples
- IV. **Technical and non-functional information**
 - Summary sheet of the technical characteristics of the AMS system
 - The additional information provided by the supplier following performance of the tests, drafted in the form of Template 5: Template OA3.NFT. Assessment of Non-Functional Features – Datagrid.

5.4.2. Recommendations and conclusions

The recommendations conclude the final report.

6. ANNEXES

6.1. FR/EN glossary

Terme/Acronyme (FR)	Description EN	Term/Acronym (EN)	description EN,
Archis (PB)	Système actuel de gestion des archives du service des Archives historiques de la Commission européenne	Archis (PB)	Current archives management system of the Historical Archives Service of the European Commission.
Archis-Scanning	Application dédiée à la gestion du processus de numérisation du Service des Archives historiques de la Commission européenne	Archis-Scanning	Application dedicated to the management of the digitisation process at the Historical Archives Service of the European Commission
a-REP	Dépôt électronique de préservation à long terme de la Commission européenne basé sur le produit Preservica	a-REP	Digital repository for long-term preservation of the European Commission based on the product Preservica
EuroVoc	Thésaurus multilingue et multidisciplinaire couvrant les domaines liés à l'Union européenne. Il est géré par l'Office des Publications de l'Union européenne	EuroVoc	Multilingual and multidisciplinary thesaurus covering fields related to the European Union. It is maintained by the Publication Office of the European Union
Evaluation des résultats (OA)	Analyses des résultats de test et évaluation de la solution	Outcome Assessment (OA)	Tests results analysis and assessment of the solution.
Exigence (R)	Exigence métier ou technique	Requirement (R)	Business or technical requirement
Exigences fonctionnelles (FR)	Exigence fonctionnelle simple ou complexe déterminée par un processus métier	Functional Requirement (FR)	Simple or complex functional requirement defined by a business process
Exigences non-fonctionnelles (NF)	Exigence technologique, d'interopérabilité, de design des interfaces, de sécurité, de conformité, de performance, de support aux utilisateurs, d'évolution, et de modèle économique acceptable pour fournir les services fonctionnels attendus	Non-Functional Requirement (NF)	Requirement which concerns technology, interoperability, interface design, conformity, performance, users support, evolution or supplier economic model which is considered acceptable in order to provide the expected functional services
Fonctionnalités (F)	Réponse à une exigence fonctionnelle en termes de fonctionnalité proposée par un système AMS	Functionality (F)	Response to a functional requirement in terms of functionality proposed by an AMS

Fournisseur AMS (SUP)	Fournisseur (éditeur, intégrateur) de solutions de gestion d'archives	AMS Supplier (SUP)	Supplier (publisher, integrator) of archives management solutions
HAEU	Acronyme anglais des Archives historiques de l'Union européenne. Elles font partie de l'Institut universitaire européen situé à Florence (Italie)	HAEU	Historical Archives of the European Union. Part of the European University Institute located in Florence, Italy
HAN	HermesAresNomCom - Système de records management de la Commission européenne	HAN	HermesAresNomCom - Records Management System of the European Commission
HistOrga	system de gestion de l'historique des organigrammes de la Commission européenne maintenu par le Service des Archives Historiques	HistOrga	System dedicated to the management of the history of the European Commission organisation charts maintained by the Historical Archives Service
Hypothèse (A)	Hypothèse de la preuve de concept face à un choix de solution	Assumption	PoC hypothesis with regards to a solution choice
ISA² Processus métier (ISA²BP)	Modèle fonctionnel conceptualisé lors de la phase 1 du projet Action 2017.1 ISA ²	ISA² Business Process	Functional Model defined during the ISA ² action 2017.1 Phase 1
Jeu de données (DS)	Jeu de données extrait des systèmes HAS utilisé pour exécuter les tests du système AMS	Data Set (DS)	Data Set coming from the HAS systems and used in order to execute tests with the AMS
Librairie de tests fonctionnels à exécuter (BS list)	Librairie de scenarios fonctionnels exécutables lors des tests d'acceptabilité fonctionnelle	Business Scenarios List (BS list)	List of functional scenarios that can be executed during the functional acceptance tests
Maître d'ouvrage	Maître d'ouvrage représenté par le Secrétariat général (SG), la direction générale de l'Informatique (DIGIT) et le Service des archives historiques (HAS) de la Commission européenne	Owner	Project owner represented by the General Secretariat (SG) the General Direction for Informatics (DIGIT) and the Historical Archives Service (HAS) of the European Commission
Modèle (M)	Caractéristiques conceptuelles fondamentales de la solution AMS	Model (M)	Basic conceptual specifications of the AMS
Module "Processus Métier" (B-P Module)	Groupe de fonctionnalités déterminant un module spécialisé dans la gestion des service d'archives	Module of Business process (B-P Module)	Group of functionalities defining a module specialised in the management of archival services

Module "Processus métier" couplé avec un système de préservation électronique (DPS # BP-Module ou DPS # IBP)	Modèle bâti entre un module BP et un système de préservation électronique selon un degré de dépendance plus ou moins fort	Digital Preservation System integrating Business Process Modules (DPS # BP-Module ou DPS # IBP)	Model built between a Business Process module and a digital preservation system according to a more or less high degree of dependence
Persona (PE)	Rôle type associé à un utilisateur avec des droits d'utilisation, agissant soit en qualité d'agent interne (Agent HAS), soit en partenaire interne (DMO, DMA, Producteur), soit en partenaire externe (HAEU, EU Institution), soit en qualité de Public (Consumer) ou en fournisseur (AMS Supplier)	Persona (PE)	Typical role associated to a user with specific user rights, acting as internal official (HAS Officer) or as internal stakeholder (DMO, DMA, Producer) or as external partner (HAEU) or as EU Institution or as external audience (Consumer) or as supplier (AMS supplier)
PoC Logigram	Logigramme de la preuve de concept représentant le cycle de vie du PoC déterminé par des étapes organisées en séquences	PoC Diagram	Proof of concept diagram representing the life cycle of the proof of concepts organised in steps (sequences)
Preuve de concept (PoC)	Méthodes, outils et opérations mises en œuvre pour réaliser une preuve de concept	Proof of concept (PoC)	Methods, tools and processes set up in order to run a proof of concept
Processus Métier (BP)	Processus métier propres au domaine archivistique mettant en jeux des services entre les utilisateurs et les traitements de données dans le cadre des missions, des règles et des activités de gestion d'archives	Business Process (BP)	Business processes specific to the archival domain including services between users and data processing in the framework of their missions, rules and management activities
Produit (PR)	Logiciel de gestion d'archives remplissant tout ou partie des exigences fonctionnelles d'un système de gestion d'archives historiques	Product (PR)	Archives management software covering all or part of the functional requirements of a historical archives management system

Scenario Métier (BS)	Représentation d'un processus métier de gestion archivistique, composé d'une tâche ou d'une séquence de tâches exécutables dans le système AMS configuré. Un Scenario est la combinaison d'une User Story, de Personae et de Data Set	Business Scenario (BS)	Representation of a specific archives management business process composed of one task or a sequence of tasks, which can be executed within a configured AMS. A Scenario is the combination of a User Story, a personae and a data set
Services de niveau 1	Installation des instances logiciels du système dans un data centre et configuration des contenus pour lancer l'exécution des test	Level 1 Services	Installation of the software within a data center and content configuration allowing the launch of the test phase
Services de niveau 2	Support du fournisseur pour l'exécution des tests fonctionnels	Level 2 Services	Supplier support provided for the execution of functional tests
Services de niveau 3	Approche des développements nécessaires pour améliorer les capacités d'interopérabilité et fonctionnelles du systèmes AMS	Level 3 Services	Developments needed in order to improve the interoperability and functional capabilities of the AMS
Solution (S)	Ensemble des choix d'architecture et des logiciels AMS intégrés au systèmes HAS	Solution (S)	Set of architectural choices and AMS modules integrated to the HAS systems
Système (SYS)	Configuration de logiciels interopérables entre eux et avec les systèmes HAS pour couvrir les exigences fonctionnelles de gestion des archives historiques	System (SYS)	Software configuration interoperable with each other's and with the HAS systems in order to cover the functional requirements of historical archives management
Système de gestion des archives (AMS)	Système permettant au service d'archives de gérer ses processus métier spécifiques	Archives Management System (AMS)	System allowing the archives service to manage its specific business process
Système de Gestion Intégré des Processus Métier (IBP)	Groupe de modules logiciels intégrés pour couvrir un périmètre large et flexible, disposant d'un modèle de données évolué, d'un moteur de workflow et de règles d'échanges des données entre les modules	Integrated Business Process System	Group of integrated software that cover a large and flexible perimeter, having an advanced data model, workflows and data exchange rules
Système de Préservation à Long Terme (DPS)	Système dédié à la préservation à long terme des données électroniques	Long Term Preservation System (DPS)	System dedicated to the long-term preservation of electronic data

Système de préservation numérique	Voir système de Préservation à Long Terme (DPS)	Digital Preservation System (DPS)	See Digital Preservation System (DPS)
Systèmes du Service d'archives historiques	Architecture des systèmes d'information devant être interopérable avec l'AMS	Systems of the Historical Archives Service	Information systems architecture that has to interoperate with the AMS
Test d'acceptation fonctionnel (FT)	Test d'acceptation fonctionnel lors de l'exécution d'un scénario	Functional Acceptance Test (FT)	Functional acceptance test during the execution of a scenario
User Story (US)	Forme standardisée d'une tâche ou d'une séquence de tâches fonctionnelles basée sur un ou plusieurs utilisateurs clés et compréhensible à la fois du point de vue de l'utilisateur (exigence fonctionnelle) et de celui de l'éditeur (fonctionnalité du système). Une User Story peut être une action simple (ex : remplir un formulaire) dans un même bloc fonctionnel ou une séquence d'actions complexes (transfert d'archives et de métadonnées entre différents services) impliquant plusieurs blocs fonctionnels	User Story (US)	Standardised form of a functional task or sequence of functional tasks based on one or more key users and understandable by the user (functional requirement) and the supplier (system functionality). A user story may be a simple action (e.g. fill a form in) within a single functional block or a sequence of complex actions (e.g. archives and metadata transfer between services) implying several functional blocks
Votre Système pour un PoC (Your SYS.A)	Solution configurée pour être évaluée lors d'un PoC	Your PoC's System (Your SYS.A)	Solution customised in order to be assessed in a POC

6.2. Key indicators of HAS – Historical archives service of OIB

Source: HAS, December 2018

Key Indicator	Value
Human Resources	
HAS, Number of officers:	38 Various profiles. Roughly: Physical repository management (4 staff), Specific information workers & administration (11 staff), Archivists (15), Scanning team (8 staff)
DMC, Number of Documentary Offices accessioning to HAS (RM system to HAS System):	40-500
DMO, number of DMO linked to the HAS:	190
Fonds [Delivery, Acquisition, Preservation]	
Paper, linear meters in store (Physical storage):	140,000 linear metres (140 km)
Paper, Increase per year: transfer from DMC to HAS stores:	1,800 linear metres
Paper, Disposal per year:	1,800 linear metres
Digital, Storage of electronic born file (To):	1.4 TB; 3,000,000 digital objects
Digital, Increase per year of digital born files:	2 to 5 TB/year for the 5 next years
Number of fonds: group of fonds, fonds, series:	8 group of fonds, 192 fonds, 370 sub-fonds, 609 series
Digitisation, pages :	1.633.000 pages/year, 9700 dossiers/year
Digitisation, quantity per year (To):	16 TB
Quantity of archives evaluated (in linear metres) by sampling, sampling and statistical method:	749 linear metres evaluated for sampling resulting in 524 linear metres of elimination and 225 linear metres of preservation
Declassification estimate:	255 linear metres
Transfer to Florence (Historical Centre for EU Institutions)	
Paper, transfer to Florence (ml per year):	200 – 1,000 linear metres/year
Access and Consultation, Request and Loan	
Access to Public (per year):	1,200 physical items
Consumer in the HAS public room:	48 unique visitors
Number of communications in HAS Public room:	1,122 physical items
Access online (Web Portal):	110,000 files (dossiers)

Internal communication:	1,098 physical items
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6.3. Product PR1 – ArchivesSpace

ID: PR1 Name:	ArchivesSpace 
DESCRIPTION REVIEW	
Basic Description	A web-based archives information management system designed by archivists and supported by diverse archival repositories. Web site: http://archivesspace.org/
Owner	Origin: by Institutions (NYU, UCSD, and UIUC) - USA Developing by a leader Company: Lyrasis
Date	Creation: 2009 Last version: With reference to the person named in section 2.5 2018 please send
Licensing	Open-source: GNU https://github.com/archivesspace/archivesspace
MARKET USER	
User (site)	User Community: 350
Type of output	Archives, Academic, Library, International institutions, Governmental and non-governmental institutions
Site	North and South America
TECHNOLOGIES, STACK	
Language	Ruby
Operating System Server	Linux Ubuntu/RedHat/CentOs – Ms Windows – MacOs – Docker (Virtualisation)
Client Leger Browser	Web navigator: IE >2 – Firefox 7 and below – Chrome – Safari >4
Stack	Apache/Nginx – MySQL – Solr (Search) - Oracle Java JRE
Stack configuration	Mono server Several servers isolated – Architecture to structure user groups with rights and security
Customise / Integration	High activity for integration services (CMS, Digital Repository -Preservation) by community developer or institutions, retributed version or documentation: <ul style="list-style-type: none"> • PRESERVICA: <i>“synchronises metadata and hierarchy between ArchivesSpace and Preservica, during and at any time after ingest.”</i> • ARCHIVEMATICA: <i>“Pairs Archivematica digital objects with ArchivesSpace Resources and Archival Objects and automatically generates Digital Objects in ArchiveSpace”</i> Integration Scenarios: Digital Preservation Systems - Content Publication Systems - Digital Asset Management and Repository Systems – Integrated - Library Systems - Aggregated Discovery Layers - Fulfilment Systems Method integration: 3 tiers integration defined Technology: <ul style="list-style-type: none"> • ArchivesSpace RESTful API • Toolkit Development • Plugin - Scripting

6.4. Product PR2 – AtoM – Access to Memory

ID : PR2 Name:	AtoM – Access to Memory 
DESCRIPTION REVIEW	
Basic Description	AtoM is web-based archives information management system, designed by archivists and supported by diverse archival repositories.
Owner	Origin: by ICA, International Council on Archives Developing by a leader Company: Artefactual System (Canada) Information site: https://www.accesstomemory.org
Date	Creation: 2007 Last version: 2.4.1 (stable) – Nov. 2018
Licensing	Open-source: GNU Affero General Public Licence' (A-GPL 3.0) https://www.accesstomemory.org/fr/download/ https://github.com/artefactual/atom First version 1.0: 2008 Latest version 2.41 (stable): Nov.2018
MARKET USER	
User (site)	User Community: >150 users
Type	Archives, Academic, Library, International institutions, Governmental and non-governmental institutions
Site	North and South America, Europe, Asia, Australia, Africa - Map
TECHNOLOGIES, STACK	
Language	PHP Symfony
Operating System	Linux Ubuntu (recommended), CentOS – Ms Windows – MacOS – Vagrant (Virtualisation)
Client Léger Browser	Web navigator: IE >2 – Firefox 7 and below – Chrome – Safari >4
Software	MySQL (recommended) – Elasticsearch (Search) – JavaScript jQuery - Bootstrap
Software Dependency (More)	A webserver like Apache or Nginx; Elasticsearch 1.3.0 or newer Oracle Java 7 or newer (required for Elasticsearch) MySQL 5.1 or newer PHP 5.5 or 5.6 (with Ubuntu 14.04) or 7.0 (with Ubuntu 16.04) Memcached, Gearman job server
Stack configuration	Mono server: Back end to test description services Multi-node: Backend and Front End for archives processing and access (Security, isolate server load, replace individual node, configure new front-end) – Pipeline and Scripting/command
Customise	Front-end: Low – integration to CMS Functionality: writing code source, GNU licence respecting
Implementation	Internal informatic services (DIGIT) Integrator application services <ul style="list-style-type: none"> - Artefactual (Canada) - Docuteam (Switzerland), Other: open-sources integrator Commercial solutions (Cloud SaaS / On-Premise): <ul style="list-style-type: none"> - PERPETUA by Arkivum – Technology: Archivematica + AtoM

6.5. Product PR3|PR4 – Archeevo 5 Management and Access – KKEEP Solution (PT)

ID: PR3 4 Name:	Archeevo 5 Management (PR3) and Access (PR4)	ARCHEEVO 5
DESCRIPTION REVIEW		
Basic Description	Archeevo is an archival management software that aims to support all the functional areas of an archival institution, covering activities ranging from archival acquisition to access (consumer) Website: Archeevo	
Owner	Company: KEEP Solution (PT)	
Date	Creation: 2008 - academic spin-off of the University of Minho	
Licensing	Commercial	
MARKET USER		
Users	Env.450 State and Local Authorities	
Type	Public authorities	
Site	Portugal and South America	
TECHNOLOGIES, STACK		
Suite tools	<ul style="list-style-type: none"> Archeevo 5 Management Archeevo 5 Access 	
Stack Server	Windows Server 2008 Microsoft SQL Server 2010 + Microsoft IIS Server7+	
Browser	Web navigator: IE >2 – Firefox 7 and below – Chrome – Safari >4	
customise / Integration		
Implementation	Keep Solution as editor/integrator	
<p><i>Schema of IT architecture</i></p>		

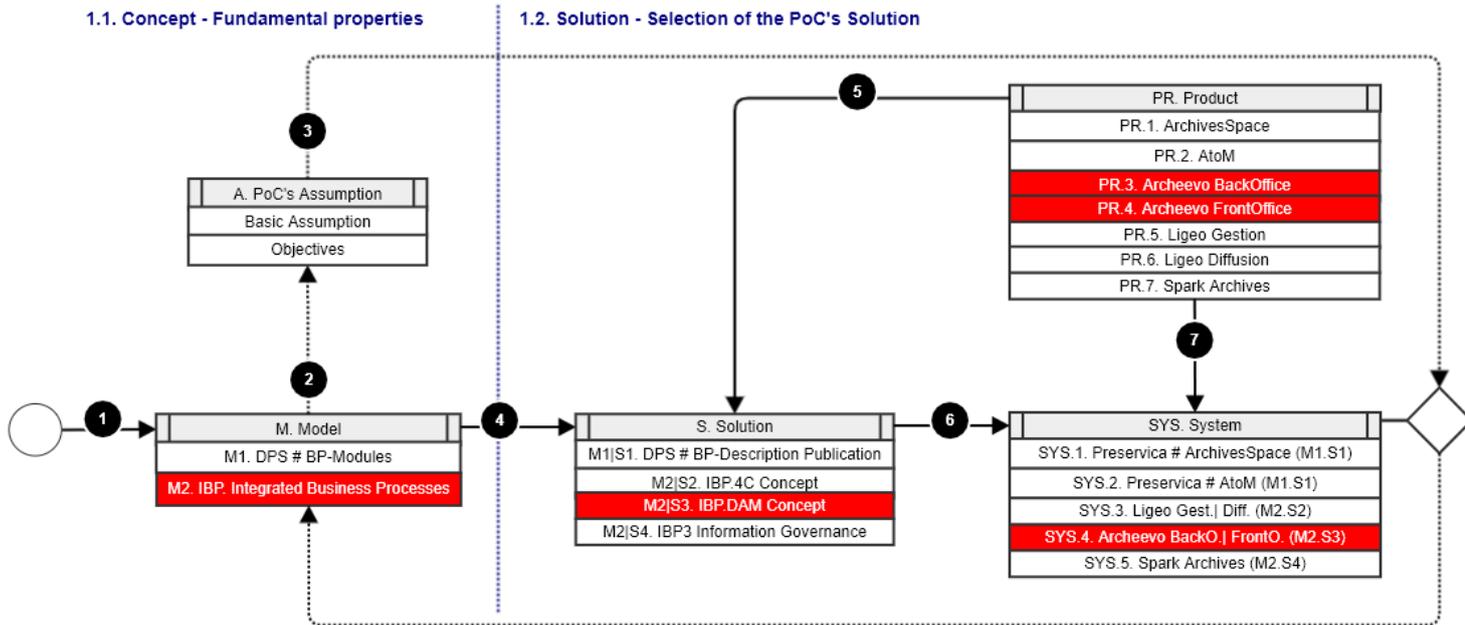
6.6. Solution S3 – Archeevo 5 Management and Access – Sequence 1, Diagram of Your SYS.A

ID	Provider	Product Designation
F0.2		PR3 - ARCHEEVO 5 BackOffice
		PR4 - ARCHEEVO 5 FrontOffice

DIGIT.OIB-HAS - Archival Management System

Sequence n°1. Selection of a PoC's Solution
 PoC Logigram. Model, Solution, Product, System
 Version: 1.0, 25.04.2019
 Use Case: Archeevo from Keep Solution (PT)

Sequence n°1 : Selection of a PoC's solution

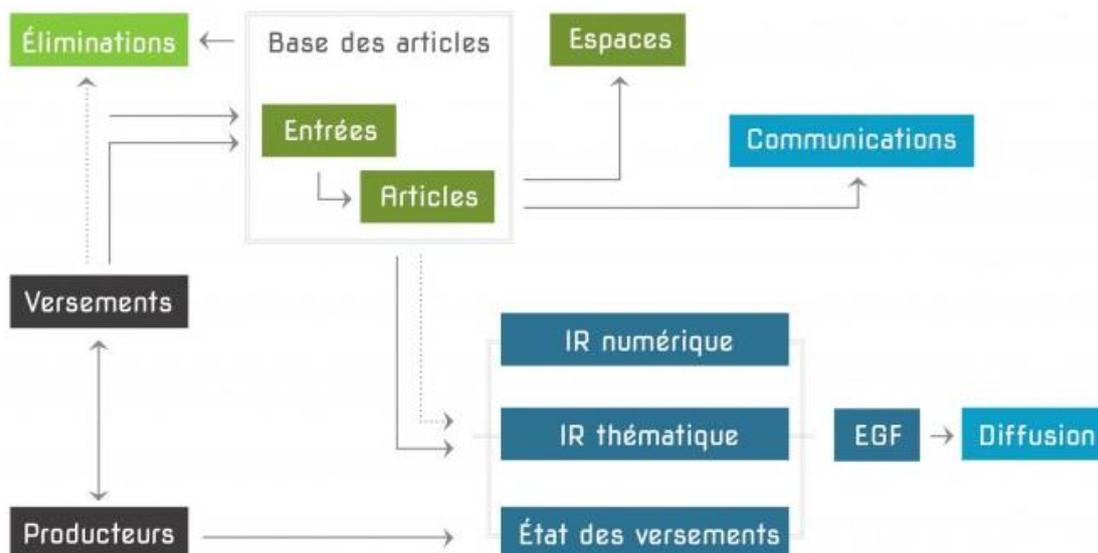


6.7. PR 5|6 Products – Ligeo Archives – FO3. V-TECH Group, Empreinte Digitale (FR)

ID: PR5 6	Ligeo Archives	
Name:	Gestion (PR5), Diffusion (PR6)	
DESCRIPTION REVIEW		
Basic Description	Ligeo Archives is an archival management system that aims to support all the functional areas of an archival institution, covering activities ranging from archival acquisition to access and outreach (consumer). Website: Ligeo Archives	
Owner	Company: Empreinte Digitale - Groupe V-Technologie (France)	
Date	Creation: 2000	
Licensing	Commercial	
MARKET USER		
Users	75 State ad and Local Authorities	
Type	Public authorities – State – Local	
Site	France	
TECHNOLOGIES, STACK		

Suite tools	<ul style="list-style-type: none"> • Ligeo Gestion: Collection (Acquisition, Accession) – Classification (Description, Indexation, Publication) – Preservation (Storage, Digitisation) • Ligeo Diffusion: Access, Consultation, Loan, Outreach
OS Server	LAMP: Linux – Apache – MySQL – PHP Development: CakePHP
Browser	Web navigator: IE >2 – Firefox 7 and below – Chrome – Safari >4
customise / Integration	
Implementation	Empreinte Digitale, Groupe V-Technologie as publisher/integrator

Schema of Data Model



6.8. Solution S2 - Ligeo Archives – Sequence 1, Diagram of Your SYS.B

ID	Provider	Product Designation	
FO.3		PR5 - LIGEO Gestion PR6 - LIGEO Diffusion	

DIGIT.OIB-HAS - Archival Management System

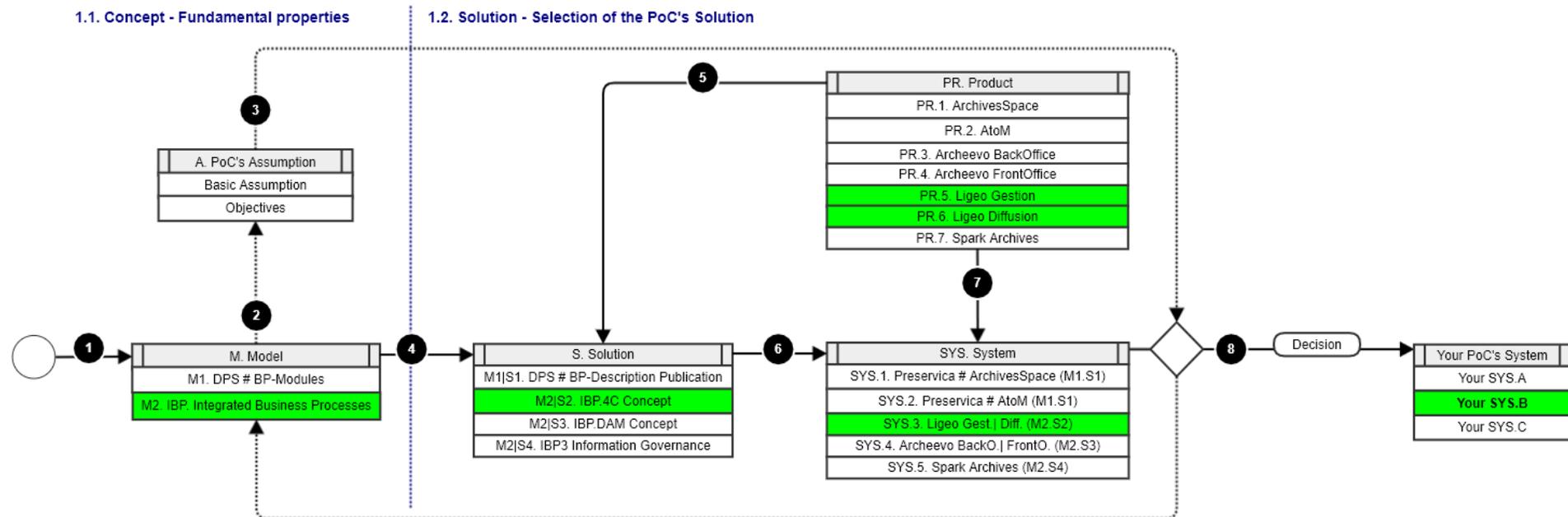
Sequence n°1. Selection of a PoC's Solution

PoC Logigram: Model, Solution, Product, System

Version: 1.0, 25.04.2019

Use Case: Ligeo Archives from Empreinte Digitale (Groupe V-Technologies) (FR)

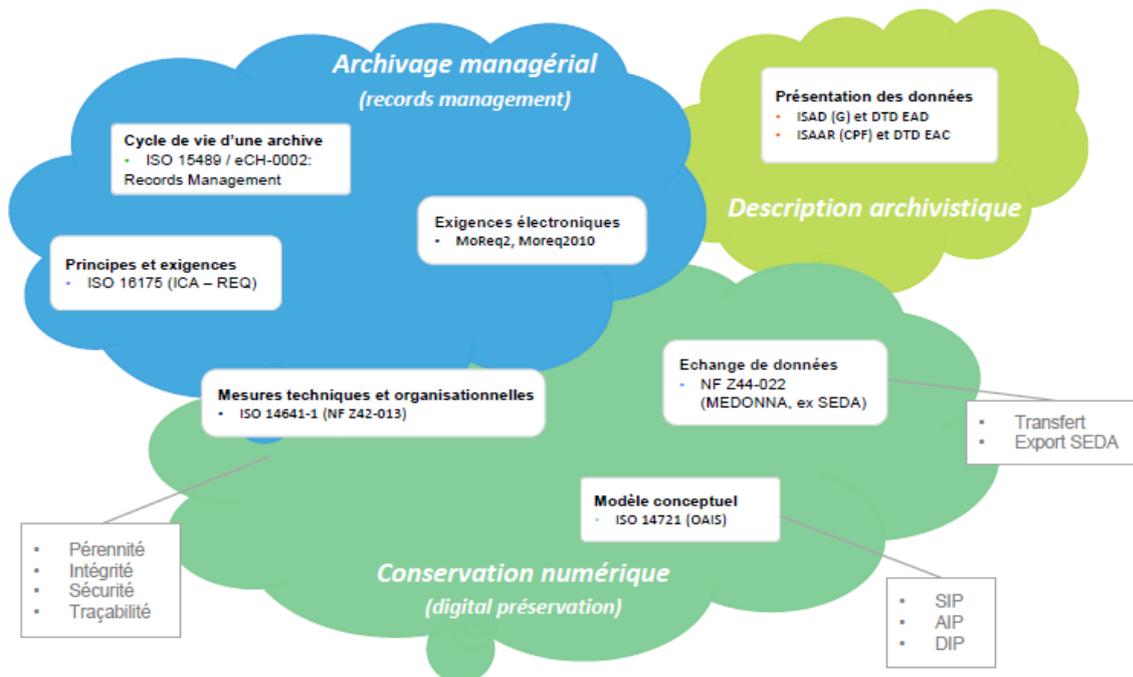
Sequence n°1 : Selection of a PoC's solution



6.9. Product PR7 – Spark Archives – Klee Group (FR)

ID: PR7 Name:	Spark Archives Ajantâ SAFE First Edition – SAAE Advanced Edition	
DESCRIPTION REVIEW		
Basic Description	Hybrid paper and electronic information management system for 'best archival practices and information governance'. Website: https://www.spark-archives.com/fr	
Owner	Company: Klee Group (France)	
Date	Creation: 1998	
Licensing	Commercial: >50	
MARKET		
Users	Company and institutions with a high-level life cycle records and archives regulation	
Type	Banks and Insurances, Major industrial groups, Public administrations, Major hospital, Regulatory authority archives	
Site	World	
TECHNOLOGIES, STACK		
Suite tools	SAFE – Spark Archives First Edition SAAE – Spark Archives Advanced Edition	
OS Server	Linux – Database :PostgreSQL / Oracle Apache / Tomcat / Java API REST, Web Services	
Browser	Web navigator: IE >2 – Firefox 7 and below – Chrome – Safari >4	
Stack	SAFE or SAAE	
Customise / Integration	Project Management Cycle	
Implementation	Klee Group – SparkArchives Division	

Schema of Data Model



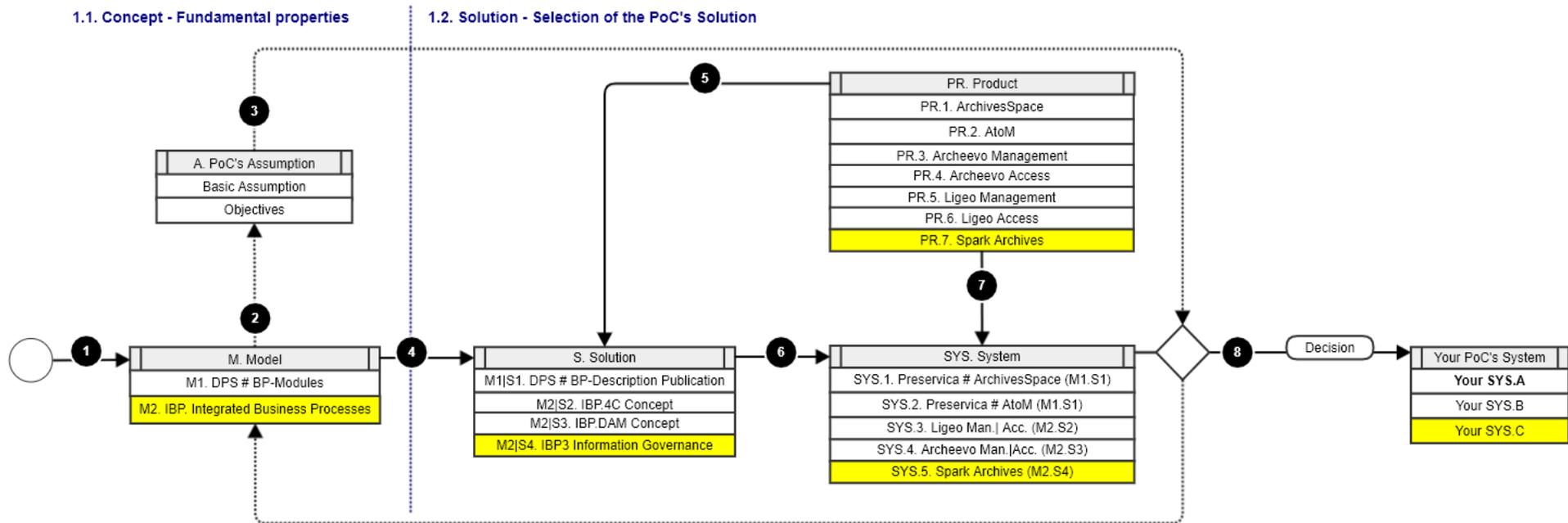
6.10. Solution M2.S4, Spark Archives Ajantâ – Sequence 1, Diagram of the SYS.C

ID	Provider	Product Designation	
FO.4		PR7 - SPARK Archives Ajantâ	

DIGIT.OIB-HAS - Archival Management System

Sequence n°1. Selection of a PoC's Solution
 PoC Logigram. Model, Solution, Product, System
 Version: 1.0, 25.04.2019
 Use Case: Archeevo from Keep Solution (PT)

Sequence n°1 : Selection of a PoC's solution



6.11. Archivistic and Interoperability Standards

Annex 8 – Archivistic and Interoperability Standards – lists the archivistic, organisational and technical standards involved directly or indirectly during integration of the AMS system with the architecture of the HAS systems:

Archival an Interoperability Standards		
Processing of Historical Archives		
1	ISAD(G)	ICA, General International Standard Archival Description https://www.ica.org/en/isadg-general-international-standard-archival-description-second-edition Encoded Archival Description - DTD - XML Schema https://www.loc.gov/ead/
2	ISAAR (CPF)	ICA, International Standard Archival Authority Record for Corporate Bodies, Persons and Families https://www.ica.org/en/isaar-cpf-international-standard-archival-authority-record-corporate-bodies-persons-and-families-2nd Encoded Archival Context for Corporate Bodies, Persons, and Families – XML Schema http://eac.staatsbibliothek-berlin.de/
3	ISDF	ICA, International Standard for Describing Functions https://www.ica.org/en/isdf-international-standard-describing-functions
4	(ISDIAH)	ICA, International Standard for Describing Institutions with Archival Holdings https://www.ica.org/en/isdiah-international-standard-describing-institutions-archival-holdings
5	SKOS EuroVoc	Simple Knowledge Organisation System https://www.w3.org/2004/02/skos/ EuroVoc - Multilingual Thesaurus of the European Union Interface Language https://data.europa.eu/euodp/en/data/group
File format - Preservation – Data exchange		
6	XML Schema	Extensible Markup Language, W3C https://www.w3.org/XML/
7	PDF/A	ISO 19005 - Document management — Electronic document file format for long-term preservation https://www.iso.org/standard/38920.html
8	JPEG	ISO/IEC 15444 - Joint Photographic Experts Group (JPEG2000-JPEG) http://ec.europa.eu/ipg/standards/image/jpeg/
9	ALTO	Analysed Layout and Text Object https://www.loc.gov/standards/alto/
10	METS	Metadata Encoding and Transmission Standard http://www.loc.gov/standards/mets/
11	PREMIS	Data Dictionary for Preservation Metadata https://www.loc.gov/standards/premis/index.html
12	DEPIP (Ex SEDA MEDONA)	ISO 20614 - Information and documentation — Data exchange protocol for interoperability and preservation https://www.iso.org/standard/68562.html
13	OAI-PMH	Open Archives Initiative https://www.openarchives.org/
14	ISO 8601	Data elements and interchange formats — Information interchange — Representation of dates and times https://www.iso.org/obp/ui/fr/#iso:std:iso:8601:-1:dis:ed-1:v1:en
Interoperability – Organisation - Model		
15	OAIS	ISO 14721 / CCSDS 650.0-P-1.1 - Space data and information transfer systems - Open archival information system (OAIS) - Reference model. https://public.ccsds.org/Pubs/650x0b1s.pdf
16	14641-1	ISO 14641-1 - Electronic archiving -- Part 1: Specifications concerning the design and the operation of an information system for electronic information preservation. https://www.iso.org/standard/54911.html
17	RM	ISO 15489 - Information and documentation — Records management https://www.iso.org/standard/31908.html
18	MoReq	MoReq2010 - Model Requirements for the Management of Electronic Records http://ec.europa.eu/idabc/en/document/2303/5927.html

6.12. Content of the Business Scenario List – Version 1 and 2

Version 1 of the Business Scenario List is only in Excel format. Version 2 below is the result of the filter applied to Version 1. The filter selects only the functional requirements with 4 and 5 stars in the FR.Ranked column and eliminates the user stories identified as duplicates ('covered by other') in the US.Certified column. This explains how the number of functional requirements has changed during the development phase of the BS List:

- In the initial version, the number of functional requirements is 176.
- In Version 1, the number of functional requirements with priority 4 and 5 selecting for writing of User Stories is reduced to 95.
- In Version 2, the number of User Stories making up the list of functional scenarios is finalised as 71 (after removal of duplicates).

FB.Key	FR. Key	ID.ISA ²	ISA ² Business Process	FR.Functional Requirement	FR.Ranked [Step11]	US.Certified [Step.12,13]	PE.Persona [Step.14,15]
2	1	2.1	Transfer (non-digital archives)	In the case of “non – HAN” paper archives, the archives producer will be able to encode , in the AMS, metadata about “non-digital” archives (physical items level) still stored at his premises, even if it is not yet the time for transfer.	Five	The <PE.10 - Document Management Officer (Producer)> of the producer organization encodes in the AMS the metadata of locally stored (not yet transferred to HAS) physical items.	E: PE.10 - Document manager Officer (Producer), PE.3 - Archivist (Acquisition) O: PE.4 - Archivist (Processing)
2	2	2.2	Transfer (non-digital archives)	In the case of HAN paper archives, the AMS will be aware of any physical items associated to HAN files by the archives producer .	Four	When the <PE.10 - Document Manager Officer (Producer)> is submitting to HAS, in NomCom, a transfer containing physical items, an <PE.3 - Archivist (Acquisition)> will see the afferent transfer and its physical items directly in AMS.	E: PE.10 - Document Manager Officer (Producer) O: PE.3 - Archivist (Acquisition)
2	4	2.4	Transfer (non-digital archives)	In the case of “non-HAN” paper archives, the archives producer will be able to gather physical items together within a transfer record in order to prepare the transfer to the HAS	Four	When the physical archive must be transferred, <PE.10 - Document Manager Officer (Producer)> selects all the physical items already encoded in AMS and launches the transfer to Historical archives.	E: PE.10 - Document Manager Officer (Producer) O: PE.3 - Archivist (Acquisition)
2	6	2.6	Transfer (non-digital archives)	In both HAN and non-HAN paper archives cases, the user (DMO or HAS) will be able to edit (including rearrange) existing paper transfers records and physical items in the AMS, depending on their status	Four	When discrepancies are identified, <PE.14 - Document management agent> can create a new physical item in AMS by inheriting attributes of an existing one.	PE.14 - Document Manager agent PE.5 - Archivist (Preservation - Physical storage)
2	10	2.10	Transfer (non-digital archives)	The user (archives producer / HAS) will be able to generate labels with barcodes for the selected physical items in the AMS .	Four	For the correct identification of the physical item, <PE.14 - Document management agent> will print the custom labels, containing barcodes, from AMS	E: PE.14 - Document management agent O: PE.3 - Archivist (Acquisition)

3	1	3.1	Digitisation	Archis-Scanning will communicate to the AMS the statuses of the physical item (digitisation process on-going / digitised).	Five	When paper files are being processed in the digitization service, the <PE.8 - Scanning Manager> is able to follow in AMS all the statuses of digitization workflow.	E: PE.14 - Document management agent O: PE.8 - Scanning Manager
3	2	3.2	Digitisation	The AMS will communicate with the relevant repositories in order to retrieve and consult the "consultation" output of the digitisation (e.g. Commission storage, Cloud, Cellar etc.).	Four	While in AMS, <PE.4 - Archivist (Processing)> will be able to associate to a document links or URIs pointing to the consultation copy of the document potentially stored in another repository/ies	PE.4 - Archivist (Processing)
4	1	4.1	Ingest (digital archives)	Regardless the source system, when a first review is accepted by the HAS (in a-REP), the AMS will be informed about the transfer request and include the transfer metadata into the AMS.	Five	The <PE.9 - Digital Preservation Manager> who accepts file transfers to a-REP during the first review (in case of HAN) or any other ingest type, should also be able to consult a weekly list of transfers accepted from the AMS	E: PE.9 - Digital Preservation Manager O: PE.3 - Archivist (Acquisition)
4	5	4.5	Ingest (digital archives)	The AMS will create the "a-REP deliverable units" in the historical archives filing plan, based on specific rules (e.g corresponding to the concepts of "File EC" and "Document EC").	Five	<PE.9 - Digital Preservation Manager> will be able to view in AMS the details of all the transfers ingested in a-REP, both at the level of transfer records as at the level of associated file (dossier) and document metadata at the level of the transfer and in specific branches of the historical archives filing plan.	E: PE.9 - Digital Preservation Manager O: PE.3 - Archivist (Acquisition)
5	1	5.1	Accession (non-digital archives)	The archivist will accept or reject the paper transfer directly in the Archive management system.	Four	When a Producer represented by a DMO requests the transfer of files group to the HAS, the <PE.3 - Archivist (Acquisition)> have to be able to accept the transfer or reject it, with a proper justification, making use of specific pre-defined options (e.g. the transfer list is incomplete, the descriptions are lacking) or by making a general comment.	E: PE.3 - Archivist (Acquisition) O: PE.10 - Document Manager Officer (Producer)
5	2	5.2	Accession (non-digital archives)	The AMS will communicate the decision back to the archive producer.	Five	If <PE.3 - Archivist (Acquisition)> accepted/refused the transfer, <PE.10 - Document Manager Officer (Producer)> will receive a confirmation email, containing earlier given comments (user story 5.1).	E: PE.3 - Archivist (Acquisition) O: PE.10 - Document Manager Officer (Producer)

5	3	5.3	Accession (non-digital archives)	When the transfer record and the corresponding physical items are accepted their status is modified accordingly	Five	The <PE.3 - Archivist (Acquisition)> is always able to see in the AMS the current status of transfers and physical items managed in the system.	PE.3 - Archivist (Acquisition)
5	4	5.4	Accession (non-digital archives)	The archivist will be able to edit the transfer metadata, e.g. to add additional details	Four	When receiving a transfer, the <PE.3 - Archivist (Acquisition)> will be able to edit some selected transfer attributes or to add additional ones.	PE.3 - Archivist (Acquisition)
5	5	5.5	Accession (non-digital archives)	The storage manager will be able to assign a storage location to the physical items (see point 4.1)	Five	For the paper archives entering the warehouse, the <PE.5 - Archivist (Preservation - Physical storage) will encode a physical location for the entire transfer or for a group of physical items	E: PE.5 - Archivist (Preservation - Physical storage)
5	6	5.6	Accession (non-digital archives)	The archivist will be able to associate the transfer and physical items to corresponding fonds.	Four	When receiving a transfer, the <PE.3 - Archivist (Acquisition)> links the files found in the transfer to appropriate fonds.	PE.3 - Archivist (Acquisition)
6	2	6.2	Appraisal & Selection	Review functionalities will be available to group archives that should be subject of a review or a 2nd review (only for archives that underwent a 1st review as stipulated in the current document management rules)	Five	Within an archival holdings, a <PE.4 Archivist (Processing)> will be able to select, in a flexible way, a group of files and carry out on those activities related to appraisal or 2nd review.	E: PE.4 - Archivist (Processing) O: PE.3 - Archivist (Acquisition)
6	4	6.4	Appraisal & Selection	Sorting and reordering functionalities will be available for the displayed content. This includes also to define filing plan like hierarchies in order to group up according to certain parameters.	Five	In order to manage a series already stored but not processed since its acquisition, the <PE.4 - Archivist (Processing)> will be able to sort and to reorder the articles within the series by using the acquisition list, assign the series to a fonds (holdings), and dispatching several articles to others fonds	E: PE.4 - Archivist (Processing) O: PE.6 - Archivist (Access)
6	14	6.14	Appraisal & Selection	The concept of the universe will be available with the possibility of manually defining the size of the universe.	Four	The <PE.4 - Archivist (Processing)> will be able to add review indications (sampling/selection instructions) for large groups of files that will undergo the appraisal or 2nd review.	E: PE.4 - Archivist (Processing)

6	15	6.15	Appraisal & Selection	Archives can be manually selected for permanent preservation or elimination by the archivist.	Five	When working within the review, <PE.4 - Archivist (Processing)> will be able to decide on the elimination or preservation of the files or subgroup of files in the review	E: PE.4 - Archivist (Processing)
6	22	6.22	Appraisal & Selection	All the decisions made on the permanent preservation or elimination of the archives will be preserved in the review, with direct link to the archives for which the decision was taken.	Four	<PE.4 - Archivist (Processing)> will consult the history of the transfer or elimination decisions taken for the files in a specific review	E: PE.4 - Archivist (Processing)
7	1	7.1	Sensitivity Review	The functionalities related to treating archives with exceptions to opening to the public will be available irrespective of the age of the files or documents	Five	<PE.4 Archivist (Processing)> periodically performs sensitivity review ("declassification") of files in archival holdings and can decide (in group or one by one) if the files, or the contained documents can be opened for public access or shall remain restricted. If metadata at document level would exist and is considered incommunicable, then the entire item must be treated as incommunicable.	E: PE.4 - Archivist (Processing) O: PE.6 - Archivist (Access)
7	2	7.2	Sensitivity Review	The decision to lift the exception to opening will be done at file, physical unit or document level (unlike now, where declassification is only possible on physical unit level).	Four	<PE.15 - Archivist (Sensitivity review)> must be able to encode the declassification decision at file, document or physical item level.	E: PE.15 - Archivist (Sensitivity review)
7	6	7.6	Sensitivity Review	The letters confirming that the archives can be opened to the public will be generated automatically by the AMS, using the existing metadata.	Four	When the declassification action should be communicated to the archives producers, <PE.4 - Archivist (Processing)> will launch the creation of the communication letters in AMS.	E: PE.4 - Archivist (Processing)
7	9	7.9	Sensitivity Review	All the actions performed in the declassification workflow will be subject to the audit trail.	Four	The <PE.9 - Digital Preservation Manager> will be able to review, when needed, the details of the audited (previously defined) actions performed in AMS.	E: PE.9 - Digital Preservation Manager
7	14	7.14	Sensitivity Review	AMS will store the necessary codes (DA, C, D, SP, ST) that will be used in the declassification workflow.	Four	Based on the encoded classification codes the dedicated <PE.15 - Archivist (Sensitivity review)> will trigger the specific declassification workflow	PE.15 - Archivist (Sensitivity review)

8	1	8.1	Description Indexation Enrichment	Create fonds	Five	When a fonds, sub-fonds or series is created, a <PE.4. Archivist (Processing)> must be able to select an appropriate ISAD(G) template and enter the information directly or under the control of authority lists in multi-level mode from the fonds to the piece.	E: PE.4 - Archivist (Processing) O: PE.4 - Archivist (Processing)
8	3	8.3	Description Indexation Enrichment	Create on the level of archives series the associated files (dossiers) or documents. Files can be created from various sources: for example, physical items having no electronic counterpart or electronic files (from e.g. Adonis or HAN archives transfers).	Five	For the received archives <PE.4 - Archivist (Processing)> will create and edit the files and documents levels under the corresponding series.	E: PE.4 - Archivist (Processing) O: PE.4 - Archivist (Processing)
8	5	8.5	Description Indexation Enrichment	Classify, describe and validate archives producers. Build up hierarchies of archival producers in correspondence with standards on description of archival producers.	Five	A <PE.4 Archivist (Processing)> must be able to set up producers authority lists and describe the archives producers according to ISAAR (CPF) archival standard.	E: PE.4 - Archivist (Processing) O: PE.1 - System Administrator O: PE.10 - Document Manager Officer (Producer)
8	6	8.6	Description Indexation Enrichment	The Archival management system will connect to HistOrga to retrieve information about the organisational entities to be connected to a described archive producer	Four	<PE.4 Archivist (Processing)> uses the integration of AMS with the corporate HistOrga application to retrieve and import information in order to enrich the producers description.	E: PE.4 - Archivist (Processing) O: PE.4 - Archivist (Processing)
8	8	8.8	Description Indexation Enrichment	Create descriptions of documents taking into account particularities of current document categories (speeches, Commission PV's).	Four	To describe a document, a <PE.4 Archivist (Processing)> must be able to configure several templates for different categories of documents so that he can take advantage of the appropriate form to input the corresponding data.	E: PE.4 - Archivist (Processing) O: PE.4 - Archivist (Processing)

8	9	8.9	Description Indexation Enrichment	The draft versions of the archival descriptions will be made final only after a validation workflow. Details about the actions taken during this workflow will be stored in the Archival management system. Various versions should be able to surpass previous version (0.1 > 0.2 > 1.0 > 1.1 > 1.2 ...). Various version types should co-exist for different means of use (internal use only, publication version ...).	Five	As <PE.4 Archivist (processing)>, the user can create a first version of an archival description (0.1), define minor (0.1, 0.2, etc.) and major (1.0, 2.0) versions and define the archival description status (e.g. draft, ready for publication, published).	E: PE.4 - Archivist (Processing) O: PE.4 - Archivist (Processing)
8	10	8.10	Description Indexation Enrichment	The forms available in the AMS to describe archives and producers (following the international standards) must be able to be adapted to the specific needs of the HAS as defined in the internal manual for archival description.	Five	To file, to describe and to index the archives, a <PE.4 Archivist (Processing)> with high user rights, and if necessary with the help of a <PE.1 System Administrator> must be able to configure several templates for all categories of users, including producers so that each user take advantage of the appropriate form to input information of filing.	E: PE.4 - Archivist (Processing) E: PE.1 - System Administrator O: PE.3 - Archivist (Acquisition) O: PE 4 - Archivist (Processing) O: PE.10 - Document Management Officer
8	12	8.12	Description Indexation Enrichment	Apply "indexation" by making use of the managed authority lists or controlled vocabularies be them HAS specific or managed in a collaborative way by various archives services.	Five	As an <PE.4 Archivist (Processing) I can use authority lists and controlled vocabularies in order to enrich archival description.	E: PE.4 - Archivist (Processing) O: PE.4 - Archivist (Processing)
9	1	9.1	Data Import	Activities related to archival description done by the HAEU archivists will be communicated back to the AMS; a new version for the archival description will be created based on the received information.	Five	When a <PE.11 - Archivist (HAEU)> communicates changes in description data (archival description standards or any other metadata element) to the HAS, the <PE.4 Archivist (Processing)> will be able to consult the new version of the description data set in the AMS and choose to ignore it or to accept it as a new version (minor or major) of the current archival description and publish it.	E: PE.4 - Archivist (Processing) O: PE.11- Archivist (HAEU)

10	1	10.1	Data Export	The AMS will support the organisation and transfer of archives to the HAEU. For paper-based archives the exchange relates to physical objects (for which logistics and transport must be supported) and metadata. For digital archives the exchange is metadata based only. There is no need for further dealing with the transfer to of available microfilms.	Five	When an archive transfer to the HAEU is scheduled for shipment, <PE.4 - Archivist (Processing)> must be able to: - Select a group of archives to be transferred; - Update their status, - Send a request for transfer preparation to the paper repository team, - Prepare the corresponding metadata (incl. the link to the digital objects) in the proper format (EAD, EAC, etc.) - Submit the metadata to the HAEU. The <PE.5 - Archivist (Preservation - Physical storage)> must be able to: - Update the archives status, - Update storage locations.	E: PE.5 - Archivist (Physical Storage) O: PE.4 - Archivist (Processing) O: PE.11- Archivist (HAEU)
10	3	10.3	Data Export	A transfer will be executed only after the validation is performed by an archivist, having the relevant role.	Four	For a new proposed transfer <PE.4 - Archivist (Processing)>, having dedicated approval rights, confirms the execution of transfer to AHEU	E: PE.9 - Digital Preservation Manager
10	6	10.6	Data Export	EUI users will have access, after the transfer, to consultation copies of the digitised archives.	Four	By selecting the link in the received transfer, <PE.11- Archivist (HAEU)> accesses the consultation copy of the digitised archive directly on the EU repositories.	E: PE.11- Archivist (HAEU)
10	7	10.7	Data Export	For already exchanged archival descriptions, new draft versions will be proposed by the users having access to the dedicated module in the AMS: basically, HAS archivists, HAEU users, users from EUI, DMOs.	Four	For the published archives <PE.4 - Archivist (Processing)> makes the changes in the description and submit it to the <PE.11 - Archivist (HAEU)> that will be able to reject it, publish it or merge it with the existing description.	E: PE. 4 - Archivist (Processing) O: PE.11 - Archivist (HAEU)
10	11	10.11	Data Export	HAEU users will have access and will be able to confirm the receipt of the paper archive transfer.	Four	For the received paper transfer <PE.11- Archivist (HAEU)> will log in AMS and confirm the reception.	E: PE.11- Archivist (HAEU) O: PE.4 - Archivist (Processing)
11	2	11.2	Reporting	Users will have access to reports covering destruction of physical items, sampling/selection, published archives and archives to be published	Four	<Different roles> selects the desired report (available based on this role) and launches it, defining also the needed output format.	PE.1 - Administrator System PE.4 - Archivist (Processing) PE.3 - Archivist (Acquisition) PE.5 - Archivist (Preservation - Physical storage) PE.9 - Digital Preservation Manager

11	7	11.7	Reporting	The users with special profiles can define/generate new reports based on the available metadata.	Five	When a new report is needed <PE.1 - Administrator System> defines it in AMS by indicating the criteria and output data and format	PE.1 - Administrator System
13	1	13.1	Master Data Management (User)	User rights will be defined with the granularity that will allow specific rights on different actions performed in the business processes, differentiated based on different statuses (e.g. accept paper transfer, perform the declassification, publish archives etc.) The way the user right and security are currently defined could be used as a reference.	Five	A <PE.1 System Administrator> must be able to set up user rights with granularity that will allow specific rights on different actions performed in the business processes, differentiated based on different statuses (e.g. accept paper transfer, perform the declassification, publish archives etc.) The way the user rights and security are currently defined could be used as a reference.	E: PE.1 - System Administrator O: PE.3 - Archivist (Acquisition) O: PE.4 - Archivist (Processing) O: PE.5 - Archivist (Physical Storage) O: PE.6 - Archivist (Access) O: PE.7 - Reading Room Manager O: PE.8 - Scanning Manager O: PE.9 - Digital Preservation Manager O: PE.10 - Document Manager Officer O: PE.11 - Archivist (HAEU) O: PE.12 - Reading Room Customer O: PE.13 - Web Portal Customer
13	5	13.5	Master Data Management (User)	Depending the architecture of the archives management solution, various types of users will have to be defined going from within the institutions to outside (other EU institutions and the HAEU).	Five	An <PE.1 System administrator> must be able to set up the visibility of functional blocks, to set up the access level of the archival holdings according to their access status and set up the user rights on archival holdings (creation, modification, reading).	E: PE.1 - System Administrator O: PE.3 - Archivist (Acquisition) O: PE.4 - Archivist (Processing) O: PE.5 - Archivist (Physical Storage) O: PE.6 - Archivist (Access) O: PE.7 - Reading Room Manager O: PE.8 - Scanning Manager O: PE.9 - Digital Preservation Manager O: PE.10 - Document Manager Officer O: PE.11 - Archivist (HAEU) O: PE.12 - Reading Room Customer O: PE.13 - Web Portal Customer
13	7	13.7	Master Data Management	The AMS will be able to connect to external sources for importing the standard values for the needed attributes (e.g. EuroVoc, HistOrga, Publication Office – country names under the ISO standard etc.).	Five	To allow the use of authority lists when indexing, the <PE.1 System Administrator> will be able to integrate standardized external vocabularies such as EuroVoc, HistOrga, User Repository, ISO Country, ISO Date or the ones being collaboratively managed outside the AMS.	E: PE.1 - System Administrator O: PE.4 - Archivist (Processing)

13	9	13.9	Master Data Management	The AMS will be able to construct and maintain from scratch new specific controlled vocabularies or controlled named entities (non-shared).	Four	<PE.1 - System Administrator> will set up within the AMS new EC specific controlled (hierarchical) vocabularies.	PE.1 - System Administrator
13	12	13.12	Master Data Management]Different types of "master data" will have to be defined. At least those needed for the internal functioning of the systems (e.g. shelving categories, types of physical items, declassification metadata) and the ones needed e.g. for enriching descriptive metadata.	Five	A <PE.1 - System Administrator> should be able to configure master data list of physical storage management, of declassification and of physical item types in order to control data input, trigger workflows and automate operations.	E: PE.1 - System Administrator O: PE.4 - Archivist (Processing) O: PE.5 - Archivist (Physical Storage) O: PE.6 - Archivist (Access) O: PE.8 - Scanning Manager O: PE.9 - Digital Preservation Manager
14	3	14.3	Authority List Management	The AMS must be organised in such a way that the management of the master data can be distributed over several stakeholders (like other EU institutions and the HAEU).	Five	A <PE.1 - System Administrator> will be able to set up access (view and/or edit) to master data (controlled vocabularies) for specific users outside the EC with the objective to manage data in a shared and collaborative way (probably outside the AMS).	E: PE.1 - System Administrator O: PE.13 - Web Portal Customer O: PE.4 - Archivist (Processing) O: PE.11 - Archivist (HAEU)
15	1	15.1	Storage Management (non-digital archives)	The physical items location management will be done at the box level or lower. For this, specific metadata will be available at physical item level and below (file, document).	Five	1. Physical items can exist as a box or a binder (or other) or can also be nested (a box in a box, a binder in a box). <PE.5 - Archivist (Preservation - Physical storage)> will be able to encode the specific location metadata, possibly using the bar code scanner. 2. Physical items are grouped in "transfers". A <PE.5 - Archivist (Preservation - Physical storage)> can associate a complete transfer to a storage space. The application allows the calculation of the needed space and adds information at physical items level.	PE.5 - Archivist (Preservation - Physical storage)

15	2	15.2	Storage Management (non-digital archives)	The AMS will manage all the available storing space, having at all time the status of the occupied and empty locations; this way it will be able to propose locations based on the specific metadata available at physical item level.	Five	<p>1. When a new physical location is available, <PE.5 - Archivist (Preservation - Physical storage)> will create it in AMS with all the needed details (hierarchy levels, available dimensions, etc.).</p> <p>2. For archives that must be stored <PE.5 - Archivist (Preservation - Physical storage)> requests that AMS calculates the exact storage location based on the dimensions of the physical items and available free space.</p>	PE.5 - Archivist (Preservation - Physical storage)
15	3	15.3	Storage Management (non-digital archives)	The functionalities related to physical items management will be available for services with central archive management, even if the physical items are not subject of a transfer to HAS yet.	Four	For paper archives stored at his premises, <PE.10 - Document Manager Officer (Producer)> encodes existing storage location by adding details related to hierarchy (building, floor, room, etc.) and dimensions	E: PE.10 - Document Manager Officer (Producer) O: PE.3 - Archivist (Acquisition)
15	8	15.8	Storage Management (non-digital archives)	Test scenario consisting in changing the storage location of a number of physical units.	Five	<p>1. Certain physical units must be moved to another storage space so a <PE.5 Archivist (Preservation - Physical Storage)> must be able to "check out" the concerned physical items and check them in at another place.</p> <p>2. After freeing up a lot of small spaces scattered in a store after disposals, a <PE.5 Archivist (Preservation - Physical Storage)> must be able to re-organize archival units on the free spaces and quickly update the location in the AMS.</p>	E: PE.5 - Archivist (Preservation - Physical Storage) O: PE.4- Archivist (Processing)
17	1	17.1	Elimination (non-digital archives)	The elimination procedure should be available when archives are selected for elimination.	Five	When a group of files have to be deleted, a <PE.4 Archivist (Processing)> must be able to launch a workflow of elimination (disposal) allowing him to select the units (articles), edit the list of elimination, have it approved by those responsible, ask the <PE.5 Archivist (Preservation - Physical Storage)> to proceed with the destruction, and be able to consult the trace of the operation in order to guarantee the elimination audit.	E: PE.4 - Archivist (Processing) O: PE.5 - Archivist (Preservation - Physical Storage)

17	4	17.4	Elimination (non-digital archives)	A basic set of metadata will be permanently preserved for the eliminated archives.	Five	At any moment <PE.4 Archivist (Processing)> must be able to view the details (basic set of metadata) of all the eliminated content.	PE.4 - Archivist (Processing)
17	8	17.8	Elimination (non-digital archives)	The AMS will allow the archivist that supervises the physical items destruction to encode the confirmation of the successful action.	Four	After observing the destruction of the physical items <PE.5 - Archivist (Preservation - Physical storage)> will encode the confirmation of the action in AMS.	PE.5 - Archivist (Preservation - Physical storage)
19	1	19.1	Standard Publication	It will be possible to trigger the publication from the AMS for the archives that are older than 30 years and correspond to other rules allowing to be opened to the public.	Five	1. When the date of the archives is 30 years old and over and corresponds to all other related criteria, a <PE.4 Archivist (Processing)> must be able to manually trigger the publication. 2. In the case the publication process was automatically triggered by the AMS, <PE.4 - Archivist (Processing)> will verify and confirm the publication.	E: PE.4 - Archivist (Processing) O: PE.13 - Web Portal Customer
19	3	19.3	Standard Publication	A dedicated interface will be offered for visualisation of the published archives. The interface will allow internal or external users to add additional description (that will be proposed for validation to the archivist) for the published archives.	Five	1. Whenever a need arises to consult published archives, any <PE> can go to a dedicated public website to search and retrieve public archival descriptions. 2. When on the public website, an archival description needs to be improved, any <PE> can suggest a correction or an additional information.	E: PE.4 - Archivist (Processing) O: PE.10 - Document Manager Officer O: PE.11 - Archivist (HAEU) O: PE.12 - Reading Room Customer O: PE.13 - Web Portal Customer
19	8	19.8	Standard Publication	The elimination of archives from publication portal can be requested by the external users, directly in the publication portal. The user will be requested to input the reasons for the elimination request.	Four	In specific cases <PE.13 - Web Portal Customer> makes a documented request for removing the published content. The request will be analysed and decided over by the <PE.4 - Archivist (Processing)>.	E: PE.13 - Web Portal Customer O: PE.4 - Archivist (Processing)

20	1	20.1	Reading Room	No requirement	Five	1. A <PE.13 Reading Room Customer> will be able to register himself by making use of a dedicated form to collect user data. 2. A <PE.13 Reading Room Customer> will be able to use a workstation to request the inventories and databases, book and obtain access to files and documents according to the reading room rules.	E: PE.12 - Reading Room Customer O: PE.7 - Reading Room Manager
21	1	21.1	Search & Request	The AMS will support the creation of research requests by internal (EC) users and external users, accessing published archives through a dedicated interface.	Five	In the context of an administrative search request by any <PE.13 - Web portal consumer> (external/internal), this <PE.13 - Web portal consumer> can encode the request on a dedicated form available on the public website.	E: PE.13 - Web Portal Consumer O: PE.10 - Document Manager Officer O: PE.4 - Archivist (Processing)
21	2	21.2	Search & Request	The AMS will allow the encoding of specific metadata for the research requests (e.g. reason of request, details about the requestor, how the answer should be delivered etc.).	Four	<PE.6 - Archivist (Access)> will encode specific details about the new request (e.g. reason of request, details about the requestor, how the answer should be delivered etc.). The request can be dispatched and the <PE.6 - Archivist (Access)> must be able to follow-up the request.	PE.6 - Archivist (Access)
21	3	21.3	Search & Request	The AMS (e.g. front end) will allow external users to authenticate in order to follow the status of the research requirement or performing changes in the original request.	Four	In the case an original request was updated in the portal by the requestor (EC internal or external) <PE.6 - Archivist (Access)> will be able to visualise the changes in AMS.	PE.6 - Archivist (Access)
21	8	21.8	Search & Request	The result list (based on a search performed on the available archives) will be exported by the archivist in order to be used in the communication with the requestor.	Five	When a search result is displayed <PE.6 - Archivist (Access)> can export it in a standard format.	PE.6 - Archivist (Access)

21	15	21.15	Search & Request	The answer created for the requestor could contain the URIs created for the scanned archives and the DIPs generated for the archives existing in a-Rep.	Five	When an user performs a request and obtains the right to access content in electronic form, the <PE.9 - Digital Preservation Manager> must be able to communicate the right to access an URI for digitised content or to launch a DIP process in a-REP allowing to make the data ready for consultation (downloading).	E: PE.9 - Digital Preservation Manager O: PE.1 - System Administrator O: PE.4 - Archivist (Processing) O: PE.13 - Web Portal Customer
21	18	21.18	Search & Request	Be able to perform complex searches (cross searches)	Five	A <PE. 4 Archivist (Processing)> must be able to define and set up search and request templates based on cross searches, associated to user profile and holdings categories.	E: PE.4 - Archivist (Processing) O: PE.6 - Archivist (Access) O: PE.7 - Reading Room Manager O: PE.9 - Digital Preservation Manager O: PE.10 - Document Manager Officer (Producer) O: PE.13 - Web Portal Customer
21	19	21.19	Search & Request	Export search results	Five	A <PE. 4 Archivist (Processing)> must be able to define and set up templates and data grids to export search results	E: PE.4 - Archivist (Processing) O: PE.6 - Archivist (Access) O: PE.9 - Digital Preservation Manager O: PE.11 - Archivist (HAEU)
21	20	21.20	Search & Request	A PU that has been used to answer a search request should have this information as additional metadata.	Four	When <PE.6 - Archivist (Access)> accesses a physical unit, he must see that it was used in a search request.	E: PE.6 - Archivist (Access)
22	1	22.1	Loan	A loan request could be started from scratch or from the search results when the results contain physical items.	Five	1. From a search results of the publication platform, a <PE.13- Web Portal Customer> can launch a consultation request that will later on - if the request is eligible - be made available in the reading room. 2. From a search result in the AMS, a <PE.6 - Archivist (Access)> can be able to launch a loan request for which physical items will be delivered at his office.	E: PE.13 - Web Portal Customer E: PE.12 - Reading Room Customer E: PE. 6 - Archivist (Access) O: PE.7 - Reading Room Manager
22	6	22.6	Loan	The report of the physical items to be delivered to the requestor will be available for the warehouse user so it will be used in the communication with the transport service provider.	Four	<PE.5 - Archivist (Preservation - Physical storage)> will receive loan request details in order to prepare the loan.	PE.5 - Archivist (Preservation - Physical storage)

22	8	22.8	Loan	Specific statuses will be available for the physical items loan requests; the successful finalisation of the loan process will be encoded in the system together with the proof of the delivery.	Four	When a loan request is created by any user of the AMS, <PE.6 - Archivist (Access)> will launch the loan workflow	PE.6 - Archivist (Access)
22	14	22.14	Loan	Create "fiche fantôme"	Five	A <PE.5 Archivist (Preservation - Physical Storage)> must be able to automatically print a "fiche fantôme" to replace the extracted unit of his location and update the information (reason, unavailability time) in the AMS to secure the document and facilitate the come back from reading room when its place again.	E: PE.5 - Archivist (Preservation - Physical Storage) O: PE.4 - Archivist (Processing) O: PE.7 - Reading Room Manager (Access)

