



Project Abstract: Phase 1

Contractor T-Systems International GmbH

Keywords: Archiving, Preservation, Discovery, Data Management, Data integrity, Security, API, OAIS, Core Trusted Seal, FAIR, Storage, Scalability, Hybrid Cloud, Science Cloud, Open Science, Large-scale Data, Federated Identity Management, GÉANT Network, OpenStack, Business Models, Service Level Agreement, Licensing, European Open Science Cloud, EOSC.

Abstract

This project abstract is a summary to clearly explain the R&D to be carried out in Phase 1 and the objectives to be met. It shall include:

- short description of the company or consortium
- a description of the proposed solution and how it meets the R&D objectives identified in the Contract
- the R&D for Phase 1 (what specifically will be done)
- how the objectives will be achieved (technical and organizational measures to carry out the R&D and achieve the stated objectives)
- any steps that will be taken to prepare for commercialization of the solution after the PCP.

This project abstract will be communicated to the European Commission, and information that is not indicated as being confidential will be provided to interested parties such as early adopters. Any confidential information must be marked as such.

To meet the challenge of the Archiver PCP to create cost-effective preservation services for the European science community, T-Systems' approach is to provide an OAIS-compliant solution that is open, easy-to-use, extendable, cost- and energy-efficient.

The solution follows a full open-source and cloud-agnostic approach, building on pre-existing and proven components for data preservation and workflow management. The core components include Archivematica, Onedata and Flowable. The modular approach is supported by a large set of APIs that will enable users to extend and integrate the components with other preferred services.

The R&D will focus on new innovative functionality for baseline and advanced data preservation services, including Petabyte-scale storage options, compliance with OAIS, PREMIS, METS and BagIT standards and new innovate functions for distributed data and workflow management, search and discovery, data representation and scientific analysis.

The objective is an integrated service offer for end-users, integrators and cloud providers for deployments on local and public cloud infrastructures. T-Systems will operate the services as part of its Open Telekom Cloud portfolio, a leading European public cloud service based on OpenStack. GWDG will extend its portfolio with the service offer for its established public and academic community. Both will support other candidates that will adapt the solution and join the community.

New business models will be evaluated for public sector organizations, enabling competitive procurements of preservation services while taking full advantage of the flexibility, scalability and competitive pricing that commercial and academic cloud providers can offer.

The project will support the European Open Science Cloud initiative, to eventually provide Europe's 1.7 million researchers and 70 million science and technology professionals with preservation services and re-use of research data across borders and scientific disciplines.

T-Systems is the lead contractor from Germany and will be supported by subcontractor GWDG, an academic service provider from Germany and Onedata, an SME from Poland.