Contribution ID: **9**   Type: **Full presentation: short (15 mins.)**

Next-gen research data management, archiving and digital preservation

Monday, 2 November 2020 15:45 (15 minutes)

With a total procurement budget of 3.4 million euros, the project ARCHIVER will use a Pre-Commercial Procurement (PCP) approach to competitively procure R&D services for archiving and digital preservation. ARCHIVER will introduce significant improvements in the area of archiving and digital preservation services, supporting the IT requirements of European scientists and providing end-to-end archival and preservation services, cost-effective for data generated in the petabyte range with high, sustained ingest rates, in the context of scientific research projects. The project is managed by a consortium of procurer research organisations (CERN, DESY, EMBL-EBI and PIC) and experts (Addestino and Trust-IT) and receives funding from the European Union's Horizon 2020 research and innovation programme. T-Systems is amongst the five winning consortia selected to perform the solution design.

T-Systems'approach for Archiver is to provide research organisations and the European Science community with a next-generation architecture, that will seamlessly integrate archiving and digital preservation into existing science workflows, and provide an OAIS-compliant, open, easy-to-use, extendable, cost- and energy-efficient solution.

The solution follows a full open-source and cloud-agnostic approach, building on pre-existing and proven components for data preservation, data and workflow management. The core components include Archivematica, Onedata and Flowable, and have been selected based on functionality, integration, cloud-adoption, maturity, size of user community and relations with EOSC. 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 service offer will include a wide range of Petabyte-scale storage options in compliance with standards like OAIS, PREMIS, METS and BagIT. The service will integrate new innovate functions for distributed data and workflow management, data processing, and provide a set of new visual tools for advanced data services including search and discovery, data representation and scientific analysis.

The core components will be provided as one integrated service offer that will be available to 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.

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Session Classification: Data Management Solutions - Part 1