Contribution ID: **479** Type: **Oral**

Open Data Science Mesh: friction-free collaboration for researchers bridging High-Energy Physics and European Open Science Cloud

Tuesday, November 5, 2019 2:30 PM (15 minutes)

Open Data Science Mesh (CS3MESH4EOSC) is a newly funded project to create a new generation, interoperable federation of data and higher-level services to enable friction-free collaboration between European researchers.

This new EU-funded project brings together 12 partners from the CS3 community (Cloud Synchronization and Sharing Services). The consortium partners include CERN, Danish Technical University (DK), SURFSARA (NL), Poznan Supercomputing Centre (PL), CESNET (CZ), AARNET (AUS), SWITCH (CH), University of Munster (DE), Ailleron SA (PL), Cubbit (IT), Joint Research Centre (BE) and Fundacion ESADE (ES). CERN acts as project coordinator.

The consortium already operates services and storage-centric infrastructure for around 300 thousand scientists and researchers across the globe. The project will integrate these local existing sites and services into a seamless mesh infrastructure which is fully interconnected with the EOSC-Hub, as proposed in the European Commission's Implementation Roadmap for EOSC.

The project will provide a framework for applications in several major areas: Data Science Environments, Open Data Systems, Collaborative Documents, On-demand Large Dataset Transfers and Cross-domain Data Sharing.

The collaboration between the users will be enabled by a simple sharing mechanism: a user will select a file or folder to share with other users at other sites. Such shared links will be established and removed dynamically by the users from a streamline web interface of their local storage systems. The mesh will automatically and contextually enable different research workflow actions based on type of content shared in the folder. One of the excellence areas of CS3 services is access to content from all types of devices: web, desktop applications and mobile devices. The project augments this capability to access content stored on remote sites and will *in practice* introduce FAIR principles in European Science.

The project with leverage on technologies developed and integrated in the research community, such as ScienceBox (CERNBox, SWAN, EOS), EGI-CheckIn, File Transfer Service (FTS), ARGO, EduGAIN and others. The project will also involve commercial cloud providers, integrating their software and services

Consider for promotion

Yes

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Session Classification: Track 8 – Collaboration, Education, Training and Outreach

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