

# Towards a Global Federated Framework For Open Science Cloud - EaP

## Principal Investigators:

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**Entry in the community requirement database:** [Towards a Global Federated Framework For Open Science Cloud](#)

## About the pilot

### Description of supported work

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### Objectives

1. Initial integration, federation and interoperability between CSTCloud and EOSC.
2. Testing the three pilots in the federated infrastructure
3. Forecasting Taiwan Typhoon using 1 km resolution, Doppler Radar and radiation satellite and high resolution satellite images.
4. Precision medicine using animal or plant Genomics.
5. SmartCity Storm surge and disaster assessment using satellite data.

### General

The project aims to allow researchers from Africa and China to use EOSC services to analyse and publish datasets on a federated cloud infrastructure composed by EGI and CNIC CAS resources.

Three different pilot use cases have been identified during this project:

- Disaster risk: CASEarth provides high resolution (8 m) satellite data and radiation satellite images for the simulation of tsunamis, hurricane, earthquakes, typhoons, floods and extreme weather.
- Smart City: ESA and CSTCloud provide high resolution data and sensor data for the city of Shenzhen in Guangzhou province, China.
- Precision Medicine: Beijing Institute of Genomics (BIG) provides datasets for analysing genetic make up of diseases.

## Team

Participant	Role	Name and Surname
Director AASCTC Khartoum	PI	Hussein Sherief
Director of CSTCloud (CNIC-CAS)	PI	Jianhui Li
EGI Foundation	Shepherd	Giuseppe La Rocca
LNEC	Technical support	<a href="#">Anabela Oliveira</a> , <a href="#">André Fortunato</a> , <a href="#">João Rogeiro</a> and <a href="#">Alberto Azevedo</a>
Academia Sinica Grid Computing (ASGC)	Technical support	<a href="#">Eric Yen</a>
PSNC	Cloud Provider	<a href="#">Marcin Plociennik</a> and <a href="#">Norbert Meyer</a>

## Technical Plan

The full technical plan can be found here:

<https://docs.google.com/document/d/1r9ml1H7lvNCi2ePKc-Fv5GWbSRORgXKp/edit>

Work planned for Q1	
Work planned for Q2	
Work planned for Q3	

# EOSC services and providers

## Providers

PSNC is contributing with cloud resources for supporting the three pilot use cases (3PMs).

Additional computing and storage resources will be complemented by the OCRE project.

## Services

- EGI AAI Check-In service will be used to enable access to global cloud infrastructure.
  - For this integration no additional effort is allocated since a MoU between EGI and CSTCloud is already in place.
- Cloud Compute, online and long-term archiving storage.
- [OPENCoasT service](#)
  - 6PMs are allocated to LNEC to extend the framework and support the EaP application
- DMCC+ service
  - 3PMs are allocated to ACGC to support the EaP application
  - WRF 4DVAR
- AGROS (OpenAIRE)
  - No additional effort is requested from the service provider side