



EXTRACT

A distributed data-mining software platform for
extreme data across the compute continuum

TASKA Use Case

Transient Astrophysics with an SKA pathfinder

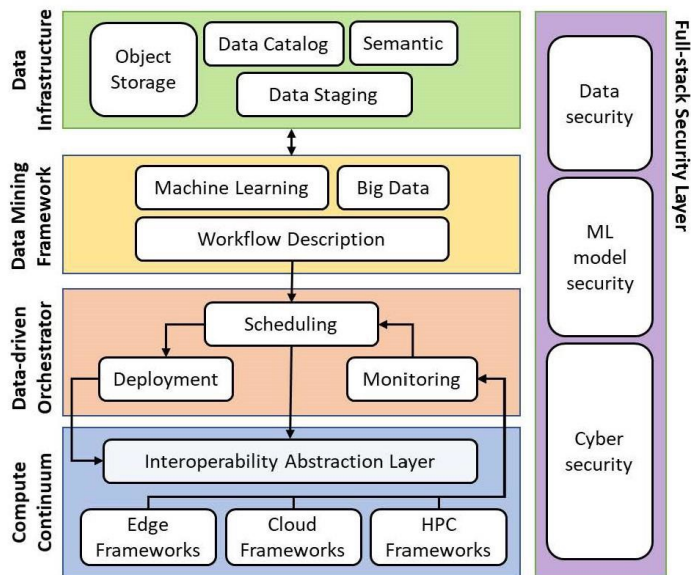
B. Cecconi and the EXTRACT & TASKA teams



The EXTRACT Project has received funding from the European Union's
Horizon Europe programme under grant agreement number 101093110

Project Goal

- Delivering a data-driven **open-source platform** integrating cloud, edge and HPC technologies for trustworthy, accurate, fair and green **data mining workflows** for high-quality actionable knowledge



Partners

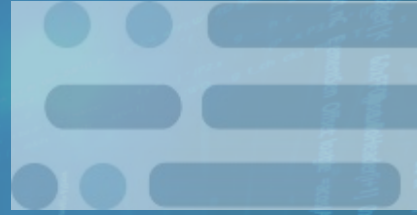


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TASKA Use Case



Transient Astrophysics with an SKA Pathfinder



- **NenuFAR**: an SKA Pathfinder, located in Nançay (France)
- **Edge** data processing, in Nançay, real time data analysis:
« *Beam forming* » mode, goal = *Analog-to-information*
Detect (AI) structures => decision on resolution of data output
- **Cloud** data processing in Datalake (NenuFAR data centre):
Post-processing of « Imaging » data:
 - orchestration of staging, computing, optimisation of workflow
 - generic processing (calibration, source removal...)
 - specific heavy processing (e.g., dynamic spectrum extraction from visibilities)

Dynamic imaging of transient / variable sources in visibility space:
- decomposition of components/calibration in visibility space



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