

# SUMMARY

Data is fueling the digital transformation but its extreme characteristics challenge conventional tools and technology, leaving untapped potential.

EXTRACT will create a complete and secure edge-cloud-HPC continuum to tackle this challenge head-on.

The EXTRACT open-source platform will improve the entire lifecycle of extreme data: from data mining to generating actionable knowledge.

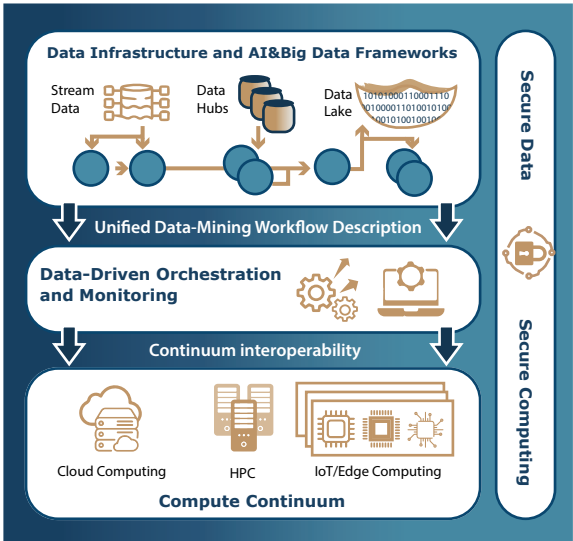


Figure 1. Main EXTRACT platform components . BSC©

# PARTNERS

[www.extract-project.eu](http://www.extract-project.eu)

## EXTRACT

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

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# EXTRACT

A distributed data-mining software platform for EXTREME data across the Compute continuum



@EXTRACT\_EU\_proj EXTRACT EU project

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## ➤ OBJECTIVES



Enable the development of complex and secure data-mining workflows.



Develop novel data-driven orchestration mechanisms to efficiently deploy and execute data mining workflows.



Deliver the EXTRACT software platform and demonstrate its benefits in two use cases.



Fully exploit the performance capabilities of the compute continuum to effectively address extreme data characteristics (high volume, variety, velocity, veracity) holistically.



Foster the adoption of EXTRACT technology by industrial and academic communities.

## ➤ USE CASE 1

### Personalized Evacuation Routing (PER) System



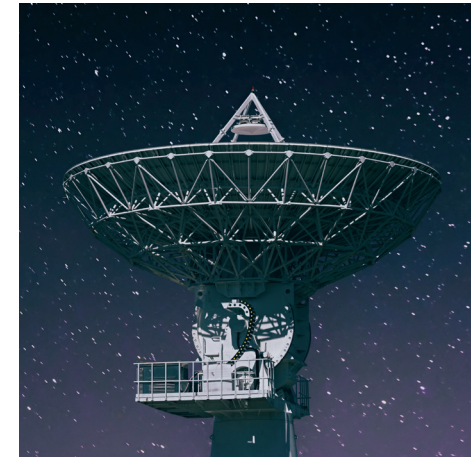
#### A **Personalized Evacuation Routing (PER)**

System will guide citizens in an urban environment (the city of Venice) through a safe route in real time.

The EXTRACT platform will develop, deploy and execute a data-mining workflow to generate **personalized evacuation routes** for each citizen and display them on a mobile phone app. Extreme data from Copernicus & Galileo satellite data, IoT sensors, and 5G mobile signals will be fused in a data lake and processed and analysed.

## ➤ USE CASE 2

### Transient Astrophysics with a Square Kilometer Array Pathfinder (TASKA)



#### The **Transient Astrophysics with a Square Kilometer Array Pathfinder (TASKA)**

case will use EXTRACT technology to develop data-mining workflows that effectively reduce the huge amount of raw data produced by NenuFAR radio-telescopes by a factor of 100.

These workflows will allow for the populating of high-quality datasets that will be openly accessible to the astronomy community (through the EOSC portal) to be leveraged for multiple research activities.