



ascender

**A Software
Architecture for
Continuous Computing
Environments for
the Development,
Deployment and
Efficient Execution
of Extreme Data
Analytics Methods**



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Funded by
the European Union
NextGenerationEU



Plan de
Recuperación,
Transformación
y Resiliencia

This ASCENDER project of the UNICO I+D Cloud program is funded by the Ministry for Digital Transformation and Public Administration and by the European Union – NextGenerationEU, within the framework of the PRTR and the MRR. – NextGenerationEU, en el marco del PRTR y el MRR.

The **ascender**'s objective is to integrate the most relevant technologies to enable the application of extremely big data analysis methods.

To this end, the project will implement:

a **software architecture** for the development, deployment and execution of **complex workflows** for knowledge extraction in a continuous computing environment

Use cases



Smart mobility

Real-time detection of risk situations in intermodal mobility for safer and more efficient traffic management.

→ It will allow the generation of alerts and the creation of traffic statistics through cloud and edge computing.



Sustainable mobility

Air quality estimation in large cities and monitoring of the environmental impact of urban transport.

→ It will provide microscopic models for estimating instantaneous pollutant emissions.



Precision farming

Estimation of production and water stress in vineyards for proper planning of agricultural resources.

→ It will allow optimizing the use of resources such as water, with a clear benefit for the environment.

This project is developed by the



**Barcelona
Supercomputing
Center**
Centro Nacional de Supercomputación