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PRESS RELEASE

An Extreme Data platform for advanced data analysis and knowledge extraction

The consortium of **EXA4MIND** (Extreme Analytics for Mining Data spaces) is pleased to announce the launch of an ambitious project selected and funded by the European Commission as part of the Horizon Europe Programme. Involving top talent from renowned universities and research centres, small and medium-sized enterprises and the industrial sector, 9 partners from 6 countries (the Czech Republic, Germany, Switzerland, Turkey, Spain and France) will join forces to make EXA4MIND a reality and create a unique Extreme Data platform by 2026.

This initiative constitutes a leap forward for Big and Extreme Data techniques in Europe. At its core, EXA4MIND is driven by four application cases in the fields of molecular dynamics, advanced driver assistance systems, smart agri-viticulture and health and social Big Data. With co-design and interdisciplinarity as its cornerstones, the project proposes innovative solutions to complex everyday data-processing problems and addresses critical challenges like data analytics, Machine Learning (ML) and Artificial Intelligence (AI) at scale; effectively democratising access to and enabling connectivity across EU supercomputing centres.





As the underlying framework supporting these use cases, EXA4MIND will build an Extreme Data platform that brings together data storage systems and powerful computing infrastructures by implementing novel automated data management and effective data staging. To do this, the project will set up a unique Extreme Data Database and advanced analytics on supercomputers powered by AI and ML to unlock data collection from heterogeneous sources, automatic data harmonisation and annotation on the fly.

The platform will extract value from large and multi-modal data streams, seamlessly integrating database ecosystems and merging the world of scientific and business data with European Cloud and High-Performance Computing (HPC) resources at scale.

Thus, EXA4MIND's platform will effectively link top-notch EU supercomputing centres to reinforce and consolidate their role as lighthouses for green and fair computing in the Extreme Data sector. The project will follow an open-source approach, placing data integrity control and reproducibility under the spotlight in order to build a truly trustworthy ecosystem. As part of our commitment to openness and transparency, results and relevant data from this project will be made available to the European FAIR data ecosystem, the emerging [European Data Spaces](#), [EUDAT](#) and the [European Open Science Cloud](#).

As Jan Martinovic, the project's coordinator, has stated: *"I am glad that we will contribute to the development of the European digital space and I am looking forward to the cooperation with all partners, as we have a great team that can reach excellent results. Under the umbrella of the EXA4MIND platform, the project showcases a series of flagship use cases that bring together top players in academia, research, industry and business, harmonising the way Big Data from heterogeneous storage systems and database management systems is made available and ultimately processed on pre-Exascale Supercomputers, cloud and AI-based systems."*

EXA4MIND is a joint initiative by [IT4Innovations at VSB – Technical University of Ostrava \(IT4Innovations\)](#), the [Leibniz Supercomputing Centre \(LRZ\) of the Bavarian Academy of Sciences and Humanities](#), [Middle East Technical University \(METU\)](#), [AUSTRALO Interinnov Marketing Lab](#), [Euraxent](#), [Czech Institute of Informatics, Robotics and Cybernetics at the Czech Technical University \(CIIRC CTU\)](#), [Valeo](#), [Terraview](#) and [Altrnativ](#).



Key contacts

Coordinator: Jan Martinovic (IT4Innovations) – jan.martinovic@vsb.cz

Scientific Coordinator: Stephan Hachinger (LRZ) – stephan.hachinger@lrz.de

Communication: Marketa Dobiasova (IT4Innovations) – marketa.dobiasova@vsb.cz
and Arantxa Echarte (AUSTRALO) – arantxa@australo.org

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