Target Values

Scientific: Research and development of innovative tools and standards

- that address critical challenges in data creation, storage, ownership, discovery, and disposal across diverse data spaces.

Societal: Produce greener data and enhanced services and products

- using advanced yet eco-friendly data processing methods for data generation,

- and improve everyday life through personalised healthcare products, smart vehicles, etc.

Economic/ Technological: The deployment of the PLIADES framework aims to:

- reduce resource requirements for data acquisition,

- improve technological solutions and promote advancements across multiple industries, through the utilisation of vast amounts of high-quality data,

- enable synergies between multiple data spaces for development of innovative technologies.

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Who are we?

27 Partners across 10 EU Member States & Switzerland

Consortium Breakdown: 12 RTOs, 10 SMEs, 5 NPOs
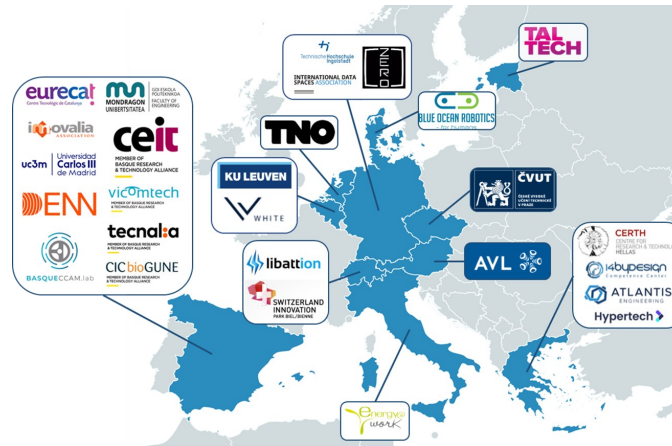
Project timeline

Start Date: January 1st, 2024

End Date: June 30th, 2027 (42 months)
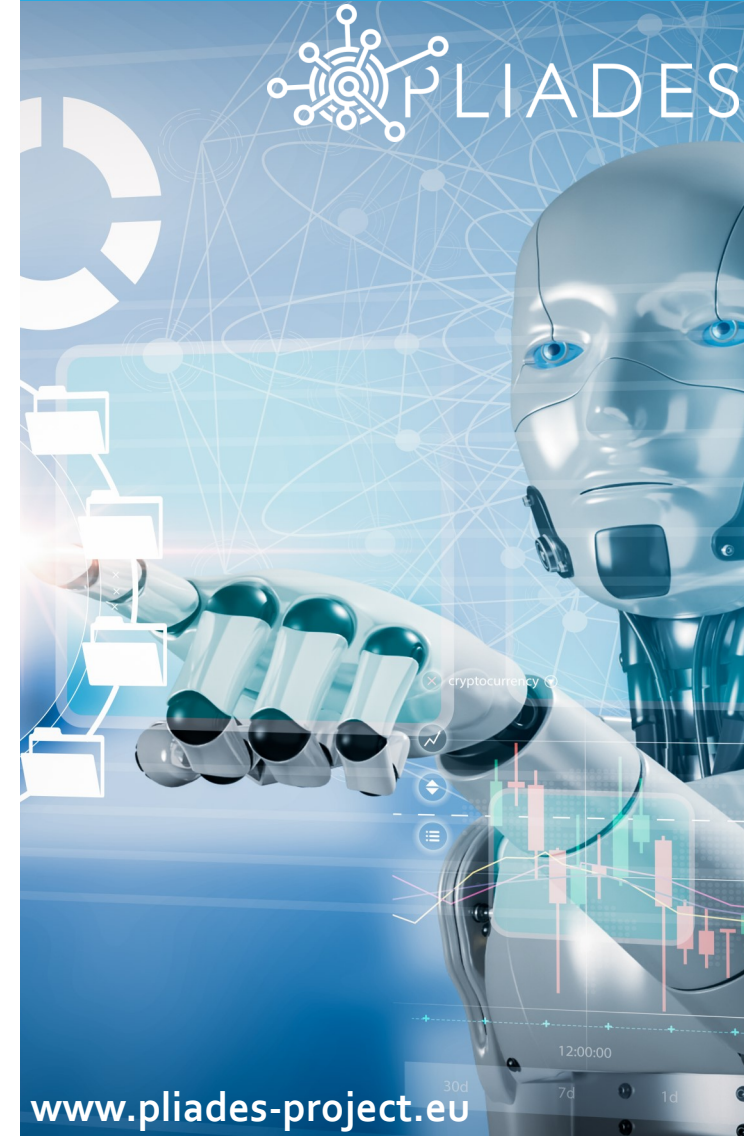
Important Milestones:

- Definition of system architecture (2024)

- Preliminary deployment of framework (2026)

- Launch of PLIADES data spaces (2026)

- Pilot testing and evaluation (2027)

Project Coordinator:
Dr. Dimitrios Giakoumis
Centre for Research and Technology Hellas
(CERTH), Information Technologies Institute (ITI)

AI-Enabled Data Lifecycles Optimization and Data Spaces Integration for Increased Efficiency and Interoperability
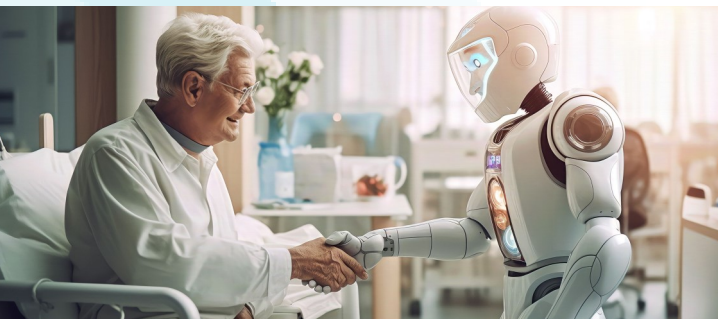
PLIADES

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Mission

PLIADES stands for an advanced AI-enabled framework for Full Data Lifecycles Optimisation and Data Spaces Integration. Our mission is to revolutionize how data is utilised across various sectors, from mobility to healthcare, manufacturing to energy, and beyond.
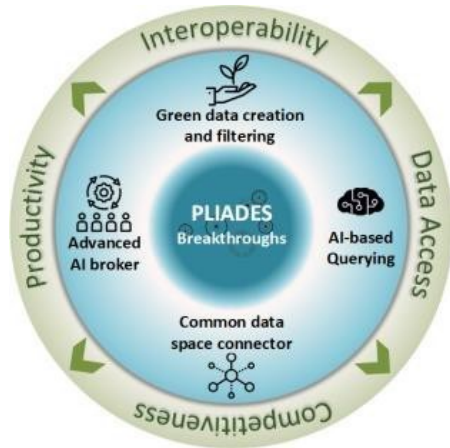
PLIADES envisions a future where diverse sectors are seamlessly interconnected, enhancing efficiency and interoperability.

We aim to provide cutting-edge data and services that drive advancements in Cooperative, Connected, and Automated Mobility (CCAM), Advanced Driver Assistance & Autonomous Driving (ADAS/AD), and Human-Robot Interaction (HRI).

Objectives

The specific objectives of PLIADES are to:

- Research and develop novel models, abstractions, and methods for environmentally friendly, context- and human-factors-aware **creation** of vast amounts of **data** for mobility, green deal, energy, industrial and healthcare dataspaces.
- Advance **data privacy, security, trustworthiness** and **sovereignty**, enabling data owners to safely determine how their information is collected, stored and used.
- Promote advanced data **decentralisation** and further advance **AI-boosted brokers**.
- Generate advanced **Data Spaces connectors** to extend the scope of data spaces **interoperability**, encompassing full data life cycles into existing data reference architectures.
- Facilitate **novel data processing** and **analytics services** to ensure data privacy, trustworthiness, security, resilience, re-use and disposal.
- Deploy the proposed framework in diverse **use cases**, focusing on transportation, energy, manufacturing, healthcare and green deal sectors.
- Develop **new business models** that promote data sharing and re-use and establish synergies with other EU initiatives.

Use cases

PLIADES outcomes will utilise **different types** of **data** spanning **six use cases**, focusing on diverse dataspaces, such as :

- data from **smart vehicles** to improve their **ADAS/ AD** & **CCAM** functions and **energy** management **(mobility dataspace)**,
- patient/doctor HRI data to improve **service robots' HRI** effectiveness and **patient** data to improve **diagnostic & prognostic** clinical models for **personalised** medicine services **(healthcare dataspace)**,
- manufacturing data to improve **zero-waste manufacturing, predictive maintenance** and **HRI (industrial dataspace)**.