PARTNERS

ABINSULA SRL (COORDINATOR) https://abinsula.com/

UNIVERSITA DEGLI STUDI DI SASSARI https://www.uniss.it/

SOFTEAM https://www.softeamgroup.fr/

TECHNISCHE UNIVERSITAET DRESDEN https://tu-dresden.de/

NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO https://www.tno.nl/

UNIVERSITA DEGLI STUDI DI CAGLIARI https://www.unica.it/

LAKESIDE LABS GMBH https://www.lakeside-labs.com/

UNIVERSIDAD POLITECNICA DE MADRID https://www.upm.es/

HIRO MICRODATACENTERS B.V. https://hiro-microdatacenters.nl/

FORGE REPLY SRL https://www.reply.com/

ARUBAKUBE S.R.L. https://www.arubakube.cloud/

CANON RESEARCH CENTRE FRANCE https://www.crf.canon.fr/

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CONTACS

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MYRTUS

Multi-layer 360° dYnamic orchestrion and interopeRable design environmenT for compute-continUum Systems

Call: HORIZON-CL4-2023-DATA-01-04 Duration: 1 January 2024 > 31 December 2026 Project ID: 101135183

OBJECTIVES

The MYRTUS project aims at unlocking the **new** living dimension of CPS, embracing the principles of the TransContinuum Initiative, integrating edge, fog and cloud computing platforms. This integration requires the reinvention of programming languages and tools to orchestrate collaborative distributed and decentralised components. Additionally, components must be augmented with interface contracts covering both functional and non-functional properties. MYRTUS solutions play a crucial role in enabling sustainable computing and trustworthiness in CPS.

OBJ1 - MYRTUS defines a **reference infrastructure** where a **diversity of fog-level and edge-level devices converge with the cloud** to form a **computing continuum** capable of addressing the needs of complex and dynamic systems, including CPS with a living dimension.

OBJ2 - MYRTUS features a **360° dynamic runtime orchestration scheme**, embodied within the MIRTO **AI-powered cognitive engine**, to guarantee high performance and energy efficiency, preserving security and trust.

OBJ3 - MYRTUS provides a reference **design and programming environment** for continuum computing systems, featuring **interoperable support** for **cross-layer modelling**, **threat analysis**, **design space exploration**, **application modelling**, **components synthesis**, **and code generation**.

EXPECTED IMPACT

MYRTUS collaborates with relevant initiatives, including IPCEI, Gaia-X and the TransContinuum Initiative, to establish synergies and promote strategic industrial partnerships.

MYRTUS scientific impact:

- Create new knowledge in the computing continuum domain, with methodologies and tools for node execution and processing portability over edge-fogcloud, including dynamic and seamless orchestration.
- Become a reference in the computing continuum.
- Promoting the creation of new collaborations, synergies and projects.

MYRTUS economic/technology impact:

Overcome vendor/platform lock-in.

- Promoting the adoption of the MYRTUS technologies among startups and SMEs, reducing development time and cost.
- MYRTUS industrial partners enrich their business offering and attract key world's leading players.
- Strengthening industrial cooperations, consolidating Europe position in the market and facilitate is access to the foreign ones.

MYRTUS societal impact:

- Induce positive changes of habit in the society through human-centred CPS.
- Guarantee capillary rehabilitation services and equitable access to care.
- Decreases mortality on the road by making intersections safer.
- Contribute to the CO2 emission reduction

