

The logo for ENAC, consisting of the letters 'E', 'N', 'A', and 'C' in a stylized, white, blocky font. Each letter has a small cyan-colored horizontal bar on its left side. The background is a vibrant blue with wavy, glowing lines and several translucent blue spheres of varying sizes, creating a futuristic, data-driven aesthetic.

**ENAC**

**A Framework for Adaptive Scheduling  
and Deployments of Data Intensive Workloads on  
Energy Efficient Edge to Cloud Continuum**

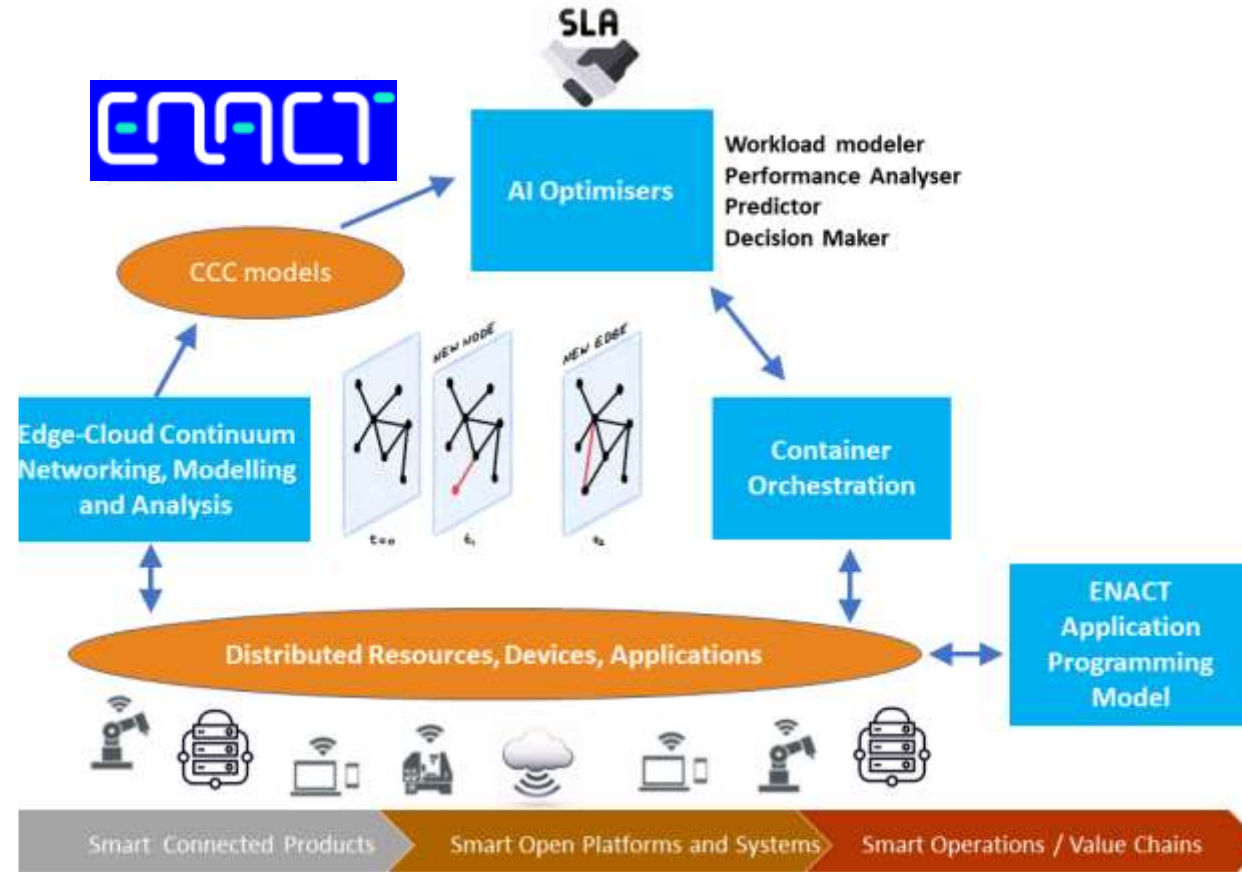
**Alexandros Nizamis  
CERTH**

# Project Intro - ENACT Approach to Address the Challenges in Cloud-Edge Orchestration

Tools to connect and discover distributed resources, devices and services across the compute continuum, characterize and model them to support complex application deployment needs

**AI-powered orchestrator** capable of deploying and managing applications across distributed (edge – cloud) nodes in an optimal way to support the energy efficiency and adaptations in applications

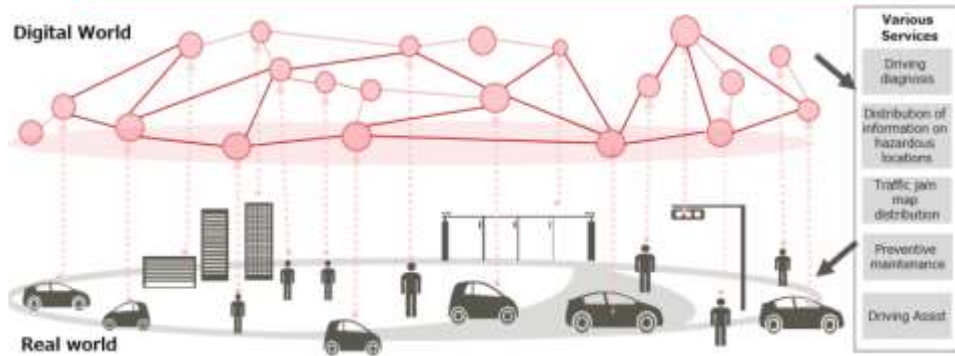
**Application development toolkit** for developing or adapting complex applications, making them distributed, responsive, robust and adaptive to changing environments



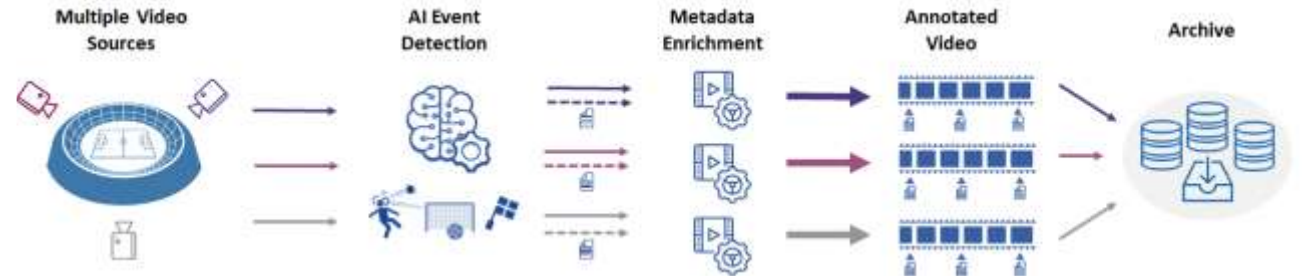
# ENACT Deployment and Validations (Use Cases)

## Pilot 1: Hyper-Distributed Data Processing for Fujitsu's Mobility Digital Twin Initiative

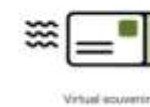
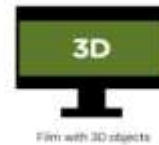
Reproduce/analyze/predict real-world information such as ever-changing vehicles and roads in real-time in the digital world



## Pilot 2: Distributed Media and Entertainment Content Management



## Pilot 3: Production and Distribution of Media Content for Cultural Heritage and Tourism Sectors



# ENACT Impact

- **Development of common standards and infrastructure for Computing Continuum and Data Spaces technologies as a key element to create a more open and interoperable data ecosystem for Europe**
- **ENACT will allow a wider and more effective use of data processed within the continuum computing. It will enable real-time decision-making in applications such as manufacturing, media, telecommunication, transportation and many other sectors.**



- **ENACT will design energy aware data infrastructures that will avoid the explosion of ICT footprint and provide deeper understanding of the potential of decentralized intelligence to support green digital solutions by exploiting ML capabilities to process data from smart connected objects**
- **ENACT outcomes aim at enabling a market shift from the widespread use of cloud-edge continuum market models that are currently dominated by non-EU entities, to a future strategy for European SMEs**

# ENACT Next Steps



## Finalization of Architecture and Specifications

Docker and Kubernetes Will be used for containerization of components including AI models



## Further Development

Development activities of the project will be continued aiming to deliver new versions of project's DRL agent, GNN network, Graph Modeler, APM, SDK, Telemetry Collector etc. etc.



## Pilot Related Activities

Kick-off actual piloting activities following the use cases and requirements definition



## Setup Secure Data Space(s)

Promote Secure Data Management and Sharing in Use Cases by setting up Data Space Connectors to promote data sovereignty and governance principles



## Dissemination and Clustering

Raise awareness regarding project activities & findings and participate to clustering ones

# ENACT

Thank you!



<https://enact-horizon.eu/>



<https://linkedin.com/in/enact-horizon-1798122b8/>



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