



This project has received funding from the Horizon Europe research and innovation programme under the GA 101070416.



# ENERGY-EFFICIENT AI-READY DATA SPACES

**Novels from data management universe - different applications, from EU Green Deal, Water, Food and Mobility Webinar, 29.05.2023**

**Dimitrios Alevras, INLECOM INNOVATION**

# AGENDA



- GREEN.DAT.AI GOAL
- GREEN.DAT.AI OBJECTIVES
- GREEN.DAT.AI CONSORTIUM
- GREEN.DAT.AI MOTIVATION
- TECHNOLOGY TO BE DEVELOPED
- CONCRETE & EXPECTED CONTRIBUTIONS TO THE EUROPEAN COMMON DATA SPACES
- IDENTIFIED OR EXPECTED NEEDS FOR COLLABORATION WITH DATA SPACES & OTHER INITIATIVES

# GREEN.DAT.AI GOAL

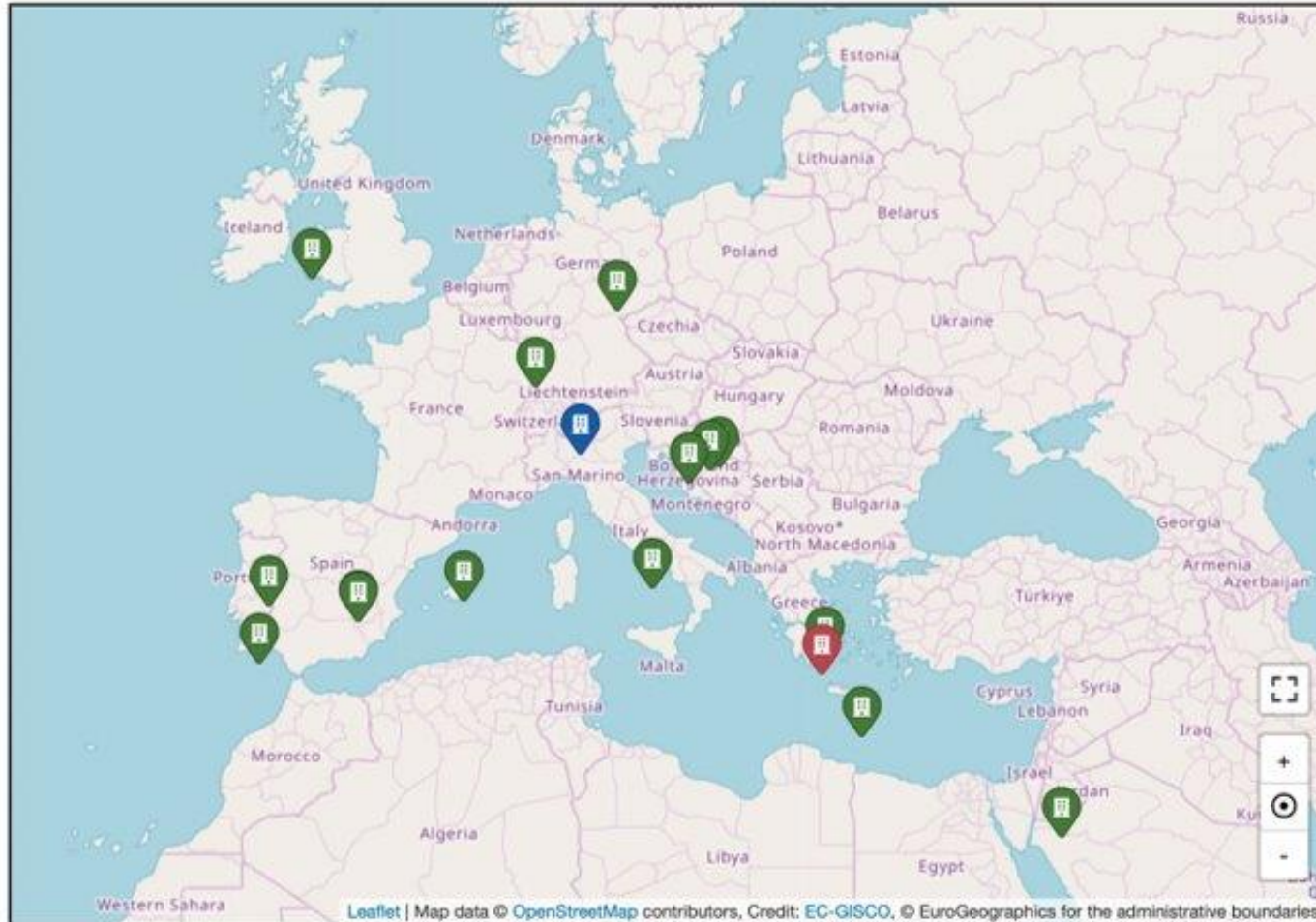


By leveraging **European Data Spaces**, **GREEN.DAT.AI PROJECT** aims to develop **Energy-Efficient Large-Scale Data Analytics Services**, ready-to-use in industrial **AI-based systems** that **reduce** the **environmental impact** of **data management processes** and deliver a distributed, **open-source**, **green**, **AI/ML - ready platform**, and a **Toolbox** for **AI-ready Data Spaces**.

## GREEN.DAT.AI OBJECTIVES

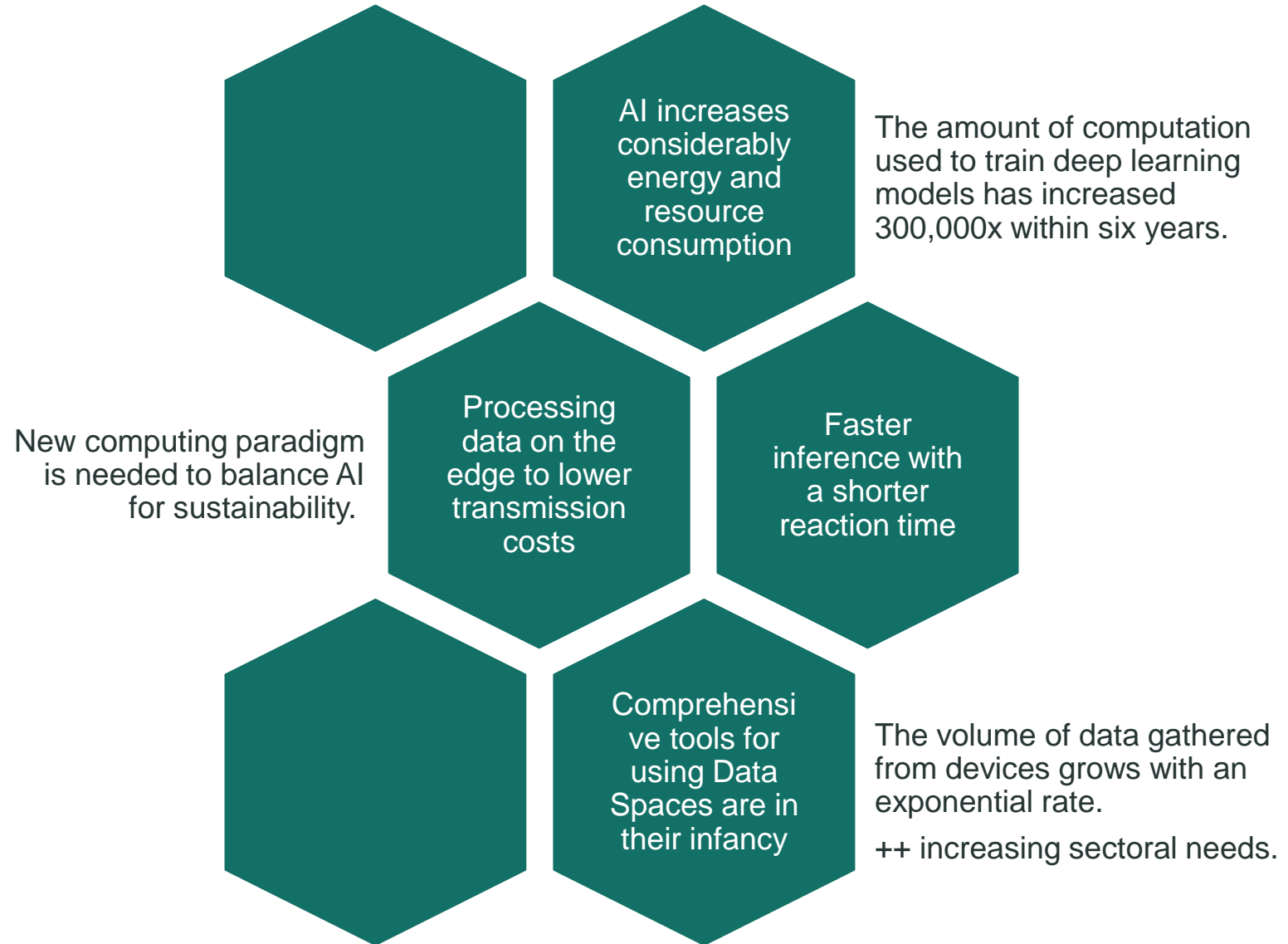
- **Objective 1 (O1)**. Define the Data Management Foundation Framework and Reference Architecture (GAIA-X, IDS) for large scale AI-based systems, harnessing the value of Data Spaces whilst accounting for energy efficiency.
- **Objective 2 (O2)**. Provide a BDA infrastructure and tools to support dynamic data sharing in industrial ecosystems through the federation of services and the execution of distributed large scale data pipelines.
- **Objective 3 (O3)**. Develop a novel Energy-Efficient Large-Scale Data Analytics Services including Federated Learning Services (FLS) and tools to support the deployment of operational solutions using the facilities developed in O2.
- **Objective 4 (O4)**. Plan and operate Demonstrators in real life settings, representative of multiple domains with diverse optimisation challenges.
- **Objective 5 (O5)**. Upscaling and Commercialisation to accelerate transition.

# GREEN.DAT.AI CONSORTIUM

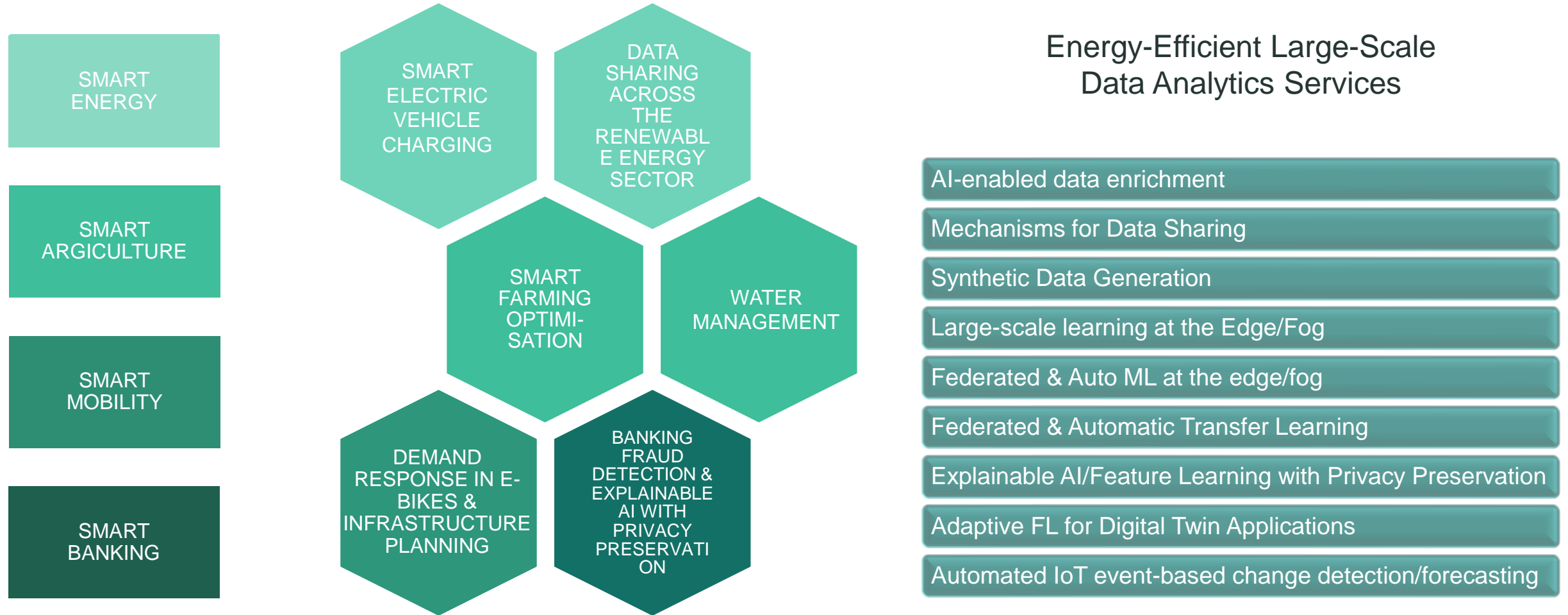


- 17 partners from 10 countries (+1 AP).
- Well balanced in terms of expertise.
- Key roles in a number of projects under the Big Data PPP, BDVA/DAIRO Association, FIWARE, AIOTI, ETSI.
- From a variety of sectors, which will contribute to industry adoption and stimulate uptake in other sectors as well.

# GREEN.DAT.AI MOTIVATION – WHY NEW ARE NEW TOOLS NEEDED?



# TECHNOLOGY TO BE DEVELOPED



## Energy-Efficient Large-Scale Data Analytics Services

4 Sectors

6 Pilots

9 Services

# CONCRETE & EXPECTED CONTRIBUTIONS TO THE EUROPEAN COMMON DATA SPACES

## Common European data spaces

Rich pool of data  
(varying degree of  
accessibility)

Free flow of data  
across sectors and  
countries

Full respect of GDPR

Horizontal  
framework for data  
governance and data  
access



- Technical tools for data pooling and sharing
- Standards & interoperability (technical, semantic)
- Sectoral Data Governance (contracts, licenses, access rights, usage rights)
- IT capacity, including cloud storage, processing and services

# IDENTIFIED OR EXPECTED NEEDS FOR COLLABORATION WITH DATA SPACES & OTHER INITIATIVES

- Liaison with BDVA and other initiatives: Clustering with EC research initiatives is expected to occur between a series of related projects and projects funded under HORIZON-CL4-2021-DATA.
- GREEN.DAT.AI clustering, creation of synergies, knowledge exchange as well as linking with existing initiatives and projects.
- Broader cooperation to be also supported via the organization of workshops and participation into various conferences, events, and special sessions that GREEN.DAT.AI will organize and co-organize with the BDVA, consortium members and relevant facilitators.



THANK YOU!

inlecom



[www.greendatai.eu](http://www.greendatai.eu)



[@GREEN\\_DAT\\_AI](https://twitter.com/GREEN_DAT_AI)



[#GREEN.DAT.AI](https://www.linkedin.com/company/greendatai)



[@GREENDATAI EU project](https://www.youtube.com/channel/UC...)

Dimitrios Alevras, INLECOM INNOVATION

E-mail: [dimitrios.alevras@inlecomsystems.com](mailto:dimitrios.alevras@inlecomsystems.com)