



EUROPEAN ALLIANCE
FOR INDUSTRIAL DATA,
EDGE AND CLOUD



Fostering the Development of **Next-generation Edge & Cloud Technologies** in Europe

Horizon Europe Info Day, 30 January 2023

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EUROPEAN ALLIANCE
FOR INDUSTRIAL DATA,
EDGE AND CLOUD

Chair of the Cloud-to-Edge WG



CEO of OpenNebula Systems

Increasing Dependence on Cloud Computing



Cloud is a key enabling technology of strategic importance to Europe's industry

- Data processing and sharing capacities required for **data-driven innovation**.
- **Digital transformation** of businesses and the public sector.
- New, **added-value products and services**.
- **Uptake and effective execution of new technologies** such as AI and IoT.

**41% of enterprises
use the cloud**

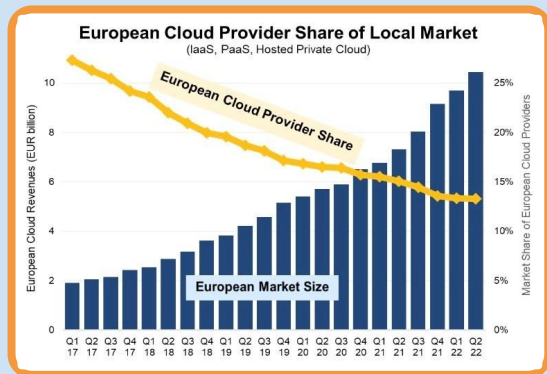
**73% are 'highly
dependent' on cloud**

Strategic Dependency of EU Cloud Market



The EU is heavily dependent on non-EU cloud services, infrastructure, and technologies

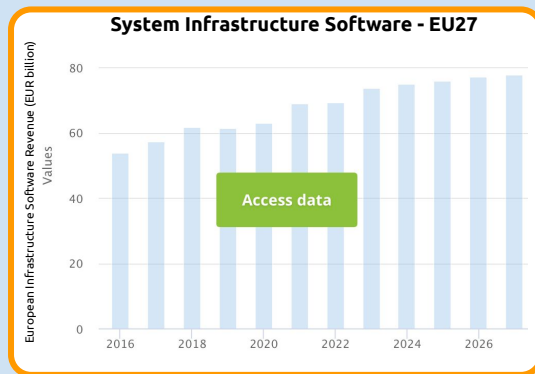
Cloud Services



Source: Synergy Research Group (September 2022)

European share has declined from 26% to <13%

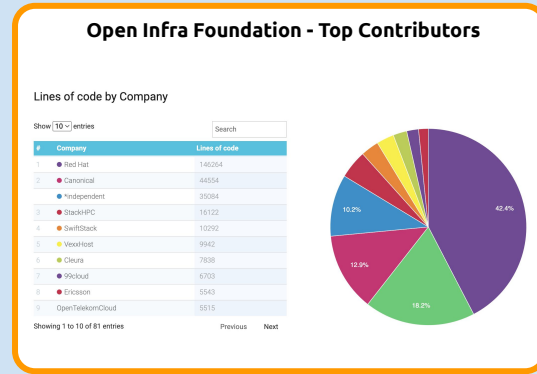
Infra Software



Source: Statista (October 2022)

None of top competitors are from **EU**
Led by US companies

Open Source Software



Source: Stackalytics (January 2023)

Marginal (<5%) role of **EU** Code
Led by non-EU companies
US-based foundations

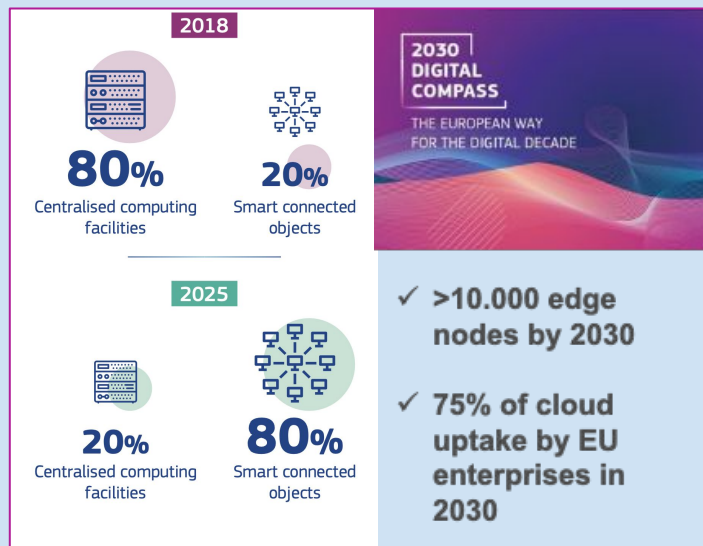


Edge Computing Opportunity

Opening up new opportunities while disrupting current business models



Edge Computing Opportunity



Source: European Strategy for Data



EUROPEAN ALLIANCE
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Edge and Fog
Computing



European Sovereign
Cloud Stack



Open source
Multi-cloud



Highly-distributed
Intelligence



Optimal Workload
Management



Cloud and Edge
Security Solutions



Solutions for Smart
Procurement



Green and Sustainable
Solutions



EU Cloud Alliance Aim

Defining the **enabling technologies** for the **next generation edge-to-cloud continuum**



WHO

- To bring together **Businesses, Member States** representatives, and relevant **experts**.



WHAT

- To assist the European Commission in designing the detailed **business, investment and implementation plan** to deploy the **next generation cloud capacities** for the public and private sector to achieve the **2030 European Digital Compass** targets.



HOW

- To foster the development and deployment of the **next generation of secure, low-carbon, and interoperable cloud and edge** services and infrastructure for Europe as envisaged in the **European Data Strategy**.

EU Cloud Alliance Technology Focus

Achieve Technology Leadership in three main trends



- Increase **distribution and decentralisation of data processing** capacities across of the **computing continuum**.
- Promote an **alternative European model** to the offerings of **cloud hyperscalers**.
- Meet the highest standards in terms of:
 - ✓ **data protection, security, climate neutrality.**
 - ✓ **resource efficiency, interoperability and portability.**

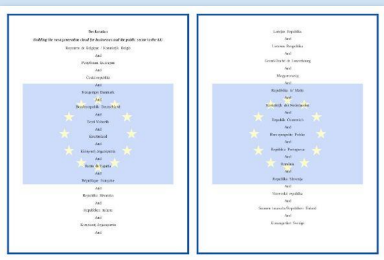


EU Cloud Alliance Timeline

Built on the **European Data Strategy** and endorsed by the **Declaration on European Cloud**



- 15 February 2023** Publication of **Industrial Roadmap** developed by the Alliance Cloud to Edge Working Group
- 01 December 2022** **First General Assembly** and official meeting of the **Alliance Forum**
- 16 December 2021** **First working-level meeting** of the Alliance
- 14 December 2021** **CEO kick-off meeting of the European Alliance for Industrial, Data, Edge and Cloud** hosted by Commissioner Breton
- 19 July 2021** **Official launch of the European Alliance for Industrial, Data, Edge and Cloud**
- 07 May 2021** 27 European CEOs submit the **"European industrial technology roadmap for the next generation cloud-edge offering"** to Commissioner Breton
- 05 May 2021** Commission announced the European Alliance for Industrial, Data, Edge and Cloud in the **updated European industrial strategy**
- 15 October 2020** 27 EU Member States declare their will to collaborate on building the **next generation of cloud in Europe**
- 19 February 2020** Publication of the **European Data Strategy**

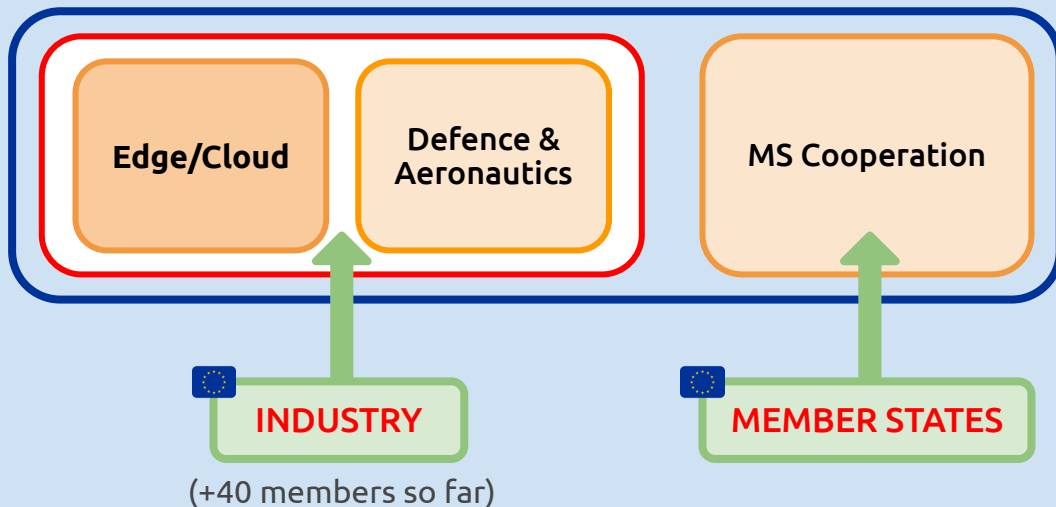




EU Cloud Alliance Structure

Working Groups and Task Forces working on specific topics

- The work is facilitated by the European Commission's Directorate-General for Communications Networks, Content and Technology (**DG CONNECT**).
- The operational work is driven by an appointed **Steering Committee** and relevant **Working Groups** and **Task Forces**.



Cloud to Edge WG Objectives

Defining the **enabling technologies** for the next generation edge-to-cloud continuum



WHO

- To bring together the **main EU Industry players in cloud computing**



WHAT

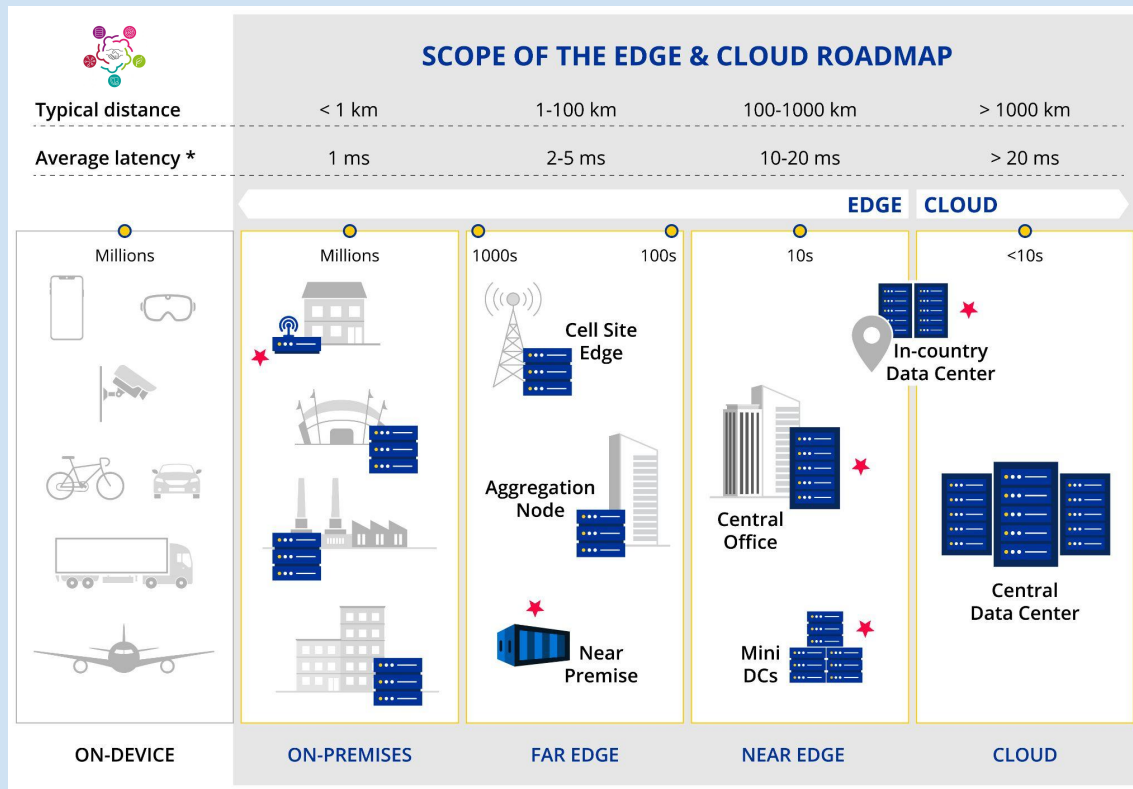
- To prepare a **strategic cloud and edge technologies roadmap**, which should be regularly updated after the first version is made available
- To identify investments for joint development and deployment of the **next generation of European cloud and edge technologies** that meet the needs of European businesses





Cloud to Edge WG Vision

Datacenter, Cloud, and Edge are part of the same **Computing Continuum** that integrates various types of cloud capabilities





Cloud to Edge WG Task Forces

Working Group lead by 3 companies, with Task Forces of 5-10 members coordinated by 2-3 co-leaders

Chair:



Co-chairs:



1

EU CLOUD / EDGE COMPUTING
LANDSCAPE

2

DEFINITION OF TECHNICAL
SOVEREIGNTY FOR EDGE/CLOUD

Transversal domains

3

CLIMATE
NEUTRALITY AND
RESOURCE
EFFICIENCY

4

CYBERSECURITY

5

INTEROPERABILITY
AND
MULTI-PROVIDER
SERVICES

Technology foundations

6

EDGE AND DATA
CENTRE
INFRASTRUCTURE

7

NETWORK
INTEGRATION
AND CONNECTIVITY

8

CLOUD / EDGE
FOUNDATION
INFRASTRUCTURE

Sector-specific services

9

INFRASTRUCTURE
SERVICES

9

PLATFORM
SERVICES

10

APPLICATION &
DATA SERVICES



Cloud to Edge WG Members

45 industrial members representing cloud providers, telco operators, technology providers and services providers





Cloud to Edge WG New Roadmap

Working on an **updated roadmap** that will provide recommendations to EC Programmes



May 2021

Initial set of recommendations



November 2022

Executive summary



February 2023

Updated set recommendations

Cloud to Edge WG New Roadmap

Working on an **updated roadmap** that will provide recommendations to EC Programmes



- **Use Cases** that will be strategic for future edge-cloud in the EU.
- **Technology Priorities** with activities for the specification, research, development, and innovation of the next-generation cloud-edge continuum capabilities.
- **Deployment Priorities** with activities for the coordination and deployment of cloud-to-edge infrastructure and services to enable the initial roll-out of next-generation use cases on a European-wide scale.
- **Deployment Challenges** of the cloud-edge continuum in the European market.

EU Cloud Alliance Join Us!



<https://digital-strategy.ec.europa.eu/en/policies/cloud-alliance>

The screenshot shows the European Commission website. At the top, there's the European Commission logo and a search bar. Below that, a blue navigation bar contains the text "Shaping Europe's digital future" and a menu with links: Home, Policies, Activities, News, Library, Funding, Calendar, and Consultations. The main content area has a breadcrumb trail: Home > Policies > European Alliance for Industrial Data, Edge and Cloud. The title "European Alliance for Industrial Data, Edge and Cloud" is prominently displayed. Below the title, there are three paragraphs of text describing the alliance's goals and objectives. To the right of the text is a circular diagram with a central cloud icon containing a handshake, surrounded by six smaller icons representing different aspects of the alliance: a database, a gear, a leaf, a shield, a network, and a person. At the bottom right of the content area is a blue button that says "Join the Alliance >".

European Commission

English

Search

Shaping Europe's digital future

Home Policies Activities News Library Funding Calendar Consultations

Home > Policies > European Alliance for Industrial Data, Edge and Cloud

European Alliance for Industrial Data, Edge and Cloud

The European Alliance for Industrial Data, Edge and Cloud aims to foster the development and deployment of next generation edge and cloud technologies.

The Alliance brings together businesses, Member States representatives and relevant experts. It will strengthen the position of EU industry on cloud and edge technologies. It aims to serve the needs of EU businesses and public administrations that process sensitive categories of data, and has the objective to increase Europe's leadership position on industrial data.

Cloud and edge technologies are strategic innovation enablers for the uptake of emerging technologies, such as artificial intelligence, the Internet of Things, and 5G. They provide the infrastructure for highly innovative use cases. Europe needs to strengthen its position of EU industry on cloud and edge technologies.

Cloud and edge technologies are key enablers for Europe's digital transformation. The Alliance aims to bring together relevant stakeholders from the private and public sector to jointly define strategic investment roadmaps to enable the next generation of highly secure, distributed, interoperable and resource-efficient computing technologies. In addition, the Alliance will serve as a platform for exchange on issues of cloud governance, for example relating to the public procurement of cloud services.

Join the Alliance >

Source: European Commission

MAIN INTERESTS ?

- ❑ Interoperability & multi-cloud approaches.
- ❑ Climate-neutral & sustainable cloud.
- ❑ Edge deployment.
- ❑ Sovereign cloud stack, encompassing the edge.
- ❑ Defence cloud.
- ❑ Governance rules and standards for data processing services.
- ❑ Cloud for European common data spaces, including coordination with the Support Centre for data sharing and the European Data Innovation Board.
- ❑ Telco edge cloud.



European Commission



*"It may be too late to replicate hyperscalers, but it is not too late to **achieve technological sovereignty** in some critical technology areas"*

President Ursula Von der Leyen

My Agenda For Europe: Political Guidelines For The Next Commission (2019-2024)



*"When it comes to digital, Europe's resilience will depend on our ability to develop the next generation of cloud and edge capacities and invest massively in **developing European alternatives** to reduce our current dependencies"*

Commissioner Thierry Breton

A European Sovereignty Fund for an industry "Made in Europe" (September 15, 2022)



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Thanks!

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