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The European Cloud, Edge & IoT Continuum

Understanding Cloud-Edge-IoT: challenges and opportunities

19th September 2022
15:00 – 16:30 CEST

Funded by
the European Union

- ### Introduction

Golboo Pourabdollahian, Consulting Manager, European Government Consulting, IDC

- ### Why investigating the Cloud-Edge-IoT domain?

John Gole, Research Director, European IoT Practice, IDC

- ### Get involved: value and benefits

Marlene Eisenträger, Consultant, VDI/VDE IT

- ### Panel discussion "Understanding Cloud-Edge-IoT: challenges and opportunities"
- *Moderator: Maria Giuffrida, Senior Researcher, Trust-IT*
  - *Kay Bierzynski, Senior Project Manager, Infineon and EPoSS*
  - *Brendan Rowan, Managing Consultant for Tech, Policy and Skills, Bluspecs*
  - *Natalie Samovich, WG Energy Chair, AIOTI*
  - *Albert Seubers, Director, Martel BV*
  - *Rainer Sträter, SVP Cloud Services and Global Platform Hosting, IONOS*
- ### Q&A
- ### Conclusion

This session will be recorded

- The recording will be available to all participants after the event

Please always keep your mics and cameras off during presentations

Get engaged by

- Asking questions via the Q/A function anytime during the event

- Writing comments in the chat

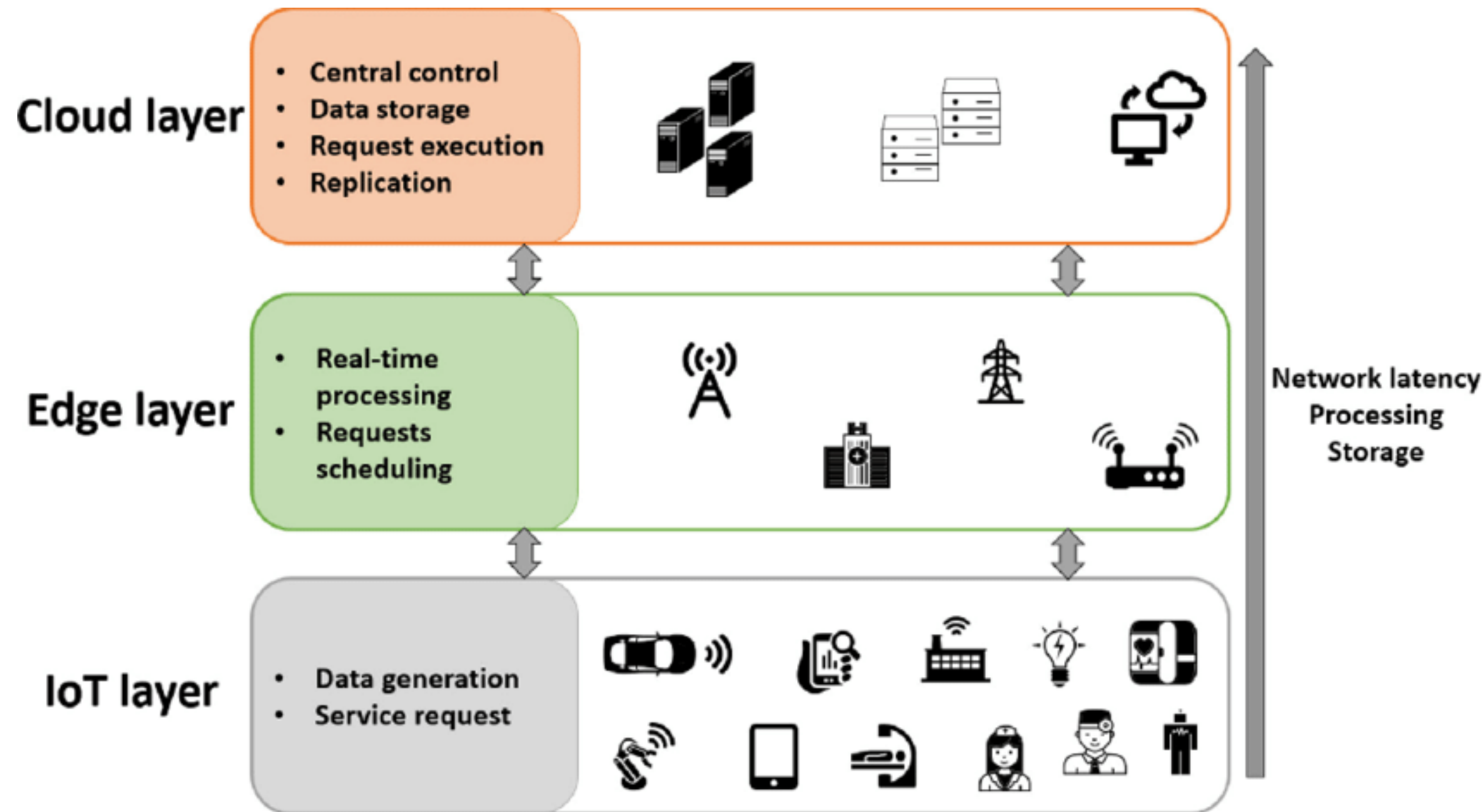- Raising your hand if you want to comment via audio/video

Introduction

Golboo Pourabdollahian
Consulting Manager, European
Government Consulting
IDC

According to IDC's European Emerging Technologies Survey:

- More than 40% of companies consider **"low latency services"** and **"reduced communication burden"** as the main benefits of edge implementation
- 30% of companies believe that edge implementation will benefit them by **cost reduction**

Cloud-Edge-IoT for European Data

HORIZON-CL4-2021-DATA-01-05,07,08
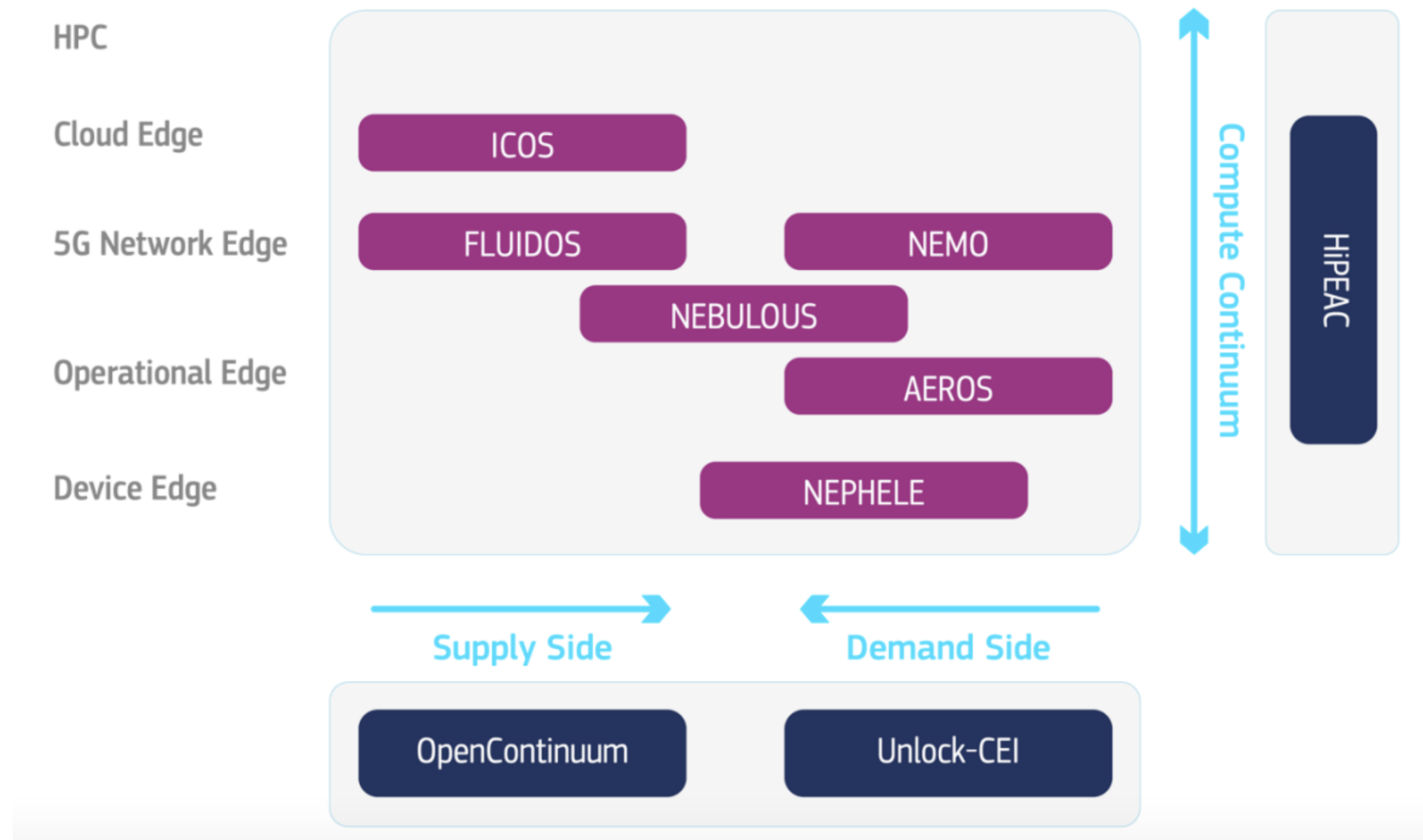
Both UNLOCK CEI project and Open Continuum project joint force under the unique umbrella of **EUCloudeEdgeIoT.**

www.eucloudesgeiot.eu
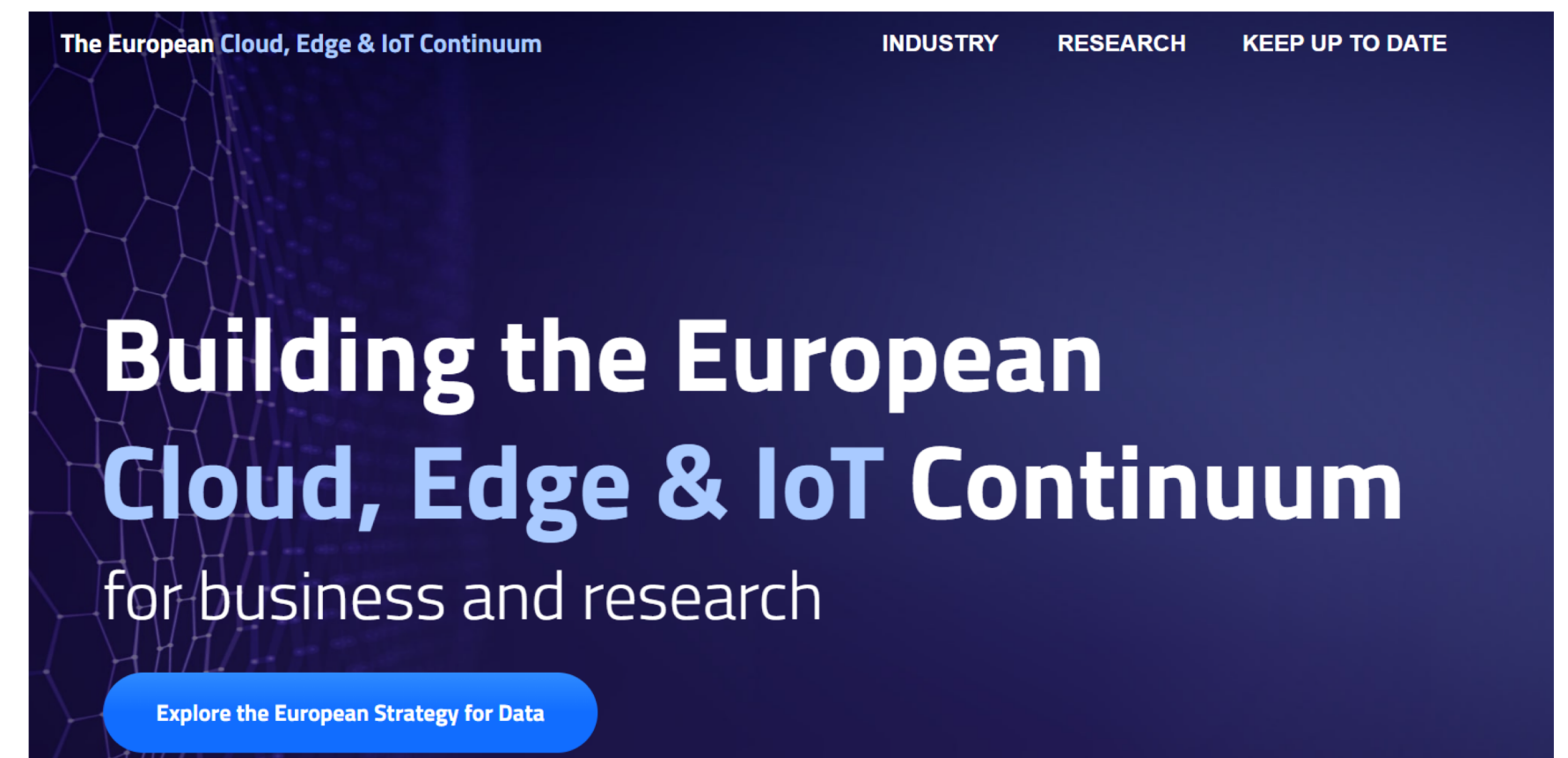
Horizon Europe Coordination and Support Actions

HORIZON-CL4-2021-DATA-01

UNLOCK CEI

Open Continuum

Start Date: June 2022
Duration: 30 Months
Consortium: 5 Beneficiaries
Coordinator: IDC

Start Date: September 2022
Duration: 24 Months
Consortium: 5 Beneficiaries
Coordinator: Martel Innovate

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UNLOCK CEI's ambition is to UNLOCK the potential for **accelerating the deployment of the Cloud-to-Edge-IoT (CEI) computing continuum** in Europe by focusing on the **demand-side drivers and challenges** to identify technology-driven innovation and **business opportunities driving demand value chains**.
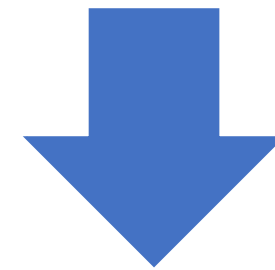
Objective 1. Assessment of CEI demand landscape

Objective 2. Define market scenarios

Objective 3. Define market scenarios

Objective 4. Coordination and interaction with supply side

Objective 5. Awareness and impact generation

Demand: Functional Needs versus technology Push

1 Assessment of CEI Demand Landscape
- Survey with 700 European Companies across European CEI Landscape
- Quantitative Indicators Identifying actual and forecast uptake
- Identify leading use cases and industry segments

2 Market Scenarios and Guidance
- Validate service requirements with Real Industries planning to implement CEI tech
- Create catalogue of ranked needs and Service Requirements
- Develop Market Scenarios and a list of actions Companies need to perform

Ecosystem strengthening the European competitiveness

1 Build and activate CEI Industry Constituency
- Organize 5 Industry Action Groups with at least 10 companies collaborating in each
- Organize specific Industry Events for each Industry Action Group plus a Global Event
- CREAT CEI Lobby to EU research agenda each IAG provides their industries SRI

2 Create Bilateral Dialog with CEI Technology Providers
- Provide a readiness assessment tool to assess readiness of CEI tech adopters
- Involve CEI technology Suppliers in events to create dialogue
- Perform Tech Adoption Days to let suppliers demonstrate and Evaluate

Technology Readiness and a Vibrant Community

1. At least 60+ examples of CEI adoption in specific use cases and vertical sectors linked to the Unlock technology readiness tool and to a use case radar
2. A collection of real implemtation stories and a series of events with real industry telling their experiences, setting requirements for technologies
3. A vibrant motivated community of real industrial players (not the Usual EU project partners building a 2,000 strong multi-stakeholder community database
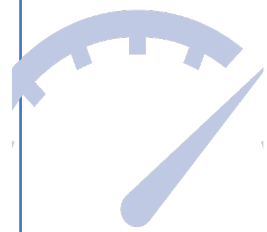
CEI demand landscape report and dashboard

Validated Market scenarios and pathways
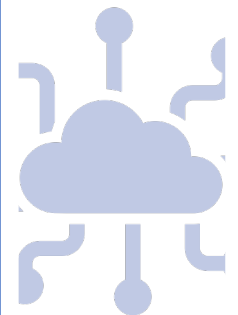
Validated CEI service requirements

Active ecosystem of value chain adopters

Pilot factory around CEI pilot actions

Recommendations for attractive market scenarios & high potential investment LSPs

Fill the gap!

Get closer to the market!

- ★ Defined purchase decisions and criteria
- ★ Identify demand drivers, structure and chain

- ★ Gain insights on market and commercial feasibility
- ★ Understand adoption levels across sectors

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Why investigating the Cloud-Edge-IoT domain?

John Gole

Research Director, European IoT Practice

IDC

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77%
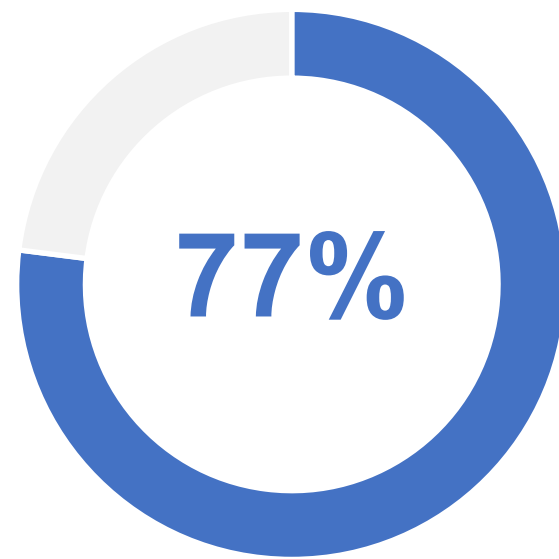
of European organizations plan to **invest** in **IoT**

EUR 176 bn

European **spending** on **IoT** in 2022

78%
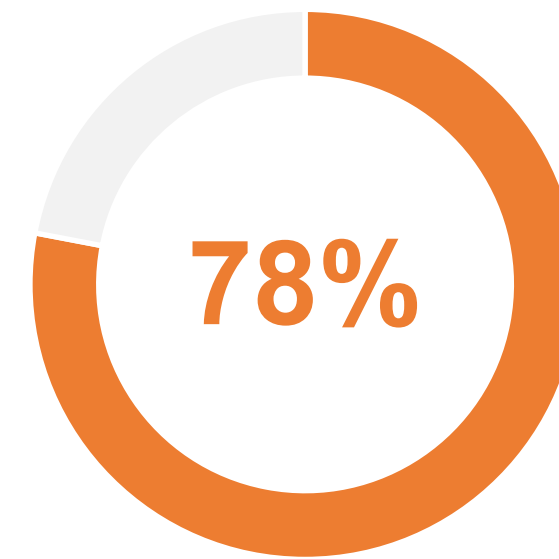
of European organizations **use** **Cloud**

EUR 36 bn

European **spending** on **Edge** in 2022
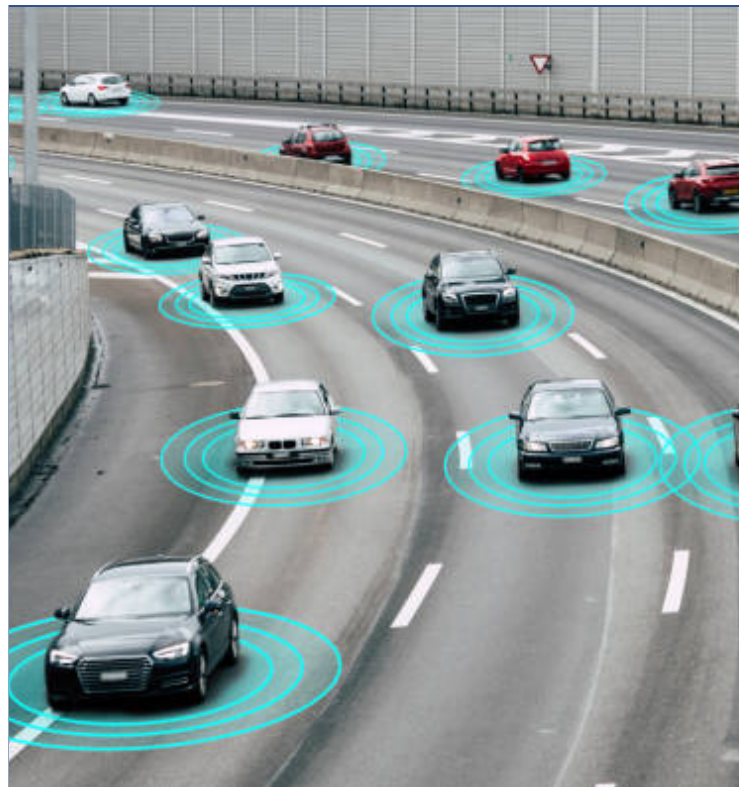
Autonomous Vehicles
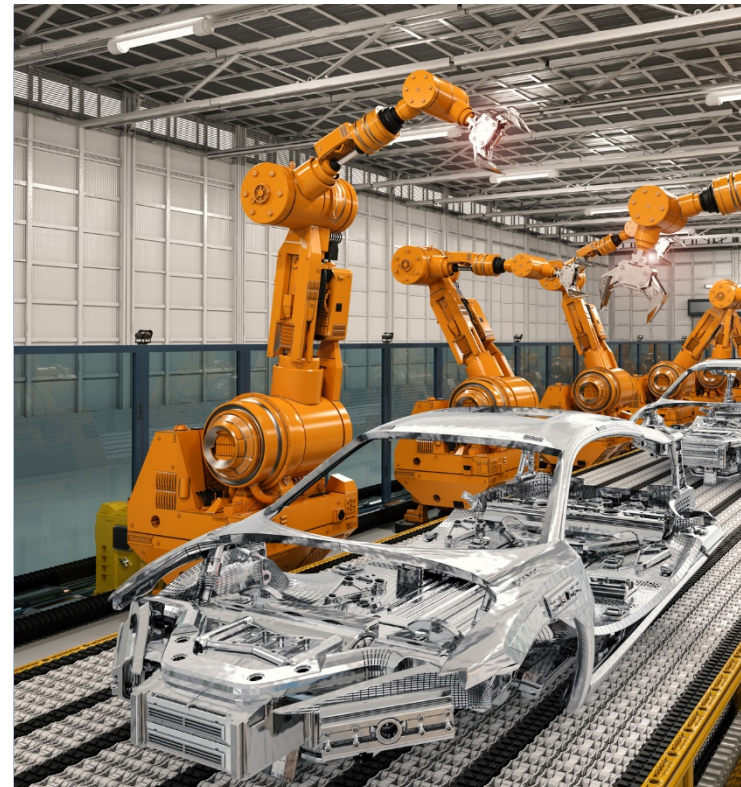
Production Automation
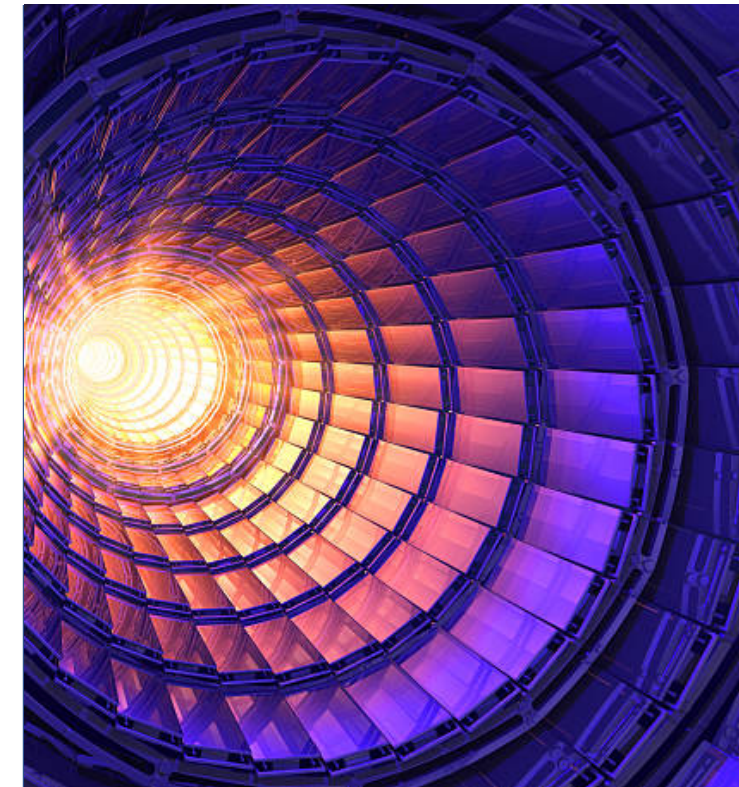
Research Labs
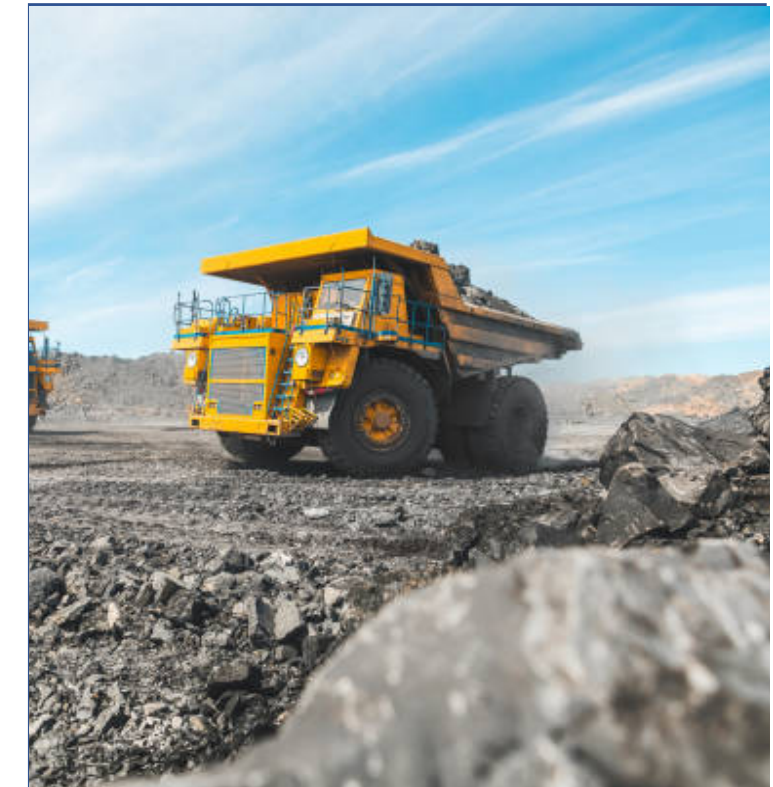
Mining and Oil Exploration

Energy Infrastructure

- Smart grid
- Pipeline management
- Integrating renewables
- Managing load
- Buildout of LNG facilities
- Mining safety and automation
- O&G exploration and extraction
- EV charging stations

National Security

- Energy security
- Physical security of critical infrastructure
- Cybersecurity
- Monitoring ports and shipments
- Food traceability and food security
- Logistics
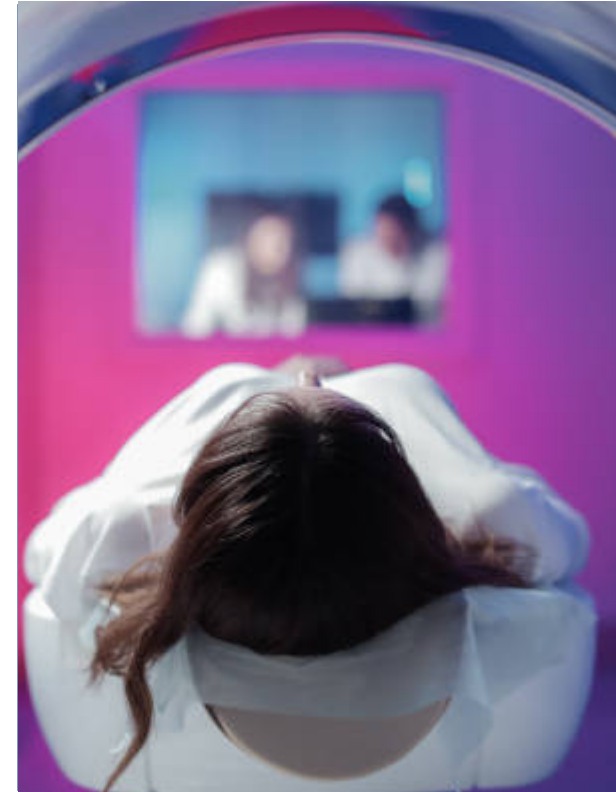
Healthcare

- Hospital efficiency
- Asset tracking
- Hospital patient monitoring
- Pharmaceutical security and tracing
- Energy efficiency
- Remote patient monitoring
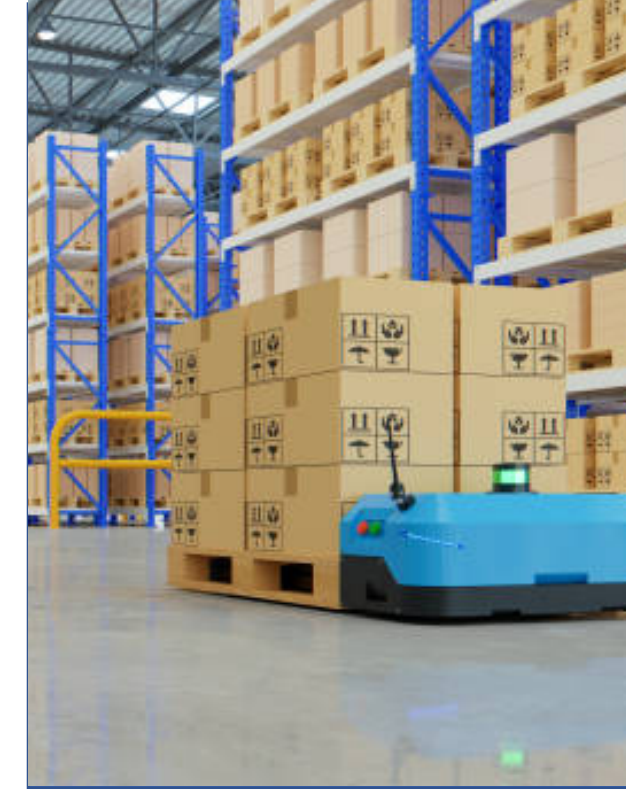
Economy

- Direct employment
- Digitalize across all industries to remain/boost competitiveness
- Increase efficiency, resilience
- Adaptable supply chains
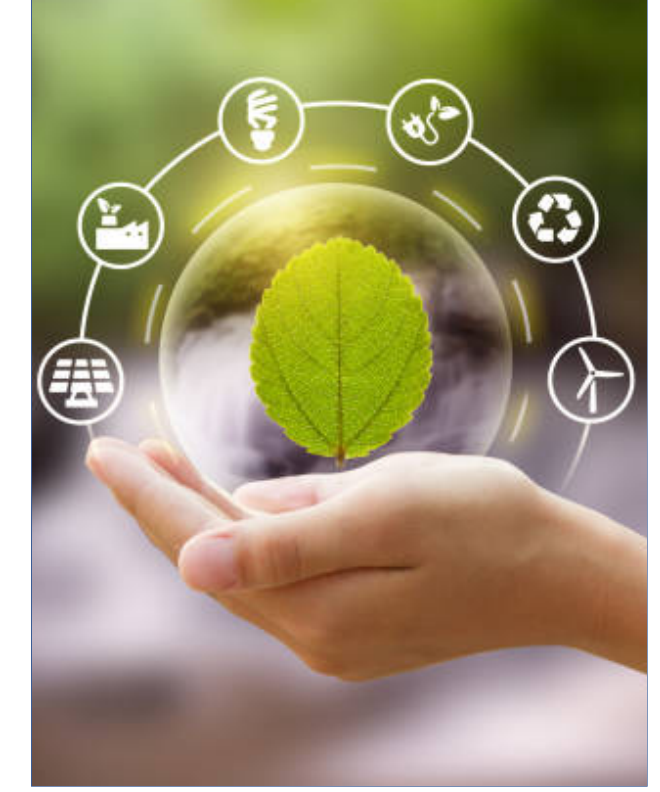
Sustainability Goals

- Affordable and clean energy
- Health and well-being
- Clean water and sanitation
- Zero hunger
- Sustainable cities and communities

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Q. Which of the following best describes how mature the majority of your organization's IoT projects are today?

More Advanced stages

Stage	Percentage
Deployed/deploying companywide	6%
Deployed/deploying in multiple departments	17%
Deployed/deploying within a single business unit/department	16%

Very Early stages

Stage	Percentage
Proof of concept or limited trial	26%
Planning phase	24%
Yet to deploy successfully	11%
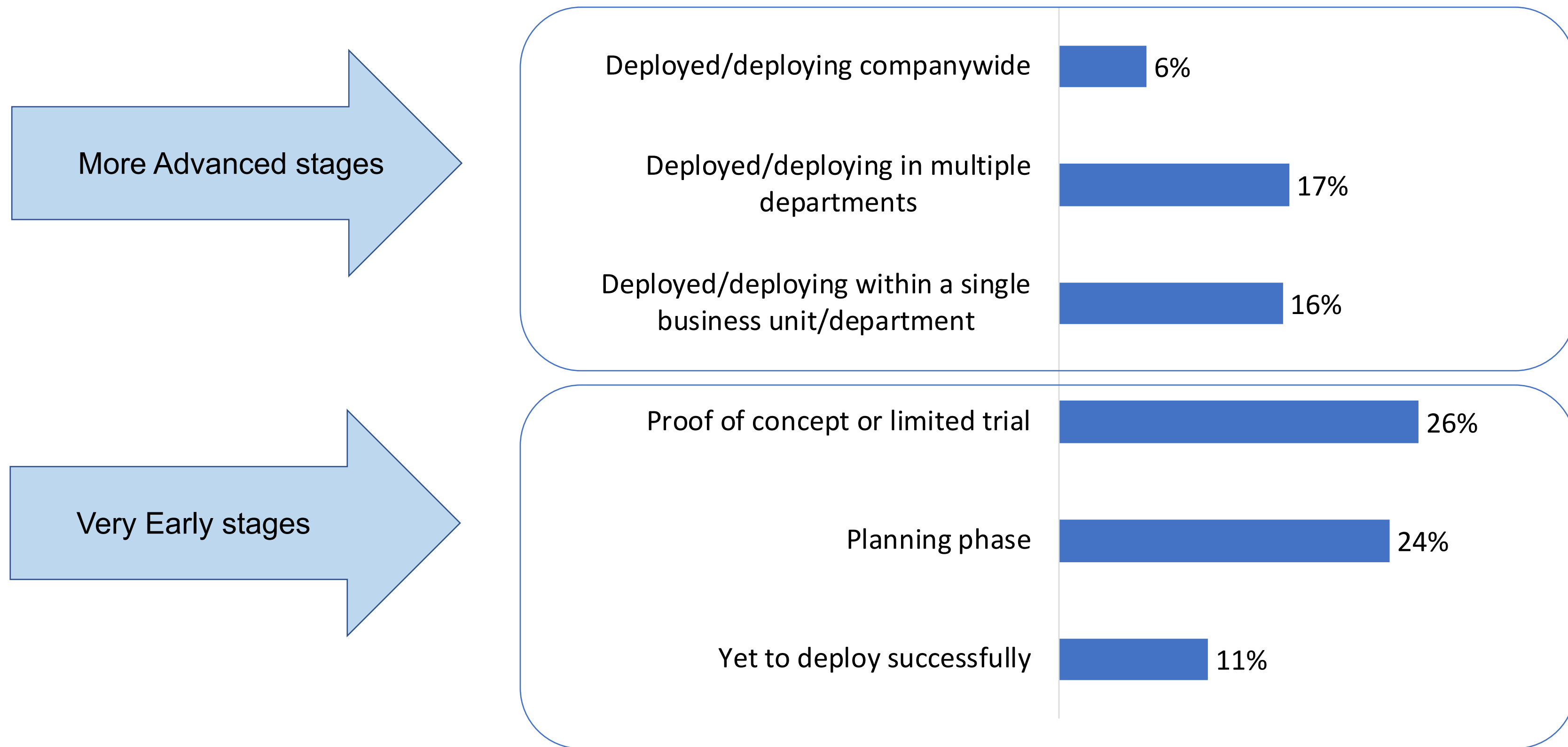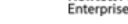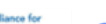
Source: *IDC's European 5G and IoT Survey, 2022* (n =426, base = those currently using IoT)

Q. What stage is your organization at regarding Edge computing?

Established standalone companywide initiative, 8%

Educational/awareness phase only, 35%

Established initiative limited to one business unit, 9%

48% of Edge adopters are in the pilot phase

Early-phase companywide pilot, 19%

Early-phase pilot limited to one business unit, 28%
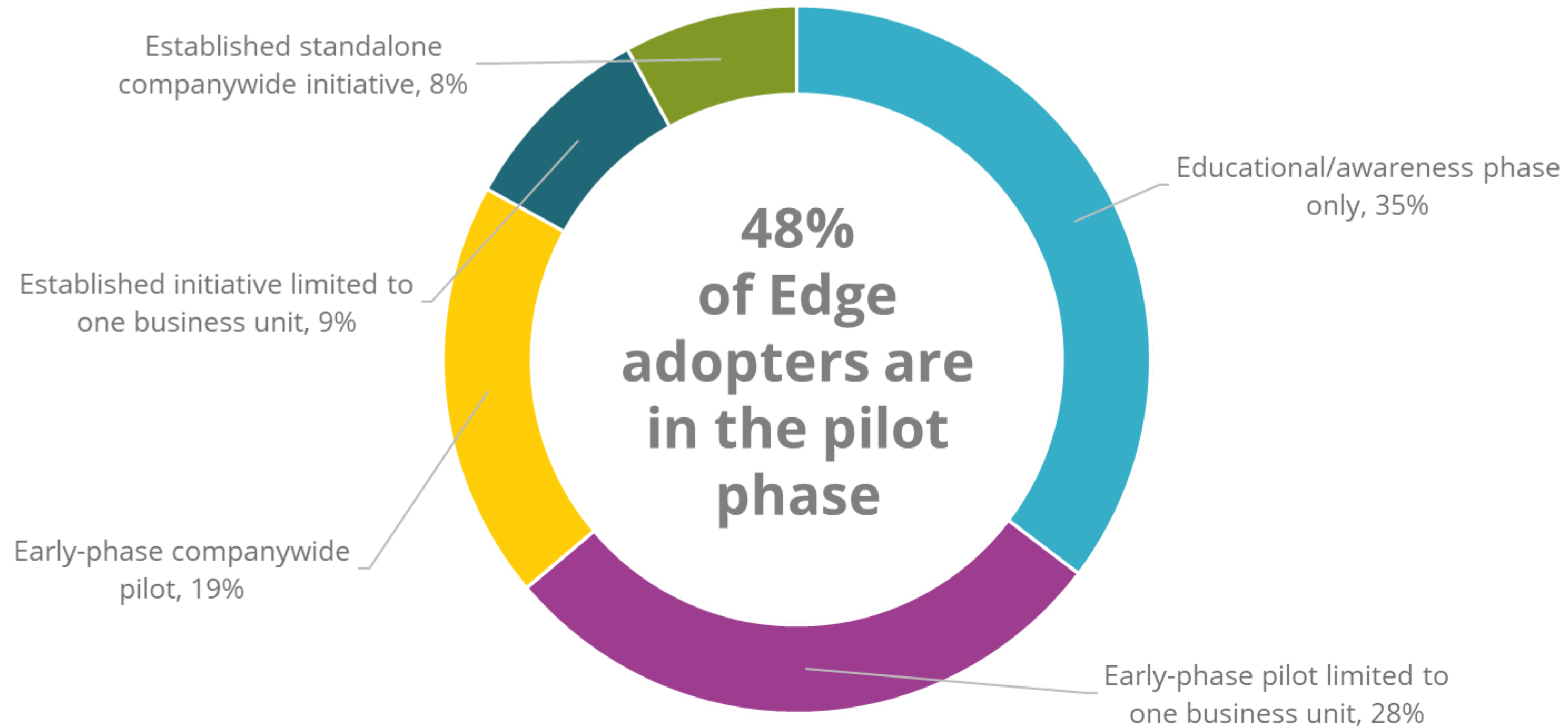
Note: Emerging technologies include AI, AR/VR, robotics or drones.

IDC Market Glance European Internet of Things

- Opportunities across the technology spectrum
- Market leadership remains wide open
  - Fragmented market
  - Many strong European players
  - Incorporates many technology components/sectors
  - Comprised of hundreds of individual use cases, each with its own market and value chains
  - No dominant players in most segments

Source: IDC, 3Q22

For areas on which IDC publishes market share data, the top 3–5 market share leaders are represented.
For areas on which IDC does not publish market share data, vendor selection is up to analyst discretion.

Europe leads in some tech fields, while lagging in others

Policies make a difference

Understand trends and opportunities, so the right policies can follow
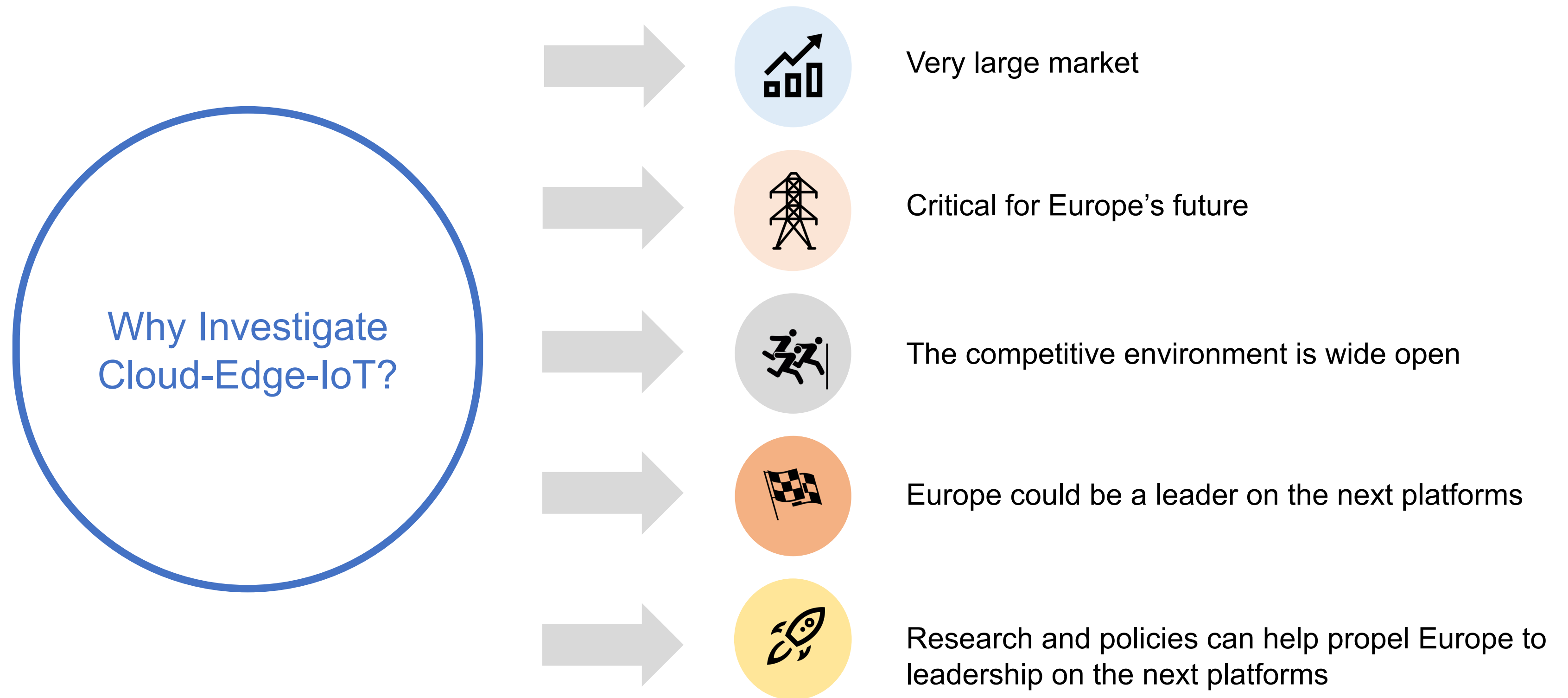
Why Investigate Cloud-Edge-IoT?

→ Very large market

→ Critical for Europe's future

→ The competitive environment is wide open

→ Europe could be a leader on the next platforms

→ Research and policies can help propel Europe to leadership on the next platforms

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Our approach: Value Chain Adopter Groups

Manufacturing

Agriculture

Health

Energy and Utilities

Transportation

VALUE CHAIN

Adobe stock: Artur

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Workshop "waves" (3-4h each) – sector-specific groups and a final cross domain panel (start in 2023)

- **First Wave (virtual)**: Who are the **business drivers**?

- Where do the **revenue streams** flow?

- Where are the potential **vendor lock-ins**, or **gaps** and **business opportunities**?

Blue Ocean Strategy

Adobe stock: KanawatTH

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Workshop "waves" (3-4h each) – sector-specific groups and a final cross domain panel (start in 2023)

- **Second Wave (hybrid)**: What are the most important **service requirements** regarding **security, sustainability and sovereignty**?

- Who are the **new players** in the edge-cloud-IoT eco system?

- Are there **novel business models** and opportunities?

Provide active feedback to the CEI service attributes required in market segment

Adobe stock: KanawatTH

Cross domain panel (3-4h, in presence, per invitation)

large-scale pilots

build and activate the demand constituency

Adobe stock: everythingpossible

- Final discussion of the pathways for **emerging market structures**, along with **key decision points** for **government actions**

- **Recommendations** for the **large-scale pilots** that will be funded by the European Commission (2023-24)

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Why to join the value chain adopter groups?

- contribute with **recommendations for the large-scale pilots**

- actively shape CEI towards **energy efficiency, reduction of CO_2 emissions, resilient supply chains, data privacy**

- estimate **cost-benefit ratio** regarding the **infrastructure investments**

- foster the green and digital 'twin' transition to build together **sustainable European data-driven value chains**

Adobe Stock: jojokrap

Please register for the workshops here!

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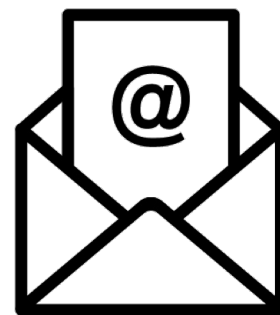The European Cloud, Edge & IoT Continuum

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