ALLPROS WEBINAR

The edge computing landscape

In the semiconductor industry in Europe

DECEMBER 2025

Alexandra Rotaru
Data and Analytics Manager
IDC Edge Computing Spending Guide

Luis Fernandes
Senior Research Manager
EMEA Digital Infrastructure Strategies

Contributing Analysts

Alexandra Rotaru

Data and Analytics Manager, IDC

Luis Fernandes

Senior Research Manager, IDC

Agenda

- (10m) The GenAI shift in Infrastructure
- (10m) Edge in the EU
- (10m) Semiconductor industry impact
- (20m) Expert Analyst Interview
- (10m) Q&A

Executive Summary

Shift in infrastructure

Since the advent of the mainframe, no other single event has changed the way companies look at IT infrastructure in such a big way like they have with GenAI. EU companies should acknowledge it, embrace it and leverage it to their advantage.

Edge and the EU

Edge computing has always been a big bet by the EU central instances. Growth in edge is growing and will only accelerate. The need to create decentralized and distributed computing to process GenAI inferencing near endpoints is key to that.

Impact in semiconductor industry

This change in the way we process edge will have serious impact in the semiconductor industry. ARM CPUs, Entry-level GPUs, increase in memory consumption and new cooling paradigms will cause massive impact.

Edge spending

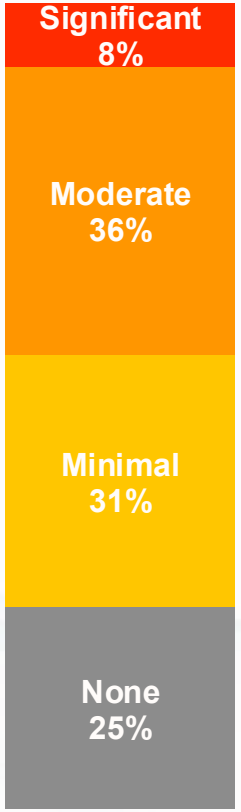
Edge computing becomes increasingly relevant for the GenAI compute-intensive models and a major growth driver for chips optimized for AI workloads. The overall European edge computing market is poised to reach $ 62 billion by the end of 2026, with Edge AI accounting for nearly 20%.

The GenAI shift in Infrastructure

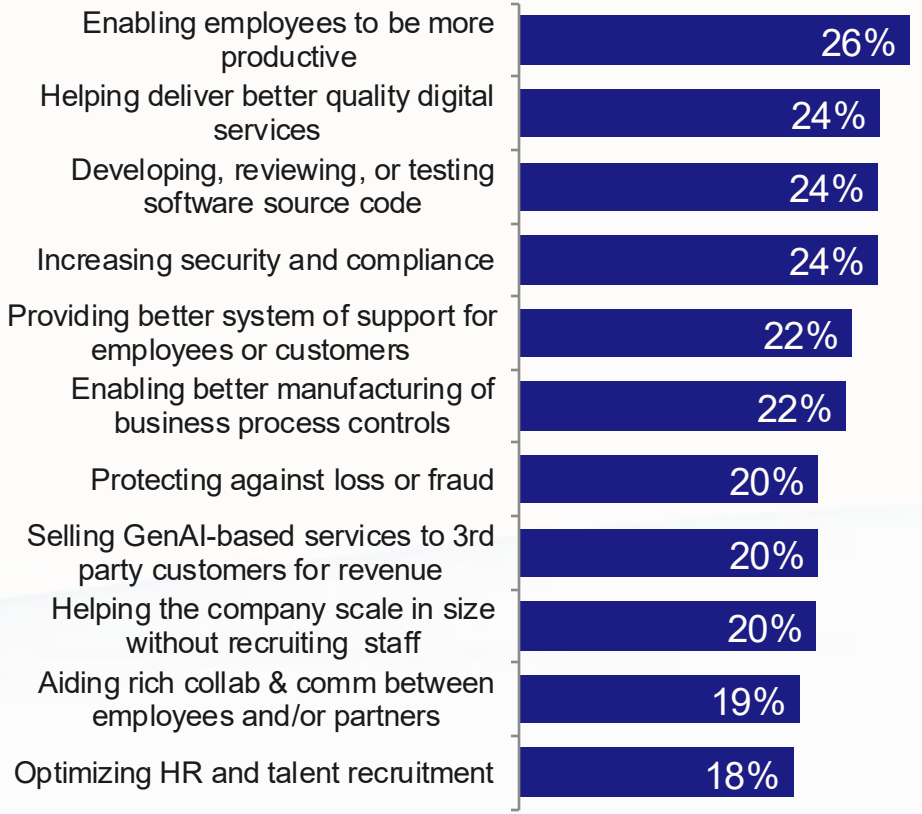
Disruption from GenAI is coming, and companies adapting to it are poised to increase their profits

- Approximately a quarter of all respondents hasn't felt any type of disruption to the business model or competitive positioning caused by GenAI.
- For those that have felt disruption, it has been either minimal or moderate impact, totaling over 65% of respondents.
- A substantial disruption is yet to be felt by most companies, with only 8% stating that they have felt a significant disruption in the business model or competitive position of their company.
- The largest impacts in revenue attributed to GenAI have been around increasing productivity of employees and output of services to customers.

Disruption by GenAI



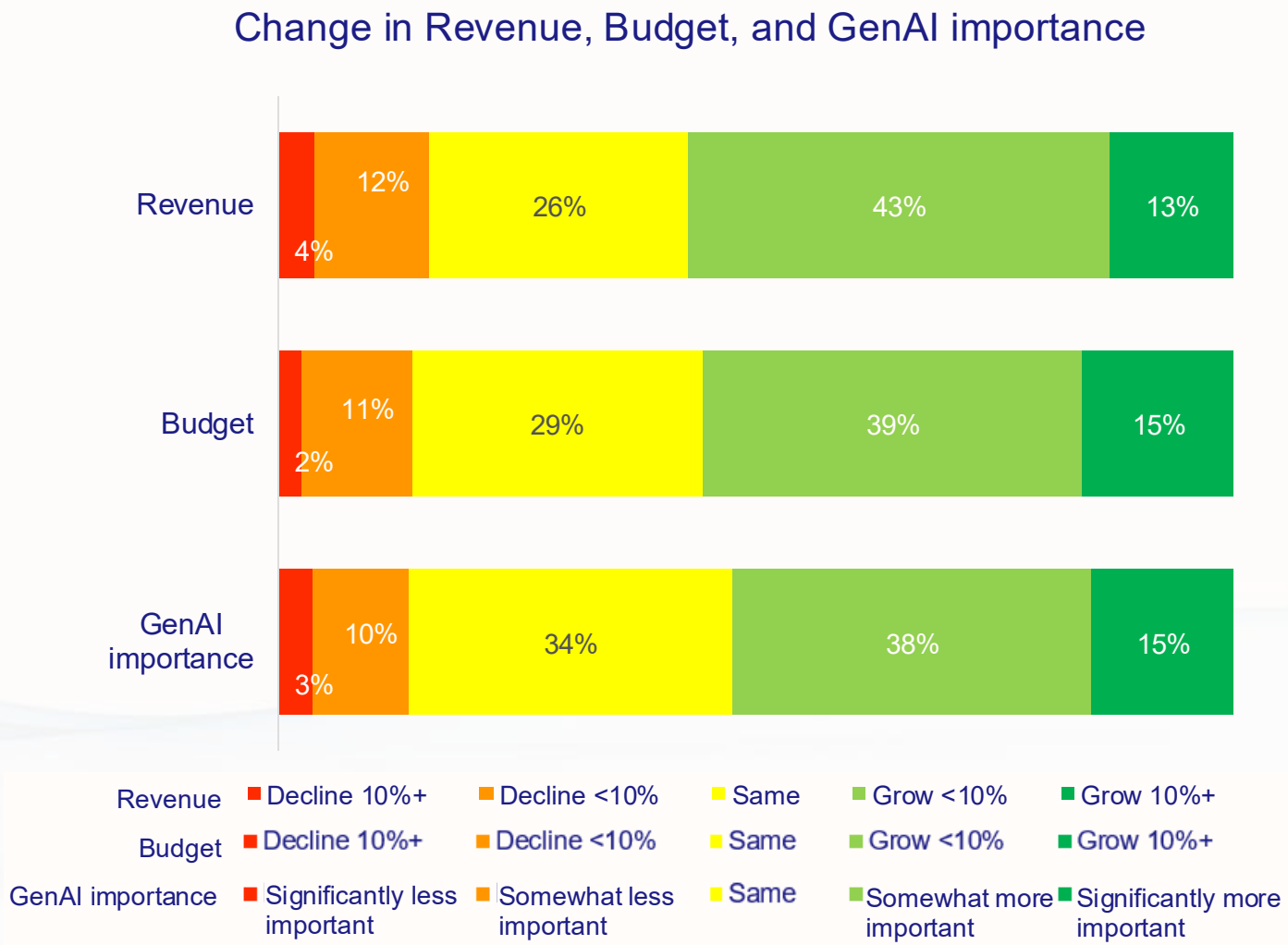
Largest impact on business revenues or profitability by GenAI



Source: IDC's *EMEA GenAI Infrastructure Survey*, 2025 (n = 700, EU based companies)

Just over half of companies in the EU have realized how important GenAI is to their strategy

- A slight majority of companies have realized the symbiotic relationship between IT investment and revenue increase and are increasing their budgets to support their growth.
- Approximately the same percentage of companies are paying more attention to GenAI, taking it into account when designing their corporate strategy in the next cycles.
- However, only a fraction of companies are able to grow their investment in substantial numbers to capitalize on a competitive advantage using IT and a solid GenAI strategy.

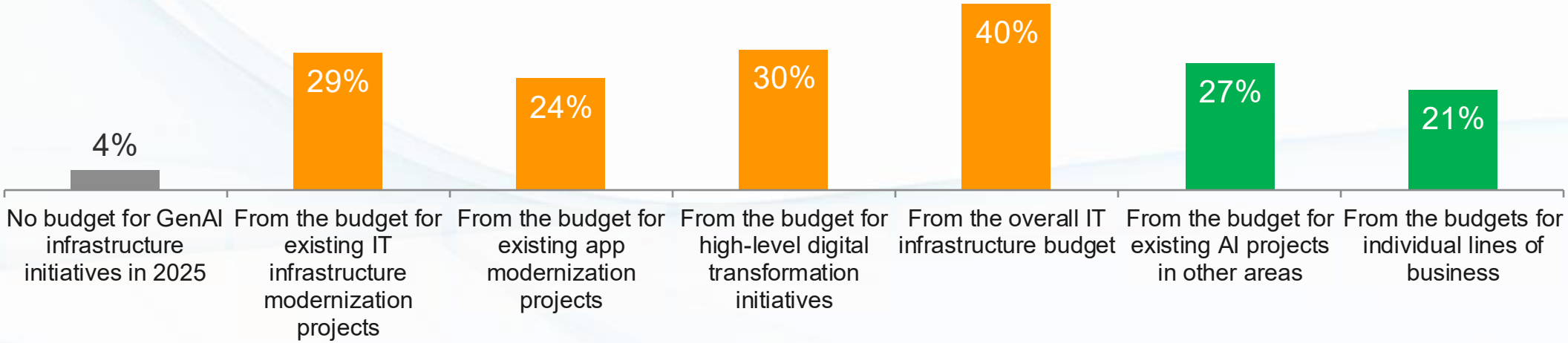


Source: IDC's *EMEA GenAI Infrastructure Survey*, 2025 (n = 700, EU based companies)

Most companies are funding GenAI initiatives, but they should avoid building technical debt by appropriation

- Although the numbers we saw previously regarding companies not feeling disruption from AI, only 4% of companies are not allocating some of their budget towards GenAI Infrastructure.
- A major part of GenAI Infrastructure projects is still being financed at the expense of other projects, a trend that started at the beginning of the advent of GenAI, but that IDC has been warning about since then. By carving out budget from other areas, companies are not approaching these topics in a sustainable form.
- Already underfunded infrastructure projects will suffer further and might cause issues in not just delays in delivering results, but serious questions around resilience and security.
- On the other hand, less than half of companies are, at least in part, securing their GenAI budget from AI projects or being paid directly by reporting lines of business that will benefit from the outcomes of projects.
- Ideally, more budget will have either a dedicated section for AI projects or being supported by lines of business wanting to develop these projects, turning IT into a service provider to those LOBs.

Origin of current GenAI infrastructure budget for 2025



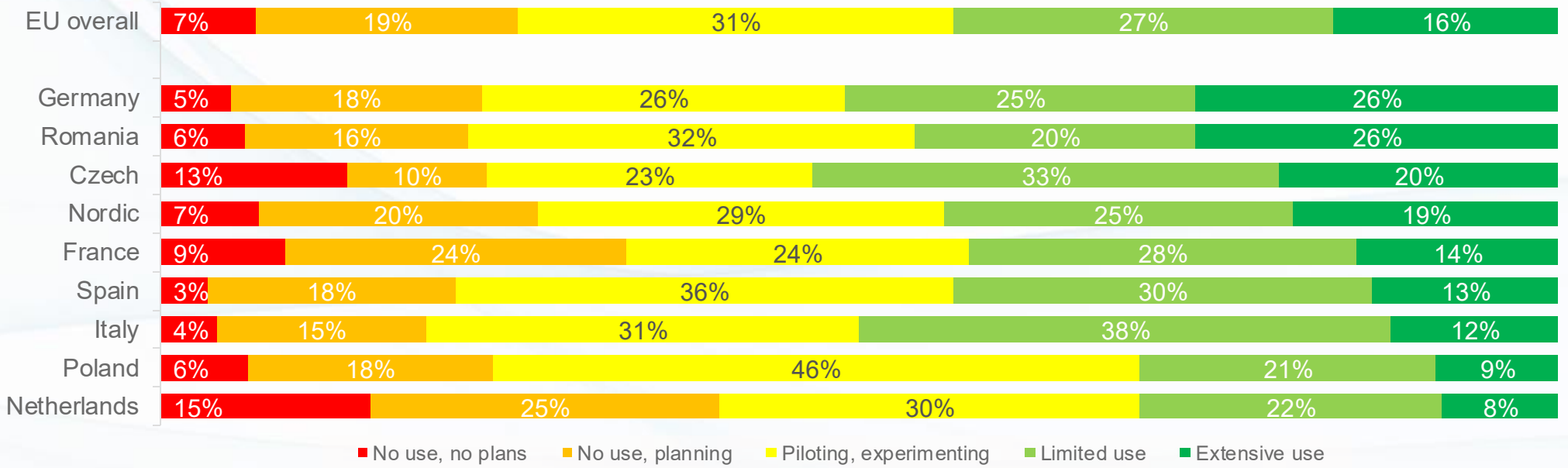
Note: Survey allowed multiple options, total may be greater than 100%, except for ”No budget” which was an exclusive choice.

Source: IDC's *EMEA GenAI Infrastructure Survey*, 2025 (n = 700, EU based companies)

GenAI adoption is expanding, but still has a long road ahead to be in extensive use in a substantial way

- Although 3 out of every 4 companies are in some way at least experimenting with GenAI in their IT infrastructure, only 16% of respondents have made an extensive use of it.
- A big share of companies across all countries are still in the pilot and experimentation phase, which many times can be traced back to a lack of engagement between the CIO and the C-suite.
- There is still a portion of the market that is still highly resistant to using GenAI in their IT infrastructure. Between those that are planning and those without any plans, around a quarter of all respondents is not at the time deploying GenAI.

Current use of GenAI in IT infrastructure

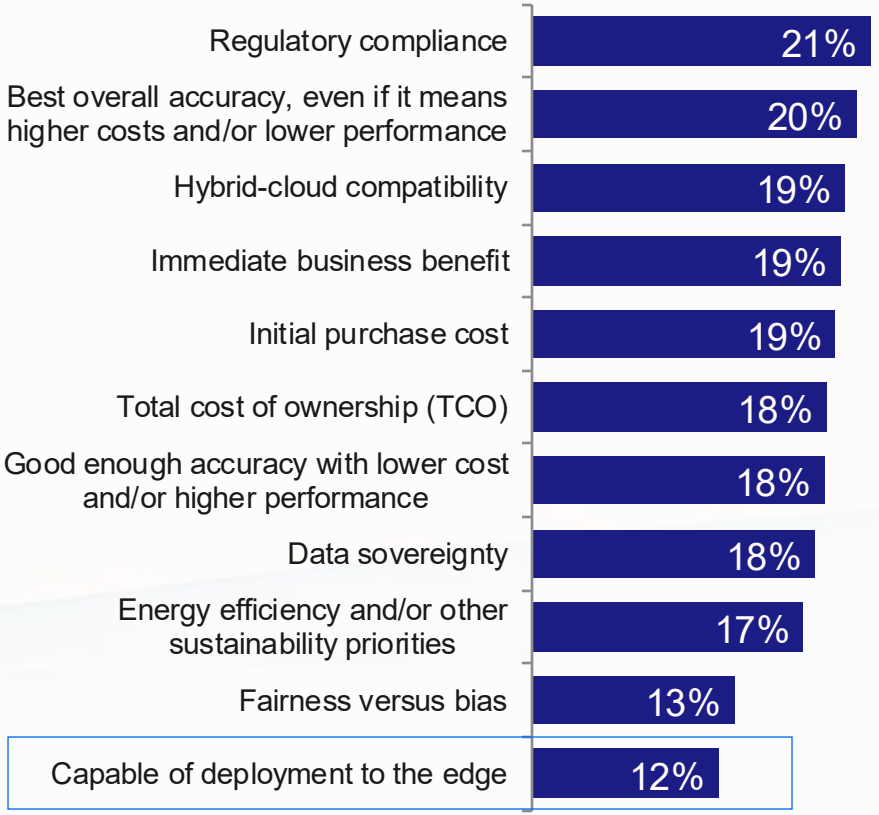


Source: IDC's *EMEA GenAI Infrastructure Survey*, 2025 (n = 700, EU based companies)

Digital sovereignty and private AI are fueling EU companies prioritizing compliance

- Regulatory compliance is top of mind when choosing GenAI models and types. Companies in the EU are necessarily very aware of the need for compliance given the EU's heavy regulation environment.
- Another major aspect is the fear that systems will not be accurate enough - provide inconsistent or incomplete answers, create hallucinations, etc.
- In third place there is a concern regarding the need for the system to be hybrid-cloud compatible. This relates to the fact that a lot of companies are turning to public cloud for piloting their AI systems but state their intention to move to private IT when deploying into production.
- Investment costs and TCO are not yet top concerns but its likely they will rise in importance given the budget shift that is happening to GenAI projects.
- Other topics that might become more top of mind moving forward will be data sovereignty and energy efficiency awareness.

Major considerations in choosing GenAI model and deployment types

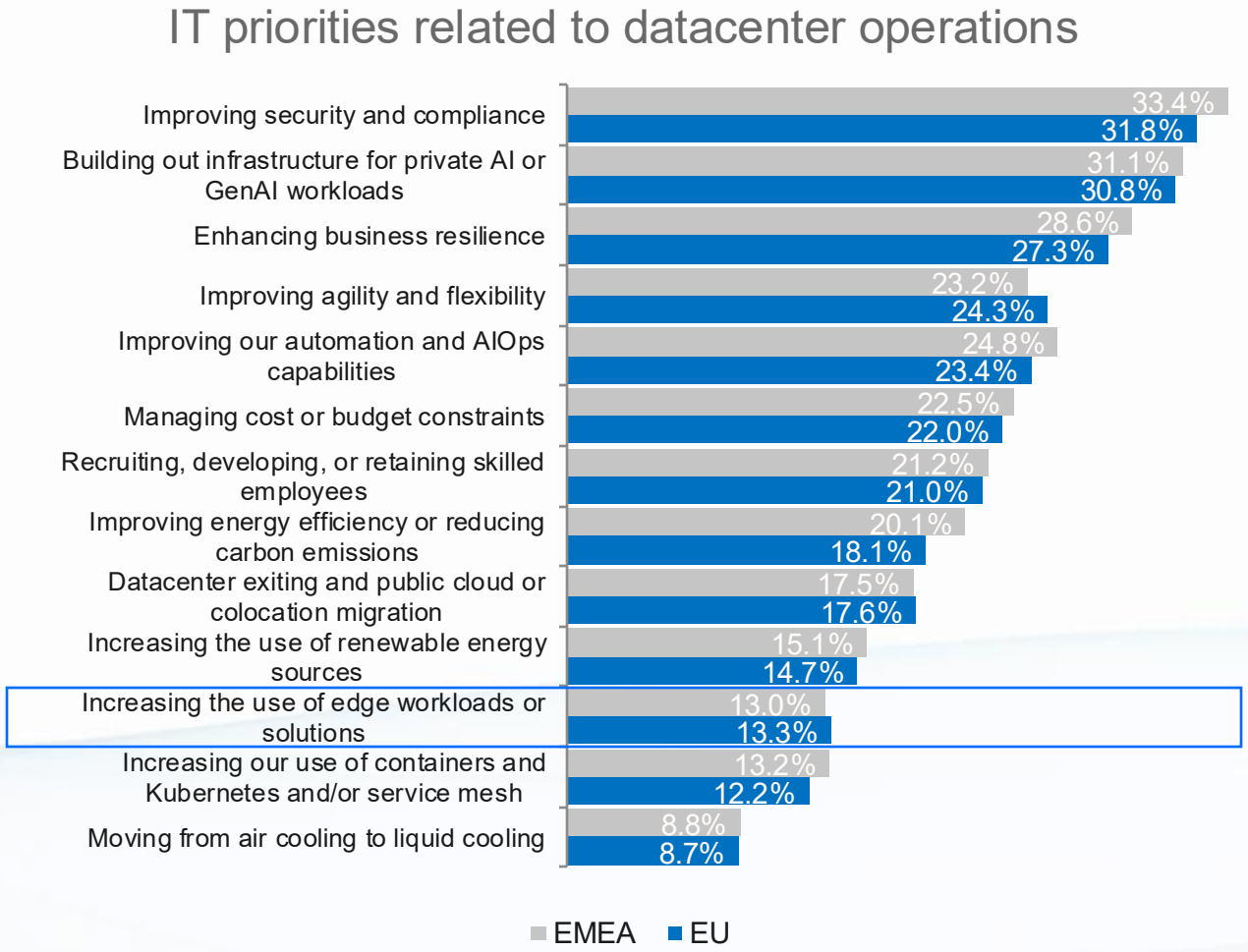


Source: IDC's *EMEA GenAI Infrastructure Survey*, 2025 (n = 700, EU based companies)

Edge in the EU

Edge computing is far from being a top priority, but it can be key to solving other priority elements

- Security and compliance are top of mind priorities for CIOs in the EU.
- Given the overarching impact of GenAI, many IT managers are concerned with building out specialized infrastructure for AI and GenAI workloads.
- Another major aspect is to enhance business resilience of the existent IT ecosystem.
- At this point in time there isn't much focus on increasing the use of edge workloads or solutions.
- However, it is noteworthy that the increase of use of edge is one of the few priorities where EU companies are more concerned than the overall EMEA market.
- Other cases are improving agility and flexibility and exiting datacenters to move to public cloud or colocation providers.

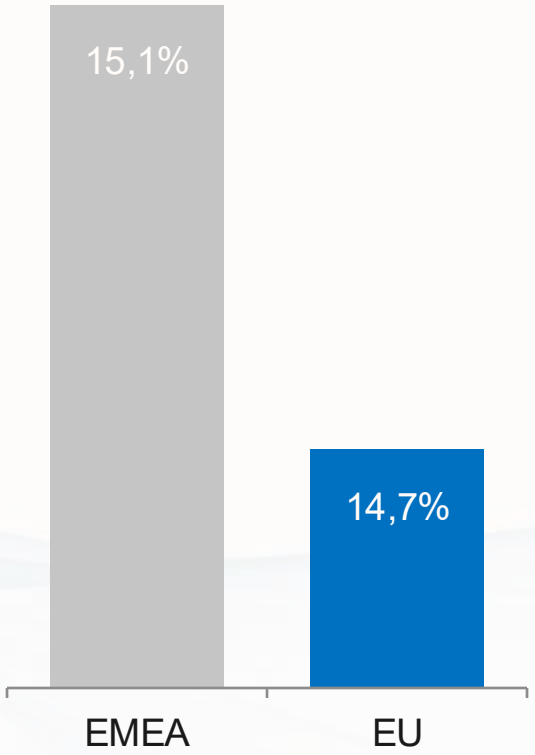


Source: IDC's *EMEA Digital Infrastructure Survey*, 2025 (n = 1,050, EU based companies)

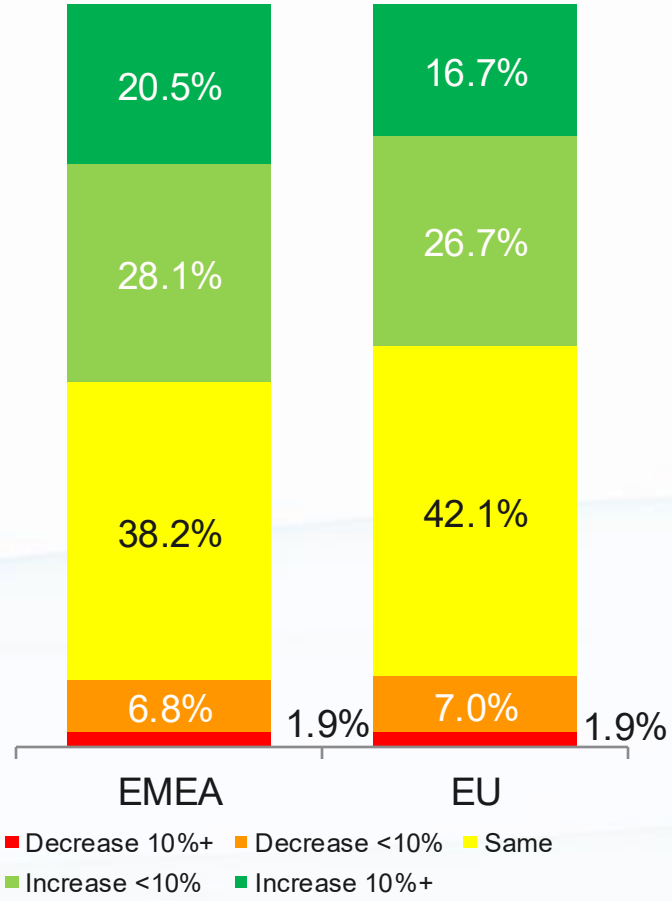
Edge environments receive only a fraction of companies' infrastructure budget

- When IT managers need to allocate budget to different areas such as core datacenters or cloud or edge, only about less than 1/6 of that investment is for edge environments.
- That figure is even more challenging when we look exclusively at EU companies.
- Regarding the spending change in edge environments, while in the overall EMEA market almost half of respondents is growing its budget from last year to this one, that number drops 5%.

Infrastructure spending allocated edge environments, workloads, and solutions in the previous year



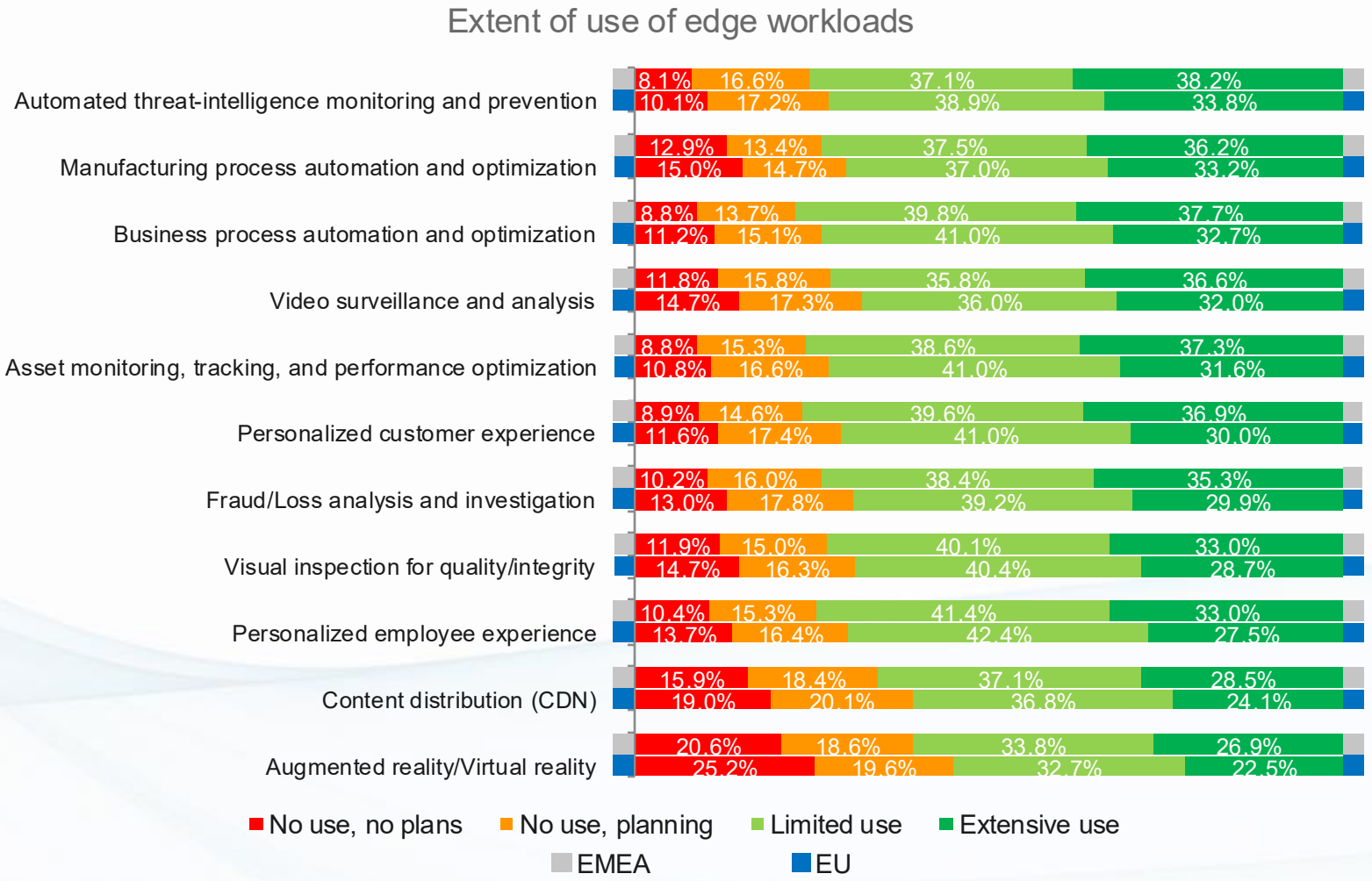
Spending change this year vs previous year in own edge environments, workloads, and solutions



Source: IDC's *EMEA Digital Infrastructure Survey*, 2025 (n = 1,050, EU based companies)

Multiple diverse edge use cases are being deployed in the market

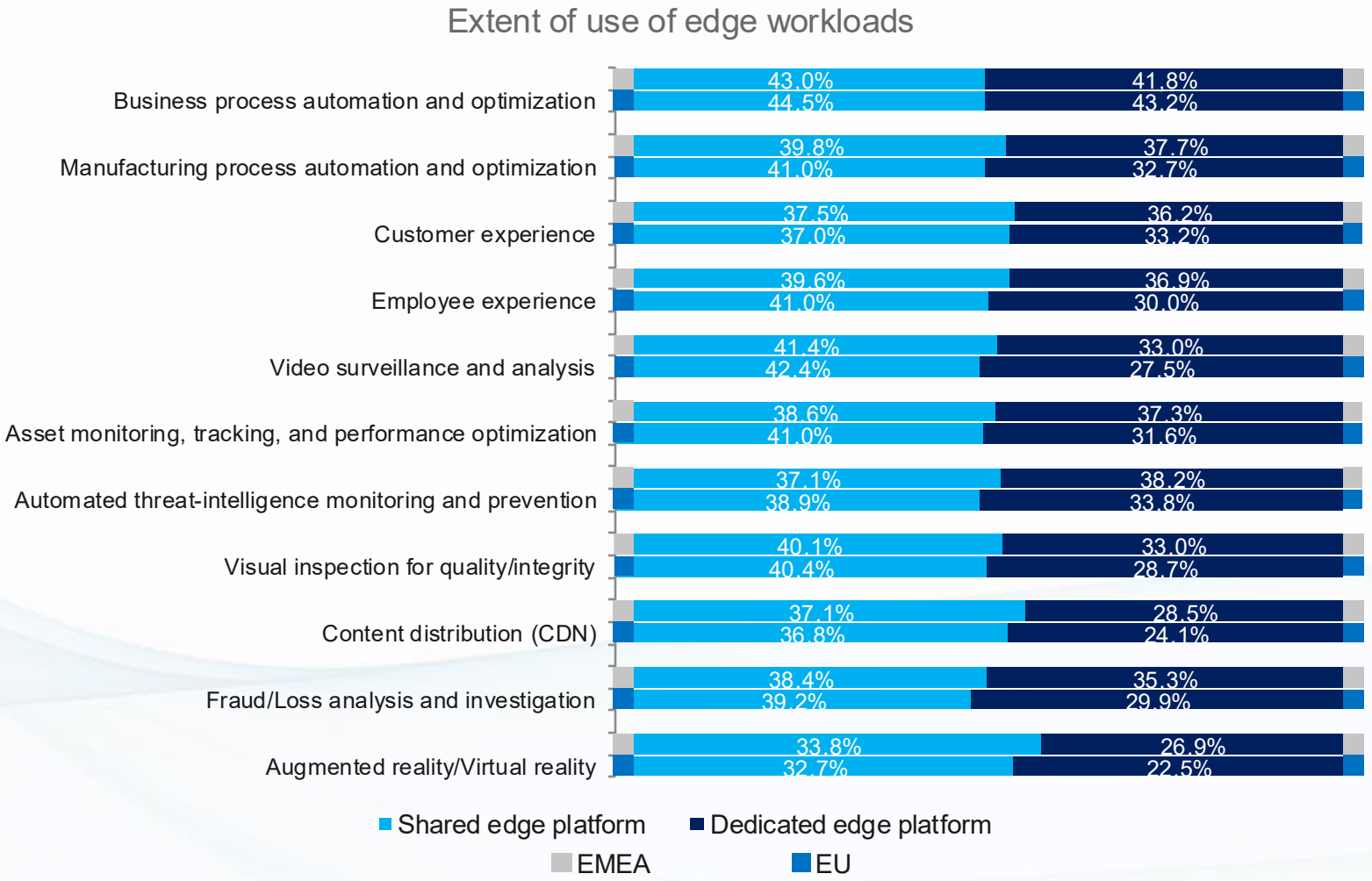
- When it comes to deploying edge use cases, the most deployed is around security, with CIOs deploying edge to monitor and prevent cyber threats.
- Companies are also using edge to support automation and optimization, either in business or manufacturing efforts.
- A large section of customers is still deploying edge, however, in limited use, not fully committing to edge deployments extensively.



Source: IDC's *EMEA Digital Infrastructure Survey*, 2025 (n = 1,050, EU based companies)

The willingness to use shared platforms can be an opportunity to develop EU-sponsored edge locations

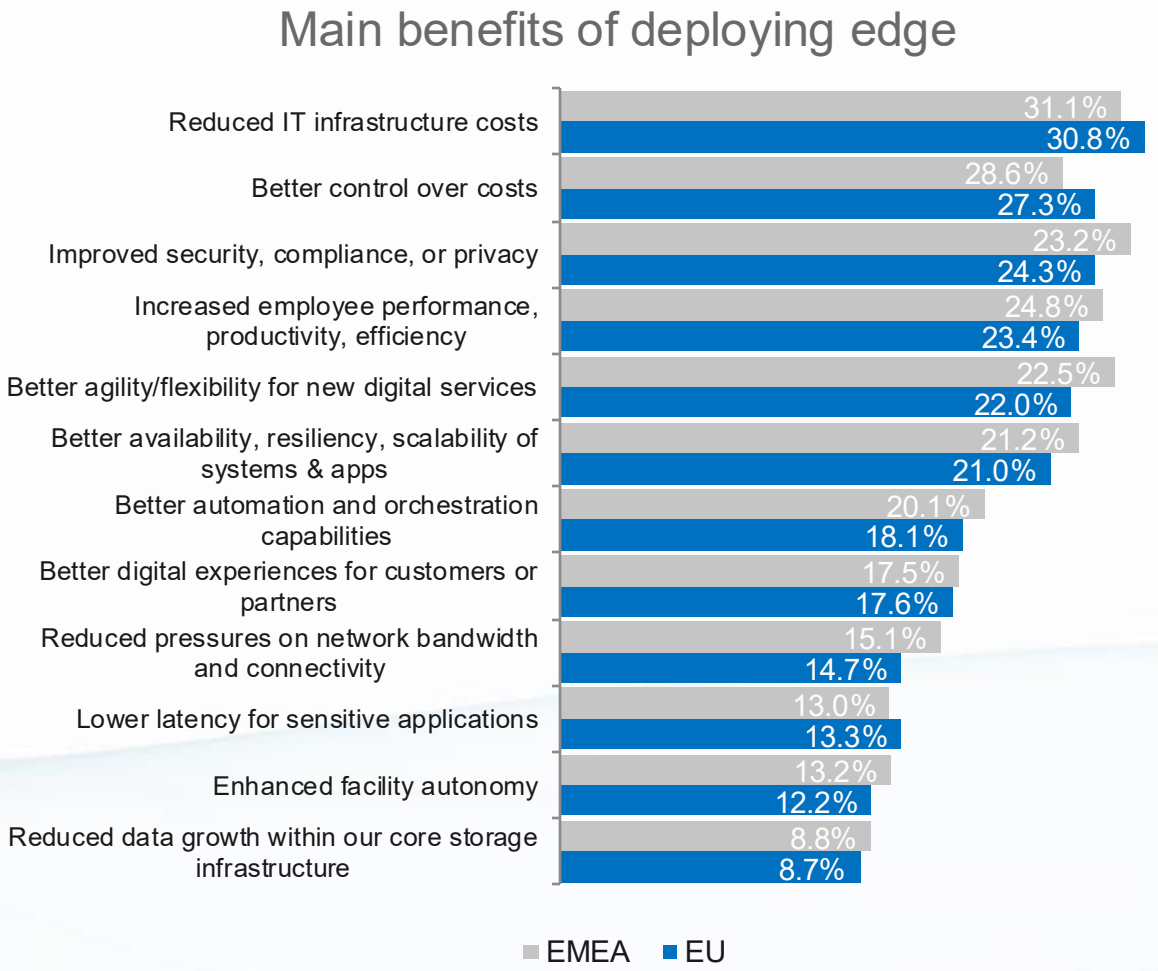
- Customers deploying edge workloads tend to slightly favor shared platforms.
- Dedicated platforms can be at time necessary to protect private data or IP.
- Shared platforms, on the other hand, are usually favored to reduce costs.
- While dedicated platforms will remain relevant to edge workloads that require to be air gapped from other workloads, shared infrastructures can be provided to serve multiple workloads in a multi-functional, multi-tenant environment, with a service provider managing the infrastructure.



Source: IDC's *EMEA Digital Infrastructure Survey*, 2025 (n = 1,050, EU based companies)

Edge computing is seen as a path to reducing or controlling costs

- The top benefits of deploying edge are the main reasoning behind the top dedicated and shared platforms.
- While EU companies wish to reduce and optimize their costs, there is a reasonable concern around security and digital sovereignty.
- Latency and network bandwidth are factors that have been decreasing steadily in recent years, given that networks have become more resilient and with optimal performance.
- Interesting to note is also the rise of two benefits that have been seen as extremely relevant in surveys on GenAI – Increased employee performance, productivity and efficiency and agility/flexibility for new digital services.
- With the increase in GenAI workloads at the edge, and especially with Agentic AI, these factors will most likely become more relevant.



Source: IDC's *EMEA Digital Infrastructure Survey*, 2025 (n = 1,050, EU based companies)

Edge and the future of the semiconductor industry

The EU is helping fuel the Exascale era

JUPITER Officially Propels Europe into the Exascale Era

Europe reaches a historic milestone on the new Top500 list: JUPITER is not only the continent's fastest supercomputer but also the first to break the exascale barrier. Together with LUMI & Leonardo, Europe secures 3 spots among the world's top 10.

Newsroom > AMD and Eviden to Power Europe's New Exascale Supercomputer, the First Based in France

AMD and Eviden to Power Europe's New Exascale Supercomputer, the First Based in France

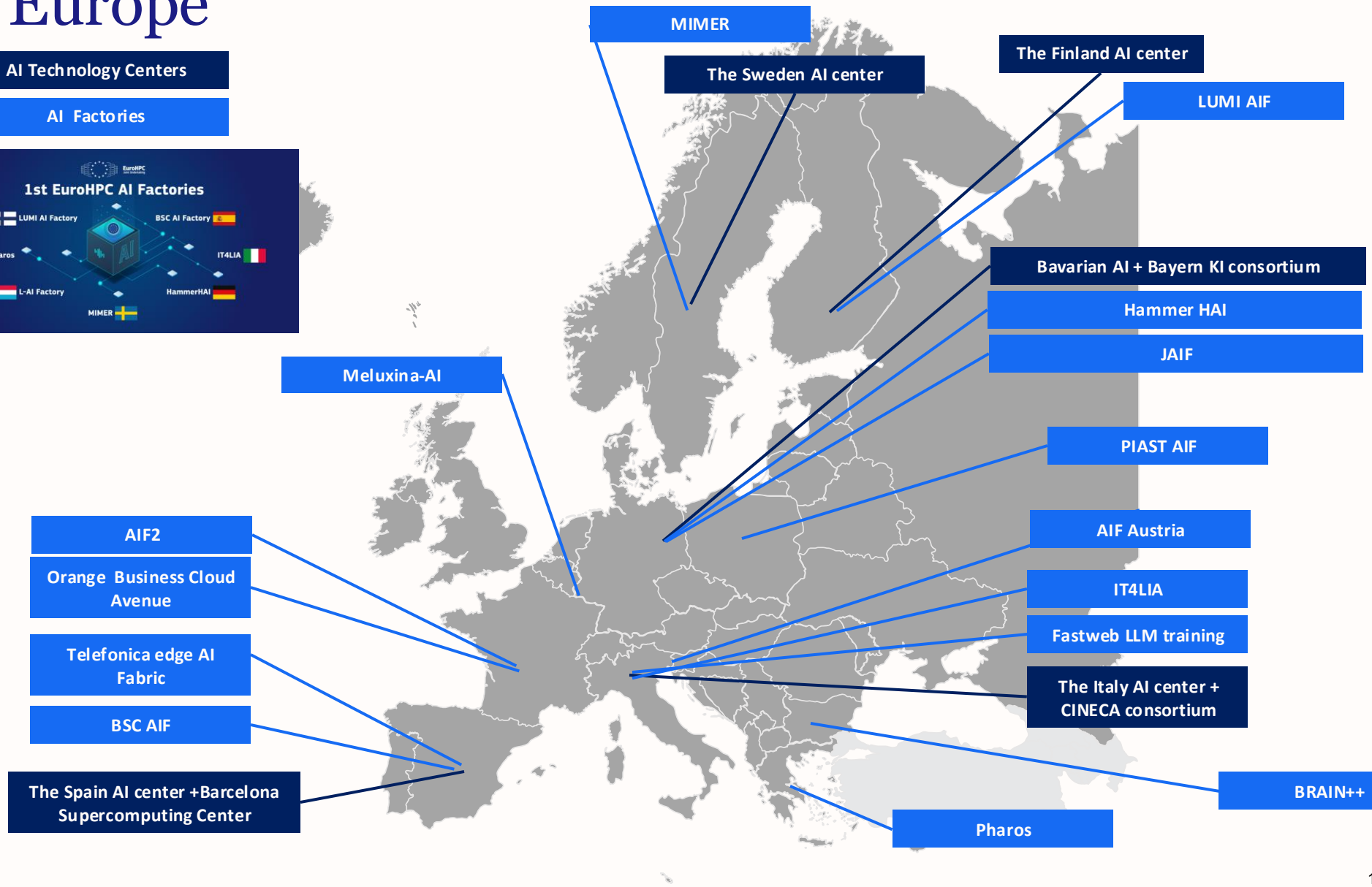
News Highlights

- The Alice Recoque supercomputer will expand Europe's AI, scientific computing and research capabilities while ensuring energy efficiency and sovereignty.
- Alice Recoque will be powered by next-gen AMD EPYC CPUs and AMD Instinct MI430X GPUs to deliver more than one exaflop of HPL performance.

AI Capacity and Skills are building across Europe

AI Technology Centers

AI Factories

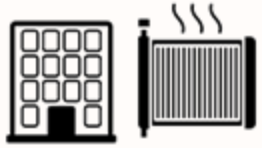


The edge is about to have a power and cooling problem

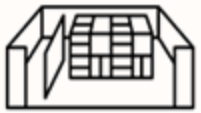
The key benefits of direct-to-chip liquid cooling:

- Dramatically lowers cooling overhead and enhances TCO
- Maximum system performance due to the high heat capacity of the technical cooling liquid
- More efficient datacenter use of water
- Helps meet ESG commitments and reporting requirements
- Supports significantly higher GenAI compute density
- Quieter operation, improving workplace comfort
- Prevents hotspots and thermal throttling
- Processors that run more consistently at peak "boost" clocks

Elements of a direct-to-chip liquid cooled datacenter that turn it into an AI factory:



Datacenter facilities-side plumbing, fluid, and heat exchanger

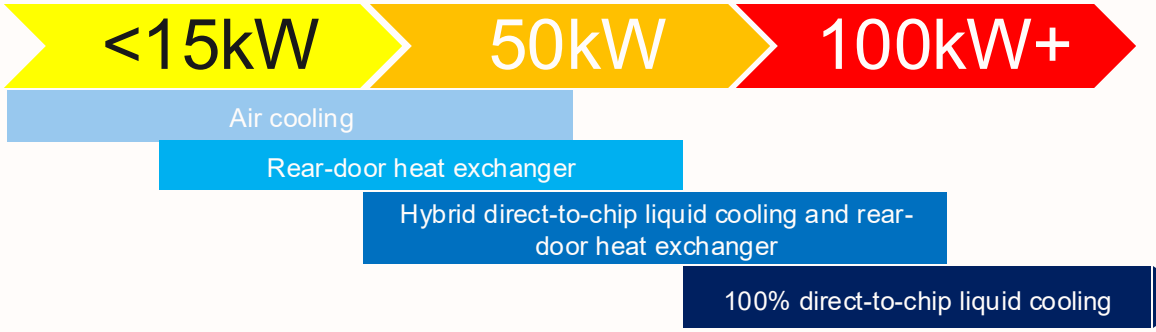


Facilities-side liquid distribution manifolds and heat exchangers in datahalls

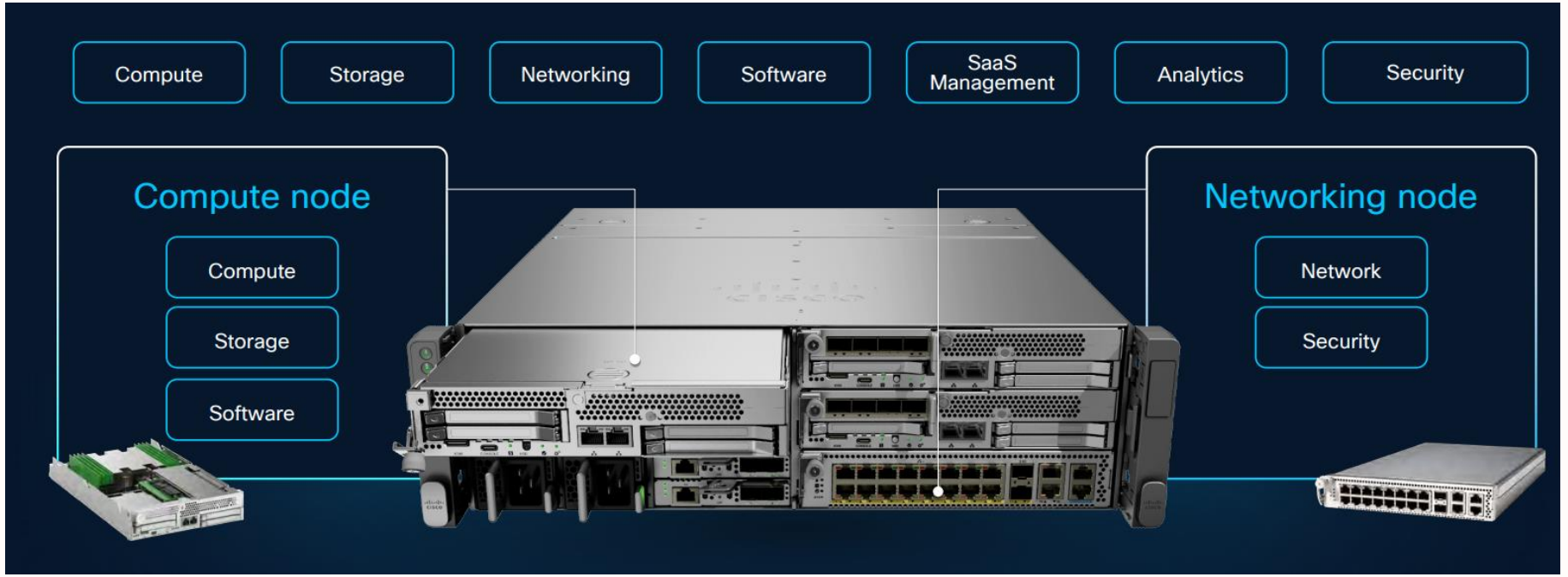
Coolant distribution units (CDUs) in racks, rows, or datahalls

Hybrid or 100% direct-to-chip cooling loop with **advanced technical cooling fluid**

The suitability of different air and liquid cooling approaches based on rack-level power density



OEM Vendors are investing in the edge



We've been here before

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TECH

AI boom is fueling a memory chip shortage that could hit cars and phones

PUBLISHED MON, NOV 17 2025·5:32 AM EST | UPDATED MON, NOV 17 2025·6:40 AM EST

Dylan Butts
@IN/DYLAN-B-7A451A107

KEY POINTS

- According to th… shortage have… products.
- Analysts say th… demand from A…

In this article

SSU-FF -15.00 (-1.07%)

.FKRX300 -64.15 (-4.21%)

A SK Hynix Inc. 12-layer HBM3E memory
Bloomberg | Bloomberg | Getty Images

THE OUTPOST

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AI Demand Triggers Memory Crisis: DRAM Prices Surge 50% as Supply Chain Buckles

23 Oct 2025, 7:33 PM GMT+1 • Reviewed by Nidhi Govil

7 Sources Share

AI-driven demand has created a severe memory shortage, pushing DRAM prices up 50% and leaving even major cloud providers receiving only 70% of their orders. The crisis affects both enterprise and consumer markets, with retail RAM prices doubling in some cases.

…t in Crisis

…l market is experiencing an unprecedented supply crunch as artificial intelligence …es the semiconductor landscape. Major U.S. and Chinese hyperscalers are now …0% of their server DRAM orders despite agreeing to contract price increases of up …Q4 [1]. This represents a significant escalation from the 30% price hike many …ally budgeted for earlier this year.

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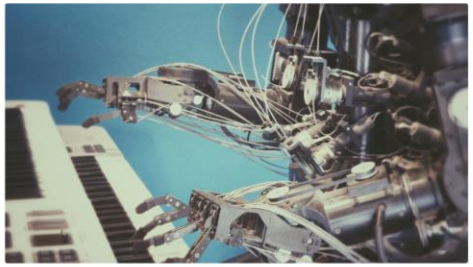
AI Boom Sparks Global Memory Shortage, Driving Decade-Long Hardware Price Surge

Watch this article

Written by Dave Sobel | Published on October 10, 2025

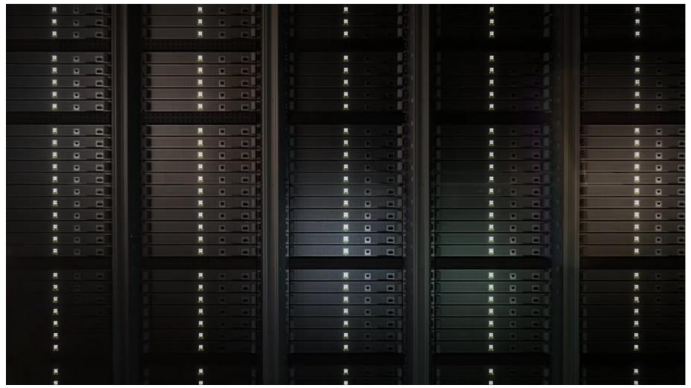


WinBuzzer AI WINDOWS MICROSOFT 365 CLOUD HARDWARE HOW TO ABOUT WINBU…

AI Infrastructure Growth Causes Memory Shortage with Server DRAM Prices Surging 50%

A severe server DRAM shortage, fueled by the AI arms race, has led to 50% price hikes and left hyperscalers with only 70% of their orders fulfilled, with ripple effects hitting consumer PC prices.

By Markus Kasanmascheff November 4, 2025 7:47 pm CET



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P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14 Manual Stop

A major server memory shortage is squeezing the world's largest tech companies, with late October 2025 reports showing U.S. and Chinese hyperscalers are getting just 70% of their DRAM orders filled, a supply crunch that has driven fourth-quarter contract prices up by as much as 50%.

Its roots lie directly in the global AI arms race, as memory makers redirect factory capacity from standard server RAM to high-demand components like HBM needed for AI chips.

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Brian Dantonio
20 Nov, 2025

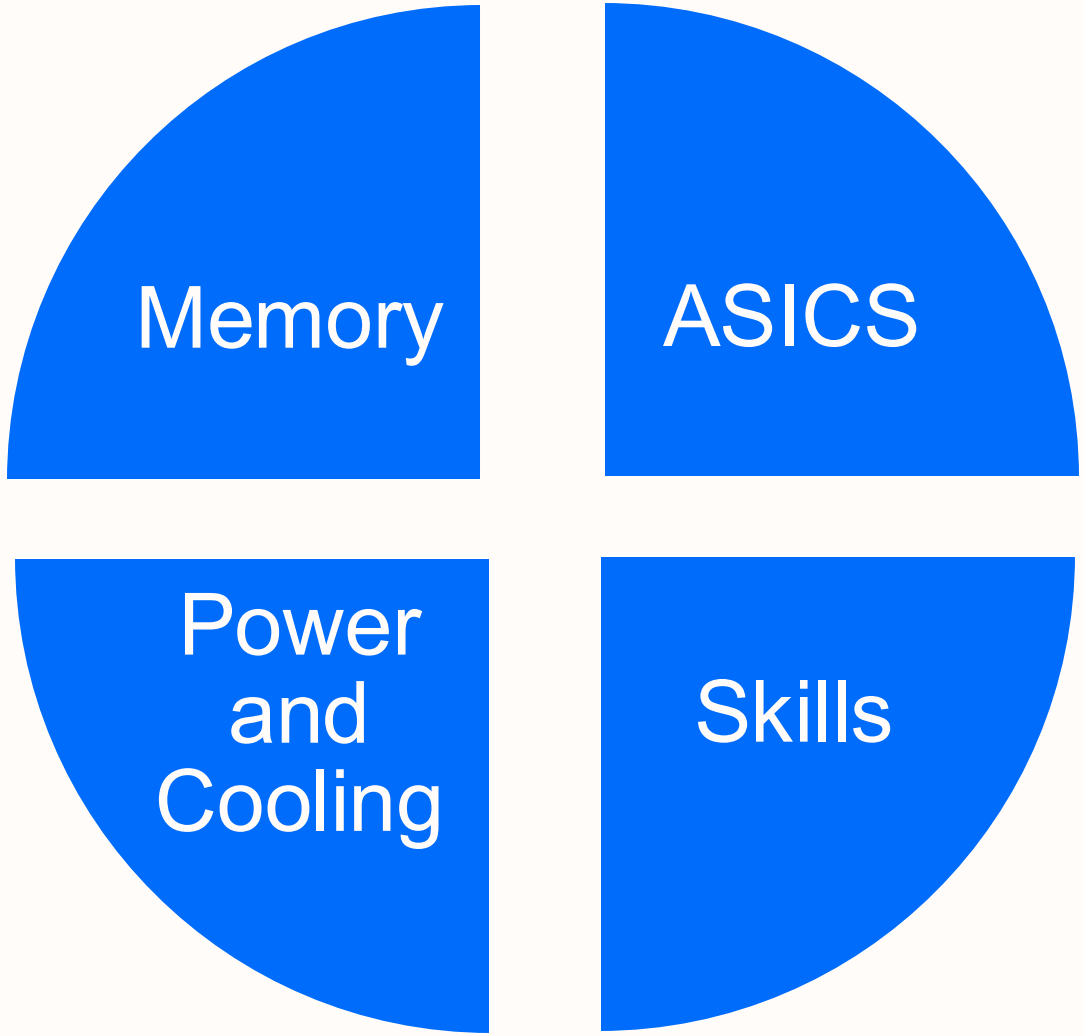
Share

AI's memory grab is about to hit your next pc build

GPUs and power grids were the first warning signs. Now the AI data center boom is colliding with a different bottleneck: the DRAM that feeds those chips, and the same memory that sits inside your PC, phone, car, and medical devices.

What used to be a quiet commodity market is suddenly front-page news. Hyperscalers are racing to stand up clusters for large language models, and each of those racks needs enormous pools of high-bandwidth memory. At the same time, consumers are discovering that a 32 GB DDR5 kit that felt like a routine upgrade last year now costs as much as a midrange motherboard.

The EU needs to invest seriously



Expert Analyst Interview

Q1. How is Edge spending evolving worldwide? And in different regions?

Alexandra Rotaru

Data and Analytics Manager

Worldwide Lead IDC Edge Computing Spending Guide

Q2. How much does that differ from the EU? Where are the biggest gaps?

Alexandra Rotaru

Data and Analytics Manager

Worldwide Lead IDC Edge Computing Spending Guide

Q3. How does that impact EU's ability to be competitive?

Alexandra Rotaru

Data and Analytics Manager

Worldwide Lead IDC Edge Computing Spending Guide

Q4. What should or could be done differently?

Alexandra Rotaru

Data and Analytics Manager

Worldwide Lead IDC Edge Computing Spending Guide

Q&A

Key Takeaways

Edge will grow in coming years and will require a strong industry to back it up

GenAI is going to drive Edge

For now, GenAI is associated with Datacenters and AI Factories and massive deployments.
That computational power will become distributed and decentralized, and edge will be the primary vehicle for it.

Europe is not ready

Investments in Edge computing are some of the lowest in the world.
The EU needs to step up and speed up its investment today to be relevant tomorrow.

Impact in semiconductor industry

There are many areas where edge will need the support of the semiconductor industry.
Some of this support can come from the EU with the right push – ASICS, Memory.

It takes a village

Edge also requires skills, power and cooling.
For industries to invest, there have to the basic foundations in place to support that investment.


IDC