

# How infrastructure is driving our digital world

Haven't you also used ChatGPT, DeepSeek, or some other artificial intelligence (AI) solution recently? As AI continues to transform significant aspects of our lives and work, and while the exact trajectory of this transformation remains uncertain, it is clear that more and more opportunities will arise as use cases become more defined.

The digital infrastructure landscape plays a critical role in supporting modern economies and societies, enabling connectivity, data transfer, and technological advancements. The immediate need for developments

in the data center space is apparent, but the scope extends much further. Connectivity between computing and storage facilities, as well as the end users and their devices, must evolve in tandem with renewable power capacity and networks to support these installations. The global AI market alone was estimated at USD 196.63 billion in 2023, projected to grow at a CAGR of 36.6% from 2024 to 2030<sup>1</sup> showing the extent of the current digital transformation.

## Computing power and storage

Recently, we have witnessed significant developments across digital infrastructure presenting various investment opportunities. This includes wireless and fixed communication network infrastructure, with particular emphasis on the data center space and

its adjacent areas. The acceleration of AI and machine learning, together with cloud adoption, has been a major driver of this growth, creating vast demand for computing power and storage across diverse applications incl. both large scale core hyperscale facilities as well as latency sensitive installations on the "edge", that are closer to the customer. While the release of DeepSeek's R1 model has drawn considerable attention, most



**Maria Aguilar-Wittmann**  
Co-Head  
Infrastructure Fund &  
Co-Investments



**Tilman Müller**  
Co-Head  
Infrastructure Fund &  
Co-Investments



## HOW INFRASTRUCTURE IS DRIVING OUR DIGITAL WORLD

maintain that the need for substantial AI-related investment remains. Both Microsoft and Meta have recently re-iterated their commitments to AI-related spending. In addition, if DeepSeek’s model does prove to be considerably more cost-effective, it could accelerate the widespread adoption of AI applications, given new and improved business cases. This in turn would also necessitate further investments in infrastructure required to support AI inference (the processing of user requests by trained AI models).

One question that also ChatGPT (or DeepSeek) cannot answer (yet) is which individual technology and application areas will ultimately prevail. Here, regional differences in the possibilities and individual willingness to adopt new technologies are also significant. While Asia but also Africa tend to be more open to new technologies some parts of Europe lag when it comes to the implementation of innovations but also put more emphasis on data privacy and protection aspects. Today, the majority of investments in digital infrastructure is made in Europe (c.30%)<sup>2</sup>, North America (c.45%)<sup>2</sup>, and parts of the Asia-Pacific region (c.20%)<sup>2</sup>. A focus was here in particular on data centers which accounted for almost 60%<sup>2</sup> of deal volumes in 2024. This trend is expected to continue in 2025, with ongoing investment in data centers (despite recent noise). However, opportunities are also anticipated in other subsectors. According to the European Commission’s 2024 Digital Decade report, only 64%<sup>3</sup> of households have access to fiber and coverage of high quality 5G

extends only to merely 50%<sup>3</sup> of the EU territory (based on main pioneer band). The investment needed to reach connectivity targets amounts up to EUR 200 billion.<sup>3</sup>

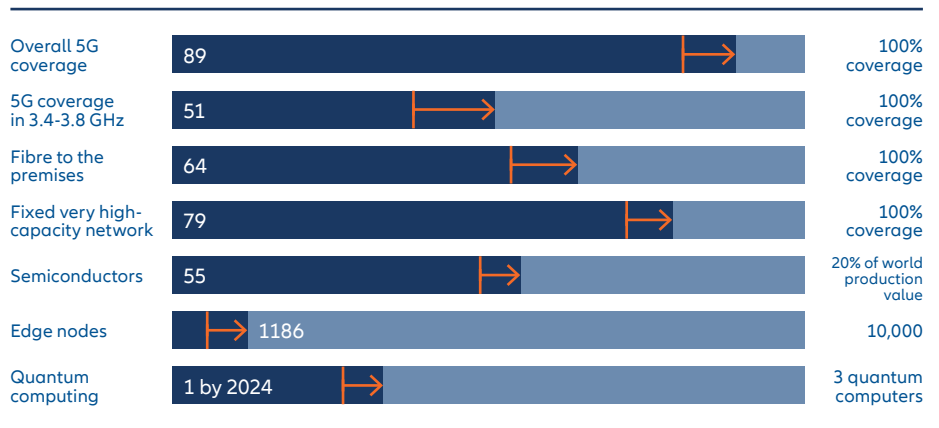
### Digitisation and decarbonisation

Be it a video conference, working remotely or streaming in the evening – more Digitisation requires more energy. In light of these developments, there has been a

notable shift towards incorporating sustainability considerations into the design and development of digital infrastructure. The issue of high energy consumption and carbon footprints remains a concern as the demand for digital services continues to grow at a rapid pace. There is a growing emphasis on transitioning to renewable energy sources and implementing climate-friendly cooling solutions for data centers. This focus on sustainability aligns with broader trends in decarbonisation and

### Taking stock of progress towards 2030

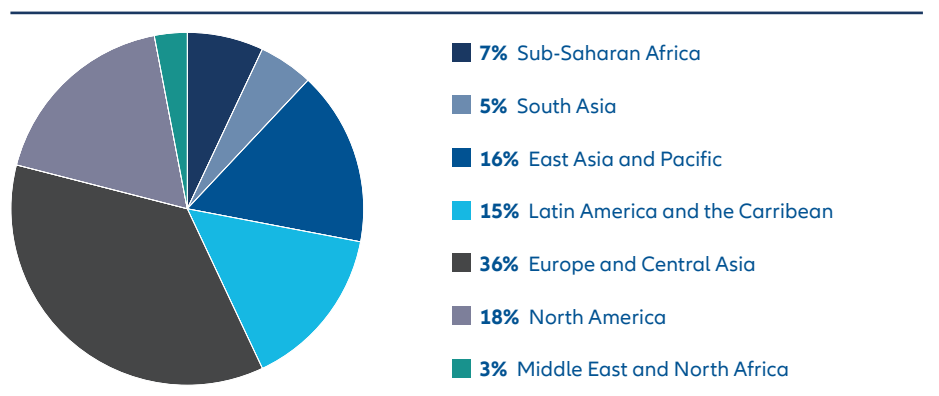
#### EU KPIs in 2024



■ Now → % of the target achieved ■ 2030 target

Source: 2030 Digital Decade Report, European Commission, 2024

### Distribution of IXPs by region (2022)



IXP = An internet exchange point is a location through which internet infrastructure providers connect with each other to exchange and provide data.

Source: Digital Progress and Trends Report 2023, worldbank

digitalisation, highlighting the need for infrastructure investments to meet rising energy demands. As operators and customers of digital infrastructure seek environmentally friendly solutions while competing with other sectors like energy and transportation in terms of decarbonisation efforts, addressing these challenges becomes more and more important. One way to tackle this environmental challenge that companies such as Google or Amazon pursue is to have agreements with renewable energy providers to supply them with green energy. Another way is to further develop cooling and other energy efficiency measures which could lead to further investment opportunities.

### Outlook for digital infrastructure

The overarching macro tailwinds for digital infrastructure remain strong, particularly as we navigate the ongoing and fast transformation driven by AI. AI will need faster, lower latency and more secure connections. Furthermore, while AI places increasing demands on digital infrastructure and its investments, it also has the potential to drive necessary changes effectively by using its innovative power. Realizing these advancements relies on having robust digital infrastructure and its interfaces in place. For 2025, we expect that areas which are most imminently needed for AI development, such as hyperscale data centers, could see more competition. As Digitisation varies between regions, we are convinced that a global and diversified approach is key for institutional investors to seize opportunities where they arise.

# Factsheet

## Digital infrastructure



### Market size and growth

The global AI market was estimated at USD 196.63 billion in 2023, projected to grow at a CAGR of 36.6% from 2024 to 2030.<sup>1</sup>



### Investment surge

U.S. capital expenditure in data-hosting infrastructure grew 60% from 2018 to 2021, reaching \$41 billion, or 20% of total information and communication technology (ICT) sector spending.<sup>4</sup>



### Cloud provider growth

Hyperscale cloud provider investments surpassed \$200 billion in 2022, averaging a 20% annual growth since 2016.<sup>4</sup>



### Investment gaps

Low- and middle-income countries attracted nearly \$50 billion in private equity for data centers in 2022 but face challenges like unstable electricity and regulatory issues.<sup>4</sup>



### Energy-efficient solution

Fiber optics is recognised as the digital infrastructure with the lowest power consumption, making it a sustainable choice for future-proofing connectivity. Fiber optic networks (FTTH) consume up to 2.6 times less power than Fiber to the Building (FTTB).<sup>5</sup>

### Sources

- 1) Artificial Intelligence Market Size, Share, [Growth Report 2030](#) (grandviewresearch.com)
- 2) Inframation, based on global deal volumes for digital infrastructure in 2024
- 3) [European Commission: 2030 digital decade report on the state of the digital decade 2024](#)
- 4) Digital Progress and Trends Report, World Bank Group. [Digital Progress and Trends Report 2023](#) (worldbank.org)
- 5) Study by Prof. Dr.-Ing. Kristof Obermann, Technical University of Central Hesse, commissioned by BREKO. [Glasfaser ist die digitale Infrastruktur mit dem geringsten Stromverbrauch](#) (brekoverband.de)

---

**Investing involves risk.** The value of an investment and the income from it will fluctuate and investors may not get back the principal invested. Past performance is not indicative of future performance. This is a marketing communication. It is for informational purposes only. This document does not constitute investment advice or a recommendation to buy, sell or hold any security and shall not be deemed an offer to sell or a solicitation of an offer to buy any security.

The views and opinions expressed herein, which are subject to change without notice, are those of the issuer or its affiliated companies at the time of publication. Certain data used are derived from various sources believed to be reliable, but the accuracy or completeness of the data is not guaranteed and no liability is assumed for any direct or consequential losses arising from their use. The duplication, publication, extraction or transmission of the contents, irrespective of the form, is not permitted. This material has not been reviewed by any regulatory authorities. In mainland China, it is for Qualified Domestic Institutional Investors scheme pursuant to applicable rules and regulations and is for information purpose only. This document does not constitute a public offer by virtue of Act Number 26.831 of the Argentine Republic and General Resolution No. 622/2013 of the NSC. This communication's sole purpose is to inform and does not under any circumstance constitute promotion or publicity of Allianz Global Investors products and/or services in Colombia or to Colombian residents pursuant to part 4 of Decree 2555 of 2010. laws. This communication does not in any way aim to directly or indirectly initiate the purchase of a product or the provision of a service offered by Allianz Global Investors. Via reception of this document, each resident in Colombia acknowledges and accepts to have contacted Allianz Global Investors via their own initiative and that the communication under no circumstances does not arise from any promotional or marketing activities carried out by Allianz Global Investors. Colombian residents accept that accessing any type of social network page of Allianz Global Investors is done under their own responsibility and initiative and are aware that they may access specific information on the products and services of Allianz Global Investors. This communication is strictly private and confidential and may not be reproduced, except for the case of explicit permission by Allianz Global Investors. This communication does not constitute a public offer of securities in Colombia pursuant to the public offer regulation set forth in Decree 2555 of 2010. This communication and the information provided herein should not be considered a solicitation or an offer by Allianz Global Investors or its affiliates to provide any financial products in Brazil, Panama, Peru, and Uruguay. In Australia, this material is presented by Allianz Global Investors Asia Pacific Limited ("AllianzGI AP") and is intended for the use of investment consultants and other institutional /professional investors only, and is not directed to the public or individual retail investors. AllianzGI AP is not licensed to provide financial services to retail clients in Australia. AllianzGI AP is exempt from the requirement to hold an Australian Foreign Financial Service License under the Corporations Act 2001 (Cth) pursuant to ASIC Class Order (CO 03/1103) with respect to the provision of financial services to wholesale clients only. AllianzGI AP is licensed and regulated by Hong Kong Securities and Futures Commission under Hong Kong laws, which differ from Australian laws.

This document is being distributed by the following Allianz Global Investors companies: Allianz Global Investors GmbH, an investment company in Germany, authorized by the German Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin); Allianz Global Investors (Schweiz) AG; Allianz Global Investors UK Limited, authorized and regulated by the Financial Conduct Authority; in HK, by Allianz Global Investors Asia Pacific Ltd., licensed by the Hong Kong Securities and Futures Commission; in Singapore, by Allianz Global Investors Singapore Ltd., regulated by the Monetary Authority of Singapore [Company Registration No. 199907169Z]; in Japan, by Allianz Global Investors Japan Co., Ltd., registered in Japan as a Financial Instruments Business Operator [Registered No. The Director of Kanto Local Finance Bureau (Financial Instruments Business Operator), No. 424], Member of Japan Investment Advisers Association, the Investment Trust Association, Japan and Type II Financial Instruments Firms Association; in Taiwan, by Allianz Global Investors Taiwan Ltd., licensed by Financial Supervisory Commission in Taiwan; and in Indonesia, by PT. Allianz Global Investors Asset Management Indonesia licensed by Indonesia Financial Services Authority (OJK).