



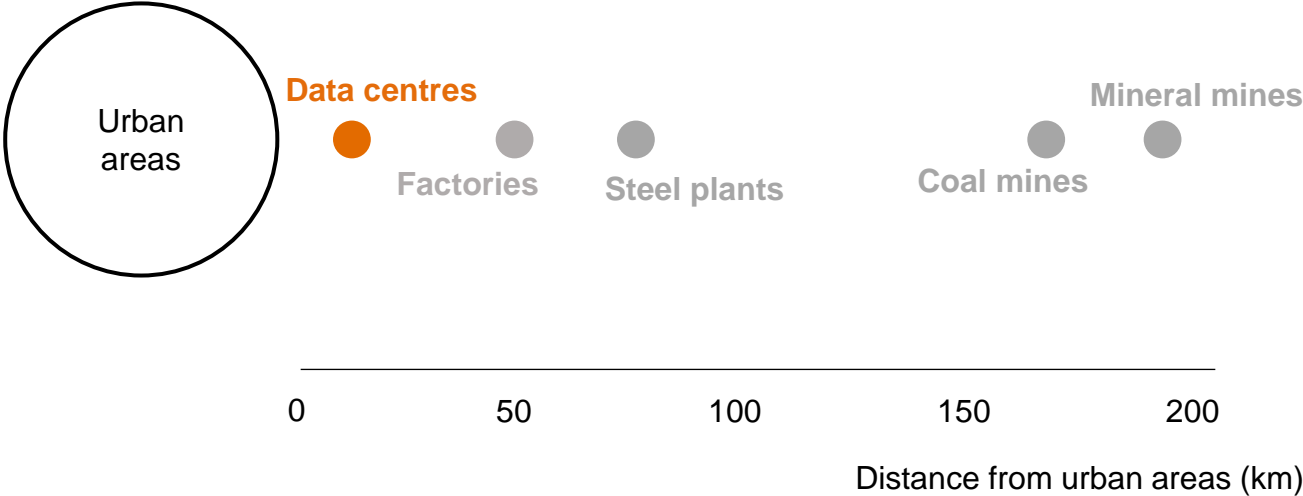
# Energy and AI

Vincent Jacamon

29 May 2026

# Data centres cluster together

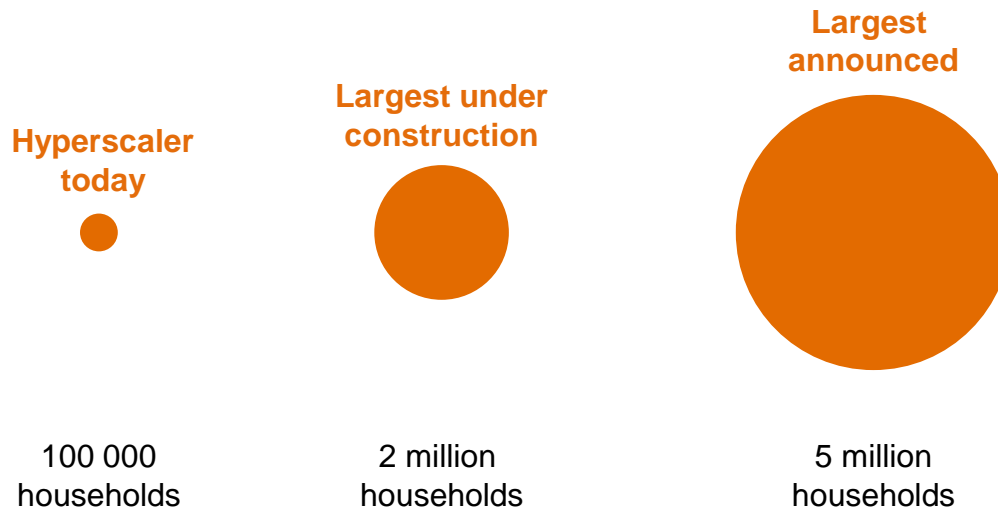
Proximity of selected infrastructure to urban areas



**Data centres are both power intensive and tend to cluster together, creating challenges for local grids.**

# Data centres cluster together – and are growing in size

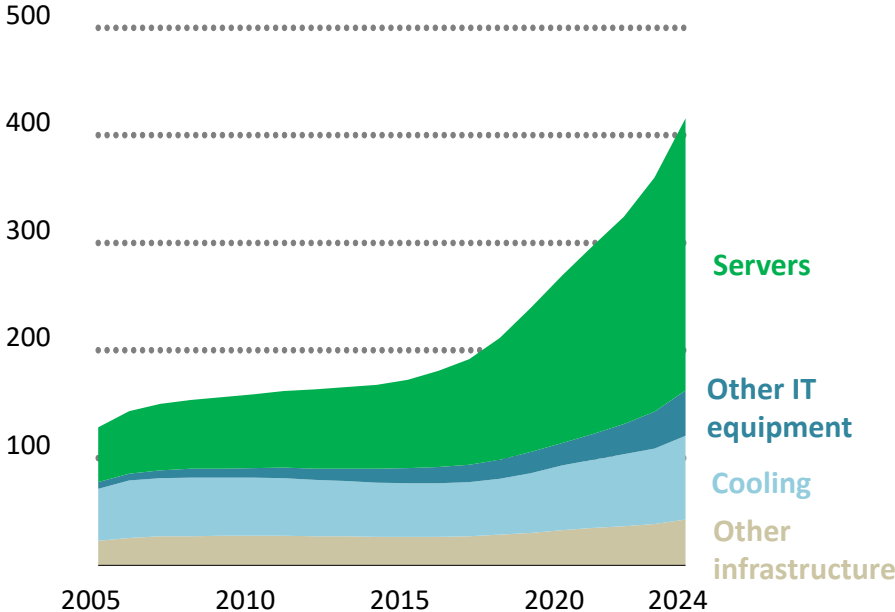
Data centre electricity consumption



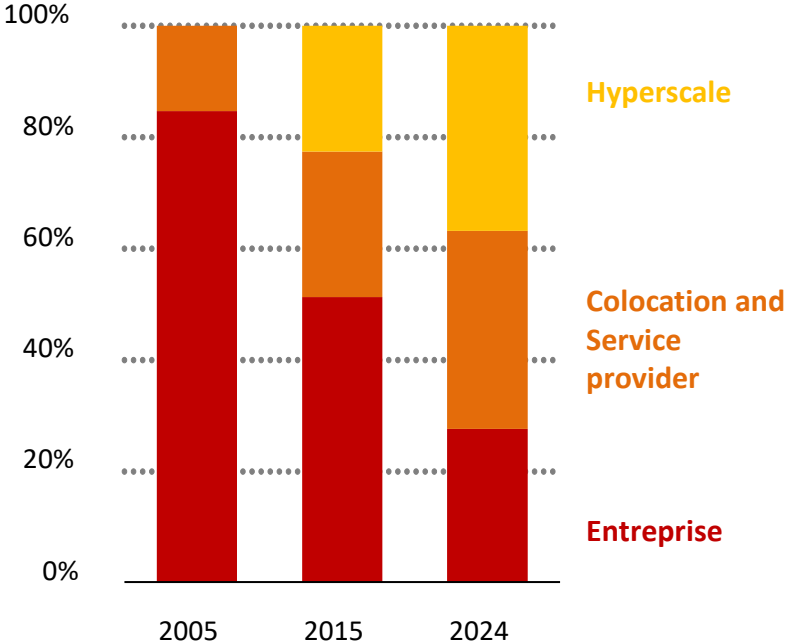
**Data centres are both power-intensive and tend to cluster together, creating challenges for local grids. They are also increasing in size, with the largest under construction 20 times larger than a typical hyperscaler today.**

# Energy efficiency has limited demand growth

Data centre electricity demand by equipment (TWh)

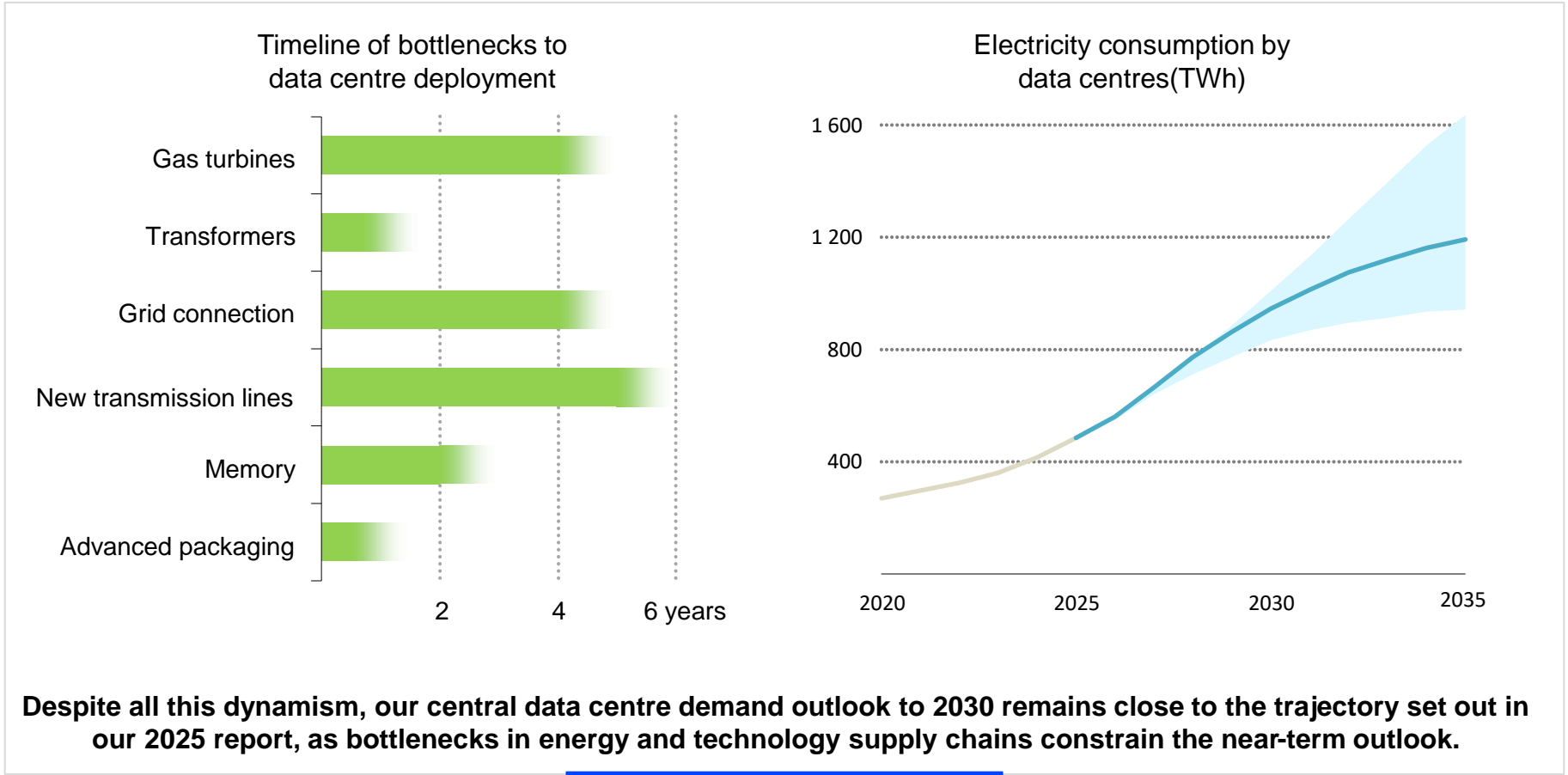


Share of each type of data centres in the demand



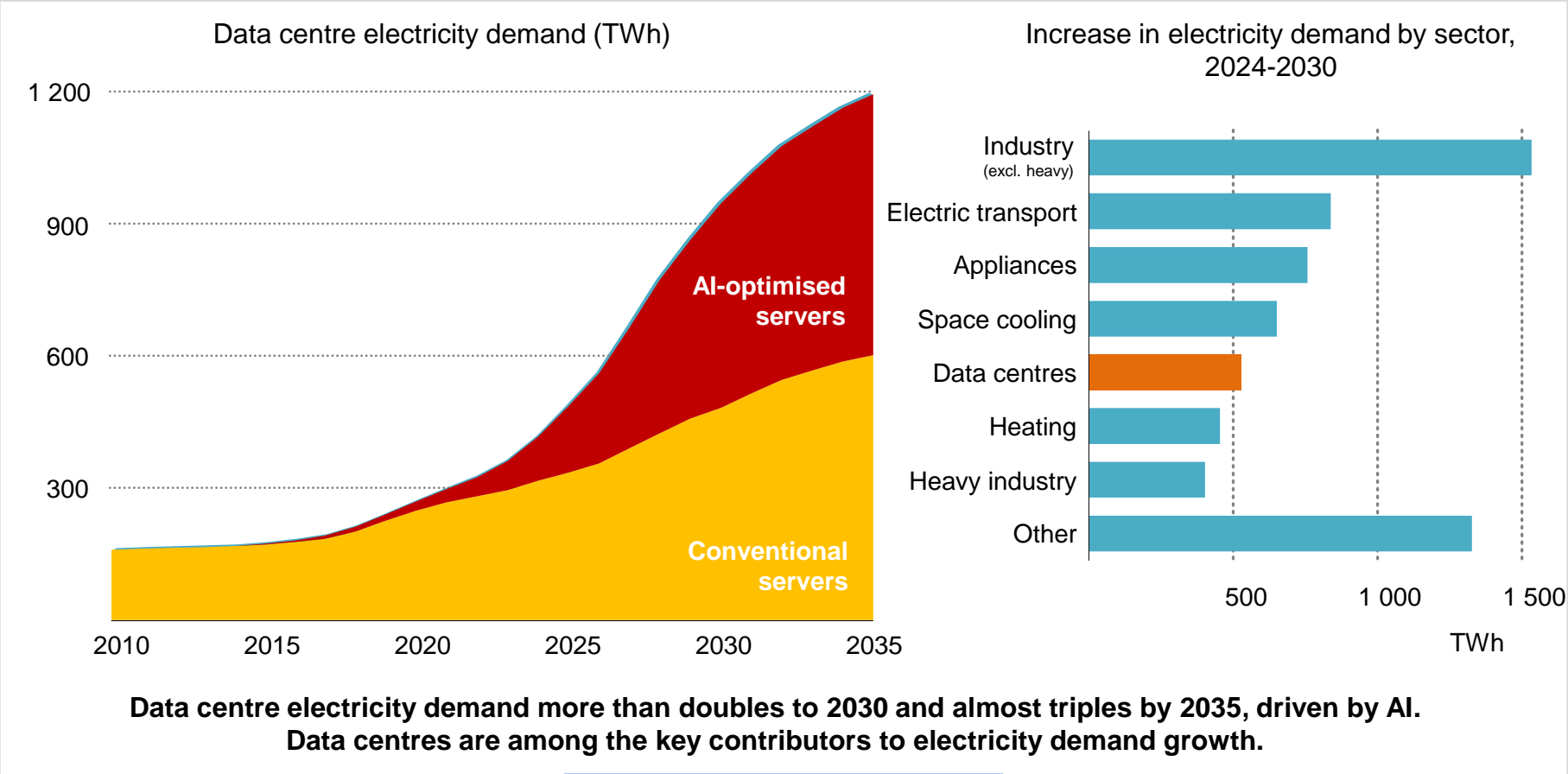
**After a decade of very limited growth thanks to hardware and software efficiency improvement, in addition to a shift from small data centres to bigger and more efficient facilities, data centre electricity demand started to grow again in 2016-17.**

# AI is hitting real-world speed bumps

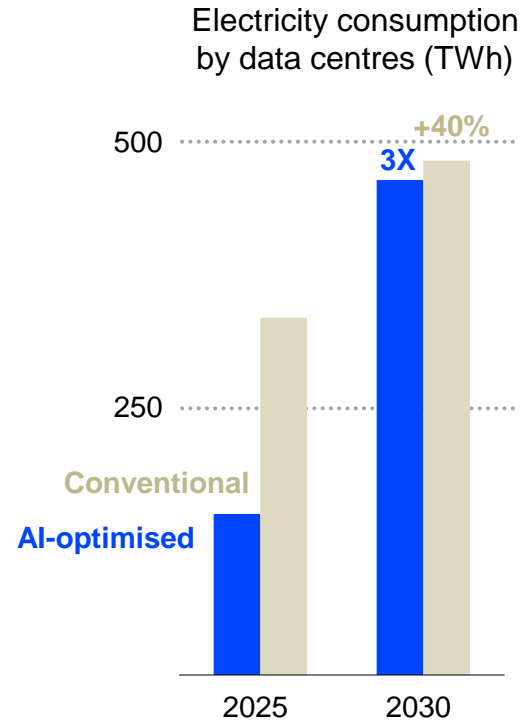


**Despite all this dynamism, our central data centre demand outlook to 2030 remains close to the trajectory set out in our 2025 report, as bottlenecks in energy and technology supply chains constrain the near-term outlook.**

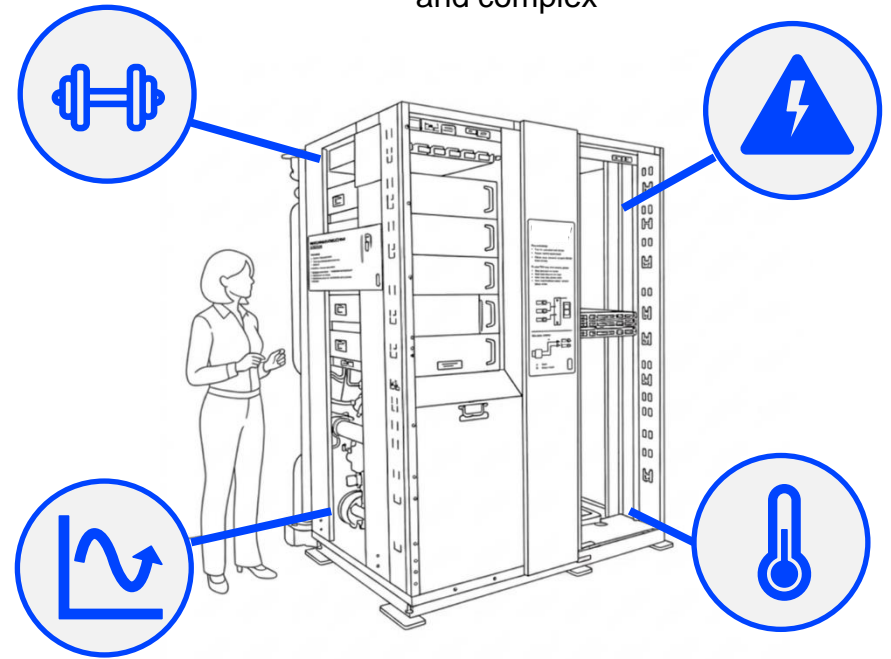
# Data centre electricity demand surges



# AI drives the outlook and transforms data centre power needs

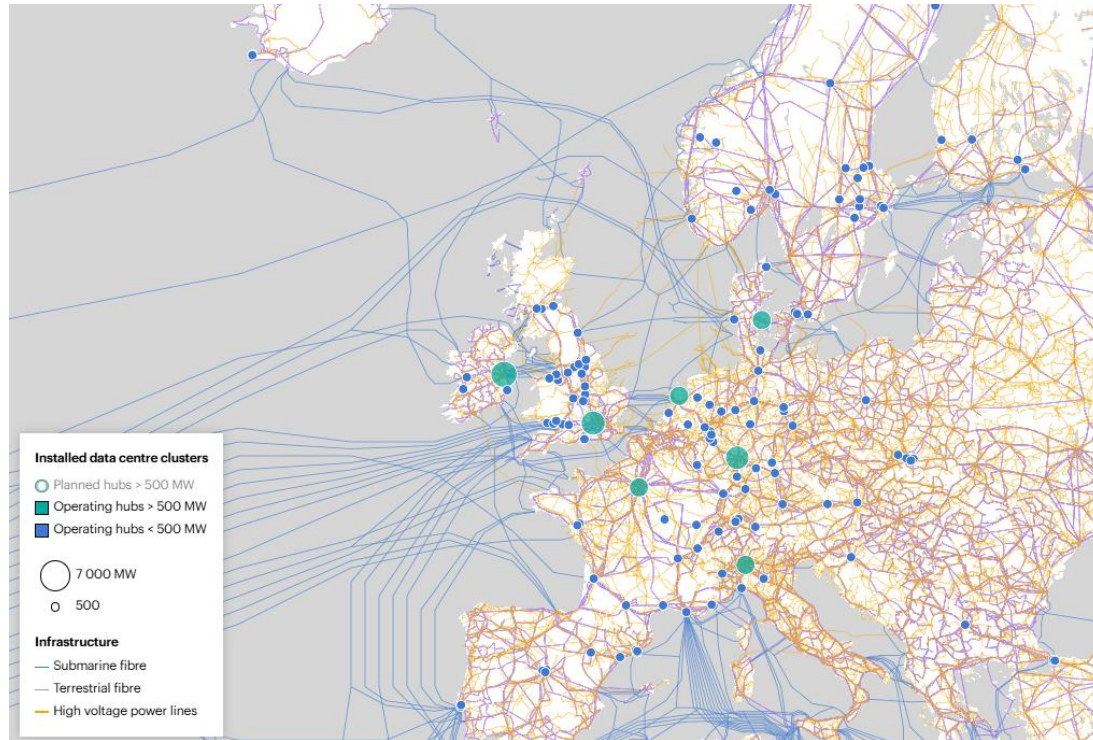


AI data centres are more power hungry and complex



**AI-optimised data centres drive electricity demand growth from the sector; their unique power needs are pushing electrical technologies and supply chains to evolve at unprecedented speeds.**

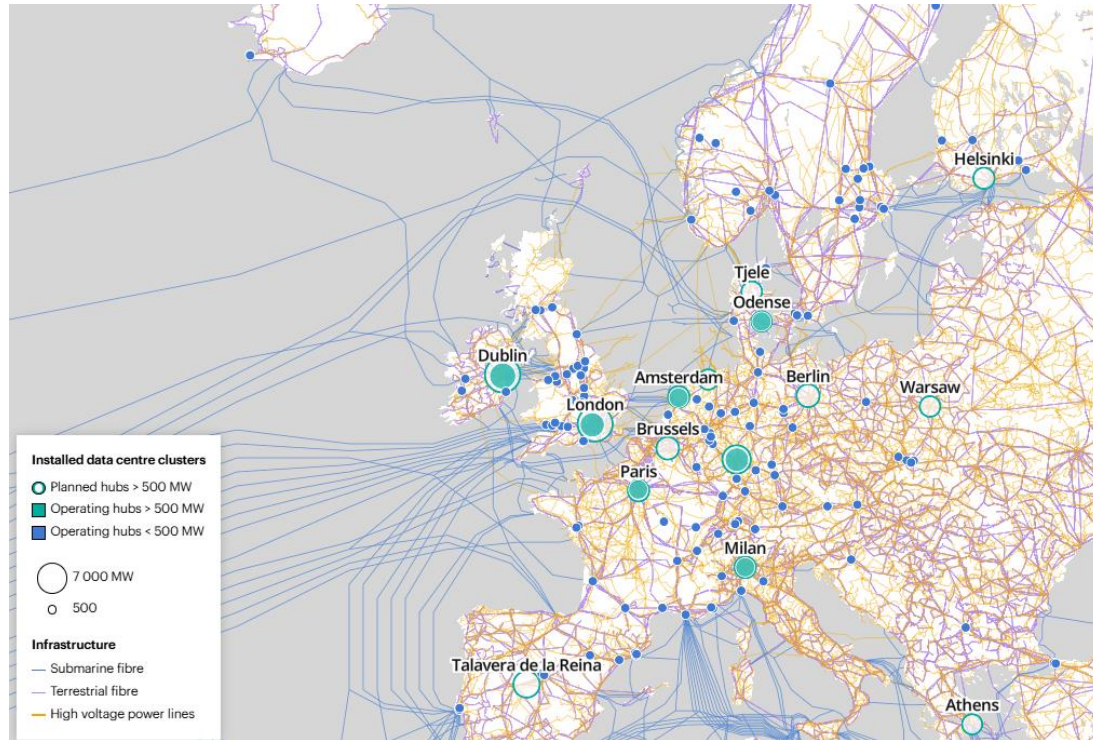
# Regional data centre hubs in Europe



Source: [IEA Energy and AI Observatory](#)

**Today, most installed data centre capacity is concentrated in a few historical hubs across Europe.**

# Regional data centre hubs in Europe

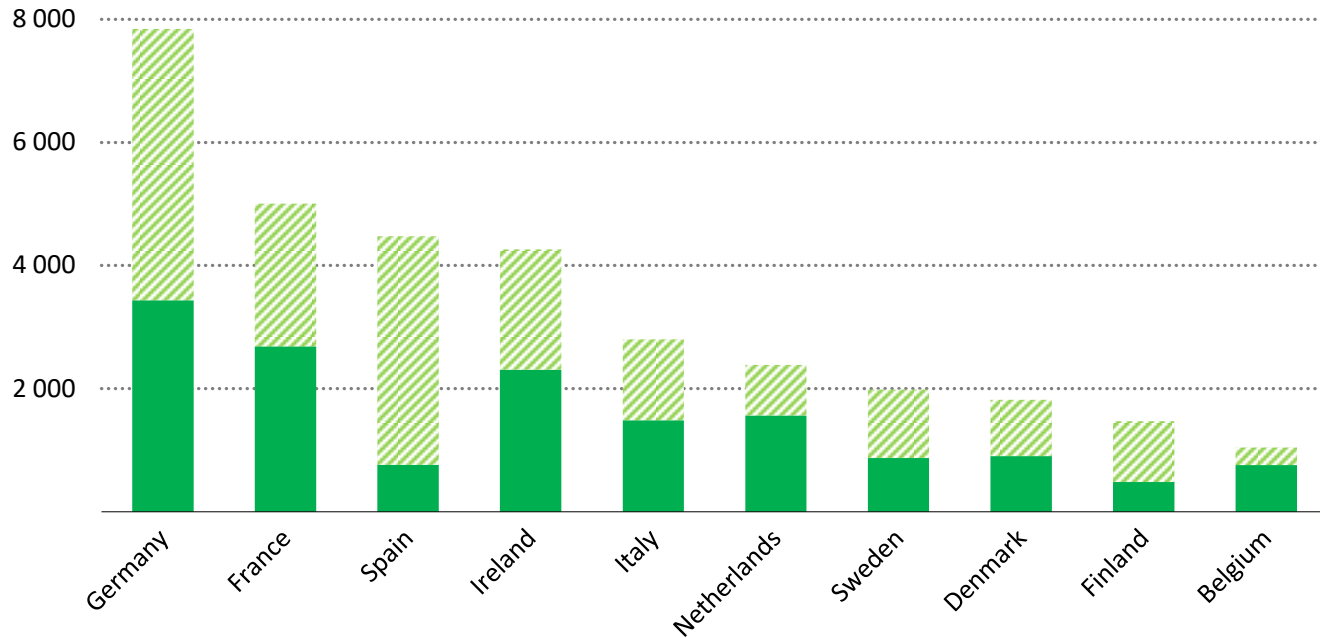


Source: [IEA Energy and AI Observatory](#)

**Today, most installed data centre capacity is concentrated in a few historical hubs across Europe. But new data centre hubs in the region are set to emerge in coming years, including in Spain and Finland.**

# Where the next data centres are being built?

Maximum design capacity of data centre facilities in the European Union by country, 2025



**In the EU, the capacity implied by the project pipeline is around 130% of installed capacity today.**

iea