Regional Data Centers: The Pillars of Digital Sovereignty

Regional data centers are the backbone of digital sovereignty. They combine data security, legal compliance and technological performance – a decisive advantage in times of growing AI usage and global tensions.

Digital Sovereignty Begins Locally

Digital sovereignty is the prerequisite for economic viability in the 21st century. *"Data centers are essential for Germany's digital sovereignty,"* according to Bitkom President Dr. Ralf Wintergerst . *"Germany must become more digitally sovereign and resilient, and this can only be achieved with a strong and powerful IT infrastructure."*

While demand for cloud services and artificial intelligence is increasing rapidly there is still a lack of sufficient data center capacity in Germany. This capacity is currently growing more slowly than demand – unlike in the USA and China which are investing massively. There's a lot of catching up to do but also justified hope.

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Trade conflicts, geopolitical uncertainty and changing framework conditions make it clear: those who relinquish control of their digital infrastructure lose strategic autonomy. Some countries have tightened their data protection laws and increasingly require the local storage of certain types of data.

It's becoming essential, and not just for internationally active companies, to have access to trusted, local data center capacities in every relevant market. Regional data centers combine compliance with innovation, security with flexibility – a decisive competitive advantage in a fragmented digital world order.

Backbone of Digital Sovereignty

However, digital sovereignty means more than simply storing data on domestic soil. It encompasses complete control over digital value chains, independence from non-European technology providers and the ability to carry out strategically relevant data processing operations within one's own jurisdiction. Data centers form the physical foundation of this autonomy.

The importance of local infrastructure is particularly evident in regulatory requirements: The General Data Protection Regulation (GDPR), the Telecommunications Act and industry-specific compliance regulations, such as TISAX for the automotive industry or KRITIS requirements for critical infrastructure, require verifiable data localization.

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Companies and public administrations can only meet these requirements with regionally available, certified data center capacities.

AI Boom as a Growth Driver

Artificial intelligence is changing many things - including the requirements for digital infrastructure. Training large AI models and processing vast amounts of data in real time require powerful data centers. The Data Center Impact Report Germany 2024 predicts that the IT capacity of colocation data centers in Germany will increase from the current 1.3 gigawatts to 3.3 gigawatts by 2029 – an increase of 154 percent.

The good news is that Germany and Europe have excellent conditions for AI data centers: central locations, first-class network infrastructure and high technical standards. Those who process AI workloads in regional data centers retain control over sensitive training data and algorithms and also benefit from low latency.

Strong data center market

The German data center market is proving robust. According to the Data Center Impact Report, the industry's economic contribution to gross domestic product will grow to €23 billion by 2029. The industry creates around 65,000 jobs and continuously invests in expansion: Investments of over €24 billion are expected for colocation capacity by 2029, in addition to the investment programs of hyperscalers Google and Microsoft totaling €4.2 billion by 2030.

This positive development is driven by rising demand for cloud services, big data analytics and AI technologies. Since 2010 the computing power required has increased tenfold – a trend that will continue.

Sustainability as a differentiator

The energy consumption of data centers is the focus of public debate. In fact, the industry is taking a pioneering role in the use of renewable energy. A large portion of the electricity consumed by colocation data centers already comes from renewable sources, and in some cases, even 100 percent. Many colocation companies purchase electricity through Power Purchase Agreements (PPAs) which promote the expansion of renewable energy in Germany.

Modern data centers achieve Power Usage Effectiveness (PUE) values of 1.2 to 1.3 – this means that for every kilowatt-hour used for IT equipment only 0.2 to 0.3 kilowatt-hours are used for cooling and infrastructure. By comparison, enterprise data centers often have PUE values of 1.8 or higher. Furthermore, innovative cooling concepts – from open-air cooling to heat recovery to liquid cooling – minimize energy requirements for the infrastructure.

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Enormous potential also lies in waste heat utilization. Data centers continuously produce heat that is suitable for heating residential and commercial buildings. Initial projects impressively demonstrate how data centers can be integrated into municipal heating networks and thus make a direct contribution to decarbonization.

Digitalization made in Bavaria

Portus Data Centers Munich is part of the Portus Data Centers Group which has been offering carrier-neutral edge colocation services throughout Germany and the surrounding regions since 2020. The Munich data center is located in one of Germany's economically strongest regions and meets the growing digital needs of regional companies, service providers and international corporations. Increasingly, these rely on secure, scalable and low-latency IT infrastructures and place the highest demands on data sovereignty and regulatory compliance.

The company recently hosted a groundbreaking ceremony in the Bavarian metropolis and is serious about its plans: *"We are doubling our space and quadrupling capacity,"* emphasized the group's new CEO, Falk Weinreich. The construction of an additional 5.5 MW facility (MUC2) will create an additional 2,200 square meters of data center space. This will increase the site's total available IT capacity to 7 MW.

Bavarian Minister of Economic Affairs Hubert Aiwanger, who was also present, emphasized the importance of the project for the country's digitalization: *"We must become independent."* The growing demand for computing power for AI applications and data sovereignty plays into Portus Data Centers' hands.

Outlook: Seizing Opportunities

The coming years will be crucial for the digital future of Germany and Europe. Growing demand for cloud services and AI infrastructure, increasing data protection requirements and the increasing sensitivity of r digital sovereignty are all creating an environment for sustainable growth.

Regional data centers are more than just technical infrastructure; they are economic engines, drivers of innovation and symbolic of a self-determined digital future. They enable global services while simultaneously meeting local requirements. They combine innovation with responsibility, growth with sustainability and technology with values.

"Data centers are the backbone of digitalization," summarizes Wintergerst. *"Hardly any company or private household can operate without the services of data centers; even public administration can no longer function without them."* Only with a strong local IT infrastructure can organizations operate with digital sovereignty and resiliently manage crises.

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Sources

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