Germany: Recent developments in the German data center market

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Special asset class

In Germany, unlike in the US or the UK, data centers (DCs) were not considered a special asset class for investors. (See Real Estate Gazette, Issue 12, summer 2013 for a detailed examination of DCs and the legal issues surrounding DC strategy.) But this has now changed as the flood of what is known as “big” data makes DCs increasingly important. Cloud computing and Industry 4.0 mean that companies are demanding DCs and co-location operators, thereby attracting investors to the market. According to Immobilienzeitung, the leading German real estate magazine, at least a dozen investors in Germany are actively seeking properties and co-location areas for rent. Interested parties include international DC and network operators such as Equinix and NTT/eShelter, as well as investment vehicles like the US REIT Digital Realty Trust and flagship companies such as Microsoft, Amazon and Google. Since investors, developers, owners, operators and landlords cover the entire core value chain, high returns can be achieved. This makes the market very attractive for institutional investors and others, even those currently operating outside this industry sector.

DC business

The DC business has been growing at a rate of doubledigit plus for almost two decades, and this growth is no longer curved, but exponential. The driving forces behind this market are cloud computing providers who offer computing capacities and software over the internet. Industry 4.0, also called the Internet of Things, where devices communicate with devices, increases data traffic as well as online payment services, for example. Furthermore, the German Mittelstand increasingly outsources its data to clouds for cost-saving purposes. Cloud providers place their high-performance servers, which store and process data from other companies, in DCs. Companies, such as banks and SMEs, as well as many telecommunication companies, rent these so-called co-location areas too. The latter also provide the necessary internet connections. The operator of a DC however, is mainly responsible for the delivery of an uninterrupted power supply and the cooling of areas with high-performance servers as well as the security of buildings and the necessary infrastructure.

DC cities in Germany

"Seventy percent of the real value of the property comes from technology and infrastructure."

Since two fibre-optic cables that are central to the IT industry converge in Frankfurt, the city is - in addition to London and Amsterdam - the most important location for DCs in the European market. One quarter of the nationwide 1.9 million sq.m. of DC space is located in Hesse - and the vast majority of DCs are in Frankfurt. It
looks likely that the influx of DCs to Germany will continue unabated. The stringent German data protection regulations and the legal certainty this offers compared to other countries means that companies are willing to overlook the disadvantage of the country’s high energy costs, which are about twice as high in Germany as, for example, in the Netherlands. Since not many sites meet the criteria required for hosting DCs, apart from Frankfurt, they are located mainly in Hamburg, Cologne, Bonn, Munich and Nuremberg.

Suitable sites and technical requirements for DCs

Generally, the key factors in the search for suitable DC sites are an efficient infrastructure and the capacity to produce significant electricity. To ensure that the computers do not run hot during operation, they must be permanently cooled and it is this cooling process that requires a lot of additional energy. In fact, a DC uses as much electricity as a small town with about 30,000 - 40,000 inhabitants. Frankfurt then is also a popular location for DCs because of its secure power supply. The DCs located there have now overtaken the airport as the largest consumer of electricity and the demand for capacity is steadily increasing. Experts estimate that data volume will rise fivefold in five years. As a result, around 100 new DCs will be needed in Germany in the near future. The DC sector assumes an increased investment volume for construction, domestic technology and IT. However, location requirements negatively affect the strong growth factor. Suitable sites for DCs are scarce since they need to be at least 50,000 sq.m., and be close to internet nodes, a high-performance power supply and a fast fibre-optic connection to meet the requirements. In many cases the local power supplier is not able to commit to providing sufficient capacity.

Restrictions in zoning and planning for DCs

Additionally, the construction, zoning and planning law does not make the search for a suitable location any easier. Even if the construction of a DC is permissible in terms of the zoning plan, local authorities have become increasingly reluctant to grant the necessary permits and exemptions. For example, one consideration is compliance with the Federal Emission Control Act. The authorities may question a DC’s emissions - not only the heated exhaust air from cooling, but also the exhaust gases from testing the diesel generators of the uninterrupted power supply (UPS). Furthermore, for obvious reasons, the authorities will not grant exemptions for a second DC in the same area. They are therefore operated mainly on the outskirts of cities, on brownfield sites or in the areas surrounding airports and those in close proximity to substations.

Land prices

Prices for suitable sites amount to EUR 400 per sq.m., although prices at the Frankfurt hotspot are higher due to the fact that investors there “leave no stone unturned”. According to market players, the investors’ concern that they will not get enough space to meet the demand for future server capacities also has a significant impact on price. On the other hand, the price paid for the site itself is only a small part of the investment. Seventy percent of the real value of the property comes from technology and infrastructure. Technical standards, security, energy and additional services essentially determine the quality of a DC and thus the total construction costs. The cost per sq.m. can amount to as much as EUR 30,000, depending on the level of quality of a DC, which may be ranked from TIER 1 - 4. The differentiation between the property itself and the property including relevant technology, is also reflected in the varying investor returns.

Conclusion

After being in use for around 15 years, the standard of the DC decreases and thus the return drops as well. The unique requirements of DCs generally make them unsuitable for alternative use and this is a disadvantage for investors. However, the increasing prevalence of big data means that high quality DCs continue to be a profitable special asset class for investors.

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