

Unlocking Africa's data centre potential: A strategic approach to site selection

By [Stephen Rose](#)

28 Jun 2023

Africa's data centre market is booming, ringing in an era of hyperscale for the continent. Industry giants such as Amazon, Google, and Microsoft are vying to establish new nodes across the continent. These new nodes are being built in countries ranging from South Africa to Morocco, Kenya to Nigeria, and further beyond into edge locations in other tier-two countries.



Data centre site preparation. Source: Scott Blake/Unsplash

Arizton Advisory predicts a staggering \$5.4bn investment in African data centres by 2027, growing at an impressive Continued Annual Growth Rate (CAGR) of 12.73% during the period between 2022-2027.

To seize the opportunities presented by this rapid expansion, meticulous site selection is crucial, especially in Africa. Data centre providers must consider several key factors to ensure efficient operations, scalability, and long-term success.

Making the wrong choice during the site selection process can be devastating to an investor's business model. Meanwhile, the right decision can position an operator for regional domination in a market ripe for investment.

Here are just a few of the key considerations involved in this process.

Due diligence

A strong due diligence process is crucial to ensuring that the right site is selected. The early engagement of a client's design team and other interested stakeholders in the due diligence process is sure to guarantee site suitability from both a technical and operational perspective. By integrating engineering considerations throughout the process, potential issues — or even red flags — can be identified and resolved early on, ensuring a harmonious and efficient facility.

Power availability

One of the key issues faced during the site selection process is power availability. Energy poverty remains a significant challenge across the continent, even in more developed markets like South Africa. The early assessment of grid quality, uptime, and capacity is essential, alongside exploring backup solutions such as gas infrastructure or renewables, where

available. Power constraints can make or break a data centre project.



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Site abnormalities

Site abnormalities also play a huge part in the selection of an appropriate site. The availability of fill material, neighbouring properties, and the site's physical characteristics are all aspects that must be carefully considered. Suitable fill material and topographic compatibility can impact construction costs and design feasibility. Comprehensive threat and vulnerability assessments can further help address security concerns and ensure facility protection.



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20 Jun 2023



The technical suitability, from a site selection perspective, also includes sub-surface conditions and flood resilience. Factors such as soil composition, groundwater levels, and seismic activity must be thoroughly evaluated early on to mitigate risk, and unnecessary expenses, in later stages of the project. A geotechnical investigation early on is an absolute must, as well as a flood resilience study. Finding out, for example, that you need to raise your site by two metres, to render it flood safe just before construction, is not only expensive — it may well break the bank.

Legal requirements and local partners

On the legal and regulatory side, land ownership, permits and authorisations are important to understand early on as well. Leasing land, rather than outright ownership, is customary practice in many African cities. Building permitting and environmental authorisations often further require local knowledge and insight as they are often convoluted and difficult to interpret from the outside.

Local partners who possess market knowledge, regulatory insights, and community understanding are key in this process. Their expertise, coupled with a strong engineering team, will help you navigate the unique challenges of each African market.

Quality control

Finally, quality control is another critical consideration when selecting data centre sites in Africa. In some countries, limitations in design, fabrication and integration facilities can result in suboptimal delivery of critical infrastructure. While overcoming these challenges often leads to mass prefabrication and increased logistics, these come at a cost. An assessment of the local fabrication and construction market, as well as the supply chains that support it, also becomes important when selecting a new site for a data centre.

By taking all these above-mentioned factors into consideration, and often a myriad of others, it's clear that selecting the right data centre site in Africa demands a comprehensive and meticulous approach. It's crucial to consider both the business and engineering aspects. And this is especially important in an environment where this market is growing as rapidly as it is.

By carefully evaluating these factors, businesses can unlock Africa's immense digital infrastructure potential, contributing to its ongoing growth and connectivity within the continent and the rest of the globe.

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