# Innovating for Data Centers: Insights from STULZ on Cooling Solutions and Africa's Growing Digital Landscape

Q&A

To explore STULZ's role in Africa's digital transformation, TechAfrica News' founder, Akim Benamara, spoke with Michael Jux, Senior Area Sales Manager, and Ton Fens, Director of Europe and South Africa Sales and Service.



INTERVIEW BY:

**TechAfrica** 

Akim Benamara Founder & Chief Editor, TechAfrica News

Africa continues As to embrace its digital future, data centers are playing an increasingly key role in supporting the continent's demand growing for connectivity, cloud services, and data With storage. businesses, governments, and global tech giants investing heavily in Africa's infrastructure, digital the need for efficient, scalable, and sustainable solutions for cooling these critical facilities has never been more urgent.

To gain deeper insight into the role STULZ is playing in Africa's digital transformation, TechAfrica News' founder and Chief Editor, Akim Benamara sat down with Michael Jux, Senior Area Sales Manager at STULZ, and Ton Fens, Director of Europe and South Africa Sales and Service. In this conversation, they discussed the company's strategic focus on the African market, the evolving demands of data centers, and the latest trends in cooling technologies driving the future of Africa's digital ecosystem.

## Can you share more about what STULZ does, its core values, and the company's focus within the global market?

**Fens:** STULZ is a family-owned company with a unique legacy. Founded in 1947, it is now in its third generation of family management. We operate globally, with 24 STULZ-owned subsidiaries and over 140 partners worldwide, allowing us to have a strong presence in virtually every country. Our equipment is designed with uniform components and the same philosophy, which means that maintenance teams, wherever they are, can seamlessly service and maintain our units, ensuring they remain operational.

At the end of the day, our goal is to keep data centers up and running for all the people using data. We make it simple by providing cooling equipment that controls temperature and humidity in data centers. Think of big players like Google, Microsoft, and Amazon, but also smaller, local data centers, telecom applications, universities and even metro stations.

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### What is STULZ currently doing in Africa, and how are you adapting your cooling solutions to the region's needs?

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Jux: So, like in other parts of the world, we're offering tailored cooling solutions for data centers across Africa. This includes working with telecom companies and data center co-location providers. What's a bit different in Africa, though, is that around 80% of the systems we're installing are air-cooled, rather than using chilled water applications.

However, over the last three vears, we've noticed that

large co-location companies are entering the African market, especially in the big hubs across sub-Saharan Africa-places like Nigeria, Kenya, and South Africa, as well as Tanzania, where these companies are now looking for water-cooled solutions with chillers.

So overall, we're focused on providing air-conditioning systems for technical rooms and data centers throughout Africa. We've been doing business across the continent since the 80s doing roll-outs together with the first mobile phone operators through STULZ UK, STULZ France and



Data is everywhere - in people's phones, apps, workplaces, bank and accounts - and it all produces heat. Our job is to make sure that heat stays at an acceptable level so the equipment can keep running. In essence, our job is to ensure that data centers stay cool and reliable, and that everything keeps operating perfectly.

TON FENS Director of Europe and South Africa Sales and Service, STULZ

other offshore partners from Lebanon.

In 2010 we changed our sales approach by looking for more local partners. We started by asking existing clients who were servicing our units locally or even searching through resources like the Yellow Pages to find new partners and we are still building it out today.

If needed from South Afrika or Germany, our technicians travel to support clients with installation and commissioning. During these trips, we're also always on the lookout for local partners to help with ongoing





service needs. We offer basic training for local teams on handling issues like highpressure alarms, low-pressure alarms, or power supply issues, giving them the skills to manage major problems.

### What is STULZ doing to grow its presence in Africa's rapidly developing market?

Jux: What sets STULZ apart in Africa is our early recognition of the continent's potential. In 2010, we shifted our sales strategy to focus on establishing local partnerships, while many of our competitors were still managing operations from their headquarters. This approach has allowed us to build a strong and growing network across Africa. Today, when major players like AWS, Google and Facebook expand into Africa, one of their first questions is, "What's your footprint here?" They seek a clear view of our network and contact details. While there are still areas to expand into, our wellestablished partnerships are a key differentiator.

In addition, we started tailoring our units for African conditions. We focused on technical features that are

critical for this market, such as including power supply monitoring systems in all our units to manage issues like phase rotation, overvoltage, undervoltage, and power fluctuations across phases (L1, L2, L3). This is crucial in Africa, where power instability can damage equipment like scroll compressors if they run in reverse for even a minute.

For coastal regions, we apply a special coating to our condensers to prevent corrosion from salty condition. We also choose refrigerant that widely qases are available in each country, as it's impractical to use newer "green" refrigerants that aren't accessible locally. While transitioning Europe is to Close to you all over Africa

more environmentally friendly refrigerants in the coming years, Africa will continue to use traditional gases until around 2030-2035, when price increases may force a shift.

STULZ's family-owned structure is another advantage. Our lean and agile decisionmaking processes allow us to address both technical and commercial challenges quickly and efficiently.

As many consultants and engineering firms are now relocating to Dubai, we responded by opening our Center of Excellence there. This team provides support for consultants working on African projects, advising not just on Europe and the Middle East







but on the growing number of data center initiatives in Africa. With the power constraints and environmental regulations in Europe and Asia making data center construction difficult, Africa and the Middle East offer ample space and resources, positioning them as ideal locations for new developments.

Africa's data center market is still in the early stages of growth, and we see immense potential. While markets in Europe and North America may be saturated, Africa's infrastructure development is just beginning, and STULZ is fully committed to supporting this growth. With the rise of Al and data center upgrades in Africa, especially considering the increased power consumption and heat production, how do you see cooling solutions evolving to support Already data centers?

**Jux:** We already have Alspecific cooling solutions in place, like our coolant management unit (CMU). We're already producing these solutions for markets in the U.S. and Southeast Asia, where Al-driven data centers are more prevalent. However, in Africa, the density of data center requirements is still much lower compared regions like the U.S., to Switzerland, and Southeast Asia. For instance, I recently visited a data center in Tanzania that managed 140 kilowatts in a large 50-by-20meter room. By contrast, we're working on systems that can handle 250 kilowatts per rack in much smaller spaces elsewhere, so the cooling capacity requirements here are still relatively low.



CyberRow – The in-line air conditioning unit with innovative air conduction

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In the next five years, we may see a shift in specific regions like Johannesburg, but overall, Africa isn't yet at the stage where large-scale, the highdensity cooling solutions for Al-ready centers are widely needed. We'll be showcasing our CMU unit at the AFRICOM2024 exhibition, but even though there's interest, there aren't immediate applications for it in Africa just yet.

MICHAEL JUX Senior Area Sales Manager, STULZ

#### How does STULZ support the telecommunications sector, especially in Africa, and how has this evolved?

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Jux: In the early 2010s, we worked on significant projects with a mobile operator in Kenya, introducing a free solution for cooling their existing base transceiver station (BTS) containers. The idea was to integrate free cooling into their current Comfort air conditioning units, creating a simple and efficient system using a filter, controller, and fan. This retrofit kit allowed them to maintain their existing \$1,000 air conditioning units, ultimately installing around 800 units across greater Nairobi and achieving a return on investment within two years.

Today, the telecommunications landscape has shifted. Many African mobile operators have sold their towers independent tower to companies. These companies handle procurement now centrally, often establishing framework agreements with headquarters-level suppliers like STULZ instead of relying on local partners for the initial contracts. Local partners are typically only involved for on-ground services such as commissioning, installation,

and maintenance.

This approach benefits largescale clients, including telecom and colocation companies, who prefer working directly STULZ with headquarters for procurement due to the limited financial capacities of local partners. High-value projects, which may require letters of credit or substantial financial guarantees, make it challenging for smaller partners to handle. Consequently, major clients now establish direct procurement agreements with STULZ, while local partners handle essential on-site services.







### How does STULZ envision the future of cooling technology, particularly in the data center sector?

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**Fens:** We're witnessing a significant shift in the market, particularly towards liquid cooling. Currently, data centers cool the heat generated by chips and software using air. However, in the future, this will shift to cooling with water directly inside the computers. Water offers superior cooling capacity compared to air because it can absorb heat more efficiently.

This change is primarily driven by AI. AI applications require 10 times more computing capacity than current data centers can provide, which means data centers will need to expand drastically and, consequently, require much more cooling. Air cooling alone will no longer suffice due to the sheer scale and demands of these systems. This is why we're transitioning to liquid cooling solutions, where water directly cools the computers, offering more efficient heat management. But also, with Liquid Cooling it's important to bear in mind that a certain proportion of air cooling will need to be used in addition.

While this shift is already happening in other parts of the world, such as the U.S. and Europe, it's not yet the primary focus in Africa. However, we are starting to see interest, with the first request for liquid cooling coming from a major data center company in South Africa, which is working with companies like Microsoft. Over the next 5 to 10 years, we expect this trend to expand into Africa, mirroring what's happening globally. The move from air to water cooling represents a big change in the industry, but it also opens up new and exciting opportunities for businesses.

Michael Jux and his guide Nicolas Mushi from Moschi at Kilimantscharo



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