

CLIMAVENETA

PROJECT FOCUS

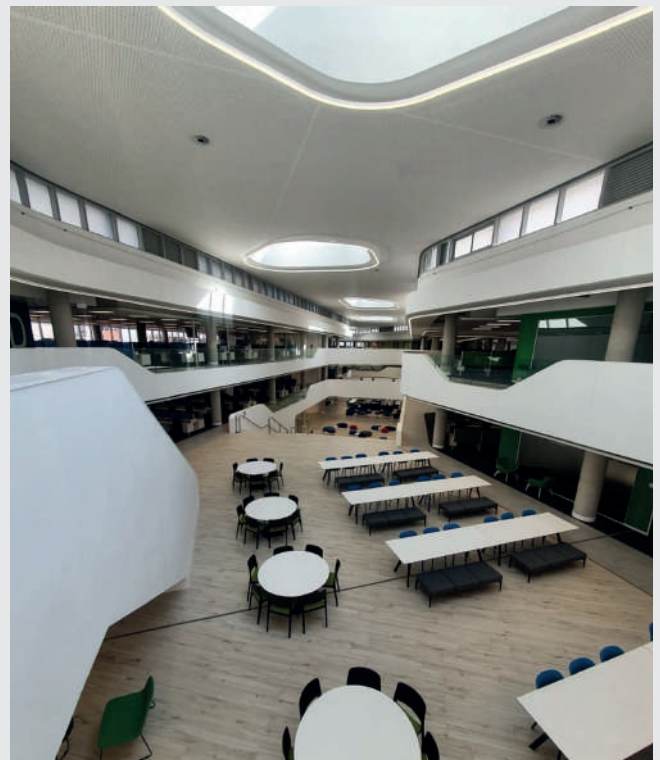


CAPITEC BANK HEADQUARTERS

Capitec Bank, one of the largest banks in Africa, is investing in its new headquarters, in Technopark, Stellenbosch.

The office building will serve to consolidate the existing staff contingent, spread across several facilities, and make provisions for future expansion. The innovative development, designed by **dhk Architects** and multi-disciplinary engineering consultants **AECOM**, is comprised of a central office building, called the Campus Building and an adjacent parking facility, both of them including a single basement level, ground floor, and two upper levels.

An innovative shape for an innovative concept
The Campus Building is a singular structure with a **jellybean-type shape** and a distinctive atrium that runs the full height of the building, covered with a lightweight roof. The building form optimizes the shape and size of the site while referencing the brand's distinctive curved logo. It is mostly an open-plan throughout, connecting the space to the atrium, with a canteen, back-of-house kitchens,



AN INNOVATIVE HVAC SYSTEM FOR AN INNOVATIVE DEVELOPMENT

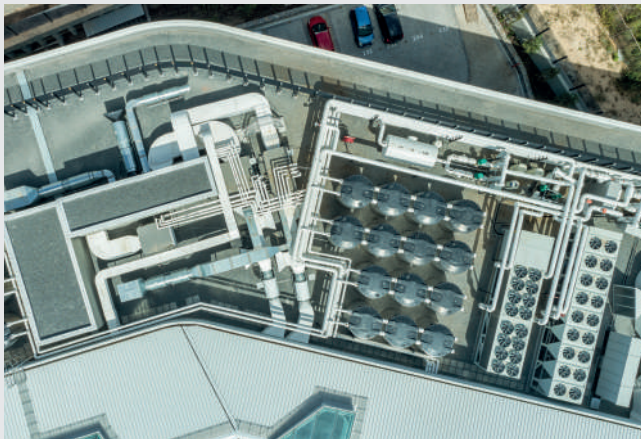


meeting rooms, break out areas, and an open-air courtyard. The architectural approach has considered both the exterior and interior to optimize corporate expenditure, internal flow, and sustainability, thus demonstrating that **commercial offices can be innovative and cost-effective** while driving operational efficiencies. Embracing the **innovative concept** of agile working, the raised access floor throughout the building facilitates maintenance and future upgrades to services.

Energy efficiency first

To enhance the energy efficiency of the building while maintaining internal comfort all year round, the plant designer planned an innovative HVAC system based on a **thermal energy storage**, to **offset the chiller electrical demand during peak tariff periods**. The glycol chiller's pumps circulate a glycol solution through numerous rooftop ice tanks at sub-zero temperatures during the night when tariffs are comparatively low; the ice generated is used during the morning and evening peaks to provide adequate cooling **without electrical demand from the units**. This primary chilled water circuit will make use of a plate heat exchanger to ensure that secondary chilled water supply / return is available at the correct temperatures (i.e. 8° / 14°C). The hot water loop will operate between 40° and 45°C and connect directly to the downstream air-handling and fan coil units.

Frans Jooste, director at Intramech, says: *"It has been a pleasure to contribute to such an innovative project. Having energy efficiency and well-being as drivers helped us to find the best HVAC solution for this challenging development."*



Combining well-being and sustainability

Capitec has championed **environmental sustainability** and **employee well-being** throughout the building. Even the air conditioning system is based on these values. As a matter of fact the Campus Building is equipped with two **Climaveneta branded air-cooled glycol units** on the roof: **1 FX/CA/S 5412 chiller** and **1 ERACS2-Q/CA/S 3222 multi-purpose unit** capable of producing both heating and cooling, even simultaneously, for a total cooling capacity of 1,700kW.



FOR FURTHER INFORMATION
ABOUT THE PROJECT:

<https://www.melcohit.com/EN/Projects/6478/Capitec-HQ.html>