

# A Prominent Commercial Space in Singapore CASE STUDY

A prominent commercial space in Singapore partnered with 75F and SP Group's Sustainable Energy Solutions to enhance thermal comfort. Leveraging real-time data and predictive analytics, the advanced control system integrates with existing HVAC infrastructure to optimize temperature and airflow based on occupancy and environmental factors, achieving greater comfort and energy efficiency.



## THE BACKGROUND

A prominent commercial space in Singapore's CBD has been revolutionizing global commercial solutions, supported by a team of over 500 professionals serving clients in more than 175 countries. Leveraging innovative digital platforms, they offer the largest marketplace for diverse office solutions, including traditional offices, serviced offices, virtual offices, and fully managed customized commercial setups.

Renowned for their comprehensive real estate services, this visionary company excels in helping businesses secure ideal office spaces while offering expert advice on portfolio management and sustainability strategies. With a steadfast commitment to achieving net-zero emissions and delivering efficient workspace solutions, they empower businesses to thrive in flexible, sustainable, and highly efficient environments tailored to their needs.

## THE CHALLENGE

The client aimed to create a modern, energy-efficient greenfield project but faced persistent temperature inconsistencies, resulting in hot and cold spots throughout the building. These fluctuations impacted occupant comfort and productivity, as well as increased energy consumption and operational costs due to the HVAC system's struggle to maintain a balanced indoor climate. The client needed a solution that could address these temperature issues across multiple floors while enhancing energy efficiency and lowering expenses. The challenge was to find a flexible, quick-install smart building management system that could be seamlessly integrated with minimal disruption to ongoing operations.

## AT A GLANCE

|                 |                                      |
|-----------------|--------------------------------------|
| Location        | Central Business District, Singapore |
| Building Type   | Commercial Building                  |
| Area            | 47,000 Square Feet                   |
| 75F® Solutions  | Dynamic Airflow Balancing            |
|                 | Number of CCUs: 5                    |
|                 | Number of HyperStats: 5              |
|                 | Number of Smart Nodes: 130           |
| Turnaround Days | 30 days from start to commissioning  |

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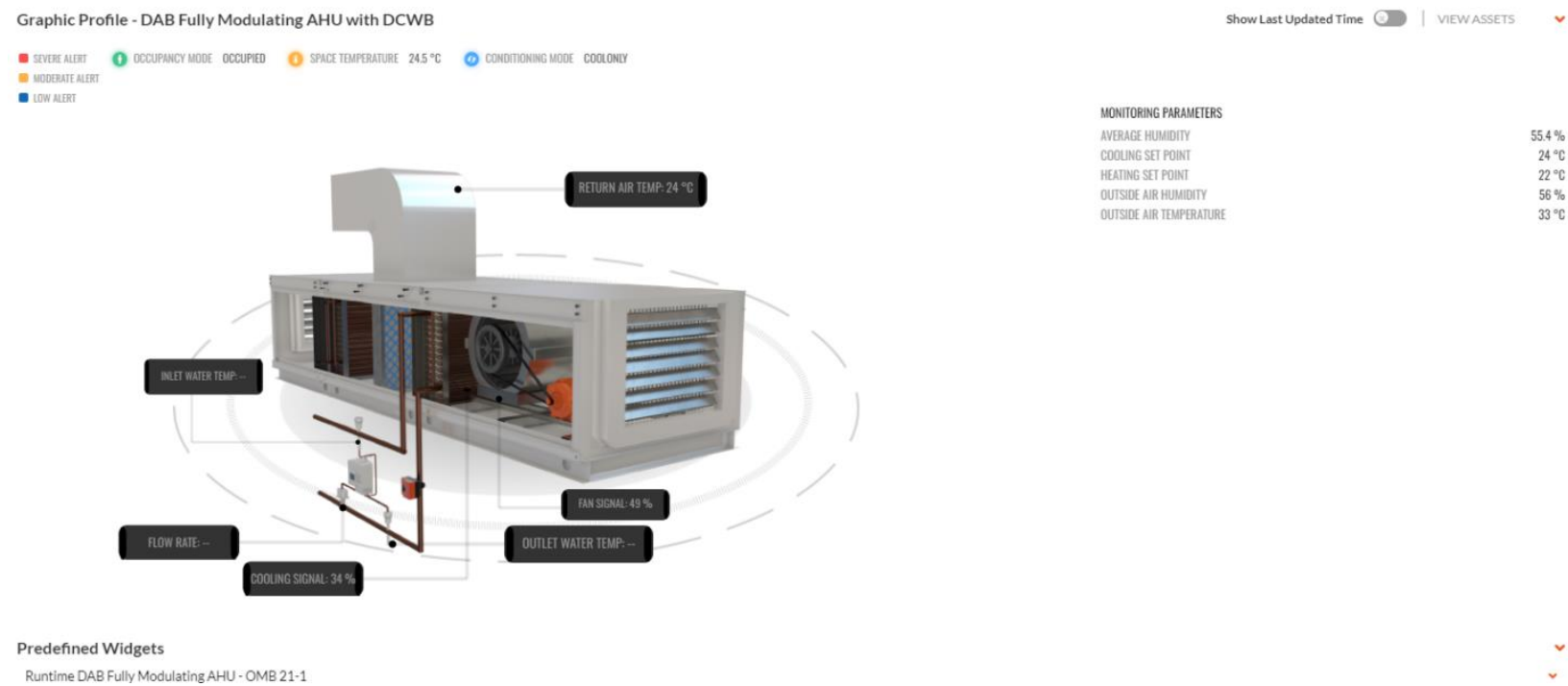
# THE SOLUTION

## Installation and Execution

We effectively liaised with the incoming tenant to align their design requirements with the architectural layout. Our 75F system performed exceptionally, facilitating smooth execution by maintaining a strong focus on timely delivery. We ensured that all aspects of the project met the tenant’s needs while adhering to the schedule. This seamless coordination and efficient performance were crucial in achieving a successful outcome within the desired timeframe.

## Dynamic Airflow Balancing (DAB)

Dynamic Airflow Balancing (DAB) is a proprietary concept of the 75F system, designed to optimize HVAC performance in buildings. Recognizing the varying needs of different spaces throughout the day, 75F developed this feature to address the dynamic nature of temperature requirements within buildings. Unlike traditional approaches that may lead to inefficient zoning or back pressure on HVAC systems, DAB employs an intelligent algorithm to continuously monitor and adjust temperature differentials. By tracking the average current temperature of zones mapped within the system profile, it identifies deviations from the desired temperature settings. When cooling is required, the algorithm instructs modulating equipment to ramp up output, and conversely, when heating is needed, it adjusts the output accordingly. This approach ensures comfort and efficiency by dynamically responding to changing conditions without resorting to fully closing off zones or causing undue strain on HVAC systems.



## 75F Facilisight

Facilisight offers multi-site visibility into HVAC energy consumption, allowing for automated control and monitoring. This AI-powered data analysis tool offers real-time insights for key metrics, including heatmaps and occupancy trends, allowing for minimal intervention of facility controls while enhancing energy efficiency and occupant comfort.



To learn more about our intelligent building solutions, visit [www.75f.io](http://www.75f.io)

## HyperStat for IAQ monitoring

HyperStat measures and displays IAQ and other key parameters like temperature, humidity, CO<sub>2</sub>, VOC, Lux level, sound, and occupancy. These devices replace old-generation thermostats and can connect to the 75F IoT Platform for remote monitoring and control.

## THE RESULTS

The installation began in December 2021 and was completed by January 2022, taking just 30 days to fully implement the solution across the entire building. The client experienced significant benefits, including improved occupant comfort through consistent temperature control, which addressed previous issues with hot and cold spots. This led to a noticeable boost in productivity and overall satisfaction for building occupants.

The remote monitoring capabilities allowed for efficient oversight of the building's performance from anywhere, drastically cutting down on the need for on-site manpower and reducing unnecessary energy consumption.

Furthermore, the implementation included comprehensive dashboards that provided valuable insights through real-time data on energy usage, temperature patterns, and system health. These insights enabled the client to make informed decisions to continually fine-tune the building's operations, ensuring long-term efficiency and performance improvements.

