

CITY DEVELOPMENTS LIMITED (CDL) CASE STUDY

Republic Plaza chose 75F in partnership with SP Digital, providers of GET™ Control, to optimize energy efficiency, reduce operating costs, and improve occupant comfort, resulting in 18% energy savings.



THE BACKGROUND

Republic Plaza, located in the heart of Raffles Place, and owned by City Development Limited (CDL), is one of Singapore's most notable skyscrapers, standing tall at 66 floors and 280 meters. Republic Plaza comprises of office space and a retail enclave across three levels. It is among the first buildings to receive the BCA Green Mark Gold Award.

THE CHALLENGE

Republic Plaza was facing several challenges including the need to maximize energy-efficiency, decrease energy costs, and enhance occupant comfort, due to persistent hot and cold spots. Additionally, the Facility Management Team needed comprehensive occupant comfort and reporting tools for green building certification.

AT A GLANCE

Location	Republic Plaza, Singapore
Building Type	Commercial Plaza
Area	15,000 Square Feet
75F® Solutions	DCWB
	Dynamic Airflow Balancing
	Outside Air Optimization
	Number of CCUs: 1
	Number of Smart Nodes: 20
Turnaround Days	Number of Smart Stats: 1
	Number of EMs: 1
	Number of BTU Meters: 1
	90 days from start to handover (with installation work only possible on weekends due to COVID-19 restrictions).

THE SOLUTION

Dynamic Chilled Water Balancing (DCWB)

DCWB offers a unique control solution for the chilled water line of Air Handling Units (AHUs). This solution helps minimize CHW usage while maintaining the desired temperature. Integration of the Central Control Unit (CCU), existing BTU Meter, and a New Actuator significantly reduced chilled water usage, saving energy costs.

Dynamic Air Flow Balancing

Designed for centralized HVAC systems, 75F's DAB uses sensors at the AHU level to relay data wirelessly to the CCU. The unit then optimizes AHU motor and CHW actuator operations. Energy savings are achieved through precise temperature monitoring and control sequences. 75F's proprietary algorithms prioritized different AHUs based on actual usage, helping to avoid energy waste.

Smart Stat for Indoor Air Quality Monitoring

Smart Stat for IAQ – 75F's SmartStat, offers enhanced monitoring and energy savings. The world's most advanced thermostat. SmartStat measures and displays IAQ and other key parameters such as temperature, humidity, CO2, VOC, lux level, sound, and occupancy. These devices replaced old-generation thermostats and connected to the 75F IoT-based BMS Platform for remote monitoring and control.

THE RESULTS

Energy Savings

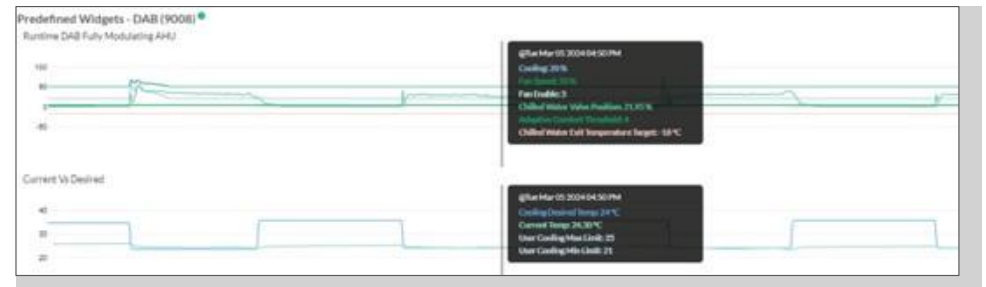
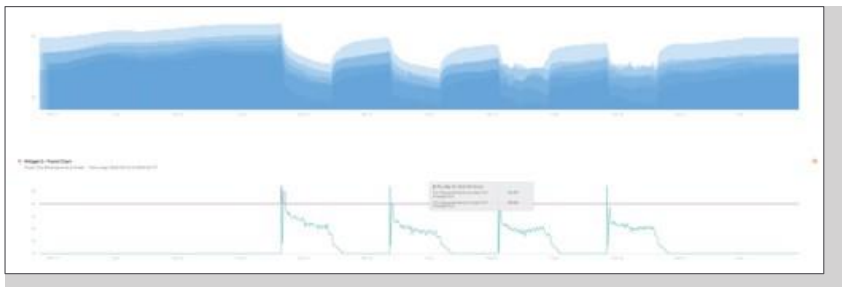
Energy savings reports since May 2022 demonstrate that 75F has helped save 18% in energy consumption.

Increased Occupant Comfort

Preliminary results have shown a 15% increase in terms of occupant thermal comfort levels with temperatures consistently being maintained between 23-25 degrees Celsius.

Fast and Easy Installation

Our deep knowledge and expertise assisted Republic Plaza's Facility Team with rapid installation and handover.



To learn more about our intelligent building solutions, visit www.75f.io