

Case Study

Champion REIT

Green Technology for Decarbonisation – Application of Internet of Things (“IoT”)

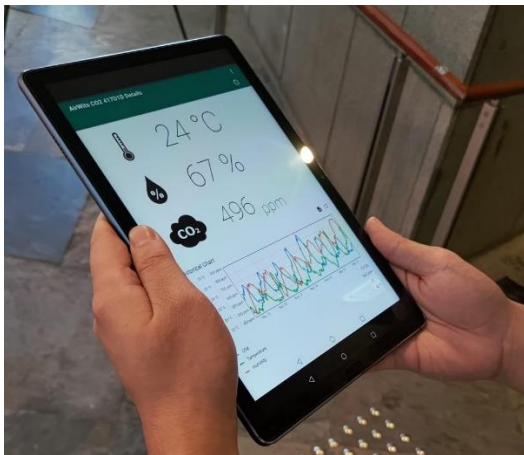
Overview

Leveraging green technology lies at the heart of Champion REIT’s decarbonisation strategy. Notably, the pioneering IoT technology is adopted extensively in its properties’ operations for enhancing energy efficiency and maintaining a favourable environment.

Green Initiatives

Champion REIT has initiated a pioneering demand-and-control ventilation system at its property Three Garden Road’s carpark, the system is operated by IoT sensors. By monitoring the carbon monoxide (“CO”) concentration level and indoor temperature at real time, IoT sensors measure the amount of exhaust emissions from vehicles in the carpark in order to provide ventilation rates by actual demand, subsequently optimising energy use and maintaining excellent indoor air quality. IoT supports wireless CO and temperature sensors that are more efficient for installation. From August 2019 to July 2020, the actual reduction on annual energy consumptions and annual carbon emissions are 605,193 kWh and 455,138kg CO₂e respectively, equivalent to 57.6% energy reduction annually.

Furthermore, Champion REIT adopted a one-stop IoT property management solution at another property Langham Place Mall. This one-stop IoT solution has allowed the team to closely monitor multiple environmental parameters, such as indoor temperature, humidity, air quality, water leakage and foot flow, enabling them to adjust energy usage and maintain a wellness-enhancing environment for better customer experience. IoT application could reduce construction waste compared to the installation of traditional signal wiring, which is conducive to preserving the environment.



Champion REIT has relentlessly integrated green technology into its decarbonisation journey, for example the installation of solar panels and system retro-commissioning supported by the timely climate-related data contributed by smart weather station, which is a key driver to achieve its carbon reduction goal progressively under Champion REIT's 2030 ESG Targets. By far, the Smart Weather Station supported the analysis of the solar photovoltaic system and retro-commissioning of the heating, ventilation, and air conditioning (“HVAC”)



system. Resetting the chilled water supply temperature and air handling unit supply air temperature, along with optimising the chiller plant control, the estimated annual energy savings is 1,430,000 kWh.

Results and Recognition

In 2021, Champion REIT achieved 19.5% reduction of carbon emissions by its efforts in driving green initiatives with an innovative approach.

Our continuing efforts in building business resilience against climate change were widely validated. Three Garden Road was the Facility Management Technology Award winner with the above-mentioned IoT On-demand Carpark Ventilation System project in 2020 presented by IFMA. We also received Certificate of Carbon Emission Reduction from Environment Bureau in recognition of our carbon emission reduction. Langham Place Mall became the first in Hong Kong property sector to attain Level 1 of Excellence in Design for Greater Efficiencies (“EDGE”), recognising its efforts to drive resource efficiency by having at least 20% reduction in energy, water and embodied energy in materials.

Way Forward

Looking forward, besides ongoing chiller plant retro-commissioning, installation of solar panels and optimisation work, we are planning to install 26 and 20 additional electric vehicles (“EVs”) charging stations in Langham Place and Three Garden Road respectively to promote reduction of carbon emissions and facilitate distribution of charging facilities.

Green technology is ever improving in the evolving operating environment, it will be a significant contributor to the global common goal of decarbonisation.