SMART LED Lighting Systems at Basement Tunnel

Singapore Healthcare Management 2019

Stephen Tan Kim Peng
Support Services, Operations
National Heart Centre Singapore

National Heart Centre Singapore
SingHealth

BACKGROUND

As a certified Green mark building, we continually seek to reduce carbon wastage and energy consumption.

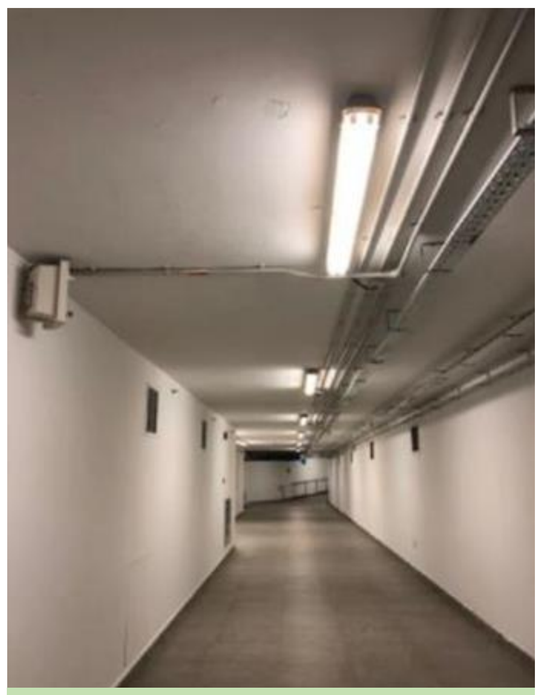
This project aims to reduce energy consumption in the NHCS basement carpark as the lighting is switched on 24hours daily.

METHODOLOGY

We have researched and compared on the lighting systems in the market for the best system that meets our needs. The SMART lighting system **(AgilLiteS)** introduced by ST Engineering Singapore was selected as the system that had the capability of on-demand and predictive lighting solution.

The installation fee is $2000 and comes with three years warranty.

BEFORE



Before the replacement
Typical T8 2 x 28watt
Fluorescent lamp fitting

AFTER

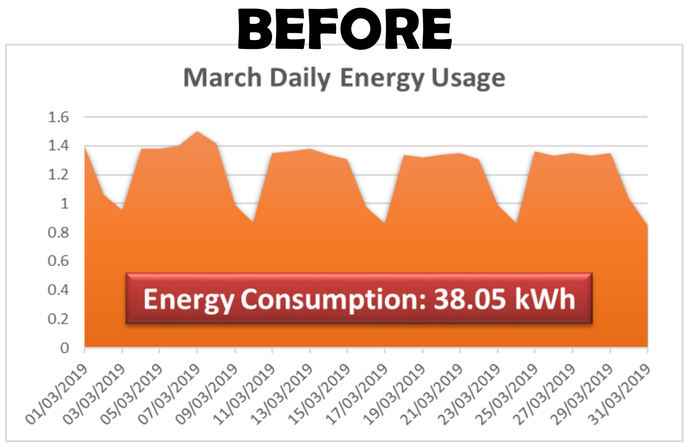
New SMART LED
Systems
At 20% brightness

New SMART LED
Systems
At 90% brightness.

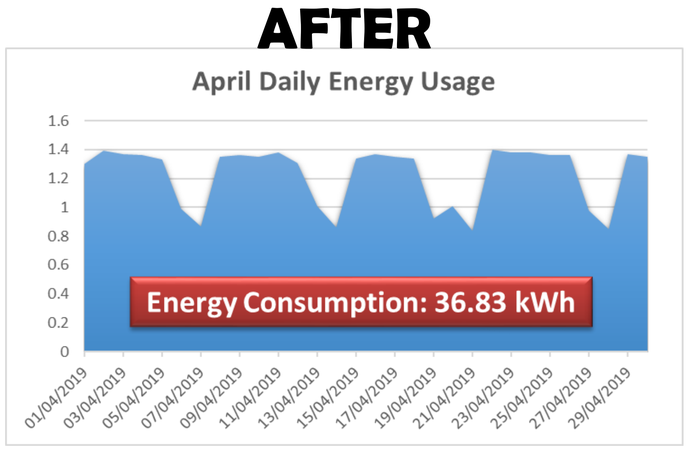
RESULTS

The tunnel lighting density is maintained at 90% lighting capacity which translates to 376 lumen. **70% of energy is being saved which translates to approximately 200kWh/month.**

BEFORE



AFTER



Annual Electrical Cost Savings

$467

Intangible Benefits

Human traffic and trending can be monitored

- It enables for a more efficient allocation of manpower.

Monitors electricity consumption

- Electricity usage is wirelessly monitored via 4G M2M Network (as shown below), hence having better visibility on our power consumption.

Conclusion

Potential Energy Savings have been realised using Smart Lighting System. Data insights collected can be used for future operation or infrastructure enhancement. There are plans to implement this lighting system to other areas that require continuous lighting after further studies to determine the cost benefits.