

# **ROBOT UTILISATION & MONITORING**

Dr Adrian Ang, PhD, LEED AP, CPM Director Corporate Development and New Businesses



## Up to 60% of a cleaner's time is spent on floor-cleaning

- Repetitive
- Manual
- Physically-demanding
- Takes time away from customer service, disinfection and other ad-hoc tasks



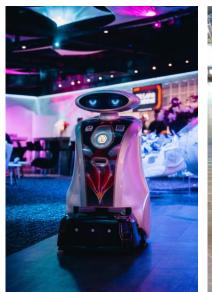
Let cleaners do the human jobs, robots the repetitive ones.

## INTRODUCTION

The purpose of utilizing autonomous cleaning robots;

- Reduce ergonomic hazards lessen strenuous tasks of floor cleaning
- Increase efficiency and productivity allow operators to focus on customer service, disinfection and other higher-value tasks
- Upgrade the Worker from Cleaner to Operator of multiple robots in a facility

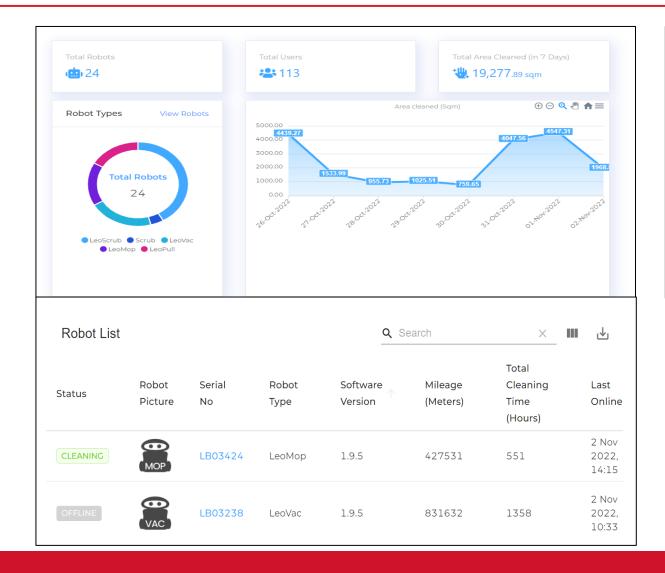
In CTM we deployed a total of 24 robots to most of our major commercial sites which assist in the daily operations.

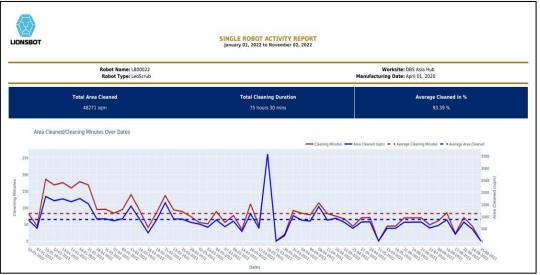












# Remote monitoring of entire robot fleet from CTM Command Centre

- Deployment statistics
- Evidence-based cleaning reports

### **IMPACT OF CLEANING ROBOTS**

### Before:



- Time Consuming for Traditional Works (Manual Scrubbing/ Mopping) – 2 hours
- Ergonomic Hazard due to large area coverage
- Potential Slip & Fall for worker

#### After:



- Time savings by using LeoBot 20 to 30 mins
- Worker can be re-deployed to attend feedback, urgent or additional task
- Eliminate Slip & Fall, and Ergonomic Hazard





