Digitalisation push for landscape sector

The National Parks Board (NParks) yesterday announced a pilot for new digital tools and technologies in the Bishan-Ang Mo Kio area for the landscape sector. Following the year-long pilot, which allows those in the sector to familiarise themselves with the tools and technologies, they will be used across the island.
Here are some of the new technologies being employed:

1 SURVEILLANCE CAMERAS, VIDEO ANALYTICS AND PARK VISITOR ASSESSMENT SYSTEM

- Surveillance cameras, some with video analytics integrated into their systems, have already been implemented to monitor visitorship levels and safe distancing in parks and gardens amid the pandemic.
- They are also able to alert NParks staff to breaches of safe distancing rules, such as gathering in groups larger than eight or when visitors remove their masks in non-exercise areas.
- NParks is working to incorporate these technologies into its operational park management to streamline processes and allocate resources more efficiently. For instance, it can provide more benches where people tend to congregate, or set up bike lanes on paths frequented by cyclists.

2 TREE TILT SENSOR

- The wireless electronic tilt sensor is attached to trees, and helps to monitor tree movements or detect lean in trees that might result from progressive weakening over the years.
- The sensors guide staff on risk mitigation measures.

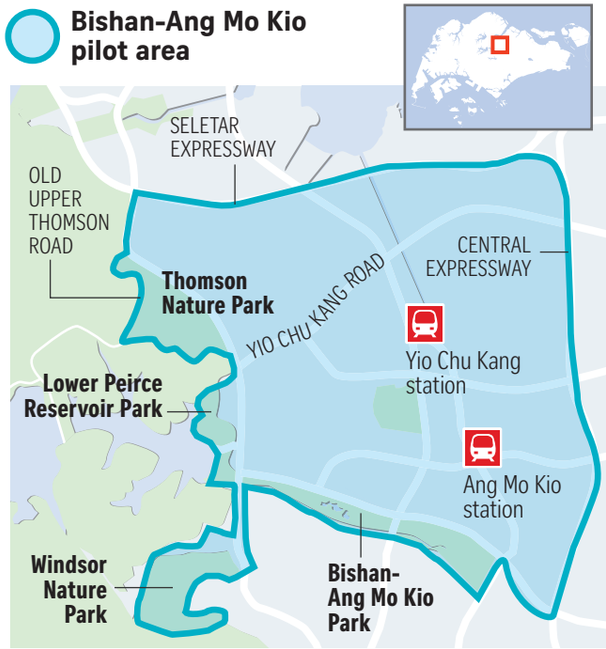
3 REMOTE TREE MEASUREMENT SYSTEM

- The system uses machine learning to extract the locations and physical parameters of trees, such as height and girth, from Light Detection and Ranging (Lidar) scans.
- The information collected is automatically uploaded onto a central platform, allowing NParks' arborists to efficiently get an overview of trees in a given area, reducing the need for fieldwork and manual records.
- The system allows trees in poorer health to be highlighted so they can be attended to earlier.

4 GRASS HEIGHT SENSOR

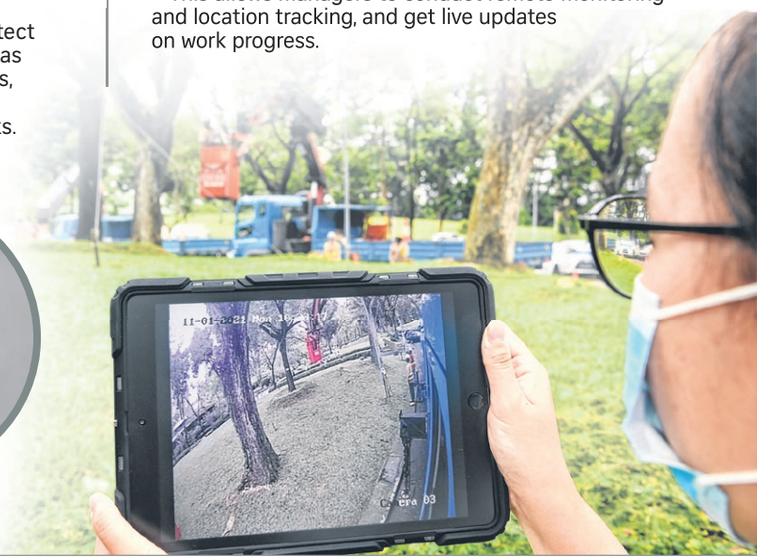
- The sensor reduces the need for NParks' staff and contractors to perform site checks as they can remotely track, using GPS data, areas where the grass has been cut.
- The hip-worn sensors can also detect grass height, to confirm that work has been completed. With these updates, contractors can be paid as soon as possible upon completing their tasks.

Bishan-Ang Mo Kio pilot area



5 CONTRACTOR FLEET MANAGEMENT SYSTEM

- Landscaping worksites are located at various locations across the island, and individual teams are constantly on the move.
- The management system consists of GPS trackers, sensor devices and video camera recorders installed on vehicles used by NParks contractors performing greenery maintenance.
- This allows managers to conduct remote monitoring and location tracking, and get live updates on work progress.



Source: NPARKS ST PHOTOS: KUA CHEE SIONG STRAITS TIMES GRAPHICS