## 2 hot news

## HDB-SUTD study aims to find ways to create new urban kampungs

Research to uncover emerging lifestyle trends, help town planning by tapping big data

**SINGAPORE** – How residents move around in their neighbourhoods could soon have a big say in how town planners add or tweak features to the area.

Using data captured by motion sensors on smart lighting, for example, the decision could be made to have Wi-Fi at void decks for residents to study. Or perhaps, identify underutilised spaces so planners can rope in residents to re-design them.

Tapping data to uncover emerging lifestyle trends in an area is one of the ways the Housing and Development Board (HDB) is looking to take its town planning and design standards to the next level, through a S\$6 million social behavioural study with the Singapore University of Technology and Design (SUTD).

The collaboration is one of two the HDB inked yesterday at the start of the two-day International Housing Forum held at the HDB Hub in Toa Payoh. The other is a S\$4.7 million agreement with the Nanyang Technological University to improve productivity in the construction process for HDB flats through the use of smart technology.

The HDB-SUTD study, which will take three years, aims to come up with a new framework, dubbed New Urban Kampung, that can predict how the demographics in towns are likely to evolve, as well as forecast how residents would respond to features introduced in their midst.

The HDB said the study will try to

dive deeper into the composition of residents in a town — beyond traditional statistics such as age, race, and income — to pick out how they like to spend their time and what they like in an area.

Harnessing big data, gathered through sensor networks placed around the estate to track human traffic and movement, among others, the HDB can come up with "more targeted and customised improvements", the agency said. Big data could also be used to examine the impact of a precinct's design on residents' interaction and behaviour, the HDB added.

It cited the addition of Wi-Fi to void decks as an example, given that residents are more digitally connected now. With such features, residents could use communal spaces more, and create a sense of belonging in their estate. Or if a space is found to be under-used, it can be flagged, so planners can figure out why this is so and tweak things to cater to the preferences of that community. This would go one step beyond the provision of typical communal spaces such as gardens, playgrounds and fitness corners, the HDB said.

The data collected could be used to run simulations in advanced modelling tools to predict receptiveness levels to certain new initiatives before they are rolled out.

Such data could also help identify common interests that residents of an area have.

If a particular estate is especially fond of, say, cycling, customised apps could be introduced for residents to come together and form a cycling community.

As part of developing the new framework for town planning and design, the HDB is also looking into coming up with new indicators to measure quality of life. It noted that as sociodemographic makeup of HDB towns evolves, traditional indicators such as healthcare, sanitation and safety, among others, may not adequately reflect what residents need anymore.

The HDB and SUTD will carry out research on indicators related to the material conditions and resources within a neighbourhood, such as whether the environs are too hot, how accessible amenities are, and greenery in the surroundings.

They will also look at psychosocial factors, including whether residents are cohesive, or feel a sense of belonging to their neighbourhood. "This will help guide future design and planning strategies to boost residents' well-being," the HDB said.

HOT NEWS HDB MOVE TO BRING COMMUNITIES TOGETHER TIMELY, SAY EXPERTS 4

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