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Headline: App identifying barrier-free routes for wheelchair users in the works

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SINGAPORE: A route-planning app for wheelchair users in the works, with the aim of locating barrier-free routes in public housing heartlands.

The app will also be able to predict the shortest possible routes for wheelchair-using residents to get around, starting with Bukit Panjang town where the pilot was launched on Saturday (Feb 10).

Developed by research and technology non-profit organisation Trampoline and the Singapore Management University, the SmartBFA app will make use of crowdsourced data from resident volunteers to locate obstacles and barrier-free access routes over more than 400 blocks across Bukit Panjang.

Starting from April, a group of 20 resident volunteers will be recruited every two months to be involved in the pilot, using geotagging technology and real-time sensors attached to their wheelchairs.

The study will collect data from a total of 260 Bukit Panjang residents until June 2019, before embarking on the app's commercialisation.

"We know that there are many such apps for navigation for able-bodied people and we asked ourselves why is there no app for people who require barrier-free access," said Dr Liang Huiguang, who is lead investigator of the study.

"That's why we decided that since we have the know-how, why don't we do this together."

Highlighting Singapore's ageing population, barrier-free amenities are important for residents facing mobility problems, said Dr Teo Ho Pin, who is Member of Parliament for Bukit Panjang.

"Although we've built barrier-free access (amenities) to all the areas, sometimes there are certain areas we can improve, especially in Bukit Panjang because we're very hilly ... and it can be quite challenging for residents with different types of mobility issues."

Dr Teo added: "So what we want to do is to collect data for the whole town, map out all the barrier-free access routes, find out where are the gaps where we can improve the accessibility of the barrier-free access amenities in Bukit Panjang town.

"And from there, we'll see how we can help our residents find the shortest possible route when they want to move from point to point within the town.

"If we can make Bukit Panjang town seamless, totally barrier-free and with the help of the mobile app and we can move around with that, I think we can share our experience with other town councils."

While one wheelchair user said the app will be helpful, getting able-bodied pedestrians to make way is still a challenge.

"Getting around here is very hard because there are so many people," said 57-year-old Kamarudin Bin Mohd Noor. "The app is helpful for me to go up and down, but the problem is some of them don't give way, that's the problem."

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The team leading the study received S\$700,000 in funding from the Tote Board earlier this year, after applying for a grant from SG Enable, an agency dedicated to enabling persons with disabilities.

The team has plans to incorporate other data sources such as from mobile phones eventually, with the aim of providing mapping services to town councils and augmenting services such as Google Maps in the future, Dr Liang said.

The app will be available for Android and iOS mobile devices for free in about six to eight months.

Source: CNA/rw