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In an exclusive interview with Channel NewsAsia, Smart Nation and Digital Government Office Deputy Secretary Tan Kok Yam tells Ahmad Khan that the aim of smart lamp posts is strictly to improve urban planning and operations.



GovTech still needs to determine whether the technology behind its vision of the "smart lampposts" is cost-effective, feasible and can be used to solve real-life problems.

SINGAPORE: An ambitious project is underway to equip lamp posts in Singapore with various capabilities to improve urban planning - serving to be more than just a light source.

A trial by the Smart Nation and Digital Government Office (SNDGO) and the Government Technology Agency (GovTech) will start next year in Geylang and One-North.

This is part of Singapore's Smart Nation Sensor Platform project, which could see all of Singapore's 110,000 lamp posts fitted with a network of wireless sensors, to transform them into "smart lamp posts".

POSSIBLE USES OF SMART LAMP POSTS

Currently, prototypes are being tested to determine the kind of technological capabilities that can be incorporated.



A "smart lamppost" prototype being tested for possible uses, to determine the kind technological capabilities that can be incorporated.

For example, environmental sensors could potentially be added to monitor rainfall, humidity and temperature, and noise sensors to detect unusually loud sounds, such as a person screaming or a car crash.

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With video sensors, it would be possible to incorporate facial recognition systems.

Navigational beacons could also be mounted to direct autonomous vehicles while speed-trap sensors could be used to track speeding bicycles or personal mobility devices.

Citing this as an example, SNDGO's Deputy Secretary Tan Kok Yam described how these smart lamp posts can be put to good use.

"We want to look at places where people most frequently use active mobility devices," he said.

"If we know where these places are, we can look at the infrastructure and the signage, to make the place safer. You want to know whether people are speeding or not for public safety reasons.

"If there is a bad collision, would a visual sensor be able to pick that up? And if that happens, would we be able to respond with emergency services?"

PRIVACY FEARS

Despite their potential, some aspects of the smart lamp posts have sparked concerns about privacy, especially the platform's prospective ability to recognise faces.

But Mr Tan tried to allay such fears.



Some aspects of the "smart lampposts" have sparked concerns about privacy, especially the platform's prospective ability to recognise faces.

"We have no plans to use it to probe into how people live their lives," he said.

"The whole point of the sensor platform is to look at improving services, look at how to run the city and operate the city better and how to plan the city better. We have no plans to do moral policing or things like that."

According to Professor Archan Misra from Singapore Management University's School of Information Systems, better education and disclosure is the solution to such concerns.

He said: "You want the public agencies to be more upfront about what they're using them for and to highlight the positive use cases."

"Admittedly there will be a very tiny sliver of cases, when you're tracking a person of interest, criminal on the run, and you're going to be using all this infrastructure to monitor those and track them. But that's going on already, there's no surprise and there's high public acceptance of that."

Instead, the professor warned that cybersecurity threats such as hacking and data leaks could be bigger dangers.

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"Some of the things I've heard is that there is potential that a lot of the communication infrastructure is based on things such as Wi-Fi. These are unlicensed spectrum, meaning they are sort of more vulnerable to threats, because anybody can bring a laptop and start messing around with these," he said.

"So you (have) got to have a higher level of security for some of those."

SNDGO, though, says the data collected will be safe, and there will be measures to prevent misuse.

"Internally we have access controls to make sure that those accessing any kind of sensor or personal data have a purpose, are allowed to do so," said Mr Tan.

"We will be able to track whoever who accesses the data in a matter that is not relevant, that does not gel with what the officer is supposed to do. As for those who misuse or abuse the access to personal data, they will be penalised."

SMART NATION FOR THE FUTURE

For now, the agencies behind the project still need to determine whether the technology behind their vision of the smart lamp posts is cost-effective, feasible and can be used to solve real-life problems.



An expert warns that cybersecurity threats such as hacking and data leaks could be bigger dangers than privacy concerns.

But Professor Misra said it is essential for Singapore to press on.

"I think it's important as a showcase of what Smart City infrastructure can be, because Singapore is a leading smart city in this part of the world, in ASEAN," he said.

"There's a lot of Smart City investments that are upcoming, and our ability to show that we can do it right positions us to be a top leader, to have the right business contracts and enable these cities to come up to speed over the next decade."

He believes the smart lamp post is still at least four years away from reaching a level where its capabilities will match its intent.

Source: CNA/ad