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**Headline: Where the entire city is the laboratory**

## **Where the entire city is the laboratory**



Using advanced sensor technology and real-time analytics, researchers at the Singapore Management University's (SMU) LiveLabs Urban Lifestyle Innovation Platform, or LiveLabs for short, have turned data from smartphones, wearable devices and the physical environment into powerful insights.

Launched on 5 November 2012 by then Deputy Prime Minister Mr Teo Chee Hean, LiveLabs was funded by the National Research Foundation Singapore and run via the Interactive Digital Media Programme Office.

Using Singapore as a city-scale testbed, researchers collected fine-grained, context-based data from the mobile devices of more than 30,000 consenting participants across Singapore, including at Changi Airport and Sentosa. They then converted the data on the participants' lifestyle and behavioural patterns into useful information for the meetings, incentives, conferencing and exhibitions (MICE) industry.

"LiveLabs was conceived as a testbed to trial research prototypes in real-life environments. It ran for seven years, from 2012 until it was closed earlier this year," said LiveLabs co-director, SMU Associate Professor of Information Systems Rajesh Balan.

Among the technologies developed at LiveLabs, the one that received the most traction was the LiveLabs Indoor Location Tracking & Analytics solution, which allows venue operators to conduct indoor analytics of how people move inside indoor spaces using just Wi-Fi. The solution provides both retrospective insights, such as heat maps, visit durations and group sizes; and predictive insights, such as the locations they are likely to visit next.

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Besides the MICE industry, other applications for the solution include space planning. "For example, in a university, it is very important to figure out where to put your seminar rooms, meeting rooms and study spaces, and to know whether your meeting rooms are underutilised or overutilised," Professor Balan said.

The technology from LiveLabs is now entering a new phase, in the form of a new startup founded by Professor Balan to commercialise the technology, called SenzIQ Pte. Ltd.

"LiveLabs was a very successful research lab and we managed to reach a point where we can commercialise the technologies that came out of the lab," Professor Balan said. "As part of the LiveLabs journey, we gradually built the various technologies and deployed them to various customers. This allowed us to learn what real companies need and also to build up the necessary manpower and contacts to form a viable startup that has solutions that are closer to market ready than they would be otherwise."

Provided by Singapore Management University