ANNEX 1

About the URA-LTA- Singapore-ETH Centre collaboration on MATSim

Singapore

The flow of people within and through city areas is an important consideration in urban design, planning, and management. Tapping on the potential of new technologies and available urban data, URA, LTA and the Future Cities Laboratory (FCL) of the Singapore-ETH Centre are collaborating on a research project to better understand travel patterns in order to enhance land use and transport planning.

The collaboration to adapt the Multi-Agent Transport Simulation Toolkit (MATSim) Singapore developed by FCL to the local context is part of URA and LTA’s ongoing efforts to tap on new technologies to enhance the way we plan our land use and transport, and help us improve accessibility to daily amenities and transport services for our people.

MATSim Singapore will simulate the travel patterns of individuals in Singapore and provide planners with an in-depth understanding of the interaction and interdependency of land use, travel demand, transport supply and travel behaviour. Agencies can then improve the analysis of Singapore’s daily commuter travel patterns and behaviour to better evaluate existing transport systems, future infrastructural development and policy measures.

The tool will enable planners to investigate the impact of new MRT lines and development projects on travel demand, access to work and leisure activities, transport mode choice and traffic congestion. With individuals and vehicles as basic units of analysis, MATSim Singapore can also be used to investigate the potential of modern urban transport solutions such as cycling, car sharing, and autonomous vehicles.

The collaboration will result in the development of an operational MATSim Singapore tool, as well as capability and technology transfer to URA and LTA. The project is expected to be completed by October 2015.
About MATSim Singapore

The open source software MATSim has been under continuous development for almost 10 years at ETH Zurich, TU Berlin, Future Cities Laboratory and other research institutions, as well as Senozon - a Swiss start-up company.

MATSim Singapore is designed to simulate Singapore’s island-wide travel flows on roads and public transport by modelling the movement of individuals at different times. It provides a better understanding of the potential impact of future urban development and new transport systems. Based on the individual’s demographic profile, likely sequences of daily activities, and the location and duration of activities, the tool allows the modelling of travel flows, expected travel mode, and time taken to travel between locations.