Singapore's Collaborative Modelling Approach to Support Integrated Land Use-Transport Planning

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KEYWORD: Data-Driven Decision Making, Land Use-Transport Interactions, Transport Model

BACKGROUND

- Singapore Urban Redevelopment Authority (URA) and Land Transport Authority (LTA) have fostered a collaborative approach to integrated Land use-Transport planning.

- Data and modelling tools are leveraged to facilitate data-driven decision-making, across all planning stages from upstream planning to development control.
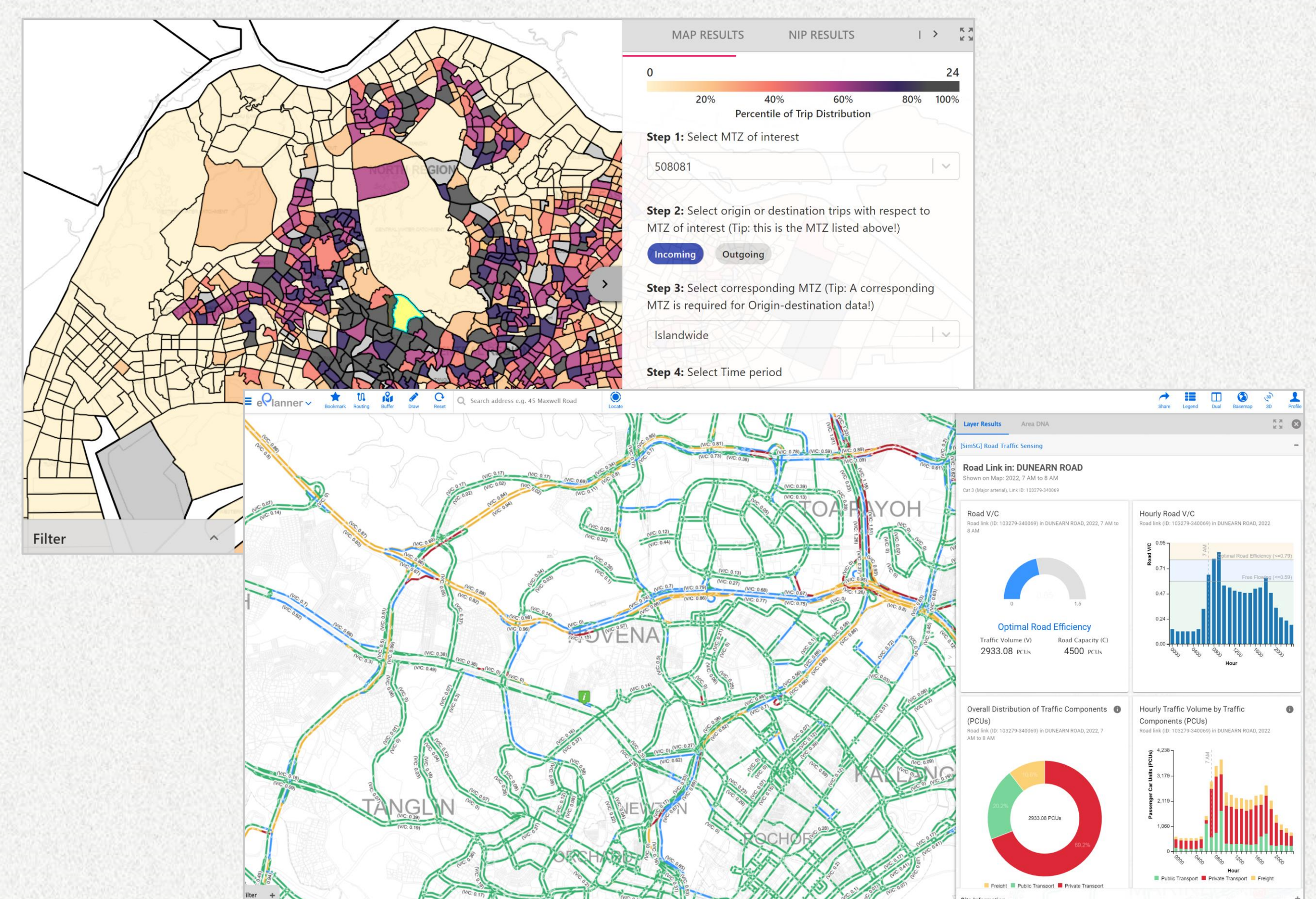
SIMSG INITIATIVE

- Recognising the need for continuous improvement, the planning agencies have embarked on a joint initiative named "SimSG" aimed at bolstering data and modelling capabilities.

- This initiative encompasses:
  1) automation of data processing;
  2) cloud-based integration models; and
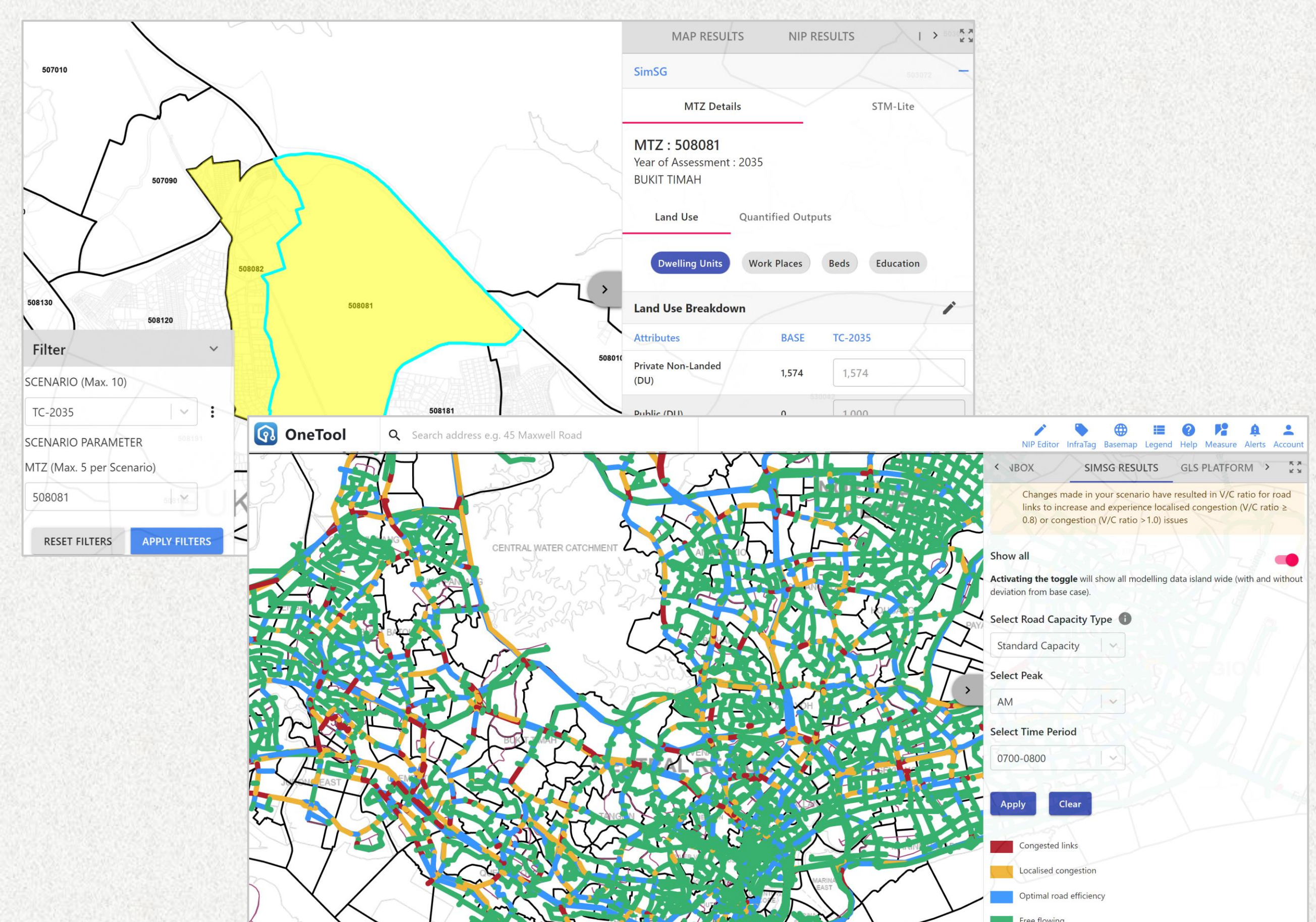 3) transformation of existing models and development of new tools.

PROGRESS

- The URA-LTA SimSG joint team has developed:

  1) **Ground Sensing App** (GSA): data layers visualising road traffic, rail loading, origin-destination flows, etc.; and

  2) **Land Use-Transport integration** (LUTi) **App**: a modelling tool enabling quick-tests of transport impact from planning scenarios.
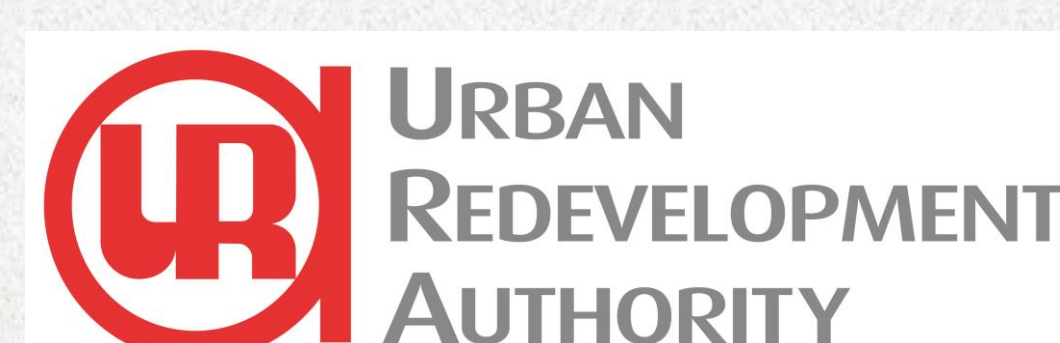

FUTURE IMPROVEMENTS

- **Collaboration**: The SimSG initiative has transcended immediate benefits for URA, LTA and other government agencies. We envision that in future, the tools can be made accessible for academic and industry professionals. This fosters a robust urban planning ecosystem, nurturing knowledge exchange and collaborative innovation.

- **Focus Areas**: SimSG would be a multiple-year effort. Future improvements will be made to improve the existing tools and develop new tools, and enhance agencies' knowledge and modelling capabilities via research projects such as understanding how people make decisions on home location choices, etc.

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