Online tools to facilitate collaboration among dispersed modelers and agencies. Associated life cycle decisions of agents (individuals, households, businesses and developers) draw on advanced behavioral and market theories and empirics to reflect different situations and constraints. Account for interactions among individuals and firms, interfaces with medium-term model via activity-based accessibility measures and lifestyle characteristics. Consistency in representing agents and their relevant attributes.

Overview
SimMobility’s long-term simulation model, to predict:
• The evolution of land use and property development and use
• Associated life cycle decisions of agents (individuals, households, businesses and developers)

Advances in Modeling Features
Demographic Transition
• Simulate agents’ life cycle evolution, annually
• Account for relevant demographic trends, such as later marriages and fewer children

Real Estate Market
• Real estate prices, firm/household movement and location choices determined in a dynamic market clearance process.
• Developers’ development schemes based on market prices and expected profitability.
• Capable of reflecting Singapore’s particular real estate sub-markets, like HDB and second-hand housing, and government policies.

Social Networks
• Account for potential role of, and evolution of, social networks in relevant behaviors (e.g., neighborhood choice, school choice).

Accessibility
• Activity-based accessibility measures (i.e., logsums) from Medium Term simulator are attributes of relevant choices (e.g., housing)
• Theoretically rigorous means for inter-model, intra-SimMobility behavioral consistency of agents.

GeoPortal for SimMobility
• Online tools to facilitate collaboration among dispersed modelers and agencies.
• Build shared understanding of available data, models, results and processing pipelines from a variety of sources.
• Visualize model parameters and spatial patterns of metropolitan development.

Accessibilities, Activity Patterns, Social Networks, and Real Estate
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Note: This Figure is not to scale and is used for illustration purpose only.