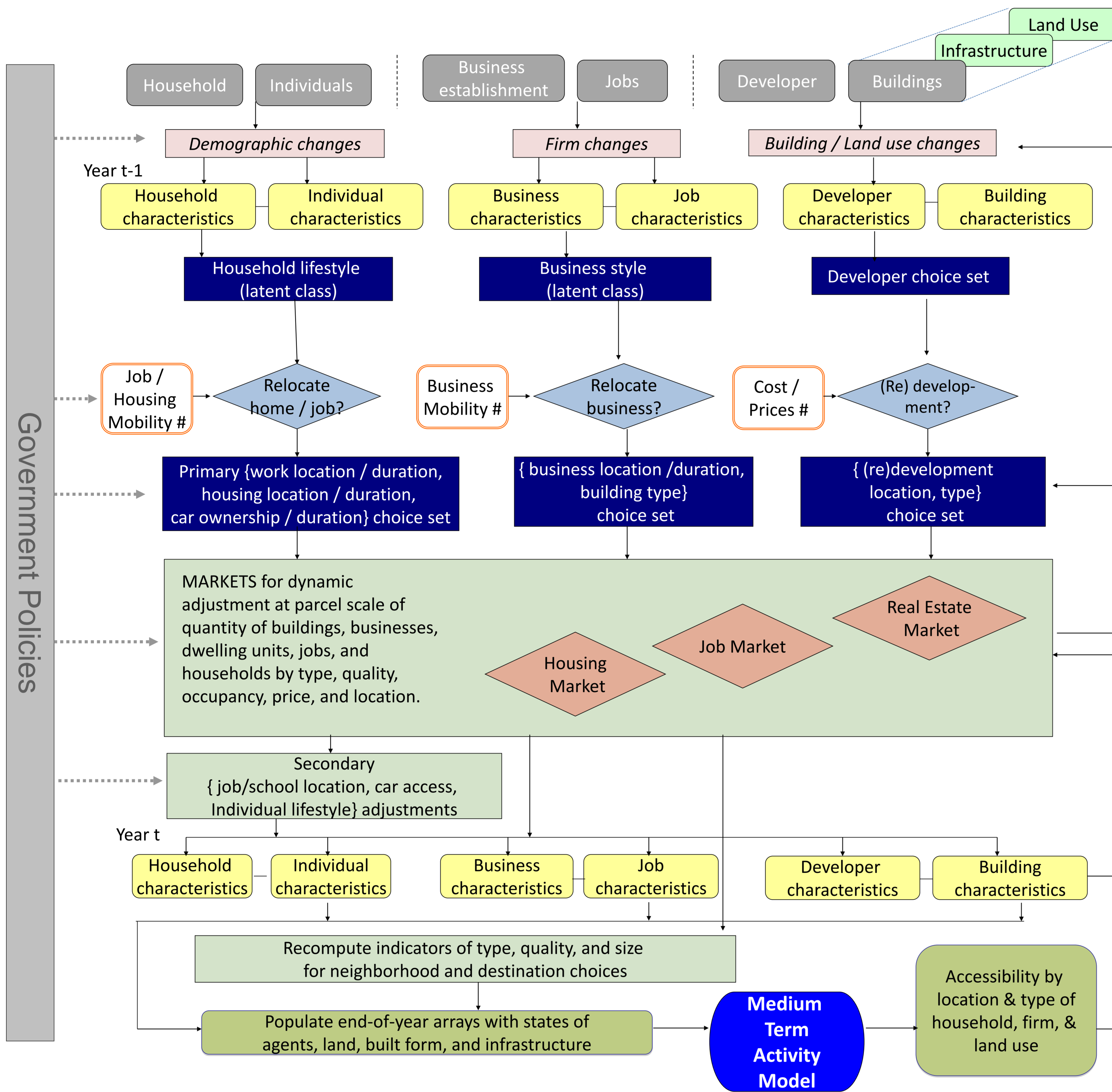


SimMobility – Next Generation Long-Term Simulator

Joseph Ferreira², Chris Zegras², Mi Diao³, Moshe Ben-Akiva², Yi Zhu², Shan Jiang², Clio Maria Andris¹, Sybil Derrible¹, Yunke Xiang²

¹Singapore-MIT Alliance for Research and Technology (SMART)
²Massachusetts Institute of Technology (MIT)
³National University of Singapore (NUS)

Long-term Model Flow Diagram



Overview

SimMobility's long-term simulation model, to predict:

- The evolution of land and property development and use
- Associated life cycle decisions of agents (individuals, households, business establishments and developers)

Draws 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

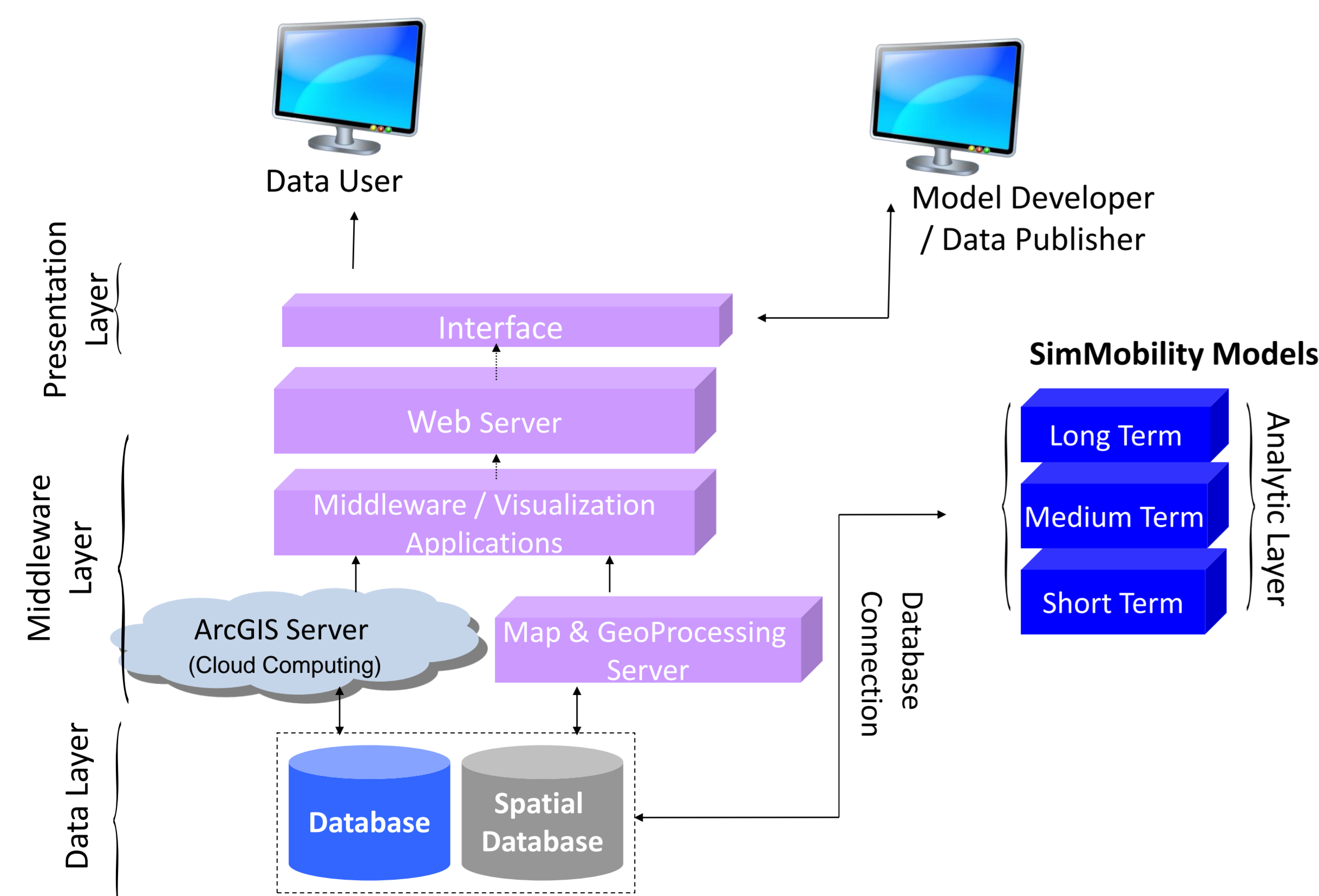
- Consistency in representing agents and their relevant attributes

Advanced Modeling Features

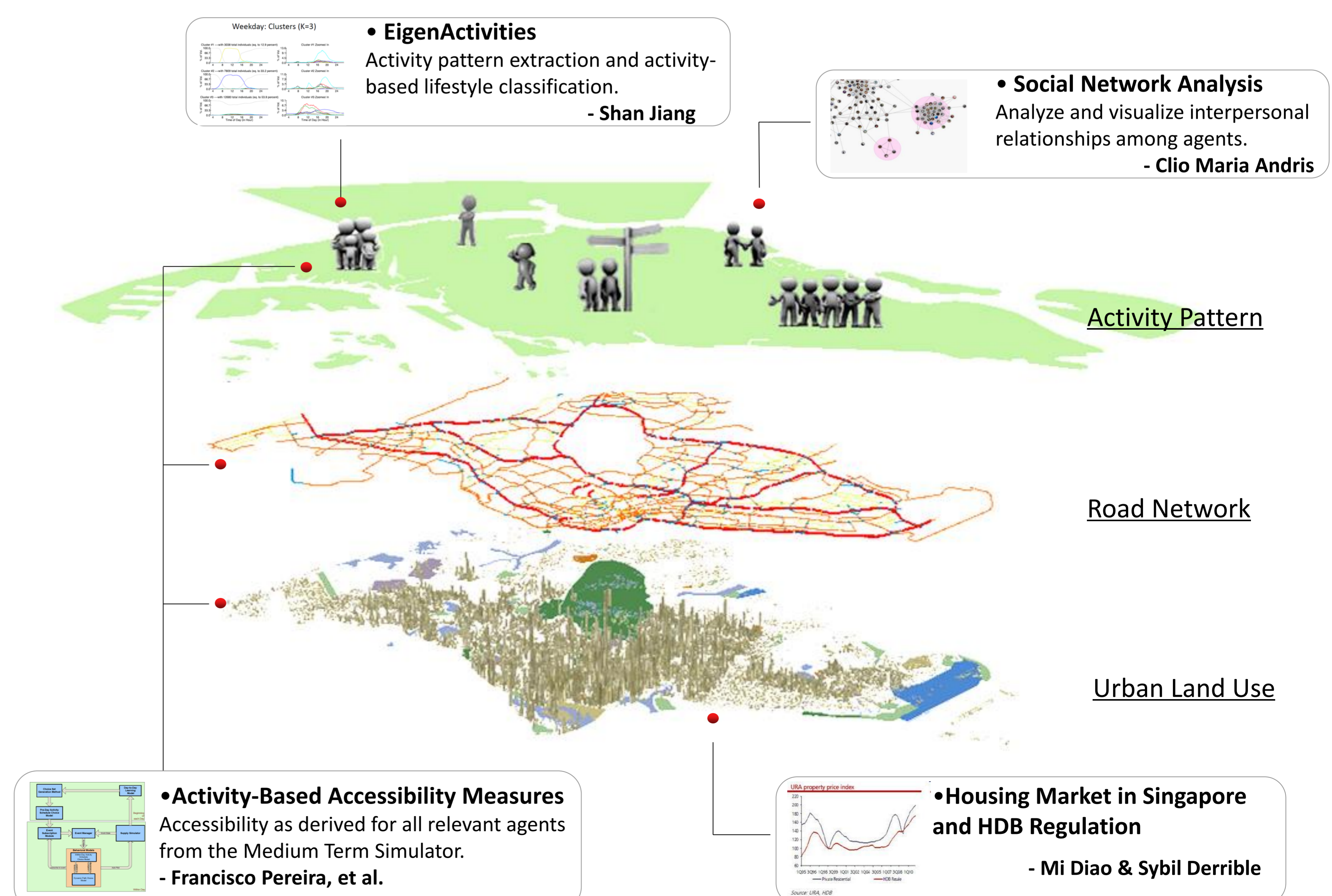
- Demographic Transition**
 - Simulate agents' life cycle evolution, annually
 - Account for relevant demographic trends, such as later marriages and fewer children
- Household Life Style / Firm-style Classification**
 - Capture and account for heterogeneous preferences of households / firms
 - Reflected via simultaneous estimation of latent class membership
- 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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