

SE Florida ABM Update

presented to
Model Task Force

presented by
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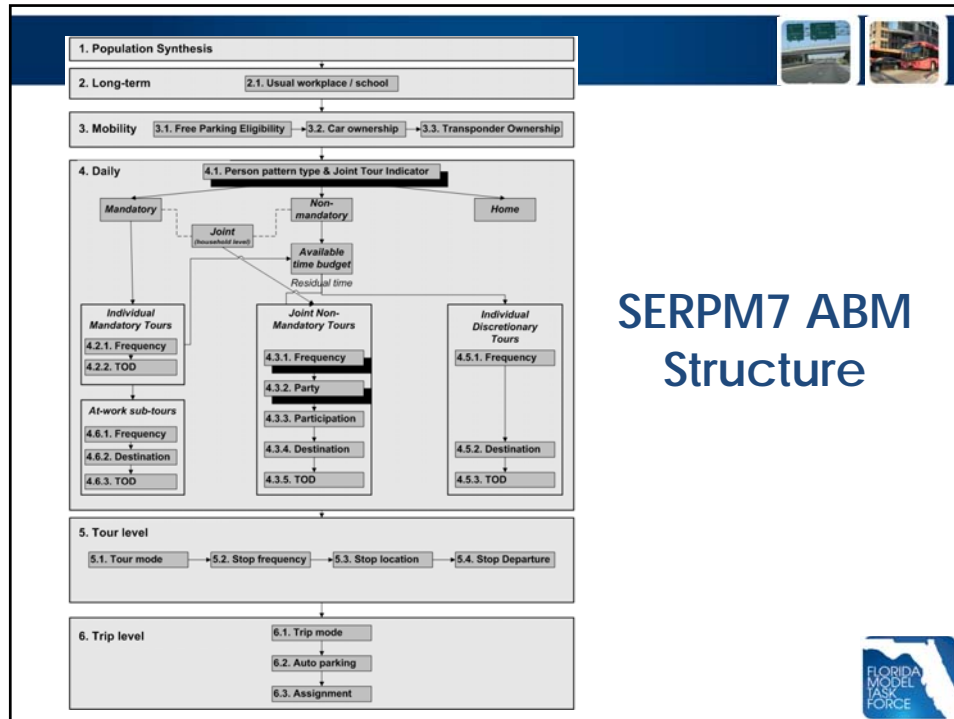


SE Florida Model Structure



- **Coordinated Travel – Regional Activity-based Modeling Platform Family of ABMs (CT-RAMP)**
- **Main features:**
 - Explicit intra-household interactions
 - Continuous temporal dimension (half-hour time periods)
 - Micro-area spatial dimension (12,000 MAZs)
 - Integration of location, time-of-day, and mode choice models
 - Java-based package for AB model implementation
 - Data visualization tool

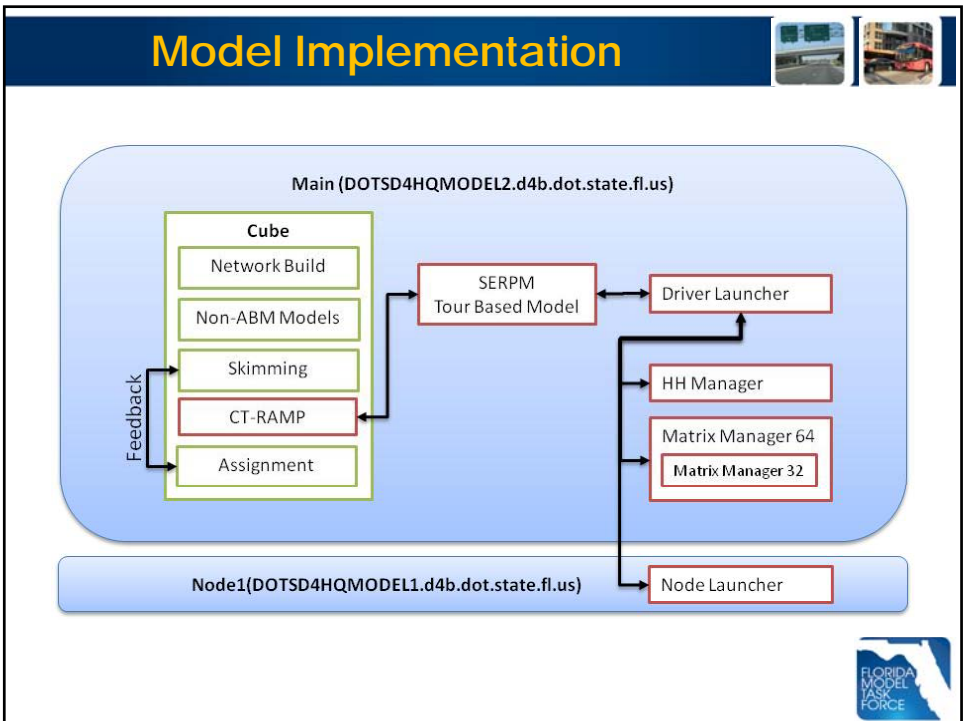
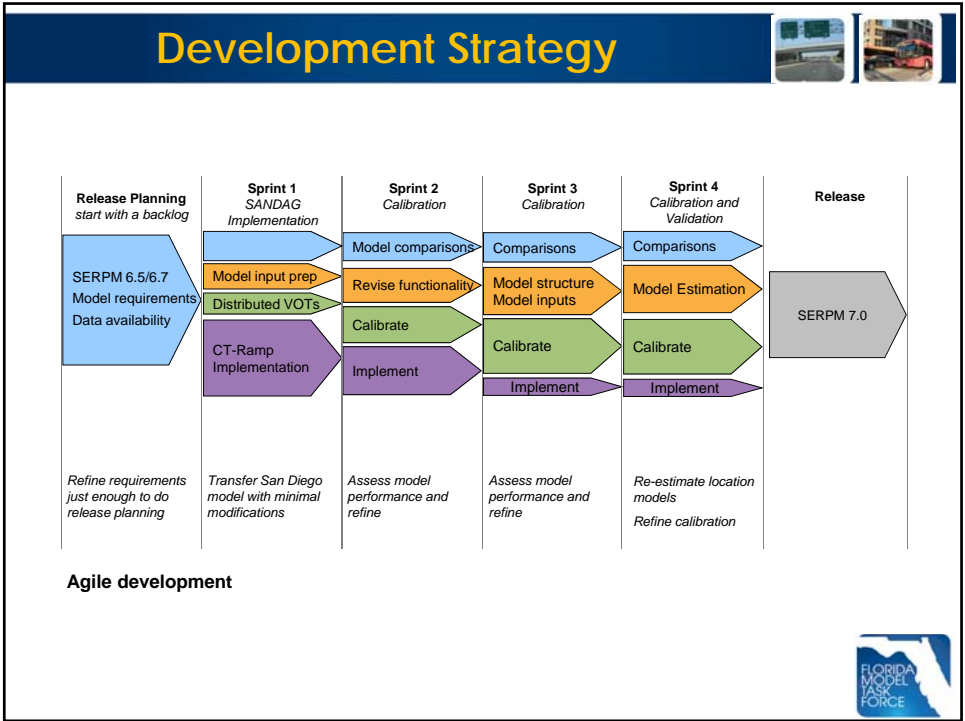




SERPM7 ABM Structure

Development Strategy

- Transfer SANDAG Activity-Based Model
 - Develop SE Florida inputs
 - Micro-zones
 - Socio-economic and employment data
 - Transit access points and networks
 - Other inputs (parking costs, transit fares, ...)
 - Develop calibration targets
 - Examine performance of transferred model
 - Re-estimate select model components
 - Implement auxiliary models (trucks, external trips, etc.)
 - Calibrate and validate
- The diagram includes two small inset images of a street scene and a Florida Model Task Force logo in the bottom right corner.



Input Data



Data Needs	Sources	Status
Micro-Zone delineation	Census blocks, parcels	Complete
Housing Units at MAZ level	Census	Complete
Household and population socio-economic attributes	Census, American Community Survey	Complete
Employment by ~ 16 sectors	InfoUSA, ES-202, PUMS	Complete
School and University enrollment	Florida DOE, Choice Programs	Complete
Transit access points	Transit operators GIS data	Complete
Transit operation attributes	SERPM 6.7, Transit agencies	Complete
Highway operation attributes	SERPM 6.7	Complete
Regional automobile inventory	Department of Motor Vehicles	Complete
Parking supply and costs	SERPM 6.7, FDOT Inventory, City of Miami, City of Miami Beach	Complete
Transponder ownership	Florida Turnpike Enterprise	SUNPASS account info avail.
Calibration targets	NHTS, SEFRICS, ACS, LEHD	Complete except mode choice
Traffic counts / Transit boardings	FDOT, MPOs, Transit agencies	90% Complete



Calibration



- Successful transfer: most models require little calibration
- Most effort spent in examining what the model understands or doesn't understand
 - adjust certain model parameters (like access distances) instead of constants
 - reasonableness checks on calibration targets
 - finding and fixing bugs – typically caused by data inconsistencies
 - refining input data



Ancillary Models



- Adapted from SERPM 6.5 and/or newly developed:
 - External trips (EE/EI/IE)
 - Airport ground access trips
 - Truck trips
 - Visitor trips (under development)
- Implemented in Cube script and integrated with ABM inputs and outputs



Work Ahead



- More detailed model calibration
- Non-mandatory location model re-estimation
- Validation to traffic counts and transit boardings
- Future year test
- Finalize implementation
- Refine/customize ABMViz



Acknowledgments



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Questions



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