

Treasure Coast Regional Planning Model ABM Development (TCRPM4)

presented to
Model Task Force

presented by
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TRCPM Model Structure


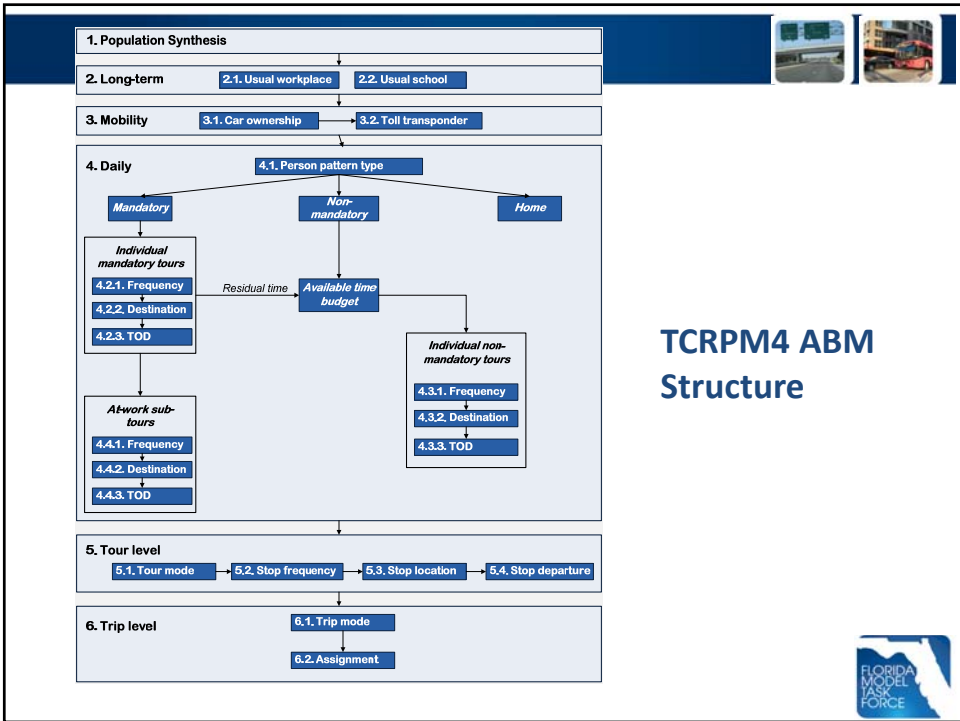


- **Coordinated Travel – Regional Activity-based Modeling Platform Family of ABMs (CT-RAMP)**
- Concepts and structure similar to SERPM7
- Main features:
 - Explicit intra-household interactions
 - Continuous temporal dimension (one-hour time periods)
 - Subdivided TAZs but no micro-zones (989 internal TAZs)
 - Integration of location, time-of-day, and mode choice models
 - Java-based package for AB model implementation
 - Designed to run on a desktop computer



Differences from SERPM7

- No micro-zones
- Simplified transit and mode choice structure
- No transponder model
- Temporal resolution of one hour instead of 30 minutes
- No explicit representation of joint travel
- No parking cost elements

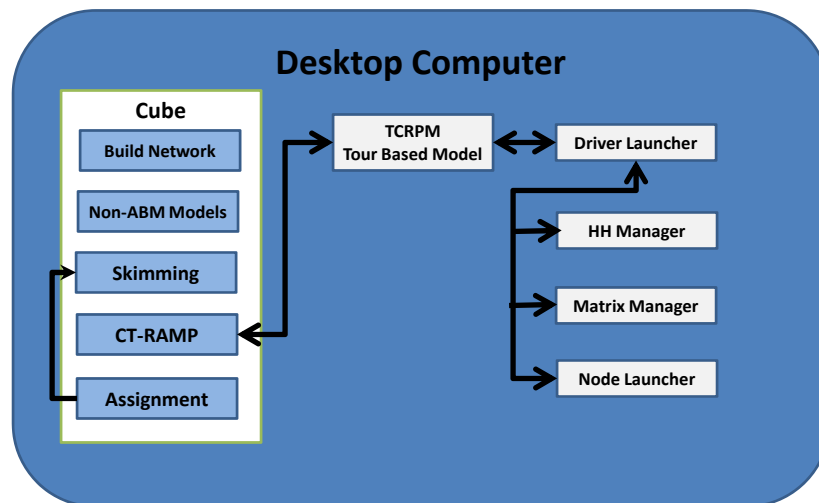
TCRPM4 Development Strategy




- Transfer SERPM7 Activity-Based Model
- Develop TCRPM inputs
 - Sub-divided TAZs in transit service areas (no Micro-zones)
 - Socio-economic and employment data
 - Transit access points and networks
 - Other inputs (transit fares, ...)
- Develop calibration targets from NHTS
- Transfer all models, no re-estimation
- Implement auxiliary models (trucks, external trips, etc.)
- Calibrate and validate




Model Implementation




Input Data




Data Needs	Sources	Status
TAZ delineation	Census blocks, MPO	Complete
Household and population, socio-economic attributes	Census, American Community Survey	Complete
Employment by ~ 16 sectors	InfoUSA, ES-202, PUMS	20% Complete
School and University enrollment	Florida DOE, MPO Staff	10% Complete
Transit access points	Transit operators GIS data	20% Complete
Transit operation attributes	Transit agencies	20% Complete
Highway attributes	GTCRPM	30% Complete
Calibration targets	NHTS, ACS, LEHD	Beginning soon
Traffic counts / Transit boardings	FDOT, MPOs, Transit agencies	15% Complete



Ancillary Models



- Adapted from GTCRPM and/or newly developed:
 - External trips (EE/EI/IE)
 - Truck trips
 - Visitor trips (from SERPM7)
- Implemented in Cube script and integrated with ABM inputs and outputs



Upcoming Work



- Complete household data
- Complete employment data
- Complete highway network and code transit network
- Develop ABM targets
- Model calibration and testing
- Final implementation



Acknowledgments



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Questions



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