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Think Forward

SERPM 8 Model Status and Next Steps

presented to

RTTAC-MS

presented by

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Project status

- **Input data complete**
  - » District 6 highway network feedback under review

- **Model development complete**
  - » Next update will include integrated reports

- **Model updated and delivered for use in LRTP development**
  - » Latest version delivered January 30, 2019

- **Current activity**
  - » Model documentation and application support
  - » TNC scenario experiments

- **Bi-weekly maintenance calls**
  - » Next call Monday, March 4, 3 - 3:45pm

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Documentation

➤ Draft available
  » Online documentation (https://sites.google.com/site/serpm8reference/)
  » Development and Validation tech report

➤ Next steps (draft by March RTTAC-MS)
  » Tutorial videos (setup & run, view reports, loaded networks)
  » Executive Summary

➤ Following (draft by May RTTAC-MS)
  » Export mechanism for online documentation
  » Application and Maintenance Guide (extension to online)
 » Parameters and Structure Guide (extension to online)

Model

- **Known issues in 1/30/19 catalog**
  - » Does not include vcredist_x64.exe in distribution
  - » Windows 10 reports does not use full processor capability
- **Next steps (March RTTAC-MS)**
  - » Integrated MAZ and PopSyn reports
  - » Seed network and skim utility
- **Following (May RTTAC-MS)**
  - » Network update and clean up
  - » Add checks on Voyager.exe existence
  - » Default to running max threads with user option to limit

- **Future**
  - » Model efficiencies:
    - ▪ Simplify assignment to remove pay/no-pay distinction
    - ▪ Change convergence criteria for intermediate feedback iterations
    - ▪ Streamline accessibility calculations
  - » Windowed area model
  - » PopSyn updates and support utilities
  - » Review changing toll calculations with Turnpike

TNC scenario testing

➤ Repositioning trip balancing method is generating unreasonably long trips

➤ RideAustin dataset showed that repositioning trips created an additional 35% of revenue VMT

➤ Next steps: recalibrate distribution method and potentially implement long-distance thresholds

Average Trip Length

Legend: Revenue trips, Repositioning

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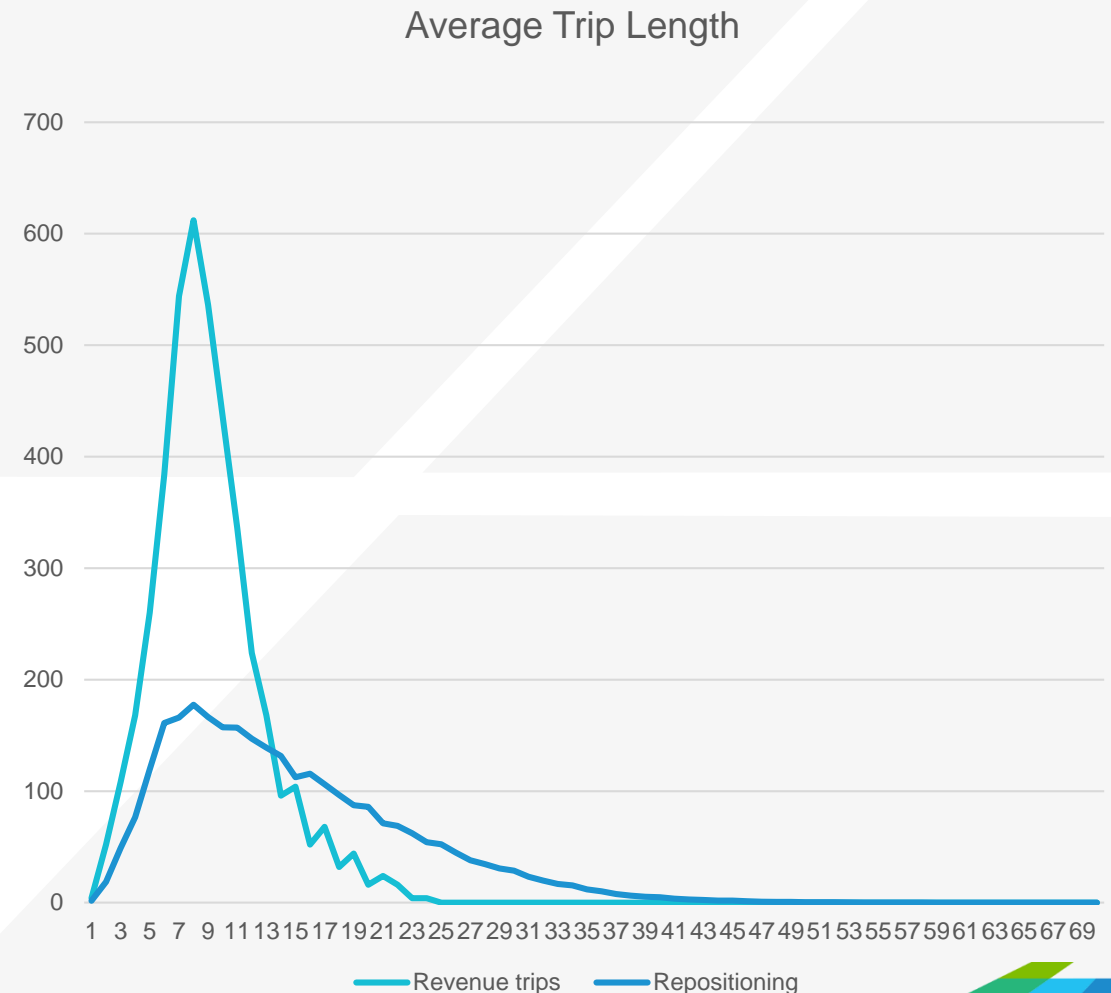
Application and maintenance

➤ Input data preparation
  » Network and data structures
  » Checking procedures and consistencies to maintain

➤ Model configuration
  » Shadow pricing testing and application guidance
  » Seed skim / loaded network usage guidance
  » Model variability on different computers and thread counts – link level checks and application guidance
  » Sampling

➤ Model run
  » Changes to Model Dependencies (PopSyn, shadow pricing, demand components - full model vs. assignment only)

➤ Reports

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Parameters and structure

- Road map to scripts, data dictionaries, parameter files

- Leverage documented inputs and organization

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Questions

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