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# FSUTMS Standards Development

*presented to*

*Florida Model task Force  
Model Advancement Committee*

*presented by*

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# Why We Are Revisiting Standards

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- MTF members have noted the need to discuss the state of FSUTMS standardization
- Survey of FSUTMS user community, Spring 2017
- Survey results and plan forward presented to MTF, October 2017
- Central Office moving forward with establishment of standards

# Brief Review of Survey Results

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- Vast majority of respondents agreed on importance of common data formats, file naming, and validation guidelines
- Most respondents believed that some flexibility was needed to reflect the diversity of regional characteristics and planning needs

# Conclusions from Survey

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- All respondents agree that having established standards is a good idea
  - » A majority believe models should use FSUTMS standard structures, file names, and data formats (though some say it should not be required)
  - » Most think that if standards are established, they should be included in the next scheduled model update

# Conclusions from Survey

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- The survey does provide some other clear directions regarding specific model components
  - » Having standards helps agencies help each other by having a common framework
  - » But flexibility is important for agencies that have differing needs

# Position Statement

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The travel demand modeling community in Florida has recognized the need to enhance the understanding and usage of FSUTMS. To achieve this goal, there is a need for common technical standards and guidelines for FSUTMS models, particularly regarding terminology, data formats, model structure, scripting, model outputs, and validation guidelines.

# Position Statement (continued)

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The following principles were put forth in developing the standardization process:

- » Model outputs should be directly useful in a decision making process.
- » Models should demonstrate correct sensitivity to policy measures.
- » Models should be able to provide reasonable and explainable forecasts.
- » Models should be easy to use and understandable to any reasonably educated analyst.
- » Model code and design should be well documented, understandable, and transferable if so desired.



# Position Statement (continued)

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The Florida modeling community has agreed that established standards are needed. Having standards helps agencies help each other by having a common framework. But it is important to recognize that flexibility is important for agencies that have differing needs. Therefore, the adopted standards should be well defined and documented so they can be followed when models are being developed and validated while at the same time allowing for differences related to the varying planning analysis needs of different types of regions.



# Work Plan for 2018

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1. Position statement (complete)
2. Recommendations for common data formats\*
3. Recommendations for file naming conventions\*
4. Model validation guidelines
5. Standard trip purposes

\* - To be done after modeling software is resolved

# Current Work

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## ➤ Validation guidelines

- » Reviewing existing FSUTMS report and other documentation (e.g., FHWA validation manual)
- » Technical memorandum for updated validation guidance (draft outline has been prepared)

## ➤ Common set of trip purposes

- » Reviewing trip purposes in existing FSUTMS models
- » Will review to find areas of commonality and specialized needs for some regions (e.g., college)
- » Will prepare draft set of trip purposes for review



# Validation Guidelines

## Outline

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- The model validation process
  - » Considerations and best practices
  - » Types of validation checks
  - » Use of targets and guidelines
  - » Development of a model validation plan
  - » Validation of model input data
- Demand model component validation
  - » Trip generation
  - » Trip distribution
  - » Mode choice
  - » Time of day
  - » Activity based model components

# Validation Guidelines

## *Outline (continued)*

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- Highway and transit assignment validation
  - » Highway assignment
  - » Transit assignment
- Temporal validation and sensitivity testing
  - » Temporal validation
  - » Sensitivity testing



# Timeline

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- Model validation guidelines
  - » Draft for review expected by April
- Standard trip purposes
  - » Draft for review expected by May



# Super Bowl LII

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Eagles 41  
Patriots 33

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