On Modeling, the Present and Future

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Orientation FDOT Toward the Future

Context Set 1, Modeling and the Present

Context Set 2, Modeling and Disruptions
• New Office of Transportation Technology

• Planning Reorganization

• New Forecasting and Trends Office
Modeling & Today’s Issues
Models & Perception
Hurricane Models & Lessons

• Differences:
  – Impact
  – Invisible Variables
  – No Boundaries

• Similarities:
  – Supports Major Decisions
  – Science/Math Based
  – No Better Method
Modeling Application: ESU

- June 1, 2017: FDOT Announces Future Use of ESUs for Storms

- August 30, 2017: TROPICAL STORM Irma Forms (Hurricane Few Days Later)

- September 8, 2017: ESUs Implemented

- September 9, 2017: Nearly 7 M Floridians Under Evacuation Order
ESUs In Action Thanks to Models
1. Greater Coordination Throughout Organizations

1. Modeling can Solve Big Problems
Planning for Disruption

- Planning is Planning
- Legislatively Mandated
- Everyone is Engaged
  - Public Sector
  - Private Sector
  - Academia
  - The Media
  - The Public
Which Tool(s) to Use?
Augmenting Current Processes

• Do volume to capacity ratios matter if AV/CV increases efficiency?
• Will occupancy levels increase with greater carpooling?
• How do AVs affect our population distributions within TAZs?
• Do education levels matter as much when cost-per-mile is expected to drop through electrification/shared/autonomous vehicles?
• Will facility types matter as much though increase efficiency of AV/CV?
Final Product
1. Prioritize use of modeling tools to navigate disruption.

2. Augment modeling processes to tackle disruption.
• FDOT Reorganizing to Meet the Needs of the Future

• Modeling can Succeed and Lead in Present Day Issues

• Modeling Essential to Planning for Disruption
Thank You!

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