



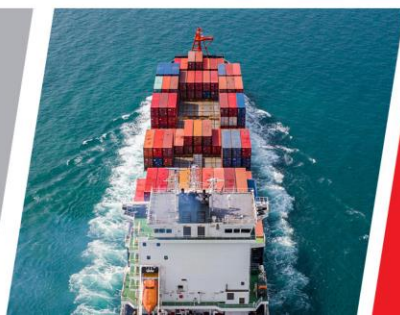
FSUTMS Next Gen



FMTF: Modal Advancement Committee
Thomas Hill, FDOT



May 9, 2023



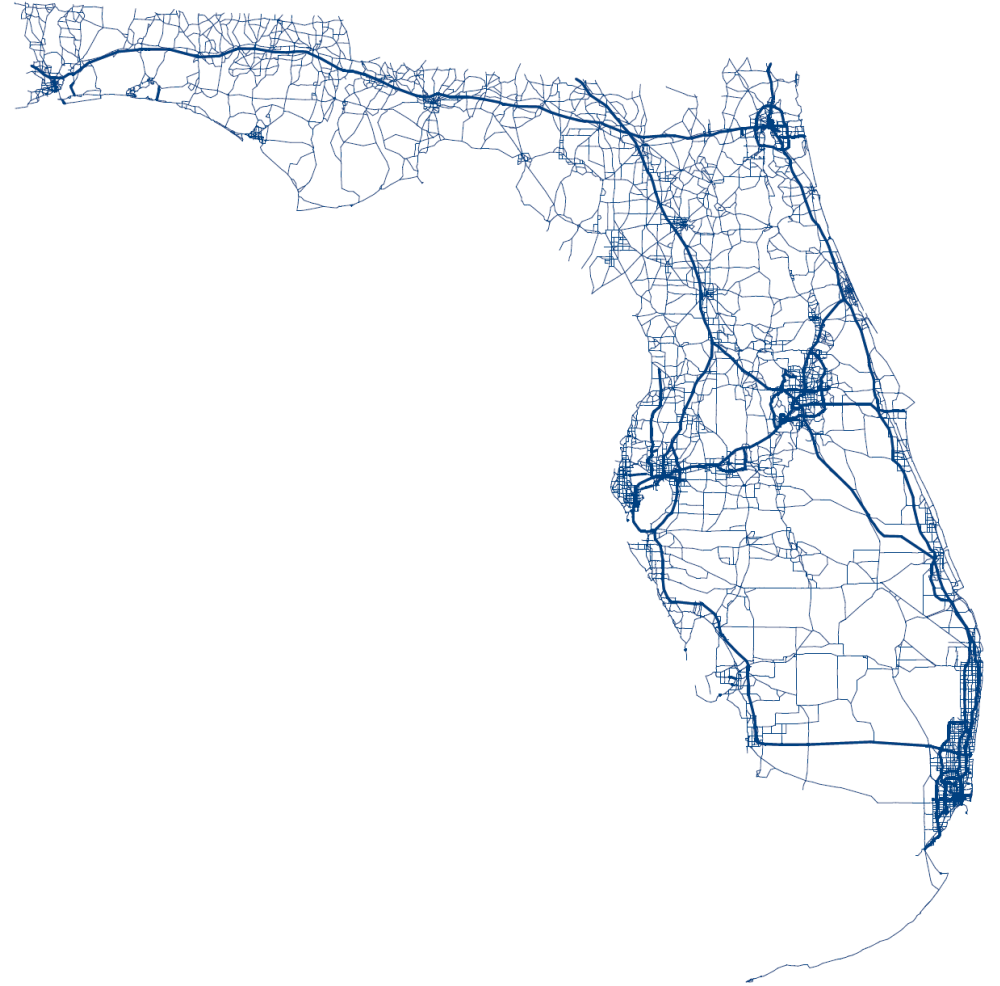
Strategic
development

Agenda

- Florida Statewide Model
- What is Next Generation?
- Organization
- Timeline
- LRTP / Software

Florida Statewide Model

- Current statewide model will not be updated
 - FreightSIM
 - Available online
 - Phase out over time
- Focus on strategically targeted evaluation tools
- Reevaluate statewide efforts

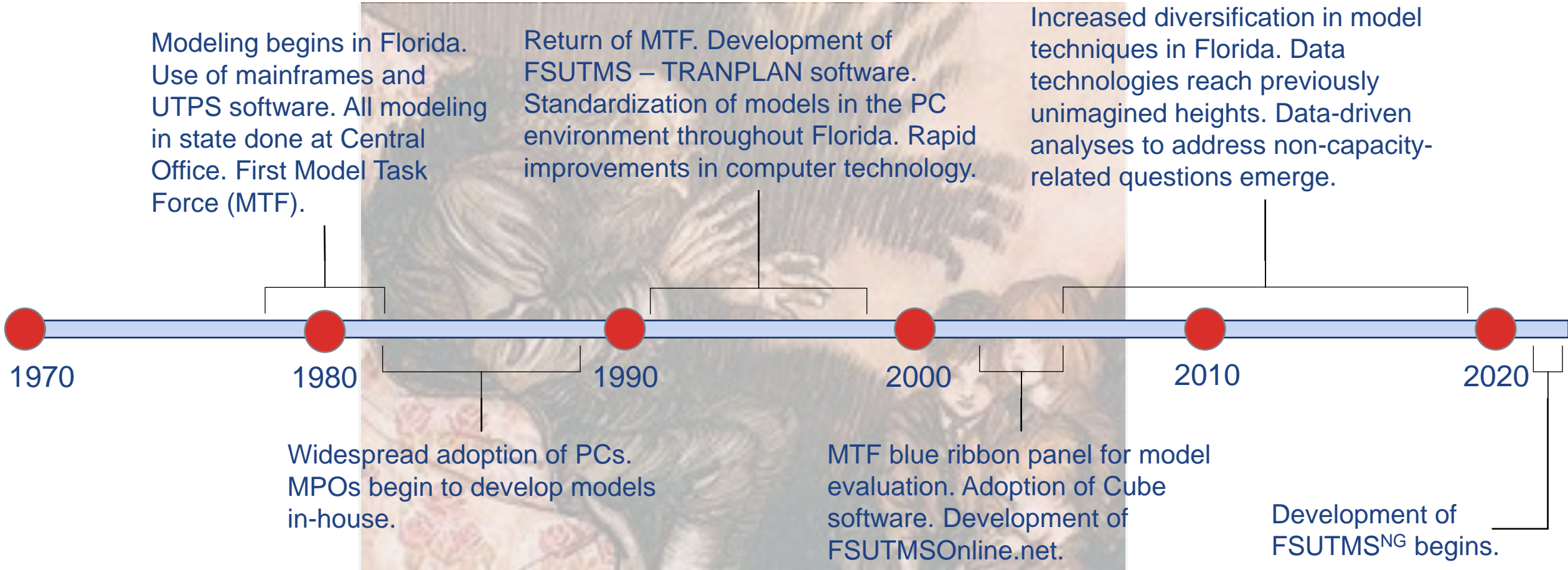


FSUTMS

Florida Standard Urban Transportation Modeling Structure

- Promote a unified statewide modeling approach
 - Consistency with the application of engineering and planning travel demand modeling activities.
 - Common travel demand forecasting approach and guidance
- Advancement of computing technology and model expectations
- Critical that a progressive modeling structure is provided
- Our current guidance is outdated and insufficient for meeting the needs of the modeling community,
 - Multi-resolution modeling,
 - PD&E studies,
 - Managed lanes analyses and
 - Future year technologies such as autonomous vehicles.
- *MODEL LORE OF ALL THAT WAS ...*

History of FSUTMS



What is Next Generation?

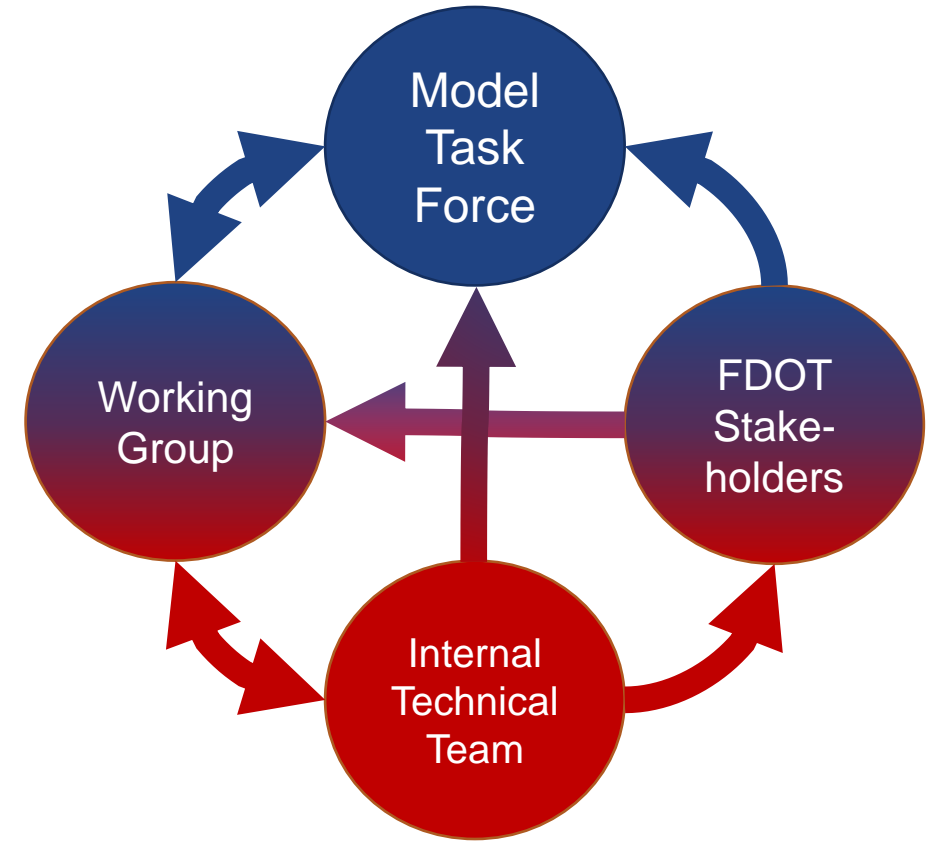
Component	Current FSUTMS	FSUTMS ^{NG}
Who?	Modelers	Data scientists, planners, software engineers, the public, & modelers
What?	<ul style="list-style-type: none">Regional travel demand modelsAnd some other stuff	<ul style="list-style-type: none">Big data analytics and data analysis dashboardsMany focused models that do one thing very well rather than one model that does many things less wellAnd regional travel demand models
When?	20+ year planning horizons	≤ 10 years
Where?	Regions (city, county, MPO, District, state)	Neighborhoods, corridors, & segments, as well as regions
Why?	Mostly capital infrastructure	Operations, policy, revenue, capital infrastructure
How?	What matters is the average over time	What matters is the variability, the average does not provide a sufficient picture

FSUTMS^{NG}

- “Next Gen”
- Guidelines instead of Standards
- A suite of data analysis and forecasting tools that include but are not limited to regional models.
- Incorporation of data scientists, computer scientists, decision makers and the public in the use of these tools.
- Development of an implementation plan to guide and track the development of FSUTMS^{NG}.

Organization – Groups

- FSUTMS Next Gen being developed by four groups.
- Each group has its own responsibilities.
- The groups are:
 - Internal Technical Team
 - FDOT Stakeholders
 - Working Group
 - Model Task Force

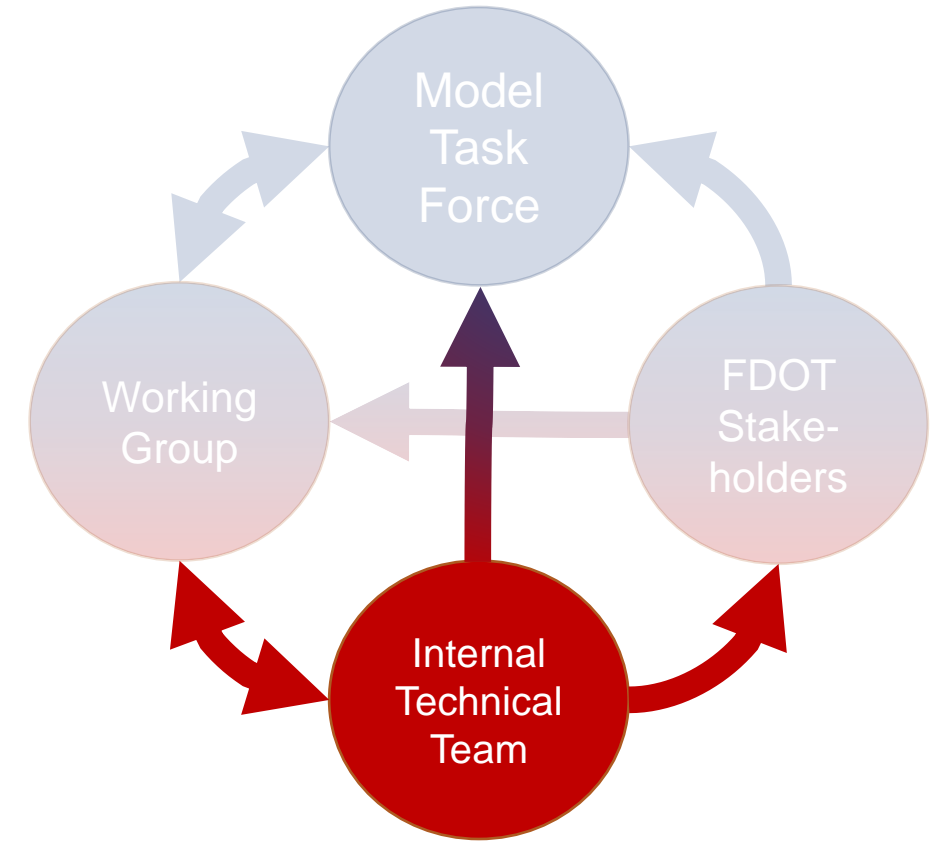


Organization – Groups

Internal Technical Team	FDOT Stakeholders	Working Group	Model Task Force
<ul style="list-style-type: none">• Technical staff developing FSUTMS Next Gen.• Identify existing standards and guidelines to be retained, modified, or discarded.• Identify new standards and guidelines that need to be developed.• Develop and communicate standards and guidelines to other groups and receive feedback.	<ul style="list-style-type: none">• District modeling coordinators representing the Department's interests.• Attend informational sessions on FSUTMS Next Gen progress.• Communicate updates on progress to District management and local stakeholders as needed.	<ul style="list-style-type: none">• MTF committee chairs and members representing the modeling community's interests.• Attend FSUTMS Next Gen Working Group Meetings.• Provide guidance to the Internal Technical Team on which standards and guidelines to pursue.• Review developing standards and guidelines and provide comments.	<ul style="list-style-type: none">• Committee Coordination with Working Group.• Full Model Task Force membership responsible for adopting FSUTMS Next Gen.• Review final FSUTMS Next Gen standards and guidelines.• Adopt FSUTMS^{NG} Implementation Plan during MTF meeting.

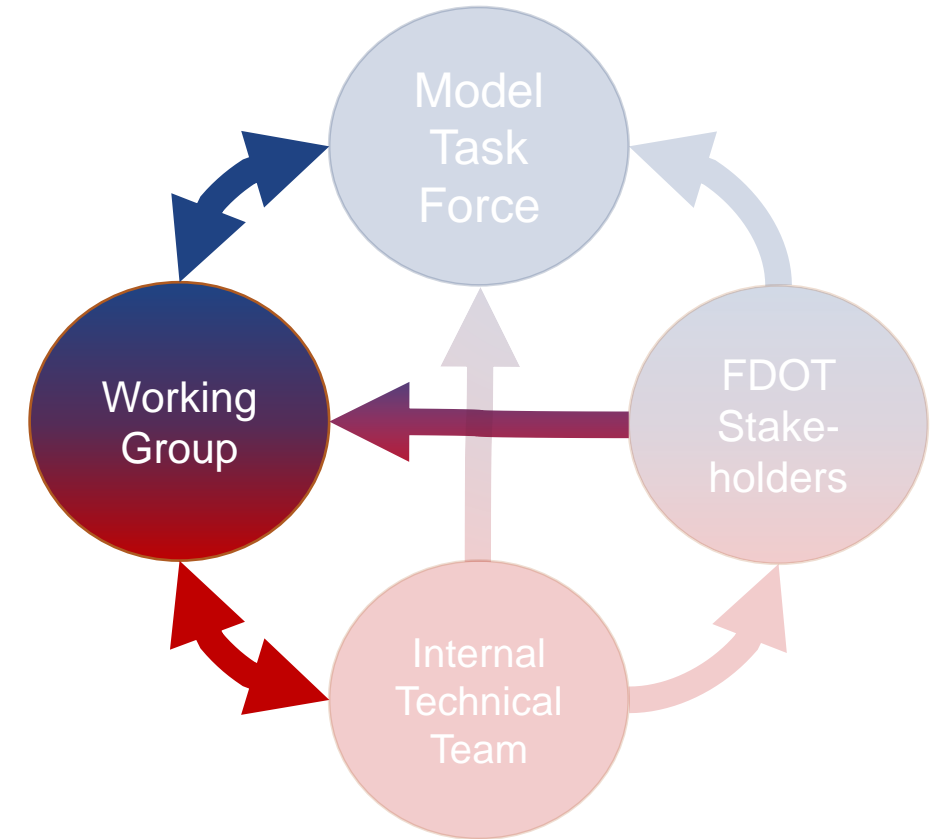
Organization – Internal Technical Team

- FDOT Champion
 - Dana Reiding
- FDOT CO Technical Staff
 - Thomas Hill
 - Terry Corkery
 - Vladimir Majano
- FDOT Consultants
 - Roberto Miquel
 - Krishnan Viswanathan
 - Thomas Rossi
 - Sheldon Harrison
 - Zeina Wafa
 - Heath Lupton
 - Sung-Ryong Han
 - Jeanette Berk
 - Dan Beaty
 - Dave Schmitt
 - Ken Kaltenbach
 - Allison Silverman



Organization – Working Group

- Andrew Tyrell
- Gary Kramer
- Paul Flavien
- Tewari Edmonson
- Ameera Sayeed
- César Segovia
- Dan McMurphy
- Daniel Miller
- Like Liu
- Michael Escalante
- Rhett Fussell
- Rob Schiffer
- Rodrigo Mesa-Arango
- Siva Srinivasan
- Soliman Peter Salem
- Srin Varanasi
- Yongqiang Wu
- David Hutchinson



Timeline – Up to Now

- **February 2022** – Announced FSUTMS NextGen at MTF Meeting and Present FSUTMS NextGen White Paper
- **June 2022** – Requested volunteers to join working group
- **September 2022** – Kicked-off working group
- **October 2022 – February 2023** – Documentation and clarification of existing standards
- **March 2023** – Working Group Workshop in Orlando

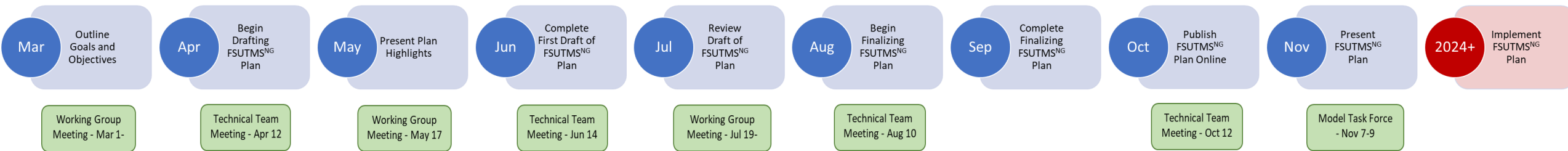
FSUTMS^{NG} – Draft Goals

- Provide information concerning transportation in Florida for current and future conditions to decision makers and members of the public in a manner that is efficient and easy to interpret.
- Acquire, house, and distribute data at the highest resolution possible that will support FSUTMS^{NG}'s suite of tools, methods, and applications.

FSUTMS^{NG} – Draft Goals (continued)

- Be able to conduct analyses at multiple levels of resolution in a dynamic and intuitive way.
- To provide support to Florida's professional community of planners, modelers, forecasters, data scientists, and engineers by providing the resources and opportunities needed to continue to advance the state of the practice.

Timeline - Moving Forward



Considerations

- Bentley CUBE license support ends October 30, 2023
 - Progress to converted model platform
- LRTP Model Updates
 - Scope development
- Florida Model Task Force
 - November 7 – 9
 - Orlando
 - Really?