

FLORIDA DEPARTMENT OF TRANSPORTATION CAPABILITY MATURITY MODEL SELF-ASSESSMENT SURVEY

By: Florida Department of Transportation

IN THIS CASE STUDY YOU WILL LEARN:

1. The Florida Central Office reorganized from an ITS office to a TSMO office in 2015.
2. Florida developed a “crosswalk” for performance measures that shared commonalities between TSMO (recurring and non-recurring congestion) and capacity (recurring congestion).
3. TSMO is now embedded into all processes and procedures within FDOT and plays an integral part in local agency efforts as well.

Central Office (CO) reorganized from an ITS office to a TSMO office in 2015. At this time, they recognized the need for TSMO, with the history going back as far as the Operations Academy training for FDOT employees, which set the bar for the importance of TSMO in operations. CO understood that buy in from Champions – from bottom up and top down - was necessary for TSMO implementation to be successful. In order for successful integration with both freeways and arterials, the arterial level needed a better-defined framework (deeper dimensions in their model requirements). Each phase of the project development process (planning, project development and environment (PD&E), design, construction, operations, and maintenance) was an opportunity to include TSMO strategies to help improve safety, mobility, and management of the transportation facilities.

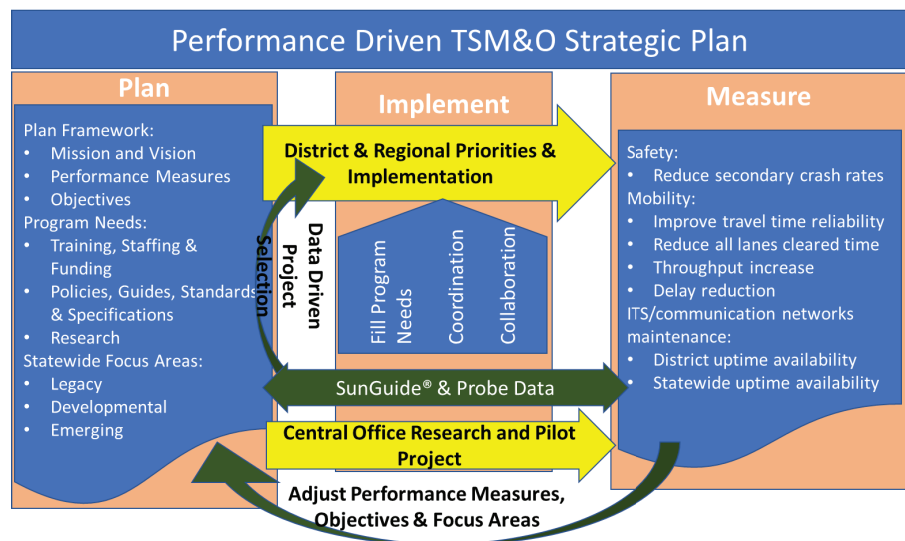
Through heavy mainstreaming efforts, CO identified TSMO Champions that then helped institutionalize TSMO at each level. The result was

BACKGROUND

In 2016, the Florida Department of Transportation (FDOT) conducted a capability maturity model (CMM) self-assessment survey through each one of its district offices. The CMM survey ranked FDOT’s capabilities for freeway management, incident management, and operations and maintenance as the most mature. There are four CMM levels and are categorized as the following: level 1 - ad hoc, level 2 - managed, level 3 - defined, and level 4 - optimized. Arterial, freight, and transit management capabilities were identified emerging, and need better definition for optimization. The survey indicated that FDOT made significant investment in real-time data resources, data archiving, and data analysis resources toward TSMO.

The goal of the CMM survey was to:

- Develop consensus around needed agency improvements
- Identify their immediate priorities for improvements
- Identify concrete actions to continuously improve capabilities to plan, design, and implement TSMO



improved horizontal and vertical communication between various FDOT functional areas as well as increased participation and communication. Finally, the TSMO Strategic Plan was developed with all champion stakeholders’ input.

Biggest Challenge – Buy-In: Getting the department (and other stakeholders) to realize that TSMO strategies can be an effective solution to capacity problems.

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Solution: Developing a “crosswalk” for performance measures that shared commonalities between TSMO (recurring and non-recurring congestion) and capacity (recurring congestion).

TSMO PLANNING, STRATEGIES AND DEPLOYMENT

The CMM survey laid the groundwork for the department to self-assess their TSMO program, which has led to the development of the TSMO Strategic Plan identifying the overall goals and direction for TSMO concepts and their associated projects for implementation. This entails accomplishing projects that are “low-hanging fruit;” easy to implement and/or have a high benefit-to-cost ratio, which has the potential to encourage an even higher investment from DOT personnel and government official’s constituents.

Identified strategies include the following:

- **Implement a Freeway Management System (FMS)**
 - Continue statewide deployment and optimize operations, infrastructure, and technology maintenance to support congestion reduction and incident response goals.
- **Implement Analysis, Modeling, and Simulation (AMS) including ATSPM, AAM, ASCT, retiming, and other AMS strategies identified in the Statewide Arterial Management Program (STAMP) Action Plan**
 - Consider in metropolitan areas and elsewhere where impact goals can be achieved to optimize operations, infrastructure, and technology maintenance, and support congestion reduction and incident response goals.
- **Implement Express Lanes**
 - Consider in metropolitan areas of over 1,000,000 in population and elsewhere where impact goals can be achieved to optimize operations, infrastructure, and technology maintenance, and support congestion reduction and incident response goals.
- **Implement CV**
 - Pilot projects, develop a CV RSE deployment plan, and engage vehicle and supplier industries to promote equipping vehicles with on-board equipment in Florida.
- **Develop and implement a statewide Data Integration and Video Aggregation System (DIVAS)**
 - Statewide implementation plan.
- **SunGuide® advanced transportation management software**
 - Statewide management and enhancement under the guidance of the statewide ITS Change Management Board.
- **Implement and support Statewide Express Lane Software (SELS)**
 - Statewide management and enhancements under the guidance of SELS change management team.
- **Continue Florida’s Advanced Traveler Information System (FLATIS)**
 - This will be continued through June 2021 and then reevaluated for future support or enhancements (note: CV and other private initiatives may replace parts of FLATIS functionality).

COMMUNICATIONS PLANNING AND EXECUTION

Communications and planning efforts started within FDOT. The TSMO Office met with office leaders in every division of the department, from leadership to maintenance. It was very important that the TSMO message be spread and understood internally before branching out to local agency partners. With Florida being a tourist state, outreach to the public is best handled through information dissemination via our news partners, social media, and FLATIS/FL511.

OUTCOME, BENEFIT AND LEARNINGS

The survey identified that TSMO is now embedded into all processes and procedures within FDOT and plays an integral part in local agency efforts as well. The outcome and benefits of these efforts are mainly measured in the time, lives, and money saved statewide. This was most noticeable during recent hurricane responses. From planning to operations, this was a group effort between FDOT and other local, state, and national partners, as well as private sector partners. Also, from the public and motorist standpoint, FDOT’s relationships with private sector partners significantly enhanced operations with access to third party tools and information dissemination to the public. Overall the outcomes are a huge success, but many lessons were learned on being prepared for unexpected and unforeseen circumstances. But it doesn’t stop here. FDOT is also committed to learning from others and sharing its lessons learned and any material developed with its sister DOTs and other local agencies wanting to use them to help develop their TSMO programs.

FURTHER INFORMATION

NOCoE Knowledge Center: <https://transportationops.org/knowledge-center>
FHWA CMM Info: <https://ops.fhwa.dot.gov/docs/cmmexesum/sec1.htm>