New York State Department of Transportation
Request for Information (RFI) for ‘Enterprise Transportation Systems Management and Operations (TSMO)’ Initiative
RFI #2019-01
Questions & Answers
May 21, 2019

Schedule

Let’s Open A Window: There has been a delay of the release of answers to questions received regarding the New York State Department of Transportation’s (NYSDOT) Enterprise Transportation Systems Management and Operations (TSMO) Initiative via Request for Information (RFI) #2019-01. To address this situation, NYSDOT is ‘relaxing’ the RFI’s schedule. NYSDOT will accept RFI responses on or after May 20th with an allowance for additional two weeks of time to submit RFI responses, two weeks after the promised Q&A gets released. To assist you further and given the nature of the RFI, NYSDOT is scheduling a webinar session to be held May 29th from 11:00AM to 12:30 PM, and is opening up a second Q&A round during the extended time frame. If sufficient parties express interest following the May 29th webinar, a second information webinar could be scheduled featuring answers to the second Q&A round.

NYSDOT’s RFI#2019-01 ‘Window’ Timeline:
1. Initial Questions Due: May 1, 2019
2. Answers to Initial Questions: May 21, 2019
3. Informational Webinar #1: “NYSDOT Overview of RFI Needs and Expectations”. To be held May 29, 2019 from 11:00 AM to 12:30 PM. Separate announcement to follow (registration information, etc).
4. Informational Webinar #2: to be scheduled if sufficient parties express interest (look for a separate announcement to follow).
5. RFI Response ‘Window’ Closes: June 30, 2019
6. Follow-up Sessions: As needed with selected RFI Responders.

The remainder of this document presents answers to questions in RFI order of appearance.

1. Introduction

Question #1: Does NYSDOT have plans to interact with over NYS Agencies via “TSMO Engine”?
Answer: The TSMO Engine should support the ability to provide access to data to 3rd Parties which may include in addition to other NYS agencies other public agency and private databases. From an ingest standpoint, interfaces to data sources external to NYSDOT may be required (for example to TRANSCOM OpenReach). However, the users of the TSMO Engine are expected to be NYSDOT users.

Question #2: Can I respond to all four sections of the RFI? We believe there are additional questions in the 4th (integrated) section that we would also like to address even though we want to respond to each of the prior sections individually.

Answer: Yes. This is acceptable.

Question #3: What is the genesis of this initiative? Any other state agencies involved?

Answer: The motivation of this initiative is spelled out in the RFI. NYSDOT desires greater data sharing and consistency between various legacy systems within the agency while preparing for the future in terms of technology and traveler information needs.

Question #4: What is the estimated cost of the TSMO Initiative project? Has the Department allocated funding for the TSMO Initiative yet? If so, through which source budget, CIP, state/federal grant etc?

Answer: This is not an RFP. There is no budget behind NYSDOT’s RFI.

Question #5: Should the Department decide to proceed past the RFI process, has a time frame been established in which the RFPs may be issued?

Answer: A time frame beyond the RFI has not been established.

Question #6: At the close of the RFI, who is the technical contact and/or project manager for the TSMO Initiative?

Answer: This question is beyond the RFI process.

Question #7: Have you had any external assistance preparing this RFI?

Answer: NYSDOT’s RFI process is assisted.

Question #8: Does the Department anticipate any professional or consulting services may be needed to accomplish this effort? (i.e. project planning/oversight, PM, QA, IV&V, staff augmentation, implementation services etc.)?

Answer: This is not an RFP. This question is beyond the RFI process.

2. Background
Question #1: Regarding Maturity of Current Data Governance and Reporting Structure: What does the current data governance and reporting structure look like? What organizational structures are in place and leverageable regarding the following:

- Data sponsor(s)?
- Reporting/analytics sponsor(s)?
- Data governance leads?
- Data owners?
- Data stewards?
- Analysts?
- Report developers?
- QA specialists?
- Steering committees?

Answer: There is no formal data governance framework currently in place for NYSDOT’s ATMS/ATIS or TSMO-related data. RFI respondents are requested to provide best practices and recommendations of what is needed in their response.

Question #2: Regarding Maturity of Current Data Governance and Reporting Structure: Are the following concepts used and available at NYSDOT:

- Master data management?
- Data domains?
- Data dictionary?
- Data governance policies?
- Data quality process?
- Data security standards?
- Data regulatory or contractual compliance requirements?

Answer: There is no formal data governance framework currently in place for NYSDOT’s ATMS/ATIS or TSMO-related data. RFI respondents are requested to provide best practices and recommendations of what is needed in their response.

Question #3: Regarding Maturity of Current Data Governance and Reporting Structure: What relevant KPIs/metrics and reports currently exist?

Answer: There is no formal data governance framework currently in place for NYSDOT’s ATMS/ATIS or TSMO-related data. RFI respondents are requested to provide best practices and recommendations of what is needed in their response.

Question #4: Regarding Technology Currently Used for TSMO Data Management:

1) What technology / toolset is currently used for:

- Data storage?
- Data quality/cleansing?
- Data wrangling?
- Data integration?
- Data orchestration?
- Data visualization?
2) Is there a desire to leverage any of your existing technologies/toolsets for the TSMO data brokerage platform, or do you anticipate a completely new set of technologies to be used?
3) Are public cloud vendors an option or preference?
4) Are any public cloud vendors in use today? (i.e. AWS, Azure, Google Cloud)?

Answer:
1. NYSDOT has a variety of individual systems that are used across the 11 Regions for specific aspects of TSMO. Each system is different in terms of its approach to data storage, management and visualization.
2. NYSDOT is open to responses about the choice of toolsets to best accomplish the data brokerage platform
3. At this point, NYSDOT does not have a preference for cloud vendors or toolsets. However, NYSDOT prefers to use open source software solutions

Question #5: Regarding Technology Currently Used for TSMO Data Management:
1) What level of data movement and data integration (ETL – Extract/Transform/Load) work does NYSDOT perform today?
2) What type of querying and tools are used today?

Answer: See answer to Question 4

Question #6: Regarding Current Data Sharing Agreement Policy: Do you have a standard “data sharing agreement” policy you use today? If so, what “data sharing agreements” are currently in place?

Answer: There is no standard data sharing agreement policy in place.

Question #7: How is the Department currently meeting this need? Which vendor provides the incumbent systems?

Answer: See below
1. Situational awareness – There are several systems/tools that have been developed over the years by various vendors as well as internally.
2. 511 – The current traveler information system contractor is IBI
3. TSMO Engine – There is no incumbent to this effort.

Question #8: How is the Department currently meeting this need? Which vendor provides the incumbent systems?

Answer: See answer to Question 7

Question #9: Would it be possible to name the three greatest challenges the Department is having with the current solution?

Answer: Please note NYSDOT is not looking for one solution via the RFI process. NYSDOT is looking for information on several services areas. But broadly, the following challenges are providing the impetus behind this effort.
• Desire to have economies of scale in terms of TSMO system development across the agency
• Greater consistency in collecting, management and sharing of TSMO-related data for various operational, planning purposes
• Ability to rapidly adapt systems and technologies to take into account changing markets and customer expectations

Question #10: Which other systems will have to integrate or interface with the TSMO, and will the Department provide incumbent vendors for each system?

Answer: For the TSMO Engine, several priority interfaces have been identified. These include TRANSCOM OpenReach, 511, ATMS systems used by different regions. However, the exact interfaces will be defined during the RFP stage.

Question #11: Which operating platform does the Department currently use? / Is desired for the TSMO Initiative?

Answer: Currently, there is no operating platform for the TSMO Engine.

Question #12: Can the Department elaborate on any additional drivers behind this acquisition that may not be addressed in the RFI?

Answer: No

Question #13: What is the number of users anticipated for the TSMO systems?

Answer: The number of anticipated users varies, but at any given time, there can be 100 or more simultaneous users utilizing the various situational awareness tools throughout the agency and its partners.

1. Situational awareness tools are largely used by NYSDOT staff and some partner agencies. The total number of users of individual tools is expected to be less than 100
2. 511NY is a public facing service that has thousands of users of the information
3. TSMO Engine is largely expected to be a data brokerage between systems but users of the TSMO engine are likely to be NYSDOT staff in the main office and in the Regions.

2.1.0 Service Area #1 – Situational Awareness Tools and Event Recording Systems

Question #1: There is an interest in “managing field devices” on page 3 under Item 2, ATMS. Does this imply interoperability between ITS devices across the state (e.g. one region being able to manage another region’s devices during off-hours) or some form of maintenance monitoring of all ITS devices including reliability, maintenance ticketing, etc?

Answer: NYSDOT is not looking for interoperability of ITS devices at this time. This may be a long-term goal. In the short-term, NYSDOT is looking at more consistent asset management of devices including maintenance monitoring, work requests, etc.
Question #2: The IIMS tool is being piloted in Region 11. How is this currently being integrated with OpenReach (item 1 on page 3). Or is one of the activities under his project the integration of the two?

Answer: The IIMS tool is currently not integrated with TRANSCOM OpenReach.

2.2.0 Service Area #2 – Next Generation traveler information systems/511 System

Question #1: Is this intended to integrate with or replace the existing 511NY?

Answer: Information from this RFI will be used to shape the procurement for the next 511NY contract.

2.3 Service Area #3—An integrated TSMO data brokerage platform (“TSMO Engine”)

Question #1: Should system support Vehicle-To-Infrastructure (V2I) and Vehicle-To-Pedestrian (V2P) system/devices/exchange?

Answer: NYSDOT is open to approaches that support V2I and V2P interfaces.

Question #2: Should interfaces between TSMO Engine and major car manufactures should be available?

Answer: Not at this time. No direct interfaces to OEMs are anticipated. However, the ability to provide data to 3rd parties through a standard interface is required.

Question #3: Should interfaces between TSMO Engine and unmanned aerial vehicle should be available?

Answer: There are no needs identified at this time for this interface.

Question #4: In reviewing the TSMO RFI, it has been noted that NYSDOT seeks a technical equipment solution to facilitate the collection and sharing of data across NYSDOT Regions and between NYSDOT and agency partners and other third parties. Experience at other state DOTs has shown that a lack of skilled program management following a careful implementation strategy can prevent DOTs from realizing the benefits of their ATMS and ATIS investment. Would you anticipate respondents include elements of data system integration into the existing NYSDOT systems, a review of existing business processes to leverage the new data system, and program management to ensure a successful rollout on the business end?

Answer: When moving from RFI to RFP, NYSDOT expects to include requirements for program management and business process improvements. At this time, the RFI is looking primarily at technical approaches for the needs identified.
2.4 Integrated Enterprise TSMO Services

No Questions

3. RFI Response Requirements and Schedule
3.1 Response Requirements

No Questions

3.1.1 Cover Letter

No Questions

3.1.2 Qualifications Summary (3 pages limit)

No Questions

3.1.3 Response to Service Area (5 pages max per Service Area, 10 pages for Integrated Services)

Question #1: If we respond to all four sections, then are we allowed to write 5 pages for the first three sections plus 10 pages for the integrated approach section? 5x3+10 = 25 pages?

Answer: Yes. A respondent is allowed to respond to all four (3 services areas and integrated approach)

Section 3.1.3, RFI states ‘if an entity is providing information on Integrated Services, they must address all three service areas in their response’. For the page limits, are we correct to understand that when providing a response to Integrated Services we are limited to a total of 25 pages (i.e. 10 pages for Integrated Services and 5 pages for each of the three services areas?)

Answer: Yes. See following question. NYSDOT has removed the page limitations for the response.

Question #2: Given that this is an RFI and not a proposal, and assuming that the state would like as much information as possible, would the state please consider removing the page limits? We believe we have relevant insights that may be difficult to include in the current page-limit given the large number of questions being asked. We want to be able to provide deep insights into the rationale behind our guidance.

Answer: NYSDOT accepts the removal of page limits. However, respondents are requested to keep information as concise as possible.

3.2 RFI Due Date

No Questions
3.3 RFI Questions, Contact Information and Response E-Mail Address

No Questions

3.4 Confidentiality

No Questions

4.0 Appendix A: Sample TSMO Engine Use Cases

Question #1: Should new portal follow NTCIP standards?

Answer: Wherever possible, NYSDOT recommends the use of applicable ITS standards