REQUEST FOR INFORMATION (RFI) from the Florida Department of Transportation

INTRODUCTION
Pursuant to Rule 60A-1.042, Florida Administrative Code (F.A.C.), an agency may request information by issuing a written Request for Information (RFI). Agencies may use RFI's in circumstances including, but not limited to, determining whether or not to competitively procure a commodity or contractual service, determining what solicitation process to use for a particular need, or researching general, special, and/or technical specifications for a solicitation. A Vendor’s response to an RFI is not an offer and the agency may not use the Vendor’s submission to justify a contract with that Vendor without otherwise complying with Chapter 287, F.S., and Rule 60A-1.042, F.A.C. Vendors submitting a response to an agency’s RFI are not prohibited from responding to any related subsequent solicitation.

PURPOSE
The Florida Department of Transportation (FDOT, Department), Office of Transportation Data and Analytics is seeking information from qualified vendors pertaining to acquisition, design, development, and implementation of a Commercial off-the-shelf (COTS) transportation data and asset management system that has been successfully provided to Departments of Transportation within the United States of America and/or its territories. In addition, the Department is requesting vendors provide information about their product, including but not limited to; how data is collected, stored, and transmitted.

BACKGROUND
The Department is responsible for the collection, management, archiving and distribution of public transportation and asset data for state agencies, federal agencies, and data users. The management of this data and information supports the Department’s business of planning, designing, programming, funding, developing, monitoring, and maintaining a safe and efficient state transportation network. The data provide information on the physical, condition, administrative, and operational features and characteristics of Florida’s roadways, railways, and SUN (Shared Used Non-Motorized) Trails also known as travel ways. Data users within the Department rely on this information to meet current critical State and Federal annual reporting requirements.

The Roadway Characteristics Inventory (RCI) application is currently used to store collected data about travel ways and their associated attributes and files to allow the Department to meet State and Federal annual reporting requirements. The application allows users to enter standardized transportation data into RCI from various functional offices across the Department through their respective programs. These programs are coordinated statewide between Central and District Offices. The District Offices support data collection and management processes that provide the most up to date information for transportation business activities that may include changes in road ownership, new road construction of roadway alignments, or transportation system improvements. The Central Office provides functional application coordination duties, procedure coordination, and statewide training duties between the following Central owning offices:
• Transportation Data and Analytics (TDA) Office
• Office of Maintenance
• Traffic Engineering and Operations (TEO) Office

The RCI application is used statewide and is considered an enterprise system. The RCI system architecture is managed by the Office of Information Technology in the FDOT Central Office. The RCI application data and hardware is stored with the state data center, the Agency of State Technology (AST).

The RCI system data and the collection of the data is primarily managed by the TDA Office which establishes data governance by performing quality assurance and quality control functions and maintains the main data products that allow data to be consumed by users. These products include the Department’s Linear Referencing System, Straight-Line-Diagrams, and transportation system data reports. To be compliance with state and federal business reporting requirements, the Department developed the RCI to the primary data source for information to ensure FDOT fulfills its requirements efficiently and on time.

The RCI system data is travel way network data of roadway, railway and SUN Trail transportation networks, routes, events, and segment mileage. The Department tracks events such as transportation project limits, information, and assets that may occur on these networks throughout the year. The components of these travel way networks are inventoried and organized in the RCI relational database model by a primary key called the Roadway ID. This ID is critical to tracking event history that occur on the travel ways. The RCI system architecture designates and identifies these events along these travel ways as feature and characteristics.

An example list of events includes: roadway name(s), administrative boundaries, width measurements, number of lanes, surface, surface description, median types, lighting, and traffic signals. The complete listing of these events can be found in the FDOT RCI Feature and Characteristic Handbook.

The Department utilizes the RCI program data for many other business functions. These functions are critical to provide data to the current and future state and federal annual reporting requirements that is a shared responsibility of throughout the FDOT Central and District Offices. These annual reporting requirements have required additional and more complex data that has increased the demand on more flexible and efficient data management efforts for the Department. Further, the increased demand for Reliable, Organized, and Accurate Data Sharing (ROADS) Department initiative is supporting the paradigm shift of increasing importance of positional and relative accuracy of data to be collected and managed by new design of the RCI to fulfill future state and federal annual reporting requirements including:

• FDOT’s Work Program and Budget
• Florida’s (Highway Performance Monitoring System) HPMS data submittal
• The Model Inventory of Roadway Elements (MIRE)
• Americans with Disabilities Act Transition Plans
• Transportation Performance Management Performance Measures, including:
  • Safety Measures;
  • Pavement and Bridge Condition Measures;
To provide detailed context regarding this project to vendors interested in responding to this RFI, additional information can be found at http://www.fdot.gov/planning/statistics/irais.shtm

Information provided at this website includes:
A) Briefing Points Document
B) Roadway Characteristics Inventory (RCI) Data Flow Diagram
C) Data Gap Analysis Study
D) Phase 1 Deliverable 6 Final User Requirements Document
E) Phase 1 Deliverable 7 Final Data Requirements Document
F) Phase 1 Deliverable Appendix A – RCI Interfaces Data Tables
G) Conceptual Data Model Entity and Attributes

DESCRIPTION OF COMMODITIES/CONTRACTUAL SERVICES:

The Department desires to incrementally replace the current transportation data and asset management system called the Roadway Characteristics Inventory (RCI) system with a more widely embraced technology leveraging advancements in: functionality, reporting, maintenance, ease of use, and integration standard protocols (such as application programming interfaces, service-oriented architecture, and rules-based logic). The FDOT is requesting the following information from prospective vendors about the commodities and/or contractual services described below.

In the following goals and specifications, the vendor solution must:

Goal 1: Improve on FDOT’s RCI application capabilities
- Integrate legacy tabular transportation data currently in the RCI and geospatial data outside the RCI.
- Provide a common operating environment for data processing routines such as collection, editing, tracking, quality assurance, and reporting.
- Support the Department’s responsibility to maintain the current and future critical state and Federal annual data reporting routines and processes of planning, operations and maintenance data including:
  - Transportation Performance Management Performance Measures;
  - Model Inventory of Reporting Elements;
  - Americans with Disabilities Act Transition Plan data; and
  - Highway Performance Monitoring System data submittals.
- Provide enhanced data analyses of transportation data utilizing multiple data sources to view the transportation system such as video, imagery, and large amounts of data.
- Efficiently share transportation data for decision making across the Department.

Goal 2: Reduce the Department’s risk exposure by harnessing modern technology built on the premises of scalability, flexibility, and maintainability with minimum customization.
- Replace outdated hardware and software with more widely embraced technology leveraging advancements in:
• Functionality
• Maintenance
• Ease of use

• Utilize integration standards and protocols (e.g., application programming interfaces, service-oriented architecture, rules-based logic.)
• Provide a new design of current database elements to expand storage and retrieval capabilities to store structured and non-structured data.
• Include a data migration from the legacy data management system into a new environment that is interoperable with a COTS.
• Employ technology capable of scaling, evolving, and growing as business needs change (e.g., ability to add data fields to asset details through configurable parameters without the need for program code changes).
• Increase system security, stability, and recoverability with implementation of latest technology standards.
• Increase timeliness of delivering information technology (IT) solutions (e.g., interfaces) since technology standards are predefined and widely recognized.

Goal 3: Utilize innovative technology to provide transportation data to users that are internal and external to the Department.

• Utilize Geographic Information Systems (GIS) to enhance the RCI system data and the Linear Referencing System (LRS).
• Increase the importance of standardizing the Department’s LRS development process to develop accurate multimodal linear referencing methods.
• Improve the ability for RCI to store positional and relative accuracy information of travel way events to track and manage assets effectively.
• Improve the ability for enhancing the accuracy of information shown on Straight Line Diagrams.
• Leverage the importance of spatial and geospatial data that have been more commonly used to locate assets to enhance FDOT data.
• Reduce duplicative efforts of creating and maintaining multiple linear referencing systems.
• Expands the ability for FDOT to utilize GIS data sharing tools and methods to enhance business processes and routines.
• Increases the value of the data for internal and external data users.

Goal 4: Improve staff productivity, reduce operational complexity, and increase internal controls by enabling standardization and automation of business processes within the Department.

• Leverages customizable workflow and rules engine development within the solution to produce predictable outcomes.
• Establish overall project and operational governance model to allow focus on process and data standardization.
• Provide a staging environment to govern the data changes before production data is updated.
• Enable Department staff to perform higher-value activities (e.g., monitor trends, identify asset inspection and maintenance needs)

**SPECIFIC INFORMATION REQUESTED:**

FDOT would like interested parties to submit a technical and brief presentation discussing their system solution and processes that are of a nonproprietary nature only.
**PROCESS**

Responses to this RFI will be reviewed by FDOT and other programmatic and Information Technology staff for informational purposes only and will not result in the award of a contract. This is an RFI as defined by section 287.012(22), Florida Statutes. Responses to this RFI are not offers and cannot be accepted by FDOT to form a binding contract. §287.012(22), Fla. Stat. (2016). Information received in response to this RFI, however, may be used to develop future procurements. Respondents to this RFI will not be prohibited from submitting bids to such future procurements based solely on having responded to this RFI. §287.057(17) (c), Fla. Stat. (2016). FDOT will review responses received from this RFI to determine the feasibility of issuing a competitive solicitation for services or commodities. Any request for cost information is for budget purposes only.

**INSTRUCTIONS TO RESPONDENTS**

The instructions for this RFI were designed to help ensure all responses are reviewed in a consistent manner. The response must include:

1. **Details**
   Interested Respondents should include the following information in their responses:
   - A description of Respondent’s ability to provide a Transportation Data and Asset Management System and its complete components;
   - Methods by which information in the database is held secure;
   - Authentication and authorization of persons accessing the database;
   - Proposed architecture for the Production environment to include hardware, operating system, framework, database, and minimum requirements;
   - Proposed storage solution;
   - Proposed data migration plan;
   - Name of proposed registry solution;
   - Respondent’s history providing similar systems to agencies in other states or US territories, to include contact information of each reference: Name, title, telephone number and email address;
   - Provide pricing models for maintenance agreements
   - Describe ways the use of the registry solution will result in costs savings to the Department
   - Describe the company’s approach to “Enterprise” license agreements and how it relates to agency customers;
   - Describe the development process from specifications gathering and documentation to testing and release with approximate timelines;
   - Describe the change management process;
   - Describe the issue resolution process;
   - Describe how modifications to the system are handled (legislative, enhancements, fixes/bugs) and cost structure modified;
   - Any other pertinent information that vendors want to supply in response to this RFI;
   - Respondent’s history with all similar systems, organizational structure, and contact information for each reference: Name, title, phone number, and email address;
   - Respondent’s experience with contemporary technology that can be applied to the FDOT business processes to create a more flexible and responsive environment.
• Any other information that Respondent wishes to supply in response to this RFI.

It is anticipated following the end of advertisement, the FDOT will contact vendors

2. Questions to Vendors
The Department is seeking information in support of a possible solution to meet the project objectives. Specifically, the Department expects any interested vendors to respond to the following:

1. What Applications does your organization have expertise with that may meet the project’s objectives?
2. What options do these Applications have for leveraging Workflow?
   a. Workflow could be developed to allow users to assign tasks, submit items for review, prioritize tasks, determined data that needs to be updated, etc.
3. What options do these Applications have for leveraging Dashboards?
4. What are the current options, with pros and cons, for hosting an Application?
   a. On premises
   b. Private cloud
   c. Public cloud
5. The Department has chosen an agile-like approach for Design, Development, and Implementation (DDI), as compared to a typical waterfall methodology, to mitigate risk and minimize cost. Once a product has been selected, the Department anticipates proceeding in a phased development methodology whereby Task Work Orders (TWO) will be developed for each DDI component once each task has been articulated in sufficient detail for a firm TWO. E.g. a TWO would be issued to complete the detailed development of the requirements, then a TWO would be issued for the design efforts, then a TWO for the first development effort, etc.
   a. What does your organization view as the pros and cons of this approach?
   b. How much of the Department’s required functionally needs to be defined prior to procurement, versus what should be defined as part of the initial detailed design phase?
6. The RCI system will continue to interface with departmental systems, state systems, and Federal systems.
   a. The Department is pursuing an Enterprise Services Bus architecture (tentatively Microsoft Azure’s ESB). What are the pros and cons of this approach related to IRAIS?
7. What are some of the considerations for a phased implementation v. Big Bang?
8. Provide your company’s experience in implementing a roadway asset management system? Provide some examples for projects with relevant sizes and objectives.

RESPONSE
It is not necessary to prepare responses using elaborate brochures and artwork, expensive paper and bindings, or other expensive visual presentation aids. Responses should be prepared in accordance with the instructions provided in this RFI. FDOT is not responsible for and will not reimburse any costs incurred in the preparation or submission of information in response to this RFI.

This is strictly a RFI, and in no way, does this request bind FDOT to solicit bids or proposals in the future. However, in no way does submittal of information pursuant to this RFI give any Respondent any
advantage in any solicitation if FDOT elects to solicit bids/proposals in the future. No confidential information should be submitted in response to this RFI.

VENDOR OPEN FORUM AGENDA
Based upon the completeness of the response, FDOT, at its sole discretion, may invite Respondents for an oral presentation. It is anticipated respondents will be scheduled in through the month of February 2018. Each presentation will be scheduled from one to two hours depending on the response and should include the following:

- A high-level overview of the product highlighting the core agency processes the product addresses, including customer references for the product where it is currently installed;
- The Respondent should be prepared to discuss its experience and competency in the design, development, and implementation of their solution, training and knowledge transfer activities, operations and maintenance of the proposed solution, and, if applicable, any additional vendors the Respondent partnered with to provide a complete solution;
- A discussion about the approach taken in previous implementations, challenges and risks encountered, and mitigating factors taken into consideration; and
- Opportunities for Questions and Answers.

CONTACT FOR QUESTIONS OR CLARIFICATION:

Please send any questions or comments to:
Lauren LeJeune
Contract Manager
Lauren.LeJeune@dot.state.fl.us

The requested information must be received by 5:00 pm (EST) on 1/31/2018. Email is the preferred method of response.

Send to:
Jessica Rogers
Project Manager
The Florida Department of Transportation
Transportation Data and Analytics Office
605 Suwannee Street, MS 27
Tallahassee, FL 32399-0450

Note: Responses to this Request for Information (RFI) will be reviewed by the agency for informational purposes, and will not be considered as offers to be accepted by the agency to form a binding contract. Advertisement of any subsequent competitive solicitation that may result from this RFI will be posted on the Florida Vendor Bid System.