

AASHTO Innovation Initiative

[Proposed] Nomination of Innovation Ready for Implementation

Sponsor

Nominations must be submitted by an AASHTO member DOT willing to help promote the innovation. If selected, the sponsoring DOT will be asked to promote the innovation to other states by participating on a Lead States Team supported by the AASHTO Innovation Initiative.

1. **Sponsoring DOT (State):** Florida Department of Transportation
2. **Name and Title:** John R. Easterling, P.E.; District Traffic Operations Engineer

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Innovation Description (10 points)

The term "innovation" may include processes, products, techniques, procedures, and practices.

3. **Name of the innovation:**

Florida Department of Transportation's Revamped Rapid Incident Scene Clearance (RISC) program contract

4. **Please describe the innovation.**

In 2004, Florida's Turnpike Enterprise (FTE), part of the Florida Dept. of Transportation (FDOT), developed the Rapid Incident Scene Clearance (RISC) program in order to expedite removal of large vehicle crashes, typically involving spilled loads and debris, through requiring the use of special equipment and trained operators. The RISC contract includes incentives for meeting performance measures (ranging from \$2,500 to \$3,500 per incident) for required arrival and clearance times when the contract is activated and has specialized requirements for equipment and training of operations for a contractor to participate. It originally used an Open Invitation advertisement method, which helped many companies gain experience with the program and its expectations. In 2019, FTE focused on revamping contract provisions to better meet Incident Clearance objectives and Florida's Open Roads Policy goals.

5. What is the existing baseline practice that the innovation intends to replace/improve?

Although very successful in its initial format for over 15 years and used almost 1,300 times, recent year trends suggested that the contract provisions could be altered to further reduce the Incident Clearance timelines on these large vehicle crashes, which can help assist improving upon TSM&O strategic goals in reducing secondary crashes and incident delays for Turnpike customers. For these incidents/crash events, the 4-year historical average (2016-2019) of lane blocking duration for FTE roadways is calculated at almost 151 minutes, when the Open Roads Policy sets the goal of clearing all incidents within 90 minutes from the travel lanes.

6. What problems associated with the baseline practice does the innovation propose to solve?

The RISC contract attempts to solve the problems associated with both the towing industry's natural incentive of hourly billing rates for recovering complex crashes and the allowable scene response times typically set by law enforcement rules/policies. In 2019, FTE reviewed the historical trends associated with inconsistent response and lack of priority from tow/recovery contractors in meeting the FDOT's objectives in the Quick Clearance area, but also lack of interest in performance to obtain contract incentives. For instance, if the required arrival response time was not met, a contractor may not have a priority in quickly clearing a crash scene, as they would have to meet both time requirements in order to qualify for the incentive for the individual incident activation. Instead these events showed lack of urgency resulting in longer lane blockage. In addition, contract participation by a rotation of qualified vendors allowed each to select the geographic limits of its contractual response, thus encouraging limits beyond what equipment availability and travel times could enable in order to gain more business, as responsible parties were still responsible for towing expenses, separate from FTE's incentive payment.

7. Briefly describe the history of its development.

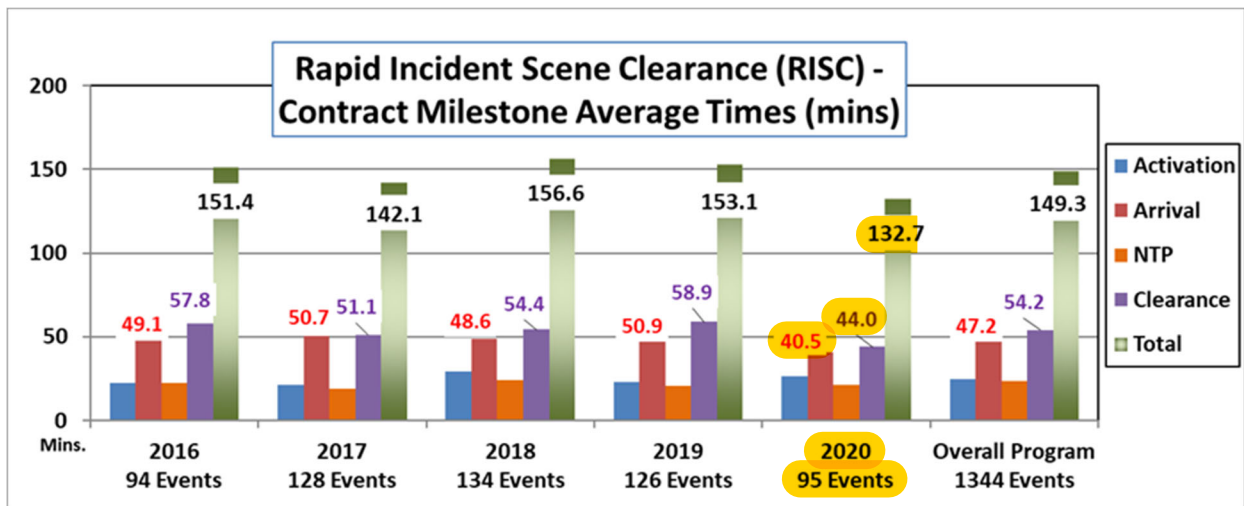
FTE's heavy-duty towing and recovery RISC contractual program is a critical component of the Traffic Incident Management program. First developed and implemented in 2004 by the Turnpike to reduce the impact of major traffic incidents, RISC helps meet Florida's Open Roads Policy goal of clearing the roadway of large vehicle crashes in 90 minutes or less. Now a statewide incentive-based program and national model, RISC awards monetary incentives to qualified participating tow companies for meeting stated quick clearance goals. FTE's Traffic Management Center (TMC) serves as the official timekeeper

of RISC milestones, the primary contact for the Florida Highway Patrol (FHP) and the hub for all incident management communications. To participate in the program, towing and recovery companies must meet and maintain contractual equipment and training standards to ensure the safe and efficient clearance of major incidents. Once activated, recovery contractors are required to respond to the incident scene within 60 minutes and open the travel lanes within 90 minutes once they are given a Notice to Proceed. Liquidated damages may be assessed if the travel lanes are not open within 180 minutes. In 2019, FTE spent time and effort to identify how to modify the contract and readvertise a new version that could help better achieve the TSM&O goals of the program. These contract changes include: 1) a new incentive structure to counteract poor performance when a arrival milestone is not met; 2) a new arrival tiering structure to incentive quicker response and yard/staging locations; 3) single organization selection per geographic sector, which required collaboration with agency partners to develop a scoring criteria to provide best method for selection.

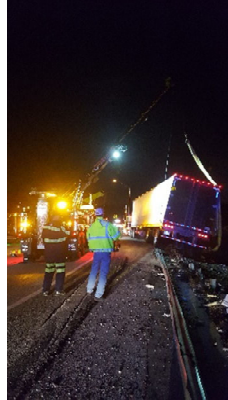
8. What resources—such as technical specifications, training materials, and user guides—have you developed to assist with the deployment effort? If appropriate, please attach or provide weblinks to reports, videos, photographs, diagrams, or other images illustrating the appearance or functionality of the innovation (if electronic, please provide a separate file). Please list your attachments or weblinks here.

FTE has developed an advertisement package (including Request for Proposal and Scope of Services sections), an Annual Report format to help educate others on the program effectiveness, share images of the incident responses, lessons learned and other innovations in recovery examples. Each of the below described files are located at the following web-accessible address: <https://tpktraffic.com/files>

- 1) Contract Advertisement package
- 2) RISC 2019 Annual Report



Attach photographs, diagrams, or other images here. If images are of larger resolution size, please provide as separate files.



State of Development (40 points)

Innovations must be successfully deployed in at least one State DOT. The All selection process will favor innovations that have advanced beyond the research stage, at least to the pilot deployment stage, and preferably into routine use.

9. How ready is this innovation for implementation in an operational environment? Please select from the following options. Please describe.

- Prototype is fully functional and yet to be piloted
- Prototype has been piloted successfully in an operational environment
- Technology has been deployed multiple times in an operational environment
- Technology is ready for full-scale implementation

This program has been used for 16 years at FDOT, and the innovations that this nomination include have been implemented as part of a program change successfully in 2020 with eight (8) months of operational experiences across 95 incidents where it was activated.

10. What additional development is necessary to enable implementation of the innovation for routine use?

This contract is used on the entire 511-mile Turnpike system of roadways, and these adjustments described have been judged internally as one of the best tools in FTE's toolbox for minimizing the impact of large-scale crashes involving trucks and fluid and/or cargo spills. It is used routinely when appropriate by Traffic Management Center and Roadway Maintenance staff to expedite incident clearance; thus, helping to quickly restore mobility, passenger traffic and freight movement of goods on the Turnpike system. There is no additional development needed for the Turnpike system, but those interested in furthering this concept on a larger basis would need to identify stakeholders within their Traffic Incident Management programs and gain input prior to determining its feasibility in their locations.

11. Are other organizations using, currently developing, or have they shown interest in this innovation or of similar technology?? Yes No At this point, FDOT districts are considering adopting similar changes to the existing contracts, but that is within the agency, not outside of FDOT.

If so, please list organization names and contacts. Please identify the source of this information.

Organization	Name	Phone	Email
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Potential Payoff (30 points)

Payoff is defined as the combination of broad applicability and significant benefit or advantage over baseline practice .

12. How does the innovation meet customer or stakeholder needs in your State DOT or other organizations that have used it?

The RISC program with its recent contractual provision adjustments helps FDOT improve its performance related to both Florida’s Open Roads Policy goals of clearing all incidents within 90 minutes from travel lanes and a TSM&O strategic goal of reducing secondary crashes. The baseline measures of previous years’ performance was used to review the first eight (8) months experience from January to August 2020, where this contract was activated and used 95 times to expedite clearance of truck related crashes on the Turnpike system. This improvement in how to handle these incidents is directly related to FDOT’s performance measures for mobility and traffic safety. The rest of FDOT adopted the Turnpike’s original model contract in 2008 following the pilot use at FTE, and the adjustments may be used on a statewide basis as well following the collaboration with other agency stakeholders and review of current wrecker rules on non-Turnpike facilities.

13. Identify the top three benefit types your DOT has realized from using this innovation. Describe the type and scale of benefits of using this innovation over baseline practice. Provide additional information, if available, using quantitative metrics, to describe the benefits.

Benefit Types	Please describe:
Improved Operation Performance	Overall incident clearance average duration on large vehicle complex recoveries was reduced from 150.8 minutes in 2016-2019 to 132.7 minutes, a savings of over 18 minutes or 12 percent of the lane blockage duration. These program participants are involved in STEALTH incident debriefs where potential lessons are learned and then disseminated for use in future events.
Improved Safety	For the first Quarter of 2020, this improvement helped reduce the monthly average of secondary crashes by approximately 25 percent on the FTE system (reduction from monthly baseline average of 95 to 71; future quarters will be reviewed). Additionally, the reduced exposure time for responders (tow, law enforcement, DOT Maintenance

	and service patrol) on the roadside reduces the potential for injury from passing vehicles.
Improved Customer Service	The above described improvement of 18 minutes in Incident Clearance has tremendous benefit in reducing incident delays for Turnpike customers, who are paying a toll to travel the system. After a complete year, further analysis will be performed to examine both the time and financial savings to the customer from this contract.

Provide any additional description, if necessary:

N/A

14 How broadly might this innovation be deployed for other applications. in the transportation industry (including other disciplines of a DOT, other transportation modes, and private industry)?

The Revamped RISC contract is just another example of how incentives can be used to achieve a better result in contract management. This particular example creates a higher level of program ownership at FTE from its partners in towing/recovery, including in the training and satisfaction of employees at the agency and those who are employed by the towing contractors. A program expenditure which averages approximately \$350,000 per year results in countless saved hours of congestion, roadside exposure for incident responders and reducing the potential for secondary crash events.

Market Readiness (20 points)

The All selection process will favor innovations that can be adopted with a reasonable amount of effort and cost, commensurate with the payoff potential.

15. What specific actions would another organization need to take along each of the following dimensions to adopt this innovation?

Check boxes that apply	Dimensions	Please describe:
<input checked="" type="checkbox"/>	Gaining executive leadership support	Review actions required to implement in relation to a state's towing regulations or administrative rules; Examine potential for impact on key freight corridors including the Interstate Highway System.
<input checked="" type="checkbox"/>	Communicating benefits	Identify a business unit to track performance statistics and collaboration with Traffic Incident Management teams.
<input checked="" type="checkbox"/>	Overcoming funding constraints	Identify in-house program costs and contract costs
<input type="checkbox"/>	Acquiring in-house capabilities	Click or tap here to enter text.
<input type="checkbox"/>	Addressing legal issues (if applicable) (e.g., liability and intellectual property)	Click or tap here to enter text.
<input type="checkbox"/>	Resolving conflicts with existing national/state regulations and standards	Click or tap here to enter text.
<input type="checkbox"/>	Other challenges	Click or tap here to enter text.

16. Please provide details of cost, effort, and length of time expended to deploy the innovation in your organization.

Cost: Based upon prior year and current year estimates, this innovation costs FTE approximately \$350,000 to cover approximately 500 miles of limited access highway.

Level of Effort: Moderate; coordination with law enforcement involved in traffic incident management as well as communicating needs to the professional towing association and other partners.

Time: Pilot implementation in 2004 required approximately one year to hold forum for industry input and for contract development. Revamped program contractual development time was approximately 9 months in duration for in-house program efforts, contract advertisement, reviews and implementation.

17. To what extent might implementation of this innovation require the involvement of third parties, including vendors, contractors, and consultants? If so, please describe. List the type of expertise required for implementation.

This innovation requires the expertise of towing/recovery organizations which have the significant investment of heavy duty wreckers and other equipment. The contractual model is used to help minimize the expenditures of the agency in this specialized equipment which may only be used in a particular region a portion of the time. It is also beneficial to have access to Traffic Incident Management consultants who can assist in program development, TIM training and TMC operational management.