

Improving Business Processes for More Effective TSMO

Traffic Incident Management - Case Study Example

*Washington State DOT Instant Tow Dispatch Program**

Overview/Background:

This case study outlines a business process for the Washington State Instant Tow Dispatch Program, which is an element of a broader incident management program focused on reducing incident clearance time through the collaborative efforts of the Washington State Department of Transportation (WSDOT) and the Washington State Patrol (WSP).

The Instant Tow Dispatch Program initially began as a program on the Tacoma Narrows Bridge to provide for quick removal of disabled vehicles from travel lanes, thereby reducing the potential impact on mobility on the corridor. When a disabled vehicle was reported or spotted by WSDOT Traffic Operations Center operators using the WSDOT CCTV cameras, a WSP trooper was dispatched and, on arriving at the scene, would verify that a tow was needed; only then would a tow operator on the WSP list be contacted. Under the Instant Tow Dispatch Program, as soon as an incident is verified on the CCTV cameras, a tow truck can be dispatched without prior verification of need from a WSP trooper. In the initial program used on the Tacoma Narrows Bridge, tow operators on each side of the bridge participated and were dispatched according to how quickly they could reach the disabled vehicle(s). An evaluation of the program by the University of Washington Transportation Research Center found that the Instant Tow Dispatch Program saved an average of 15 min for clearance, compared with having an officer first respond to the incident.

A challenge with the original program was how to reimburse tow drivers for dry runs. Dry runs occurred when tow truck drivers were dispatched, but before they arrived, the disabled vehicle was able to move out of the traffic lanes. This might happen if the driver was able to get his or her car restarted or if a passing motorist provided assistance. When this occurred, tow operators may have wasted as much as 30 min. Tow truckers thus did not want to participate in the program unless they could be reimbursed for this lost time. The business process described in this case study outlines reimbursement parameters based on the timing of notifications from WSP Dispatch to tow operators as the incident is monitored.

*Case Study Source: *E-tool for Business Processes to Improve Travel Time Reliability*, Final Report, 2014.
www.fhwa.dot.gov/goshrp2/Content/Documents/Factsheets/SHRP2_L34_Final_Report1401.pdf

Step 1: Influences

The influence for WSDOT was a top-down influence. A request from the governor's office that WSDOT and WSP collaborate on performance monitoring and accountability goals for incident response and traffic incident clearance times was very important. It made an already strong working relationship between WSDOT and WSP even stronger and increased the accountability placed on both agencies to meet the 90-min clearance time. WSDOT and WSP were required to jointly report the progress toward the 90-min incident clearance goal specified in the Government Management Accountability Performance program. This requirement led to the focus on developing strategies and practices to reduce incident clearance time and minimize the impacts of incidents on freeway mobility.

Step 2: Define the Specific Reliability Goal(s)

The primary reliability goal that WSDOT was trying to achieve was the 90-min incident clearance time; the Instant Tow Dispatch was one of several strategies that were developed and implemented to work toward achieving that overarching clearance time goal. During the initial pilot test of the Instant Tow Dispatch Program, it was not clear how well the program would contribute to meeting that goal, so there were no specific goals established for the program other than monitoring the impact of the program on reduced incident clearance. WSDOT planned to evaluate the program after the initial pilot test to determine the costs and benefits of the program. It is also important to note that goals and performance for WSDOT's transportation system and transportation program are very closely tracked and reported in the Gray Notebook, a quarterly publication of WSDOT. The Gray Notebook covers a variety of measures, ranging from project delivery, infrastructure condition, and safety statistics, and it addresses mobility as a key measure. Among the mobility measures that are publicly reported are freeway travel times and incident response times.

Step 3: Identify and Document Current Business Processes

Although the Business Process Modeling Notation (BPMN) was not used to document other similar tow programs in existence at the time, the Washington State DOT Joint Operations Policy Statement (JOPS) Agreement clearly documented each of the incident management programs that did exist. The JOPS Agreement is unique in that it not only clearly defines how incident management programs will be done in Washington, but it also identifies specific employees from both WSDOT and WSP who are responsible for each program and sets performance measures for the programs. The document is signed by the Washington State secretary of transportation and the chief of the Washington State Patrol and is collectively reviewed and updated each year by WSDOT and WSP.

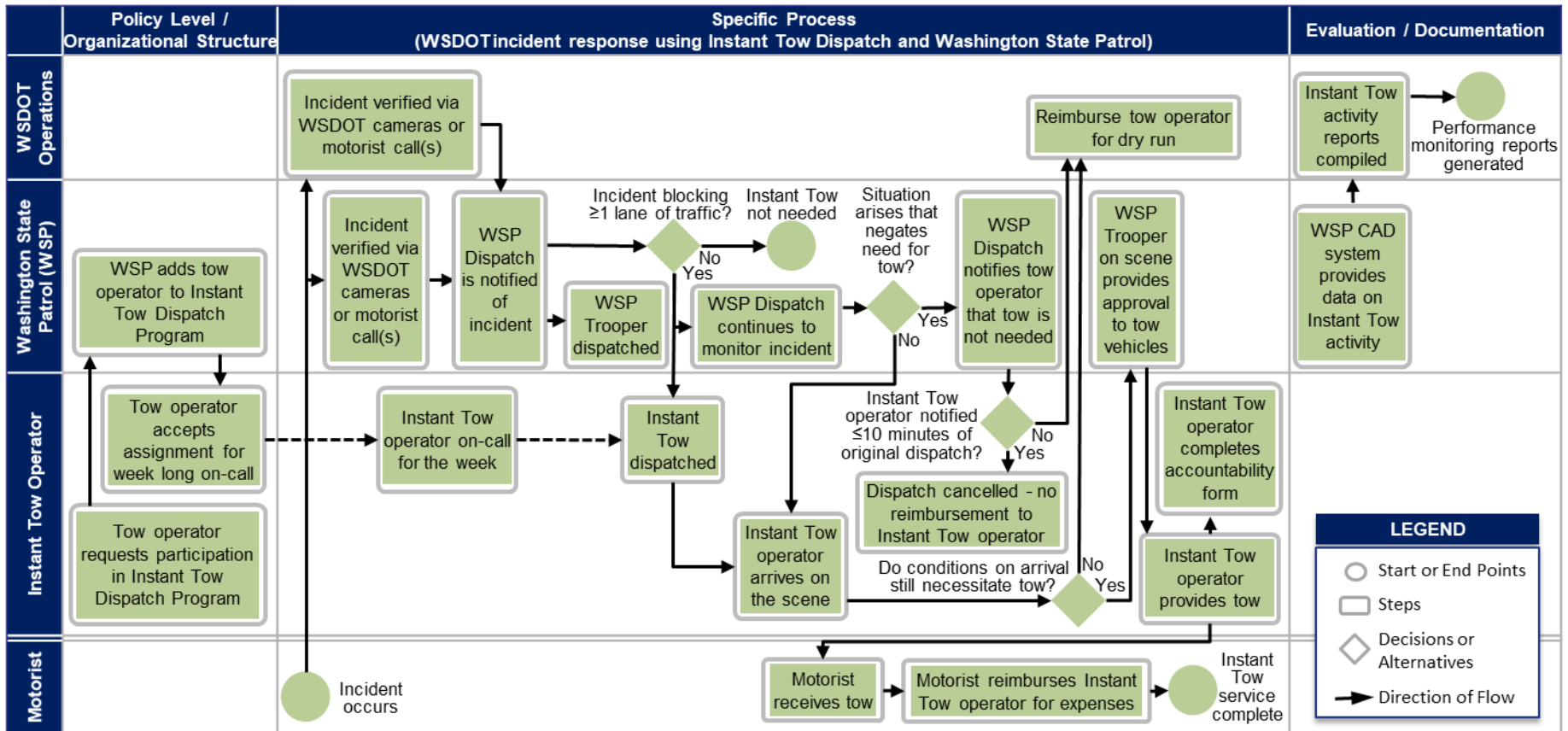


Figure 1. Business Process Diagram – Washington State DOT Instant Tow Dispatch Program

Step 4a: Develop/Change Process

In Washington, the Instant Tow Dispatch Program initially began as a program on the Tacoma Narrows Bridge. Although it was successful in reducing clearance times, it was not sustainable because tow operators were not reimbursed for dry runs, which occurred when they were dispatched to tow a vehicle and the vehicle had been removed from the lanes before the tow operator arrived. Without a reimbursement program, tow operators did not want to continue participating in the Instant Tow Dispatch Program. Through the reimbursement program that WSDOT initiated, WSDOT found it could maintain active participation by tow operators and yet still provide the Instant Tow Dispatch Program at a very low cost. WSDOT has several examples of changes that were made to the initial program to improve the process, better meet performance measures, and satisfy all of its partners.

Step 4b: Implement Process

WSDOT implemented the changes as information was collected and change was deemed necessary. The implementation step worked closely, in an iterative manner, with assessment of the process and changes in the process.

Step 5: Assess Process

WSDOT and WSP had several measures, such as response time, number of tows, and cost of the program, to monitor the impact and effectiveness of the program. The University of Washington Transportation Research Center was also asked to study the initial pilot program. The study found that without the Instant Tow Dispatch Program it would take an average of 18 min to dispatch a tow truck after an incident was detected and verified. With the Instant Tow Dispatch Program, it takes an average of 3 min to dispatch a tow truck. The program has reduced the time for a tow truck to arrive at an incident by approximately 15 min for most incidents. WSDOT looked at the saving this created in terms of lost time and wasted fuel resulting from congestion and estimated that for less than \$1,000 per year to operate the program, WSDOT would see annual benefits of approximately \$6.5 million to \$11.1 million.

Step 6: Document Process

The JOPS Agreement includes the Instant Tow Dispatch Program objective; roles and responsibilities, including those of lead staff from WSDOT and WSP; performance measures; and reporting requirements. Annual updates of the JOPS Agreement ensure that any changes to any of the joint programs included in the agreement can be captured and require the signature of the Washington secretary of transportation and the chief of the Washington State Patrol.

Step 7: Institutionalize Process

The JOPS Agreement provides the higher-level policy for the Instant Tow Dispatch Program by establishing roles and responsibilities and lead staff. A set of standard operating guidelines was developed for the Instant Tow Dispatch Program, which was rolled out in several urban areas around the state over time. With specific staff assigned from both WSDOT and WSP in the JOPS Agreement, accountability for continuing the program is clearly defined; the annual update of the JOPS Agreement reinforces the continued desire of WSDOT and WSP leadership to keep the program.