

QRT Final Report

INTRODUCTION

The Vendor Quality Assurance (QA) Evaluation Program was created as a pro-active means to maintain a high level of quality for traffic control devices bought and used by the Florida Department of Transportation (FDOT). Vendors seeking approval are queried to determine the maturity of their existing QA systems for designing, manufacturing and testing of their product. Vendors whose QA systems meet the established acceptable level of proficiency get their products placed on the APL, provided their product passes an engineering evaluation as well.

The following is a timeline of all activities regarding the inception and implementation of the QA evaluation program. It is followed by the most recent version of the QA evaluation manual (Appendix A) which serves as the central document for policies and procedures related to the QA evaluation program. All progress reports generated from 2001 onward are placed in Appendix B, followed by handouts of PowerPoint presentations given during the project in Appendix C.

TIMELINE

January 2001 – Version 1

- First QA survey developed, called the “Manufacturer Pre-qualification Checklist” was in use. It was a fill-in the blank form which asks for general company information, drawings of products and a statement of compliance.

July 2002 – Version 2

- Version 2 of QA Survey was developed. It was based on the ISO definition of a quality system. The survey featured questions that focus on quality documentation, and procedures for sampling and inspection, handling of nonconforming products and corrective action procedures.

- A status sheet was developed to keep track of all items received and to track the progress of vendors in the QA evaluation process. The first status sheet was a simple Word document placed on the file server.

December 2002

- Small adjustments to the survey were made in response to how vendors were answering the questions. On a number of submittals vendors would respond with just a “yes” or “no” answer, with no elaboration or references. The instructions were changed so vendors would have to elaborate and direct us to where this information could be found within their manual or documentation. The following is an example of how a vendor was expected to respond:

EXAMPLE

Question: Are internal audits of the quality program performed at regular intervals by personnel who are independent of those being audited?

Answer: Yes, see section 4.17 of the quality manual. It states that an internal audit of the documented quality system will be performed once a year.

- Improvements to the status sheet were also made to include more content such as contact information and records of all correspondence with the vendor.

April 2003

- The status sheet was converted from a Word document located on the file server into an online accessible webpage that was updated weekly.

July 2003

- Procedures were modified to use the grading system already in effect to determine a vendor's re-evaluation timeline. The rationale was to reward companies with excellent quality systems and to persuade those with less than first-rate systems to improve. The relationship between the evaluation grades and the timeframe for re-evaluation was as follows,

Grade (A): two years from the date of qualification.

Grade (B): one year from the date of qualification.

Grade (C): six months from the date of qualification.

- A priority list was created as an add-on to the to status sheet. It allowed members of the QRT and TERL to quickly know where each company was in the QA evaluation process and where they were in the queue.

- Vendors were now encouraged to visit the TERL and give a presentation on their quality system. These presentations served as a conference meeting and as a supplement to the QA evaluation documentation.

September 2003

- Documentation of the entire QA evaluation procedure was initiated in order to improve the speed and efficiency of evaluation process.

November 2003 – Version 3

- Due to on-going difficulty in obtaining the necessary information from vendors for evaluation purposes, a new version of the survey was developed with the questions reworded in such a way to force vendors to elaborate on their answers.

April 2004

- Plans were initiated to create a database to replace a majority of documents that required constant updates (i.e. status sheet, priority list, reports).

- The QRT began investigating ways to remove subjectivity in the evaluation process due to an increased number of people performing evaluations.

September 2004

- QA Database was created and adopted as primary recording and reporting source.

- Evaluation grading guidelines were created to reduce the subjectivity in the evaluation grading process.

October 2004 – Version 4

- Due to FDOT requirements to speed up the evaluation process (a vendor must receive a pass or fail grade within 45 days), the QA survey was streamlined and shortened to half its original size. A matrix was

developed that showed whether each evaluation question required a written explanation, documentation, and/or evidence of implementation. The improvement's goals were to help vendors better understand what was expected of them in order to reduce failures and re-submittals.

December 2004

- Pre-evaluation procedures were modified to quickly identify adequate and inadequate vendor submittals, and fail vendors early in the process so they could re-submit updated materials without delay.

February 2005

- A February 28 deadline was implemented that required a minimum of a successful pre-evaluation of a vendor's quality program submission in order for their products to remain on the APL. This criterion applied only to vendors who had existing products already listed on the APL...new applicants had to fully complete the quality evaluation along with product certification before having their product listed.

- By the 02-28-2005 deadline:

- 89 vendors had submitted qualification documents

- 0 vendors were in the queue waiting for pre-evaluation

- 29 had successfully completed the qualification process (5 of the 29 were DMS manufacturers)

June 2005

- A re-evaluation protocol was created as a means to periodically monitor vendors that had passed their initial QA evaluations and product certifications, and also to standardize resolution of vendor product issues out in the field.

September 2005

- Several procedure modifications to the evaluation process were implemented:

- All companies were to be re-evaluated 2-years after qualification, as opposed to a sliding scale based on a vendor's evaluation grade (6-months-C, 1-year-B, 2-years-A).

- Vendors were not to be notified of their evaluation grade, only whether they passed or failed.

- An on-line version of the pre-evaluation checklist was developed that automatically generated the pass/fail vendor evaluation status letter, which included the evaluation areas that needed attention by the vendor.

April 2006

- The latest version of the Quality Assurance survey has been finalized, published and put into operation.

- The updates included a reduction in the number of questions by combining or removing questions asking for redundant information.

- Improved question wording, increasing clarification of what was being asked.

- Continuous Improvement of the evaluation process drew the focus towards the typical problem areas encountered with vendor submittals.

- A QA Evaluation Manual was developed that groups the entire quality evaluation program under one cover.

- All documents that are used in the evaluation process were updated and included in a section of the manual, including: the evaluation survey; the pre-evaluation procedure and report template;

- evaluation procedures, guidelines, worksheet, and reports; the re-evaluation guidelines, request for information (RFI), and the district survey; and a training program.
- Procedures for internal corrective and preventative actions within the QA evaluation program were created.
 - Re-evaluation procedures and associated working documents were finalized and re-evaluations have commenced.

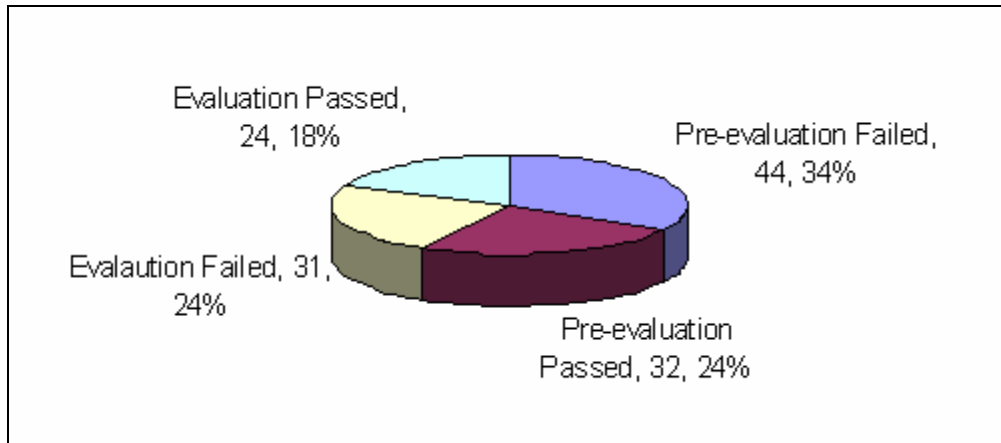


Figure 1: Statistics as of January 2006

APPENDIX A - QA Evaluation Manual and Process Documentation

APPENDIX B – Project Progress Reports

APPENDIX C – Project Presentations