



C³RS: Midterm Accomplishments at Another Site and Success Factors Across Sites

SUMMARY

The Federal Railroad Administration (FRA) has been implementing the Confidential Close Call Reporting System (C³RS). This reporting system includes:

- Confidential reporting.
- Root-cause-analysis problem solving by a Peer Review Team (PRT) comprising labor, management, and FRA.
- Implementation and review of corrective actions, some locally, and others system-wide with the help of a Support Team made up of senior managers.
- Tracking the results of change.
- Reporting the results of change.

Demonstration pilot sites for C³RS were set up at Union Pacific Railroad (UP); Canadian Pacific Railway (CP); New Jersey Transit (NJT); and Amtrak.

FRA is sponsoring a rigorous evaluation of C³RS in order to answer three questions:

1. What conditions are necessary to implement C³RS successfully?
2. What is the impact of C³RS on safety and safety culture?
3. What factors help to sustain C³RS?

This evaluation has been organized into baseline, midterm, and final time periods at each site. To protect company confidentiality, specific sites are not identified in the findings.

This report is part of a series of *Research Results* that will provide the public with the

evaluation's findings [1-7]. This paper contains 1) findings at one demonstration site (Site A), which are based on interviews with stakeholders and redacted C³RS program data, as well as 2) cross-site findings from several other sites.

Findings at Site A

Site A addressed safety issues uncovered by C³RS, such as blue flags, communication issues, and near misses with people and vehicles on the track, by implementing multiple local and system level corrective actions. The railroad's interest in C³RS led to a decision to expand the system to involve more types of close calls, locations, and labor unions. Implementing the system created challenges involving communication between the PRT and senior management, feedback to employees; and tracking corrective actions.

Cross-Site Success Factors Observed at the Evaluation Midpoint

Based on the results at the midpoint of the evaluation *across four sites*, several success factors have begun to emerge (Figure 1). Previously, the evaluation results showed that senior cross-functional management is needed to implement corrective actions [3]. Labor participation in marketing C³RS, analyzing cases, and implementing corrective actions is also necessary. Other necessary factors are: FRA responsibility for funding and assistance; the ability to implement changes; effective dispute resolution; and perceived value.

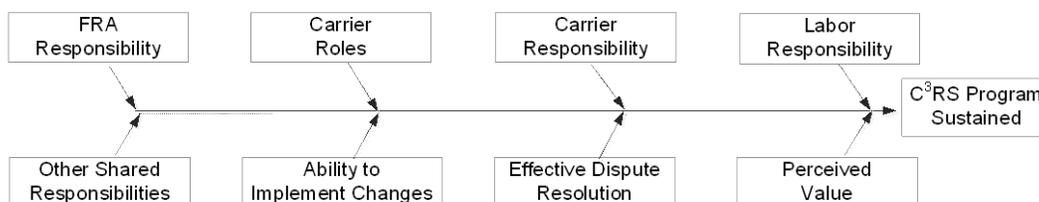


Figure 1: C³RS Success Factors



BACKGROUND

C³RS contains these critical elements:

1. Employees' reports of close calls are routed through a neutral third party, either the U.S. Bureau of Transportation Statistics (BTS) or the National Aeronautics and Space Administration (NASA), which de-identifies the reports
2. Sanitized information is sent to a Peer Review Team (PRT), a joint labor/ management/ FRA group which is trained in collaborative Multiple Cause Incident Analysis (MCIA)
3. The PRT conveys recommendations for corrective action to local and corporate management (PRT Support Team) for review and possible implementation [8].

OBJECTIVES

The goal of this evaluation is to:

- Learn how C³RS can be implemented successfully
- Examine the reporting system's impact on safety and safety culture
- Determine conditions that are necessary for the long-term viability of C³RS (for previous findings see [1-7].)

METHODS

Stakeholder Interviews

At the beginning of the baseline and midterm phases, *phased interviews* were conducted with Site A railroad employees and managers (both inside and outside of the C³RS program).

Interviewees were asked about the impact of C³RS on safety, safety culture, and program operations.

Implementation interviews were also done with key stakeholders, such as PRT members, senior managers, labor officials, FRA, the Volpe Implementation Team, BTS, or NASA. Interviewees were asked about key events in C³RS program, impact, and sustainability.

C³RS Program Data

The evaluation team studied multiple types of data related to the C³RS program: summary reporting rates, corrective actions documents; and "lessons learned" team field notes. The team used this data to assess how well the program was implemented and examined its outcomes.

RESULTS AT SITE "A"

Site A Implemented Many Corrective Actions

Site A consistently received close call reports that were reviewed by a PRT. Once the reports were reviewed, the PRT recommended corrective actions to the Support Team. According to interviewees, PRT members worked with local managers to implement local versions of the corrective actions while the Support Team worked on system level corrective actions. Top corrective actions included preventing close calls which involved collisions with people, trains, and maintenance vehicles; missed communication; and weak blue flag indications (Table 1). These were

Table 1: Potential Impacts to Safety from Corrective Actions Implemented at Site A

Corrective Actions (#)	Potential Impact					
	Personal Safety	Collisions	Productivity	Excess Speed	Run-through Switches	Derailment
Blue Flags (2)	●		●			
Trains/People/Vehicles (5)	●	●				
Communication (4)				●	●	●

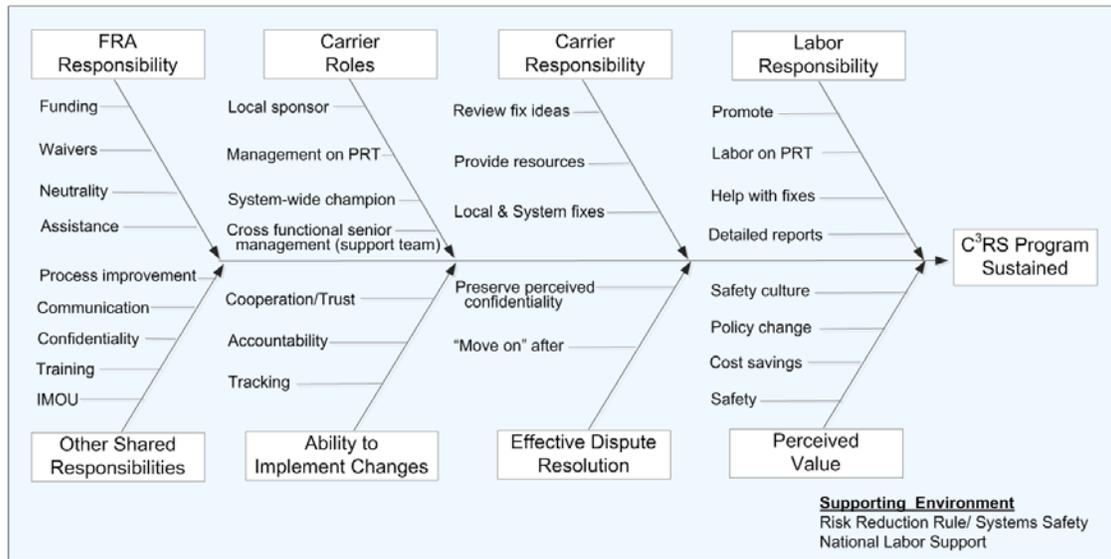


Figure 2: C³RS Success Factors Observed at the Evaluation Midpoint across Multiple Sites

accomplished despite major reorganization in Site A's management.

Interviewees Believed Safety Culture and Communication Improved

Interviewees indicated that C³RS was having an impact on safety culture at Site A. For example, because of C³RS, labor became comfortable talking to managers, even outside the formal boundaries of the program. There were also improvements in radio communications between dispatchers and crews. Labor and management indicated that reports were being submitted to C³RS to solve problems, not just to avoid discipline.

Participants Perceive Value

To collect more close call data, Site A expanded its C³RS program from including just yard transportation to main track transportation, and the engineering and mechanical departments. These changes increased the number of employees being able to report from approximately 1400 to 2500. Also, accidents below the FRA reporting threshold were added to events that could be reported under C³RS [9].

Opportunities for Improvement

There were several suggestions for improving C³RS, including: enhancing the collaboration between senior management and the PRT; improving documentation and tracking of local correction actions; tracking trends of certain types of cases and the impact of corrective actions; and providing detailed feedback to employees about C³RS accomplishments.

CROSS-SITE MIDPOINT FINDINGS

At this midpoint in the evaluation, factors that influence the success of a C³RS program have begun to emerge. These are depicted in Figure 2. At the far right of Figure 2's graphic is the main objective – a C³RS program that is sustained. Above and below the horizontal line are causes that can affect progress toward that goal. Specific contributing factors to each category of causes are shown on each "bone of the fish". Across the top of the diagram are the specific responsibilities the individual partners have. At the bottom of the graphic are the responsibilities that are shared among the groups. The ability to implement change



requires cooperation and trust among stakeholders, accountability for actions, and tracking the status of implementing change. It is important to have effective dispute resolution that that preserves confidentiality and allows partners to “move on” after the dispute. There also needs to be perceived value (i.e. improved safety culture, policy changes, cost savings, or safety).

CONCLUSIONS

Site A successfully implemented local and system level corrective actions. The evaluation team plans to collect final data at Site A and other sites and further explore success factors.

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