# Safety from an Executive's Point of View:
# Turning Complaints into Efficiencies

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## Introduction and Background

The late guru of safety, Dr. Dan Petersen, preached a consistent message for years. "Do in safety, exactly the same things you do for production and quality, and you will get exactly the same results." Simple? Maybe. As common sense as this message appears, I wonder why we consistently see safety being handled as a standalone function, separate and apart from the daily operations within organizations. So much so, that the tools and methods used to gain success in other parts of the business are often unknown and unused to gain equivalent success in safety.

Is this because executives and leaders don't care about safety? I doubt it. Leaders do not want to see employees get hurt anymore than safety people do. They typically believe in the safety process and will provide *financial* support, yet they often do not engage in safety as intensely as they do in leading other management functions, such as cost or quality. So what's the problem? Why does this seemingly simple principle seem to be such a common struggle? Could it be that leaders (and many safety pros) have been conditioned to see safety through the lens of compliance and regulation or as a cost of doing business? Could it be they do not know how to manage safety like they do everything else? Could it be they doubt the credibility of the methods that have been presented to them?

To illustrate the answers to some of these questions, I will share an example of how an executive management team of an electric transmission and distribution company set out to achieve a zero injury culture and mindset. To do so, the team had to figure out answers to these, and other, questions, including:

- What is important to our organization, and how we visibly demonstrate it?
- How do we determine and undertake organizational roles that enable us to meet the six criteria of safety excellence?

- How do we get past level one and two safety thinking (compliance and behavior observation programs) and into levels 3, 4, 5, and 6?
- How do we turn complaints into goals and efficiencies?

This paper presents the approach, techniques and tools that were used to answer these questions and achieve these successes.

## Historical Perspective

In the fall of 2007, the company embarked on an overall mission to achieve a zero incident culture. The safety system was consistently producing a relatively good lost-time frequency rate of around 1.0; yet it was not the desired great result of zero. The company completed a statistically validated safety perception, and used the results to plan a senior management-led strategic initiative designed to address some of the fundamental flaws in their safety culture Some specific strategic targets and basic results included:

1. Forming a Safety Improvement Steering Committee (SISC) led by the CEO; three executive vice presidents, leading the areas where the significant risk was concentrated; two workface field employees serving as B.S. filters; and the safety director. The committee embarked on a journey to improve their personal knowledge of safety, plan and execute a safety improvement strategy, individually lead sponsored teams, and more. They met monthly, for a day, for two years, and the process continues as belief grows.
2. The initial strategy from the SISC included a focus on several major initiatives in 2008 and in 2009, including:
   a. Development of specific safety accountabilities for every safety-sensitive position in the company, including senior executives. The results of this nine-member, cross-functional executive lead team includes: specific accountabilities for all safety sensitive positions (about 700 employees); integrated annual leadership plans; and computer reporting and tracking software.
   b. Supervisor and leader training and development, focusing on an opportunity as identified in the survey. This ten-member team was lead by an executive vice president and also consisted mainly of supervisory and hourly personnel.
   c. Communication of the survey results, the strategic improvement strategy as developed by the SISC, key safety messages delivered by executives, on-going success stories and team results.
   d. Zero incident culture training delivered to all leaders and supervisors in a one-day workshop, including a personal, planned message delivered by someone in executive leadership at each of 25-plus sessions, covering nearly 250 people.
3. In 2009, the following initiatives were untaken:
   a. Recognition systems aimed at establishing specific methods to recognize good safety performance and behavior – "catching people doing things right." This process was led by an executive vice president and a team of eight to nine field people and yielded several results including a one-day, internal, training course in recognition skills.
   b. Near-miss reporting with the intent of "finding it and fixing it" at the workface level. This team of nine field personnel was also led by an executive.

This paper will focus on the near-miss reporting initiative, and attempt to provide some specific insight on safety from an executive's point of view. The study presents how, among other thing, a company can:

1. Get from 0.006 near misses reported per employee per year to nearly 4 per employee per year quickly.
2. Improve trust and get a much higher level of employee ownership and involvement.
3. Overcome organization barriers that kept previously rolled-out near-miss programs from being successful.

## The Near Miss Plan

A team was commissioned in March of 2009, and tasked to complete the following as excerpted from the team charter. To establish this plan, the executive sponsor, team leader, and CoreMedia consultant met for a day. The team was then convened to confirm this plan and begin work.


Team Charter
**Background:** The company takes its responsibilities as they relate to safety very seriously. The organization has completed a significant amount of work related to safety, resulting in the implementation of policies, programs, and practices aimed at protecting the well-being of our employees and the public we serve. The company has much to be proud of, particularly our desire for continuous improvement. The fact that our employees are still injured on the job is not an acceptable standard. We believe that achieving a *ZERO* incident culture is attainable and the management team is committed to achieve this standard of HSE excellence, and is committed to providing the necessary resources towards a *ZERO* injury workplace.

For each serious incident that occurs there are 189 to 600 near misses that happen. In order to drive the desired safety culture, the company must become an organization that learns from all its near misses.


**Scope:** Improve the company safety culture by developing a near-miss system that engages our people in identifying and solving day-to-day safety concerns.

**Deliverables:** The deliverables are as follows:

(a)     The work team shall deliver to the Safety Improvement Steering Committee (SISC) a plan that defines the process of near-miss reporting for the company. The plan will include:
   (i)      Clear and concise definition of near-miss reporting as it relates to the task employees may perform.
   (ii)     Simplified reporting, investigation, analysis, tracking systems and forms.
   (iii)    The training necessary for the employee to achieve the above.
   (iv)    Recommended goals and measurement criteria and methods.
   (v)     Recognition possibilities that motivate the employees to use near-miss reporting.

(b)     A roll-out strategy towards fully implementing near-miss reporting. The roll-out strategy may involve a gradual implementation of the plan to ensure success.

**Schedule:** The work team shall begin its work by March 17<sup>th</sup> with a goal of meeting the deliverables and presenting its recommendations to the SISC and HSE Steering Committee by June 3, 2009.   The details include:

- o   Month One:
    - ▪   Three-day meeting to include basic team training
    - ▪   Presentation to SISC
- o   Month Two:
    - ▪   Two-day meeting
    - ▪   Presentation to SISC
- o   Month Three:
    - ▪   Two-day meeting
    - ▪   Presentation to SISC and approval to pilot
- o   Month Four
    - ▪   Two-day meeting to prepare pilot training
    - ▪   One week of pilot training conducted by team
- o   Month Six
    - ▪   Pilot result review with SISC
    - ▪   Approval to implement in entire organization

Communication
The work team shall provide a monthly status report to the Safety Improvement Steering Committee (SISC).

Management Plan

Sponsor:         An operations director (Senior leader sponsored and participated in all team meetings) to:
(a) Act as project champion and assist in clearing roadblocks
(b) Remain involved in the teamwork by providing guidance through the development of the work
(c) Ensure issues are resolved and schedules are maintained
(d) Assume lead role in presenting recommendations

Board:           HSE Steering Committee (the senior leadership steering team of Vice Presidents) that:
(a) Make strategic decisions on the project direction and recommendations
(b) Monitor the project status and issues
(c) Make the final recommendations to the company management team for implementation

Team Leader:   A well respected "workface level" supervisor assigned to:
(a) Ensure that the project stays the course and stays within the charter

(b) Provide the necessary coordination of the team's efforts through the delegation of tasks and consolidation of information

(c) Take a prime role in communicating the project's activities to the affected parties

(d) Identify training needs of the team (if necessary)


Team Members:   The team consisted of a mixture of hourly and team leaders

Team Training
The project team was provided training by CoreMedia during the first meeting.   The training included the following major topics designed to engage the team in problem solving as they identified cultural gaps in the current near-miss process (that produced nine near misses for 1500 employees the previous year).  The agenda included:

- Why Safety Programs don't work
- Why Incidents Happen
- The Heinrich Triangle  Revisited
- Root Cause of Incidents
- The Accident Reaction Cycle
- The Six Criteria of Safety Excellence
- The Four-Step Safety Accountability Cycle
- The Six Levels of Safety Performance
- The Results of the Company's Safety Perception Survey
- The Ten Barriers and Five Fatal Flaws of Near-Miss Reporting Systems
- Simple, Non-math, Continuous Improvement Tools

## Tools and Techniques

To ensure efficient outcomes from the team, training support was used to introduce ground rules and some simple, non-math Six Sigma tools. In addition, the team was given a definition of what they were expected to deliver at the end of their efforts. These tools, techniques and expectations included:

- A Fishbone Diagram
- Process Flow Chart
- The POP statement (Purpose, Outcomes and Process)
- Methods to Measure, Motivate and Track
- An Action Item Matrix to Track Team Progress and Results


The Fishbone Diagram
The Fishbone Diagram was used next to better flesh out the details and establish better outcomes. The Fishbone Diagram is also an excellent tool any time you wish to provide guiding structure for a group in a brainstorming activity.


        This management tool is usually associated with Total Quality Management (TQM) programs and is often referred to as a Cause and Effect Diagram and Ishikawa chart. The name

"fishbone" originates with its original author, who drew the chart to resemble the skeleton of a fish.

Since the Fishbone Diagram is meant for brainstorming, it is much less structured than Fault Tree Analysis. It offers a framework that allows your problem-solving group to uncover unique issues facing your company. Figure 1 is the Fishbone Diagram developed for the near-miss analysis.
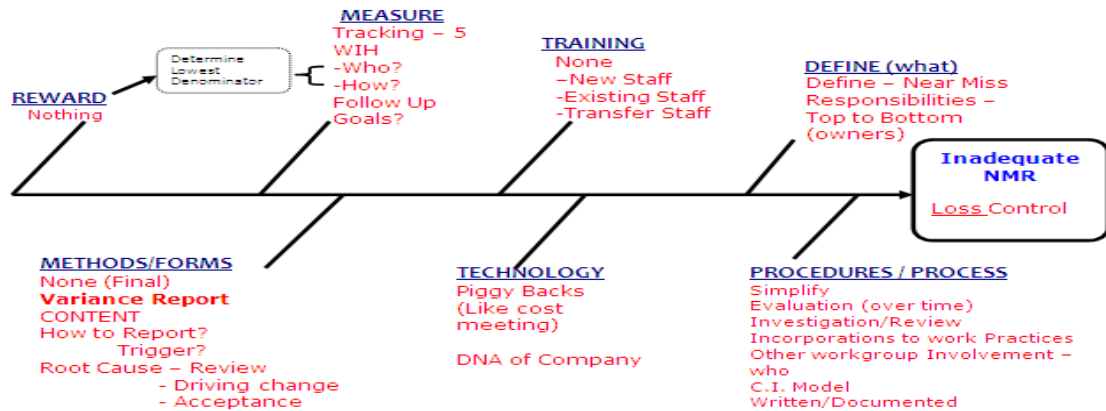


**Exhibit 1.  Team Fishbone Diagram**

The Process Flow Chart
The process flow chart (Figure 2) dissects the step-by-step activities that need to take place to deliver the desired result; in this case, a reported safety concern that is contained, resolved, and learned from. The near-miss team added a step to this by performing what is called a "product in process" review between each step to determine:

1.  What needs to happen (what tasks) to get from one step to the next?
2.  What can go wrong?  What can keep these tasks from being completed in a successful manner?
3.  What can be done to make sure these things do NOT go wrong?
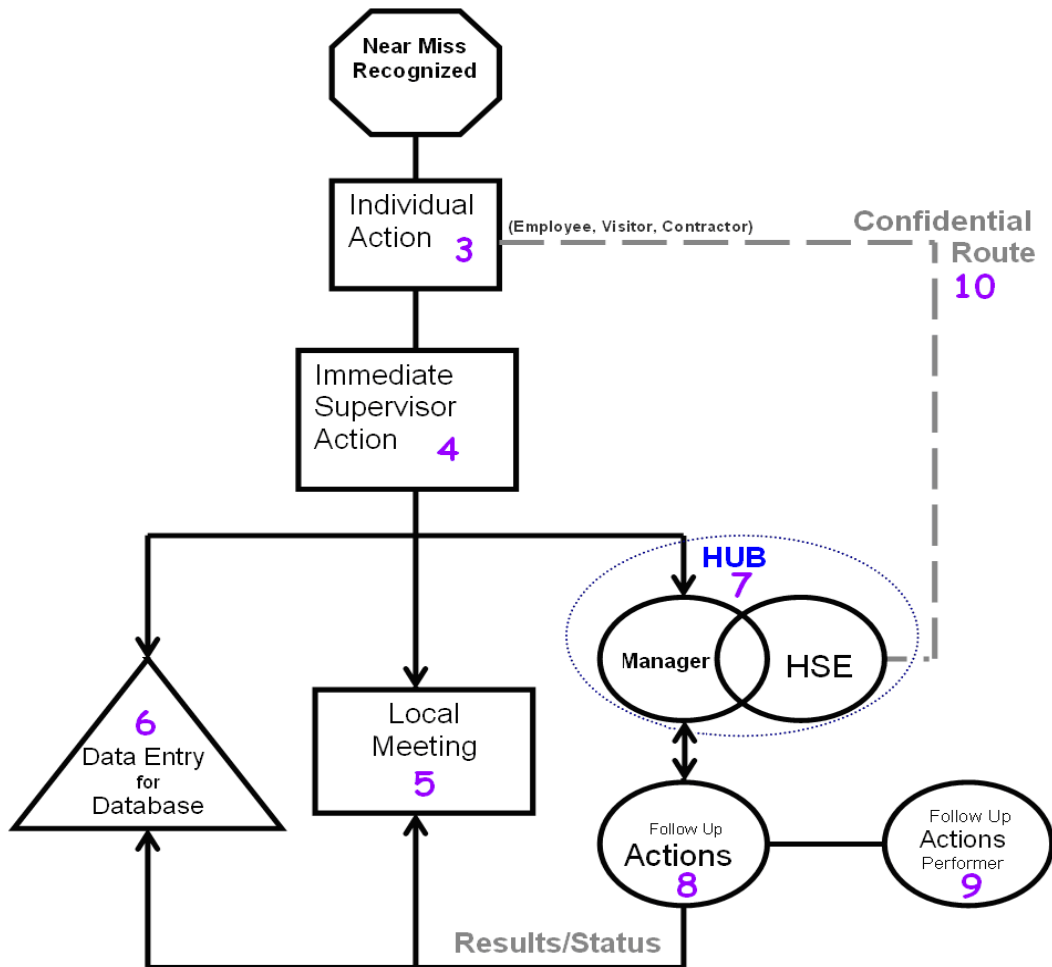
**Figure 2. Team Process Flow Diagram**

The POP Statement
One of the fundamental mechanisms to keep a team on target is for the team to develop a purpose outcomes and process (POP) statement for their task. By employing this tool, the team is able to remain focused and stay on task.  It's simple:

**Purpose:** This is a mini-mission statement. Why are we meeting? "What is our purpose for this meeting?" The team developed the following POP statements for the near miss reporting process statement:

*Team Purpose:* Improve company culture and build trust by inspiring all employees, contractors and visitors to report, analyze and communicate the lessons learned that result in positive, lasting change.

**Outcomes:** What will be accomplished when the stated purpose is achieved? This is a brainstorm list of the issues the team is designed to address. It is also the metric

for whether or not the tasks the team set out to accomplish have been accomplished (1). The whole team participates in setting these outcomes, and therefore seeks complete agreement on definitions of success. The team utilized the Fishbone Diagram and the Process Flow Chart to help determine the most significant outcomes for the project.  For near-miss reporting, the team's outcomes included:

- Define "near miss" and expand
- Risk ranking system
- Triggers (safety, quality, cost, productivity)
- Develop an efficient form
- Develop and Investigation process
    - Training
    - Clearing house
    - Review current methods
    - Root cause identification and analysis methods, beyond superficial
    - Review process to close (efficiency checks, results, change)
    - Tracking system to ensure follow-up
- Define and determine responsibilities at all organizational levels
- Measurement methods and goals at lowest common denominator
- Develop a written guideline
- Implementation plan
- Maximize employee involvement
- Answer given to employee for all generated near misses within seven days

**Process:** How will we accomplish our purpose and outcomes? Typically, what follows is a description of how the team will work (1). The team's process included:

- Filter all decisions through the six criteria of safety excellence.
- Assign tasks to individual or team sub groups complete and report back to the team.
- Quick decisions and move on.

Outcomes
Following along with the outcomes listed above, some example results from the team included:

**The Definition:** The team established the following definition for a near miss.   Note the nickname "Waldo."   The team advanced the scope of the project to a "Where's Waldo" search mentality where anything (safety, quality, cost, production) that is not "right" can be reported and addressed through this single process.  That goal was advanced to the SISC and will be considered after the near miss (safety) process is successfully implemented.  Waldo became defined as:

*Waldo:*  Any occurrence, condition or action that if improved and corrected, will result in a safer, more efficient work environment and world class performance.

**Risk Ranking System:** Keeping with outcome goals of simple and easy to use, the team developed and adopted a risk ranking system they believed hit these targets.   It is described below:

RED: Stop immediately! Any unsafe condition or act can result in death, serious personal injury, property damage or loss.

YELLOW: Use caution.  Any unsafe condition or act can result in moderate personal injury, property damage or loss.

GREEN: Continue and report unsafe condition or act has low risk of personal injury, damage or loss.

**The Form:** Incorporating the new definition and risk rank method, the following form was designed, keeping in mind the need for simplicity. Figure 3 is the front of the form, and Figure 4 is the back side.

**Figure 3.  Front of the Near Miss Form**

*The back view*. Note that an additional outcome was an investigation system. The back of the form was used to incorporate the simple, quick, and easy to use "5 Why" methodology, to be used only on reported items ranked as red.

## 5 WHYS ROOT CAUSE ANALYSIS

**1ST Why Direct Cause(s):**

**2nd Why Contributing Cause(s):**

**3rd Why Contributing Cause(s):**

**4th Why Contributing Cause(s):**

**5th Why Contributing Cause(s):**

**Figure 4.   The Back of the Near Miss Form**

**Measures:** What types of items can be measured to determine if the process is working? The team came up with several. From the outcome standpoint, measures included:

- Total number reported
- Number reported per department or crew
- Number reported by individual
- Percent reported Red, Yellow, or Green per risk rank
- Percent of Red where 5 Why form completed
- Number open and number closed
- Percent closed within three days
- Number reported anonymously
- Number reported by visitors and contractors

Additionally, the team measured several key items that existed pre-pilot and post pilot to determine what worked and what did not. Two of the twelve or so measures are presented below in Figures 5 and 6.

## I know where the current near miss form is located.

|  | Pre-Pilot Survey | Post Pilot Survey |
|---|---|---|
| Range | 1-5 | 2-5 |
| Average score | 2.30 | 4.38 |
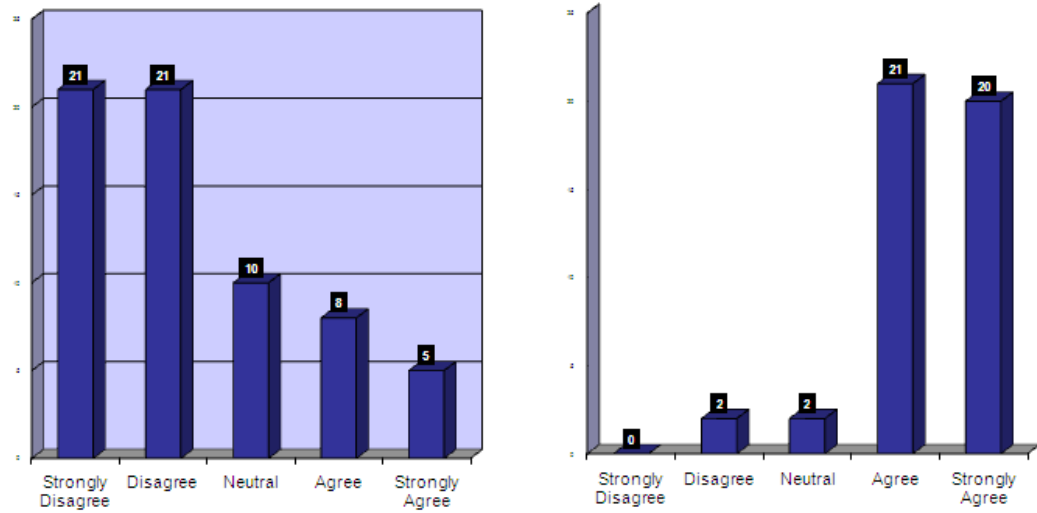


**Figure 5.  Pre- and Post-Pilot Survey Data**

## Have you ever generated/filled out a near miss report?

| Pre- Pilot Survey | Post Pilot Survey |
| --- | --- |
| | |
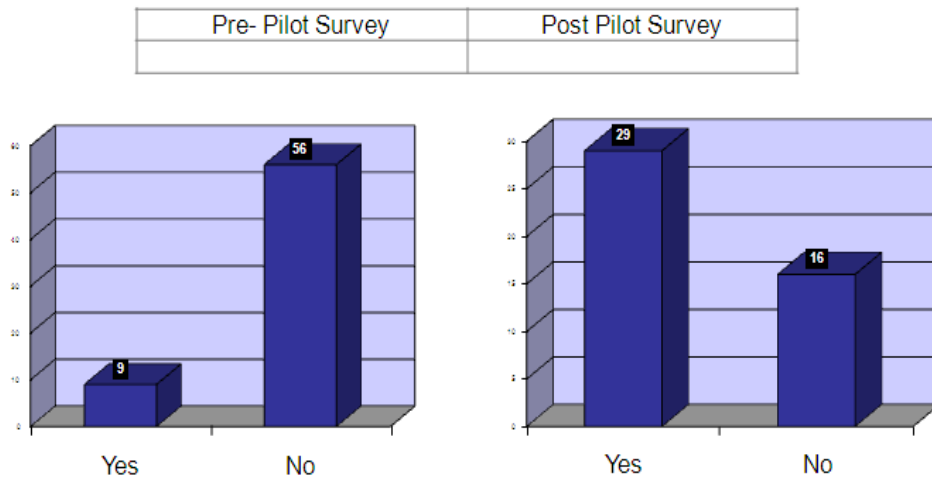
**Figure 6. Pre- and Post-Pilot Survey Data**

The Action Item Matrix

In order to deliver closure on the team POP, there are a significant number of tasks that need to be done by a variety of people in varying time frames (1). To effectively manage this wide spectrum, the teams used an action item matrix (AIM), a simple five-column spreadsheet that lists:

- *Item number*. This is a number for each item on the list. As action items are completed, they keep their number and are moved to the bottom of the list. This way there is always a record of what has been completed, as well as what still needs to be accomplished.
- *Task to be accomplished*. This is a simple, succinct statement of the issue. Each task or action item is a bite-size, manageable piece of the larger project scope.
- *The team*. This is a list of the "volunteers" who have agreed to accomplish this action item. There may be one or more, or, in some cases, no one if the assignment isn't ready.
- *The date*. This is the next report date for the task team on this action item. Sometimes it is a completion date, sometimes a progress report date.
- *Comments*. This is a field to succinctly write down whatever is pertinent to the action item, e.g., "awaiting vendor quote."

| | ACTION ITEM MATRIX | | | | |
|---|---|---|---|---|---|
| Team: Troy, Al, Russ, Shane, Wade, Andre, Mike, Melody, Dick | | | | Date: 3-18-09 | |
| Item | Action Item/ Task | Who | Target | Status | Comments |
| 1 | Develop an Investigation Process | Dick, Mike, Al, Russ, Shane | 3/19/2009 | Complete | Include outcomes listed on POP |
| 2 | Develop Triggers and Forms | Andre, Melody, Wade, Troy | 18-Mar-09 | Draft | Due 3-24-09 |
| 3 | Bring a name to consider for the process | Team | 19-Mar-09 | Complete | |
| 4 | Finalize the charter to incorporate name and process description | Dick | 19-Mar-09 | Done | Send to team |
| 5 | Inform the team of SISC comments | Dick and Andre | 9-Apr-09 | Done | email |
| 6 | Complete electronic draft form and send to team | Melody | 24-Mar-09 | Done | Want to have to show SISC |
| 7 | Contact list for team | Dick | 3/24/2009 | Done | Send to team |
| 8 | Check with field personel on "pain thresholds" for Red, Yellow, Green | Team | 4/17/2009 | | Upon SISC go ahead.  Include all categories for cost, downtime, safety, Q.C. |

**Figure 7.  Abridged Example of Team Action Item Matrix (AIM)**

Written Guideline
All of the above tools serve several purposes, such as identifying complaints, setting goals and outcomes, guiding the process, and documenting the efforts.  All this was tied together in a written best practices document.   Figure 8 is a table of contents.

## Table of Contents

**Figure 8.  Table of Contents for Written Guidelines**


Implementation and Roll Out

After a successful pilot, the SISC approved a roll-out based on the following implementation plan as developed by the team. Figure 9 is the table of contents for the implementation plan.

## Table of Contents

**Exhibit 8. Table of Contents Implementation Plan**

## Results and Summary

The numbers indicate ongoing success throughout this process. Driving safety with specific visible actions from leadership's point of view and designed to engage the entire organization, the following lagging indicator objectives have been achieved:

- Medical aid injury rates are down by over 50%
- Lost-time injury rates are down over 50%

- Severity rates are down 75%, near 5%.
- Preventable vehicle incidents are down over 40%.

Basing the success on the facts and figures above, however, falls short of the real outcomes and benefits by failing to recognize the cultural transformation that's taking place. The full story includes how these numbers were achieved. The following points provide a summary of the impact on the company's overall effort:

- A workface-level team steps up to take a leadership role and designs a process in no small part because leadership made a plan and asked the team to integrate it into their overall process, enabling this team, as well as the organization, to be successful.

- The team was commissioned to design the process. They developed such ownership that they requested to drive the pilot AND then plan and drive the overall company implementation.

- The per-employee reporting rate increased exponentially higher than anything ever seen before.

- A closure rate of 95% was achieved within three days on action items, all made visible to the workface "solution providers," by incorporating near-miss reviews into the weekly production meetings.

- Integration!  Based on the success so far, leadership is considering expanding the scope of this process to encourage employees to report any concern that detracts from successful job completion, such as cost over-runs,  downtime and quality.  Finally, the following triggers, shown in Figure 10, are under consideration to expand the process.

| Scope/Quality | Red | Yellow | Green |
|---|---|---|---|
| | Design Oversight Inadequate Materials & Equipment | Appropriate Field Change | Minor Defect Noted |

| Cost | Red | Yellow | Green |
|---|---|---|---|
| | >20% $10,000 | 10-20% 1K-$10,000 | 0-10% < $1000 |

| Timing | Red | Yellow | Green |
|---|---|---|---|
| | Lost Work I Day | Lost Work ½ Day | Lost Work 1-2 Hours |

**Figure 10.  Triggers**