

SAFETY CULTURE: THE FOUNDATION OF SUCCESS

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SUMMARY

A strong safety culture is the foundation for achieving corporate and operational success. Like the construction of a building the foundation is comprised of a number of different components that the entire structure is built on. Building a safety culture is similar as it also has numerous components contributing to its structure including: recruitment and hiring, training, testing, teamwork, communication, auditing and relationship building. This paper will explore the various pieces needed to build a strong safety culture which in turn creates a foundation that permeates to all aspects of the business. The corporate principles that lead to a successful safety culture are generally the same principles that create success in other areas of an organization and a strong bottom line.

There is nothing more vital to the stability, success and profitability for any organization than having a strong safety culture embedded into the fabric of the company. This holds true for all types of companies ranging from hardware stores to oil refineries, from restaurants to construction, and from retail to railroads. Trying to address the perceived and inherent risks of any occupation or work sector is pointless without having a proper foundation of a robust and dynamic safety culture. The success of such a foundation in any company is not evident by the absent of injuries or accidents, i.e. "the numbers", but rather by the overall company approach to how its day to day business is conducted.

INTRODUCTION

Keolis is an international leader in public transportation with operations in 13 countries. With approximately 53,000 employees worldwide Keolis provides public transportation services in the areas of rail, trams (light rail), busses, metros, bikes and the management of car parks. Keolis would not have succeeded to be a world leader in transportation without having a strong foundation of safety filtering through the entire organization with its varied languages and vastly unique and diverse cultural differences. At Keolis we have found out that safety is a universal language that does not require translation and transcends all countries and cultures.

In the United States Keolis, through its subsidiary Keolis Rail Services Virginia (KRSV), operates and maintains the Virginia Railway Express (VRE) commuter rail system. The VRE is a quasi-governmental agency providing commuter rail service from Northern Virginia to Washington, DC. The service operates 32 trains per day carrying approximately 20,000 commuters daily. KRSV maintains 20 locomotives and 93 cars for the service. A total of 114 employees including subcontractors provide the resources necessary to operate the service. Although the service is provided by different entities there is a singular approach to safety and the creation of a safety culture.

ELEMENTS THAT DRIVE AND EFFECTIVE SAFETY CULTURE

From the onset of the operation in 2010 KRSV had the following the philosophy regarding safety - A company cannot manage safety directly, but rather safety is a result of a variety of inputs including: culture, hiring and recruitment practices, training, effective and open communication, aggressive compliance monitoring, forging strong working relationships with the various stakeholders, proactive risk and incident assessment and the implementation of appropriate incentive programs. Any company that is successful in

the area of safety understands how these factors, along with others, when properly implemented can lead to a strong organization. From the moment the plans and programs were implemented to take over the service from the previous operator, these factors drove KRSV to make the safe operation of the service its number one goal, not only for its employees, but also for VRE's passengers and equipment.

Recruitment and Hiring

Any organization or company is only as strong as the individuals making up that company. When KRSV was preparing to take over service in January of 2010, it was anticipated that the employees from the previous operator would transfer to Keolis and remain on the service. This would have been an easy staffing solution because KRSV could use these individuals, who were already trained and qualified on the territory, and immediately plug them into the operation. When KRSV realized that these people were not going to remain on the service it was originally thought that this would be a negative. However, during the transition period we discovered that many of these employees, some of which had been on the service with the prior operator for over 18 years, brought with them a culture and attitude that was not the foundation that KRSV envisioned for the service. What could have been a serious negative turned into a positive by the necessity to recruit individuals that the KRSV Mobilization Team determined had the right mix of qualities and characteristics that would lead to enhanced operational and safety performance.

Even though it took longer, initially cost more, and delayed the start of the service by two weeks, KRSV was able to recruit and hire individuals who could be trained and qualified for the technical aspects of the positions. These men and women joined Keolis with no ingrained philosophies towards work practices and safety that were counter to KRSV's approach. This gave KRSV a clean slate from the beginning to develop the right culture towards safety in those critical first weeks and months.

The ability to hire a new and diverse workforce proved to be an important first step in developing KRSV's safety culture. Since there was not an established way of approaching the work, best practices from both passenger and freight operations were melded together. KRSV worked closely with the federal authorities (FRA) and host railroads to ensure that the initial training was relevant and up to date. This enabled KRSV to have a solid core of employees who wanted to be here, were eager to learn, and who were ready to do things the right way. Once this was done, subsequent hires were easily integrated into the current workforce.

Comprehensive and Responsive Training Program

KRSV understood that in order to be successful there needed to be a robust and comprehensive training program from day one. The criteria of the program were simple. Provide employees with the skills and knowledge needed to safely operate passenger trains for the VRE. Even though the goals of the program were very clear, the ability to personalize the program to meet the individual needs of the employees was challenging.

KRSV is formed of managers and craft employees from unique backgrounds. Some had a great deal of freight rail experience, while others had worked only in passenger service. Therefore, it was incumbent upon the training team at KRSV to develop a program that provided the right level of technical training based on the employee's knowledge level. Some employees had never operated or conducted a passenger train so learning the equipment, train handling and interaction with the public was paramount. Others with passenger experience needed a higher level of understanding of the railroad operating rules or experience operating in a mixed passenger and freight environment.

The KRSV training program is based on the philosophy that all individuals learn differently. The delivery of training is designed to allow for this difference. The training plan is designed around the SMART philosophy of training: S – Specific, M – Measurable, A – Achievable, R – Realistic and T – Timely. Using the SMART principals as a guideline for the development of all its training, KRSV is able to create relevant training tailored to individual needs.

The rail industry is in a dramatic period of growth and there is a concern at KRSV, and the rail industry in general, that training can become stale over time. KRSV found that some of its early training materials were quickly becoming outdated and non-relevant in today's environment. In 2011 KRSV undertook a robust effort to update all required training material to insure it covered current operational needs. This effort was not done in a vacuum. Employees who completed training in 2011 were given a detailed evaluation sheet that provided feedback directly to KRSV regarding the training and presentation of the material. The feedback included evaluations of the material, the quality of instruction and the timeliness of the material. KRSV values this type of feedback which is used to strengthen future training efforts.

Effective and Open Communication

Open, productive and meaningful communication is a key to any successful safety program. A company must strive to remove any barriers to communication within the entire organization. Employees should feel comfortable and encouraged to discuss any matter with any manager, particularly when it comes to safety

issues. The last thing a company wants is for its employees to think that managers really do not care about safety or them. Unfortunately, this belief is quickly spread throughout an organization when management fails to address a concern that was brought to their attention by an employee. Regardless of the reason, failure to adequately respond is seen as ignoring the needs of its employees, a frame of mind that is hard to change and fundamentally undermines a company's safety goals.

When a safety concern is brought to the attention of management at KRSV it is acknowledged immediately whether or not it can be resolved quickly and easily. Simple things are addressed immediately while more complex safety concerns are mitigated where possible with long term solutions developed with the assistance of the VRE or host railroads. Furthermore, all the stakeholders in VRE meet regularly to discuss and develop plans that address safety related risks.

KRSV utilizes numerous communication venues including both formal and informal ones. Every day management meets with all operating crews and mechanical employees in a formal job briefing prior to the employee starting work. There is active participation in these job briefings by the manager and the employees as they review the work activities for the day. This is an ideal setting for management and an employee to openly discuss safety related issues in a group environment and in a timely manner. KRSV management has always known and valued the input of the employees who are the closest to the operations and who are most qualified to identify safety concerns.

It is vital to the safety success of KRSV that any concerns raised during this process are communicated to all employees potentially affected by a particular issue. This is done in a variety of ways including the job briefing process itself, informal emails, formal notices and eventual changes in operating procedures and practices. In addition to the formal job briefing process, KRSV managers frequently spend informal but quality time at the crew hotel during the arrival and departure of the operating crews. Here issues can be openly discussed and debated over a cup of coffee. Though these sessions are less structured and informal, they have produced some of the best information regarding safety and operational related concerns.

Communication is not limited to intra-departments. Everyday operating crews talk to mechanical and facility personnel regarding equipment and building issues. When a train arrives into the yard the conductor and engineer meet with a mechanical foreman to identify any potential problems they may have had with the equipment that day. This provides the mechanical department with the most up to date and relevant equipment information. If there is a safety issue with a piece of equipment, it gets elevated by KRSV management for maintenance and repair with a scheduled follow up evaluation.

KRSV conducts a mandatory staff meeting every week with all management employees from each department. The meeting follows an agenda set by the General Manager and provides a formal setting to share information about issues and concerns at other departments and locations. In addition, safety issues, improvement and maintenance projects are presented along with operational plans for the upcoming week. The weekly staff meeting provides another opportunity to disseminate relevant and important safety and operational information throughout the organization.

At KRSV we have found that open and meaningful conversation is one of the most effective ways to create an environment that promotes a strong safety culture by identifying and mitigating hazards before an incident occurs, and in the event of an accident, all of our employees take away the lessons learned helping to ensure similar events do not occur again.

Diligent Testing and Observations of Employees by Management

In order to determine the effectiveness of its safety culture, a company must establish a method of evaluation. From an overall perspective the number of accidents or incidents in a given time period provides one such method, and from a regulatory or risk point of view this may be sufficient. However, such a broad perspective provides little useful data to the company. Any company that fails to put an emphasis on safety may have a "clean" record, but that may be more a measure of luck than of the quality of its safety culture. A more useful tool for measuring the effectiveness of a safety culture is through testing and observations of employees in the field for compliance with railroad operating and safety rules, special instructions and company policies.

As required by federal regulations KRSV's Program of Operational Tests and Inspections (49 CFR Parts 217 and 218) identifies specific testing scenarios, methodologies, procedures and frequencies that KRSV managers must perform without prior knowledge given to the tested employee. In addition, our managers are always observing crews for rule compliance, safety habits, and overall situational awareness. KRSV managers receive extensive training not only in the specific rules and policies under which KRSV employees operate, but also in how to educate, and as necessary to enforce, these rules and policies.

Nevertheless, humans always have, and always will, play a vital role in the operation of a railroad, but despite all the training and education there will be times when there is a rule violation or some other mistake

that puts an employee, a co-worker or railroad property in jeopardy. While there are circumstances that require some form of disciplinary action, the real benefit in requiring diligent testing and observing of employees is to provide an opportunity to coach and counsel an employee in the correct and safe method to perform a particular task or duty. The goal of coaching and counselling is not only for the employee to learn from his or her mistake but to have others also learn. As a practice when an employee is involved in an event such as an injury or a rule violation, that employee is required to meet with all other employees in their work group to explain the event, their culpability in that event and what could have been done to prevent or mitigate the results. The principle goal of our testing program is to instil positive, safe habits into each employee. KRSV has found that putting the emphasis on training and correcting unsafe habits generates more positive results than a more punitive policy.

The safety culture at KRSV or at any other company is not static, it is a dynamic institutional mindset that requires continued analysis and attention, and there is not a more effective and timely tool in supporting a company's safety culture than an established program of testing and observing its employees.

Partnering with the VRE and the host railroads, CSX, Norfolk Southern, and Amtrak

From the very beginning Keolis worked hard, and continues to work hard, to establish and grow strong working relationships with the various stakeholders in this operation, primarily the VRE and the host railroads CSX, Norfolk Southern and Amtrak. As discussed above, KRSV had to staff virtually the entire transportation department, many of whom had little or no operating experience on the territories on which VRE operates. Essentially KRSV had to train and qualify our transportation personnel on three different operating rules, signal systems and territories. All KRSV training is geared toward compliance with the three railroads' operating rules, and without using the resources gained from these strong working relationships we could not have developed such robust and effective training and testing programs. To ensure continued compliance KRSV managers meet at least monthly with front line managers from the host railroads to discuss ongoing operating and safety issues, including participation in joint testing of employees. In addition, there is regular communication in regards to day to day operations and how to best address specific operating or safety issues that arise. Periodically, training officials with the host railroads will actually have classroom training sessions with KRSV managers when implementing major rule changes or when they otherwise deem necessary.

Our contractual relationship with the VRE has evolved into a strong partnership with open, transparent communication between KRSV managers and their counterparts at the VRE. Furthermore, VRE and Keolis work closely in developing various safety initiatives and training programs such as new locomotive orientation, emergency preparedness training and customer service. Additionally, KRSV managers, along with managers from the host railroads, actively participate in the VRE's Meet the Management and On Line Forum functions. These events allow commuters who use the VRE service the opportunity to ask questions, voice concerns and provide other valuable feedback on the quality and safety of the service KRSV and VRE are providing.

Continual participation from the VRE and the host railroads in the development and review of our training program provides different perspectives and opinions of KRSV's safety culture. We are always looking to improve, and these other entities provide us independent and valuable input in identifying areas where we can focus our attention.

Benchmarking with Industry Leaders in Rail Safety

It is important for any organization to realize that its approach to safety is not the "only" approach, regardless of an organization's safety track record. There is a myopic tendency to stick to the procedures and patterns that develop naturally in a company's day to day operations. Organizations, just like people, not only resist change but they start to lose the ability to objectively assess the safety and effectiveness of these established procedures. In its continuing efforts to maintain a positive and effective safety culture, KRSV endeavours to keep a fresh perspective toward operational efficiency and safety. We find that benchmarking industry leaders in rail safety is an effective tool in keeping that fresh perspective

Organizations that excel in safety are proud of the safety culture they have cultivated, and generally the safety professionals from these organizations are more than willing to meet and discuss their ideas and philosophy in developing and maintaining a successful and effective safety culture. KRSV management have found these face to face benchmarking meetings with safety professionals from within and outside the rail industry to be a treasure trove of ideas, resources and inspiration.

The idea is not to find a "cut and paste" solution from the benchmarked company. For a myriad of reasons simply adopting a verbatim safety policy or program is unreasonable and impractical. The goal of any benchmarking exercise is to get a feel of the company's culture, its corporate attitudes and philosophy, and the reasons and rationale behind specific programs. When appropriate, KRSV will incorporate, to one

degree or another, the ideas gleaned from these benchmarking exercises into its own operational and safety programs, rules and procedures.

Critical Review of Incidents

The railroad industry should be proud in its accomplishments and achievements in the area of safety. Great strides have been made throughout the years through enhanced training and the implementation of various rules, regulations, process and procedures to make an inherently dangerous occupation safer. By no means is this task complete, and dedicated railroad managers and employees throughout the industry continue to work to make it an even safer place.

Regardless of these efforts, safety incidents will continue to occur. From the minor slip, trip or fall on a sidewalk to the horrific and tragic derailment on July 24, 2013 in Spain, employees are always reminded of the risk involved in what we do. It would be a disservice to the entire industry if through these incidents and tragedies something positive wasn't gained. We have seen this in the past with actions that have systemically changed the industry. For instance, after the Amtrak/Conrail accident in Chase, MD in 1986, a drug and alcohol testing and prevention program was implemented (49CFR part 219). After the head on collision between Metrolink and Union Pacific at Chatsworth, CA in 2008, a ban on electronic devices was enacted and the birth of positive train control arrived. With the recent information coming from the accident in Spain one can only think if the lessons learned from Chatsworth had been implemented there the tragedy might never have occurred.

At KRSV we have learned valuable lessons from these tragic events and to a much lesser extent from incidents that have occurred on our own property. Whenever we experience an incident such as an injury or operational rule violation, a formal, detailed and structured review of the incident is conducted. Participants in this review vary but always include: the General Manager, Safety Manger, the employee and the employee's direct supervisor.

During these critical incident reviews a detailed re-enactment of the event is conducted including interviews with the employee and witnesses, photographs are taken of relevant areas or items, sketches are made and all details, no matter how small or seemingly insignificant, are gathered. This information is then used to develop a complete and thorough understanding of what occurred, how it happened, how the environment effected the situation and what the employee did or did not do to contribute to the incident. Most importantly, we learn what can be done to prevent it from occurring again or to mitigate the results should a similar situation occur in the future.

The KRSV Safety Manager utilizes all this information to develop a report of the incident including root cause analysis and corrective actions. The employee after going through the process is required to conduct job briefings with co-workers regarding the incident, their culpability in the event, and how it could have been prevented. In almost all cases there is something the employee did or didn't do to prevent or mitigate the incident.

In addition, it is the responsibility of the Safety Manager to develop and implement, upon approval of the General Manager, any changes to work practices, additional or supplementary alterations and additions to personal protective equipment or modifications to the work environment. Of course, any work related changes are communicated throughout the organization. The structure and governance of KRSV promotes and allows the local management team to act quickly in making organizational and operational changes in the efforts of safety.

The ability to quickly investigate incidents plays a vital role in a strong safety culture. Learning from our mistakes, and the mistakes of others, provides the opportunity to enhance process and procedures to prevent and mitigate accidents. Whereas ignoring an incident, failing to thoroughly investigate the root cause or developing corrective actions to prevent reoccurrence is simply negligence.

Internal and External Audits of Testing and Training Programs

There is an old Russian maxim "Doveryai no Proveryai" which translates to "Trust and Verify." This phrase became popular during the presidency of Ronald Regan when he described the U.S. relationship with the Soviet Union during the cold war. This same phrase has a home with the KRSV safety culture.

KRSV along with most organizations trust that their managers and employees are doing what they are supposed to do when performing their duties, including working safety. How does a company verify that? KRSV employs a number of different internal and external audits of its training and testing programs to ensure compliance with the latest rules and regulations. It is not only important to know that our programs are relevant and up to date, but that we are properly recording and documenting our efforts.

KRSV's testing program requires our managers to regularly "audit" our employees for operational and safety compliance. Those audits are entered into a computerized recording system which in turn is audited

quarterly to validate the completeness and accuracy of the records. These quarterly audits verify that all employees and managers are participating in the program as required. Checks and rechecks help KRSV identify any negative trends as it relates to operational, rule and safety compliance.

The testing program is also subject to various external audits. There is annual audit of the program by leading industry experts in its entirety which covers all employees, including managers, and the recordkeeping processes. This annual audit generates a detailed evaluation of the program as it relates to any regulatory changes that might have occurred confirming the program is up to date. These outside audits, in conjunction with the feedback received regarding deficiencies, allow for an ever evolving and constantly improving program.

The audit findings coupled with any new regulatory rules and guidelines along with input from the VRE and host railroads, serve as the guidelines for adding or augmenting KRSV's training program. Every year KRSV management revises and updates its official Training Plan to comply with any regulatory or operational changes or needs. This would include addressing organizational trends (e.g. changing established undesired habits) and industry trends (e.g. cell phone usage). Existing training materials are also revised or removed as necessary. Once the changes are made to the training program, representatives of the VRE and host railroads will attend and audit the training classes and materials. These training audits provide valuable feedback as to relevancy and adequacy of the curriculum, and any changes or additions are quickly incorporated into the program.

Participation in Industry and Regulatory Associations

During the start up phase KRSV joined several industry organizations such as the American Public Transportation Association (APTA) and the American Short Line Railroad Association (ASLRRA) which proved to be valuable in developing programs and policies useful and necessary for successful operation of the service. In addition, we sought the advice and recommendations of the primary regulatory agency, the Federal Railroad Administration (FRA), in developing the various programs it required.

KRSV continues to remain active in these industry organizations and their various committees. The benefits to KRSV are numerous, including identifying best practices in maintenance, operations and safety. They provide an appropriate forum to discuss specific safety issues with a wide and diverse group of industry leaders. Learning what works and doesn't work in other operations throughout North America allows KRSV another effective measure of its own policies, procedures and culture.

KRSV also finds participation in the FRA's Railroad Safety Advisory Committee (RSAC) to be very helpful in keeping up with pending regulatory changes and additions. Interpretation, implementation and compliance issues are discussed which help KRSV to develop practical programs that address the safety concerns addressed by a specific law or regulation. The regulatory environment, particularly in rail safety, is seeing significant change and growth, and knowing what is on the regulatory horizon gives KRSV the opportunity to plan and budget accordingly. KRSV's entire operation must be viewed through the lens of regulatory compliance, and the direction and evolution of our safety culture must be cognizant of, and logically adhere to, those regulatory requirements.

KRSV does not operate in a vacuum; the industry is in a constant state of change. Staying ahead of regulatory changes and industry trends allows KRSV to remain proactive in developing and improving those critical pieces that drive KRSV's operational and safety success.

Encouragement of Employee Involvement in Safety Initiatives

Developing a successful safety culture requires active participation in all levels of an organization, from the CEO down to the newest unskilled labourer. A large reason why KRSV enjoys having a strong safety culture is that it strives to have every employee take ownership of their own safety and the safety of their co-workers.

One prime example of this was a grass roots program KRSV implemented in 2011 called the Individual Safety Action Plan and Improvement Program. For this, employees were asked to provide KRSV's Manager of Safety and Training an individual safety plan where each employee individually identified inherent risks in their respected position, how this employee would mitigate those risks, what support they needed from the company in regards to mitigation and elimination of those risks, and what as an individual they could do to provide a safer work environment for all employees.

Even though this program was voluntary, the response was better than expected by over 50% of the employees submitting plans. The real benefits of this particular program was that it created individual ownership and accountability in the safety process, identified previously unidentified risks and provided numerous recommendations to mitigate a variety of safety related issues.

Our employees are encouraged to talk to their managers about safety issues. They understand that we need to know about unsafe acts and conditions so we can address the root cause. We must determine whether there is a lack of understanding or confusion about a rule or policy, a deficiency in our training, or just a poor attitude. Obviously each of these requires a different approach in fixing or mitigating, but once the root cause or hazard is identified, continued employee involvement is essential in developing an appropriate response or initiative. KRSV can provide the education, training and tools to properly perform a task, but ultimately the onus falls on the employee to safely carry out that task day in and day out.

KRSV does not believe that being simply reactive is sufficient in maintaining its safety culture, we encourage our employees to actively think about safety and how it relates to the performance of their duties in daily job briefings, rules classes and through periodic safety events and contests. It is also worth repeating that without the active involvement of KRSV employees in various safety initiatives, we would lose the very resource we rely most upon in identifying hazards, creating a positive attitude toward safety, instilling safe habits and changing unsafe behaviours. It is this understanding along with recognition of each employee's contribution in working safe and maintaining a safe working environment that supports KRSV's healthy safety culture.

CONCLUSION

The development of KRSV's safety culture began from the earliest mobilization of the project and continues to evolve to this day. It develops from many different facets of the organization including recruitment and hiring, training, testing, teamwork, communication, auditing and relationship building. It is not static, and maintaining a positive and effective culture is a continuous and ongoing process that takes place every day in every department with every employee. This culture permeates throughout the company and is clearly reflected in the overall success of the organization.