NAC Executive Insights

Safety Culture Series

Safety Culture — Improving Construction Profitability

Key Points

- A strong safety culture can improve construction profitability.
- Companies with strong safety cultures routinely work an unbroken string of over a million hours without a recordable injury.
- A strong safety culture significantly reduces direct and indirect costs associated with injuries.
- A strong safety culture is good business. It increases employee morale and dedication, productivity, recruitment, retention, and reputation. Thus, it increases profit.

Introduction

This Executive Insight discusses the role of a strong safety culture in improving profitability in construction. Profitability depends to a large extent on "productivity," the efficiency and effectiveness with which resources are utilized to complete projects. Productivity, in turn, is dependent on various aspects, including planning, project engineering and design, supply chain management, project management, construction labor efficiency, equipment maintenance and utilization, and technology employed.

Labor efficiency, one of the most important factors in determining productivity, is a function of worker skill, training, motivation, and workflow organization. In the Executive Insight Series on Safety Culture, various elements of safety culture are discussed that directly affect labor efficiency as well as safety. See "For Further Reading" (page 5) for specific Executive Insights in this series that discuss ways to improve labor efficiency and effectiveness.

It takes effort, time, and resources to implement and maintain the elements of a strong safety culture. While these efforts, time, and resources are justified in terms of the moral imperative of increased safety alone, the question arises as to whether the cost of implementing and maintaining a safety culture has a negative effect on overall project productivity and thus profitability.

There is ample evidence that the safety culture of an organization contributes to labor productivity by increasing morale, and minimizing injuries, accidents, and disruptions to work schedules. The evidence, demonstrated by companies with strong safety cultures, shows that the benefits of increased labor productivity and the reduction in number and the cost of accidents far outweigh the costs associated with implementing and maintaining a strong safety culture.

How a Strong Safety Culture Improves Profitability

Safety culture significantly influences productivity and thus profitability in several ways:

- **Improved morale and employee engagement:** When workers feel that their safety is genuinely valued by the company, they are more engaged and motivated. A positive safety culture enhances mutual trust and open communications between management and workers, leading to higher morale and engagement. Engaged employees are more likely to be productive and contribute positively to the company's bottom line.
- **Reduced accidents and downtime:** A strong safety culture fosters an environment where all employees prioritize the safety of their fellow employees, safety measures, and protocols. This reduces the likelihood of workplace accidents, injuries, and fatalities. Fewer accidents, injuries, and fatalities mean less downtime for investigations, repairs, and legal procedures. Fewer accidents, injuries, and fatalities also reduce workers' compensation claims, medical expenses, and insurance premiums.
- **Enhanced reputation and client satisfaction**: Construction companies with a strong safety culture enjoy much better reputations within the industry. Clients strongly prefer to work with contractors who prioritize safety because it directly reflects the company’s commitment to quality and professionalism. A strong reputation can lead to repeat business, referrals, and higher client satisfaction, which ultimately boosts profitability.
- **Efficiency and project performance:** Safety protocols are aligned with best practices for project management and execution. Companies that prioritize safety have better-planned projects and clear protocols for risk assessment, hazard mitigation, and emergency response. This enhanced efficiency can lead to better project performance, meeting deadlines, and delivering high-quality skilled work.
- **Compliance with regulations:** Adherence to safety regulations and standards is essential for construction companies to operate legally. A strong safety culture ensures that employees are aware of all relevant regulations and are trained to comply with them. Avoiding non-compliance fines and penalties preserves the company's financial resources and reputation.
- **Attracting and retaining talent:** In the very competitive labor market, skilled workers strongly prefer to work for companies that prioritize their safety and well-being. A strong safety culture can be a key differentiator for attracting and retaining top talent in the construction industry. Lower turnover rates reduce recruitment and training costs while increasing productivity levels.

Apparent Costs of Implementing and Maintaining a Safety Culture

Safety measures include costs for training, equipment, and implementing safety protocols. Mistakenly, some individuals may view these costs as burdensome expenses and meaningless paperwork exercises rather than investments in the genuine well-being of workers and the long-term success of the company and its projects. These erroneous perceptions are the direct result of a failure of leadership in implementing, monitoring, and communicating the elements necessary to create a climate of safety.

Almost all of the individual Executive Insights in the NAC Safety Culture Series underline the importance of leadership and provide advice as to appropriate leadership behaviors and actions. Some common employee misconceptions which negatively affect implementation of a safety culture and thus the ability to accomplish the profitability benefits resulting from a strong safety culture are:

- **Perception of priorities:** In some cases, the primary focus of management might appear to be on meeting regulatory requirements or avoiding legal liabilities rather than genuinely prioritizing the safety and well-being of workers.
- **Bureaucratic overload:** When safety practices are perceived as overly bureaucratic or require extensive documentation and paperwork, workers may feel that the emphasis is being placed on satisfying administrative tasks rather than promoting practical safety measures.
- **Lack of understanding:** Some individuals may not fully understand the rationale behind safety practices. They might see them as unnecessary hindrances to efficiency and productivity rather than as essential measures to prevent accidents and protect them and their fellow workers. This is especially true if workers are not directly involved in establishing and improving the practices.
- **Cultural factors:** Workers may come from a background where their prior work culture does not reward questioning authority and where speed and productivity were prioritized over safety. In such environments, safety practices may be seen as impediments to getting the job done quickly.

Observations of Benefit to Profitability

Productivity and safety are seamlessly intertwined in the workplace. To spend time and energy on safety not only improves safety performance, but it also improves productivity and thus profitability.

In 2022-2023, NAC organized five symposia at different universities on “Introducing Safety Culture Concepts in Undergraduate Education” (https://www.naocon.org/wp-content/uploads/NAC-Safety-Culture-Symposia-Recap.pdf). Each symposia had a panel of engineering and construction company experts who espoused the benefits of a safety culture, providing proof of its dramatic improvement on worker safety. They also stressed the competitive advantage this focus provides for their firms in terms of productivity improvement and in the recruitment and retention of their workforce. A list was

presented of 58 construction companies with strong safety cultures that have reached a string of over one million hours worked without a recordable injury.

The National Safety Council (NSC) reports, "Each prevented lost-time injury or illness saves $37,000, and each avoided occupational fatality saves $1,390,000. Investors are increasingly using workplace safety and health measures to screen out underperforming stocks, and are showing stronger returns for doing so." (https://www.nsc.org/getmedia/d81515ce-57ba-4347-821e-4af731076260/journey-to-safety-excellence-safety-business-case-executives.pdf)

The NSC report also states, "over 60% of CFOs reported that each $1 invested in injury prevention returned $2 or more, and over 40% said productivity was the greatest benefit of an effective workplace safety program." OSHA has a different number. OSHA reports that for every $1 invested in safety and health, employers can expect a return of $4 to $6 in cost savings.

In the early 1990s, the Construction Industry Institute organized the Zero Accidents Task Force to perform research into worker safety. The purpose of the task force was to help owners and contractors achieve zero accidents on construction projects and to convince leadership through research the value of an effective safety program.

The CII Zero Accidents Task Force publication, *Zero Injury Economics* (September 1993, https://www.construction-institute.org/zero-injury-economics), estimates that when both the direct and indirect costs of injury are included, the cost of injury in U.S. construction exceeds $17 billion dollars annually. The task force concluded, "An employer's expense caused by worker injury is paid out of potential profit. This potential profit is spent on workers' compensation insurance premiums or claims losses; also draining the profit are the indirect costs of worker injury. Indirects include such items as lost productivity, disrupted schedules, and administrative time required to deal with an injury."

The *Zero Injury Economics* publication also presents a Contractor Injury Cost Worksheet that a company can use to estimate the direct and indirect cost of accidents and injuries based on its Experience Modification Rate (for calculating insurance costs), Recordable Incidents, and Lost Work Cases. By comparing a company's current statistics to those of companies with strong safety cultures and assuming a goal of zero injuries, an estimate of potential savings can be determined. It should be noted that this calculation does not include the subjective benefits of a more dedicated workforce in increasing productivity, quality, and corporate reputation, decreasing employee turnover, and helping recruit high value talent.

OSHA, on its website, lists studies showing that improvements in safety can lead directly to increased profitability (https://www.osha.gov/businesscase/benefits). A summary, provided on the OSHA website, of three of the studies are included in the references at the end of this Executive Insight.

Conclusion

A strong safety culture is good business as it minimizes injuries, accidents, and disruptions to work schedules and increases employee morale, dedication, productivity, recruitment, retention, the

company's reputation, and profit. Documented evidence demonstrates that a strong safety culture's benefits far exceed the costs associated with implementing and maintaining a strong safety culture. Leadership is critical to assure that staff at all levels overcome potential perceptions which might interfere with the ultimate goal of a safety culture of zero injuries.

For Further Reading – Safety Culture Series (Executive Insights)

- Introduction to the Safety Culture Series
- Safety Culture – Human Performance Principles
- Safety Culture – Worker Participation in the Safety Management System (SMS)
- Safety Culture – Demonstrating a Culture of Care and Support: The Leaders' Role
- Safety Culture – Drug and Alcohol Testing
- Safety Culture – Incident/Accident/Near-Miss Reporting and Investigations
- Safety Culture – Safety Training
- Safety Culture – Safe Work Practices
- Safety Culture – Management Commitment: All Safety Incidents Are Preventable
- Safety Culture – Subcontractor Involvement in the Safety Culture
- Safety Culture – Recognition and Reward
- Safety Culture – Job Safety Analysis
- Safety Culture – Leadership Involvement in Office and Site Visits

Summary of Selected References as Given on the OSHA Website

- Y.H. Huang, T.B. Leamon, et al, "Corporate Financial Decision-Makers' Perceptions of Workplace Safety." *Accident Analysis and Prevention*, Vol. 39, No. 4, pp. 767-775 (2007).
    - This study reviewed how senior financial executives perceived workplace safety issues. The executives believed that money spent improving workplace safety would have significant returns. The perceived top benefits of effective workplace safety and health programs were increased productivity, reduced cost, retention, and increased satisfaction among employees.

- "Building a Safety Culture: Improving Safety and Health Management in the Construction Industry" (PDF). Dodge Data and Analytics, CPWR, and United Rentals (2016).
    - Includes a section on the impact of safety practices and programs on business factors, such as budget, schedule, return on investment, and injury rates.

- R. Fabius, RD Thayer, DL Konicki, et al, "The Link between Workforce Health and Safety and the Health of the Bottom Line: Tracking Market Performance of Companies that Nurture a "Culture of Health." *Journal of Occupational and Environmental Medicine*, Vol. 55, No. 9, pp. 993-1000 (2013).
    - Companies that build a culture of health by focusing on the well-being and safety of their workforce may yield greater value for their investors.

About the Author

Ken Arnold was elected to the National Academy of Construction in 2014. In his 55-year career in oil and gas for Shell and as founder and CEO of a mid-size project engineering and project management company, he has been recognized by the National Academy of Engineering, the Society of Petroleum Engineers, the Offshore Technology Conference, API, and ASME for promoting safety in design, construction, and operations of onshore and offshore production facilities. He also is an author on safety, project management, and facilities design and is a Professional Engineer.