Better Business through S.A.F.E.R. Leadership

A ‘How-to’ Model and Systems Approach for Transformational Safety Leadership

By

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ABSTRACT

Better Business through S.A.F.E.R. Leadership

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Leaders create culture with every statement, action, assigned priority, interaction and acknowledgement they make. Leadership shapes and predicts the culture of an organization. This model uses transformational leadership dimensions to define the behaviours of safer leadership to create a safer workplace culture.

Effective leaders speak about safety; their actions make safety *live* and demonstrate their safety commitment to all employees and stakeholders; they focus and connect safety to every part of the business; they engage the workforce in safety leadership; and they recognize people for championing safety.

The components of the S.A.F.E.R. Leadership Model include: Speak, Act, Focus, Engage and Recognize. The S.A.F.E.R. Leadership model outlines specific behaviors and practices leaders do to effectively advance safety participation and outcomes within their organizations.

The purpose of this paper is to offer a leadership model and a sustainability framework towards the development and propagation of safety leadership capabilities and networks within a system of workplaces and industry stakeholders.

To achieve a critical mass of safety leadership by those that lead teams and manage organizations would bring economic advantage and strengthen competitiveness by leveraging the knowledge and existing capacity of the workforce.

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Leadership and leaders' expressed management commitment to safety has consistently emerged as a predictor of employee health and safety outcomes (e.g., Barling, Loughlin & Kelloway, 2002; Cree & Kelloway, 1996). Managers showing concern for employee safety have been shown to positively influence perceived safety climate and trust in management versus compliance approaches to control health and safety (Barling & Hutchinson, 2000). Given the importance of leadership as a determinant of occupational health and safety, it is important to specify [a] what leaders actually do to influence safety outcomes and [b] how safety leadership in Nova Scotia can be enhanced. This is the goal of the current document. I describe a model of safety leadership termed S.A.F.E.R. Leadership and consider the process of improving safety leadership within a geographical economic jurisdiction.

Rob Jager, chair of the New Zealand Business Leaders' Health and Safety Forum (2013) and chair of the Shell Companies in New Zealand, stated to an audience of top CEOs that:

> Many leaders want to improve health and safety but they don't know how to influence outcomes and build a safety culture. They struggle to find the time for personal development and only a few see Zero Harm as an achievable target. And worse, safety leadership is generally not seen as a desirable competency or part of the CEO's role. Middle management generally leads safety and CEOs don't appreciate or acknowledge the important role they can play. (p.2)

SAFETY IS GOOD FOR BUSINESS

Stewart (2002) states “Excellence in safety is compatible with excellence in other business parameters such as quality, productivity, and profitability, they are mutually supportive. Safe, healthy employees have a positive impact on all operations” (p.15).

In a knowledge-based economy organizations cannot afford to lose workers’ expertise and contribution on account of workplace injury. From an organizational learning perspective, leadership style is a predictor of team cohesion and problem-solving ability. Active leadership with clear communication through transactional leadership behaviors is associated with enhanced organizational learning (Bhat et al., 2012).

Health and safety has traditionally been practiced as a means to reduce the occurrence of workplace injuries and mitigate compliance risk to health and safety regulation. Workplace injury profoundly impacts the health and wealth of our working populations, our communities and our economy. In 2013, Nova Scotia, with a workforce of 500,000, paid approximately $260 million in direct work injury compensation costs (WCBNS, 2013). Tragically there were 34 workplace fatalities, 17 classified as chronic, and 17 classified as acute. Of the 17 acute fatalities, eight occurred in the fishing industry. Additionally, in 2013 almost two workers in every hundred workers suffered a workplace injury resulting in lost time from work (WCBNS, 2013).

The human and economic impact of workplace injury is vast, devastating and preventable. The personal impact of workplace injury on an individual, their family and community provides a call to action for workplace leaders and industry

stakeholders to partner and harness the positive performance potential of those who manage and direct work activity and those who carry out the work. Stuart MacLean, CEO of the Workers' Compensation Board of Nova Scotia raised a call to action (WCBNS, 2013):

> We need to do more. Every working Nova Scotian needs to do more. It starts with a commitment to only do something if it can be done safely. For workers, this means refusing unsafe work or speaking up when they see a hazard. For employers, it means ensuring a safe workplace and creating an environment where workers feel empowered to voice their concerns…It's everyone's responsibility and we all have a role to play in creating a workplace safety culture where no one is injured, no one dies because of their work, and everyone goes home safe. (p.6)

Using cost impact calculators of the Health & Safety Executive (1997), in 2013 there was an estimated real impact of $2 billion dollars to Nova Scotia industry as a result of workplace injuries. The uninsured losses to business from safety failures (safety-related incidents) far exceed the direct costs of medical costs and wage loss of injured workers. Mearns and Håvold (2003) presented the following costs that incurred by:

- Interruption in production immediately following the accident;
- Morale effects on co-workers;
- Personnel allocated to investigating and documenting the accident;
- Recruitment and training costs for replacement workers;
- Reduced quality of recruitment pool;
- Damage to equipment and materials;
- Reduction in product quality following the accident;

- Reduced productivity of injured workers on light duty;
- Overhead cost of space capacity maintained in order to absorb the cost of accidents;
- Market share reduction/customer retention;
- Management must leave company;
- Lost goodwill;
- Difficult to get the right kind of people to work in a company with bad reputation;
- Less support from local community official bodies;
- Higher insurance premiums, difficulties in obtaining insurance;
- Financing problems;
- Impact on the ability to bid on work if safety record threshold is part of required criteria (p. 411)

The Health and Safety Executive of the UK (1997) estimate the uninsured costs to be 8 times to 37 times greater than the insured recoverable costs.

To cover the safety-related costs, an organization must first generate the revenue to do so. That is directly linked to their profit margin. For example if a firm has a profit margin of 5 percent, they must sell $20 in goods and services (100/profit margin), to clear $1 to cover costs. In addition, valuable resources are diverted from making the business better to cover safety related losses. In addition, a review of publically traded US firms with OSHA prosecutions saw their stock market share price drop 2.1 percent (Fry & Lee, 1989). The value of the decline far exceeded the fines levied for health and safety failures. These reputational costs and losses in goodwill can be far reaching. In an address to federal government leaders, Rear Admiral John Newton (2013) stated:

> Any accident is an attack on our credibility. It's an attack on a huge investment on our labour. It's an attack on the spirit of our people, and a breech of trust. And fundamentally your organization will fail if you allow that wedge to come between you and your workforce that you are not running a safe enterprise. To me [safety] is fundamentally leadership business.

Leaders of industry are presented with a compelling value proposition they can harness as they shift their perception of safety as a compliance risk and cost centre to the other side of the ledger to realize safety as a strategic business imperative and as a profit centre. Safety and productivity are on the same side, not in opposition. In a survey of senior financial decision-makers, they reported on average a $4.41 return for every $1 spent on safety improvement (Yueng-Hsiang et al., 2009). These financial considerations do not include the impact that transformational leadership can realize.

The HSE (1999b) found strong alignment between the Leadership Excellence Model (BEM) and safety culture improvement approaches. The abovementioned financial risks and opportunities provide leaders with a powerful motivator to lead from a safety leadership mindset and seek better business through safer leadership. Employee wellbeing and organizational performance are inextricably linked in both the short-term and the long-term. Dul et al. (2012) stated, "By fitting the environment to the human, two related system outcomes can be achieved: performance (e.g productivity, efficiency, effectiveness, quality, innovativeness, flexibility, (systems) safety and security, reliability, sustainability) and well-being (e.g. health and safety, satisfaction, pleasure, learning, personal development)"

In high performance work systems where employees are considered the strategic competitive advantage of the firm we see positive occupational safety performance (Zacharatos, Barling & Iverson, 2005). The impact of positive safety outcomes and high performance work-systems is linked to organizational trust of management and positive perceived safety climate.

According to Zacharatos, Barling & Iverson (2005) the components of high performance work-systems include: employment security, selective hiring, extensive training, self-managed teams and decentralized decision making, reduced status distinctions, information sharing, compensation contingent on safe performance, transformational leadership, high-quality work, measurement and management practices, and a system of high-performance practices. In a study by Fabius et al. (2013), companies that were recognized for their outstanding approaches to health and safety by the American College of Occupational Medicine's (ACOEM) returned higher financial gains compared to the S&P market Index.

LEADERSHIP

"To lead is a privilege, and it comes with great responsibility and accountability. Leadership, focus and discipline are the skills we must continually strive to exercise in order to live up to that privilege." (S. MacLean, personal communication, 2013).

Leadership is a verb, not a noun. Leadership is about action and outcome, not a position of management. Leadership only exists if it creates followership, or as Kelloway (2013) put it, "If they ain't following, you ain't leading". The approach and quality of executive leadership practices have been shown to have the greatest

impact on firm performance as measured by returned stock value for stakeholders. The characteristics of quality leadership practices include the ability to build outstanding teams and present a compelling vision of the company's vision (Ashley & Patel, 2003).

In 1978 James MacGregor Burns authored the landmark text *Leadership* that brought focus to the power of leadership and presented the structure of moral leadership from the psychological, social, and political underpinnings. Leadership is having intended influence on followers and oneself. Burns (1978) writes:

> I define leadership as leaders inducing followers to act for certain goals that represent the values and motivations – the wants and needs, the aspirations and expectations – of both leaders and followers. And the genius of leadership lies in the manner in which leaders see and act on their own and their followers' values and motivations. (p.19)

The style of leadership and the level of safety priority demonstrated by management impact the level of safety climate and predict the incidence of occupational injuries sustained by the workforce (Zohar, 2002).

Leadership is a deciding factor on safety climate and safety performance. Given direct involvement, exposure and proximity to teams a supervisor's attitude and their actions towards safety have a significant impact on safety perceptions and performance. Bentley and Haslam (2001) describe the extent to which supervisors positively demonstrate safety leadership, impacts the level of positive safety climate of the work group. They outline the desirable supervisor actions to include:

- Daily contact between supervisor and work teams

- Regular formal and informal communication on safety-related matters
- Regular safety-focused team briefings
- Distribution of safety campaign materials
- Team alerts to instances of unsafe practices and behaviors
- Regular on-site and off-site safety tours

They found that teams led by supervisors who demonstrated the desired safety behaviors, actions and attitudes had lower rates of occupational injuries while teams with higher injury rates were led by supervisors that did not exhibit or fully exhibit the desired safety behaviors (Bentley & Haslam, 2001).

The experience of the manager or supervisor is not the leading factor in determining leadership style. Within the oil and gas industry, managers know the attributes of effective safety leadership yet they do not consistently demonstrate these behaviors with their work teams (O'Dea, 2001). Managers in the study purported that they have difficulties influencing workers to internalize safe work practice, or to embrace safety, and motivating the workforce to report near misses. The study of 200 offshore installation managers also found that those with more directive management approaches (management by exception and contingent reward) overestimated their ability to influence their work teams (O'Dea, 2001).

The Continuum of Leadership

There are many approaches to leadership across a continuum from poor to positive. Bass (1985) referred to this as the Full Range Leadership model. A leader may exhibit various leadership approaches based on their preference, the situation or context, people involved or task complexity, urgency or importance relative to the

intended outcome. Leaders may become associated with a greater propensity to exhibit a particular type as observed by their followers.

In Figure 1, I assemble a continuum of defined leadership styles cited in the following paragraphs that are associated with poor and positive outcomes.

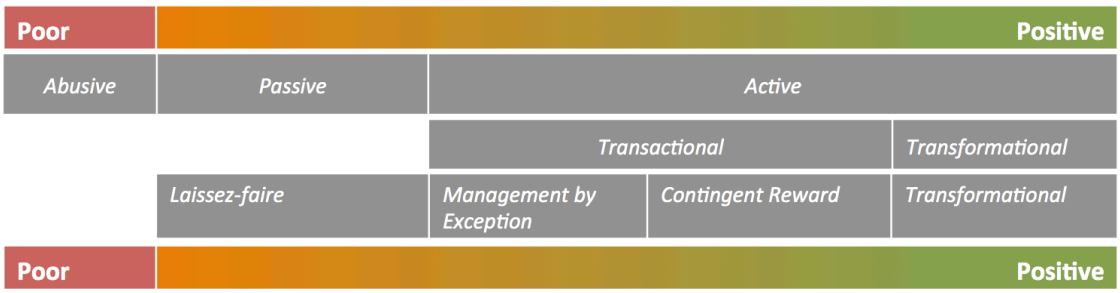

Figure 1: Leadership approaches, their alignment across a continuum and impact

Poor Leadership

Aggressive, bullying, harassing behaviors that demoralize and distress individuals characterize abusive leadership (Kelloway et al., 2005). This approach is demonstrated by those who use their position of power to coerce and control others, or withhold promised rewards or negotiated benefits.

Passive Leadership

Passive leadership includes laissez-faire and passive management by exception and is characterized by a lack of performance monitoring and only acting when problems occur (Bass, 1997).

Active Management

Active management by contrast involves monitoring performance and being present and intentional in the support and guidance of team members.

Active management approaches to leadership include transactional and transformational leadership approaches (Bass, 1997).

Transactional Leadership

Transactional leadership involves an exchange of work effort for a defined benefit or return, or to avoid a loss (Burns 1978). Transactional leadership includes active management by exception, where performance is monitored and action is taken when performance falters, and contingent reward leadership approach where leaders define the path to work goals and the followers carry out the work in exchange for some defined benefit (Bass, 1997).

Transformational Leadership

Burns (1978) defined *Transforming Leadership* where the leader is the catalyst for initializing a motivating change within the follower towards an intended outcome. Transformational leadership is a high engagement exchange where the leader sparks an internal drive within the follower to excel and pursue high performance (Bass, 1985). Transformational leadership encompasses charismatic leadership and authentic leadership approaches (Bass, 1985).

In 1985, Bernard M. Bass, dedicated his text *Leadership and Performance Beyond Expectations* to James MacGregor Burns and sought to bring greater definition to Transforming Leadership introduced earlier by Burns (1978). Bass (1985) defines a transformational leader as “one who motivates us to do more than we originally expected to do.” (p.20) and suggests that transformational leaders elevates performance in three ways.

> 1. By raising our level of awareness, our level of consciousness about the importance and value of designated outcomes, and ways of reaching them. 2. By getting us to transcend our own self-interest for the sake of the team, organization, or larger polity. 3. By altering our need level on Maslow's hierarchy or expanding our portfolio of needs and wants (p. 20)

Authentic leaders exhibit qualities of positive forward thinking, are focused on the development of others, use personal experiences to motivate others, and are secure in who they are as a person. Among entrepreneurs and business founders, the level of authentic leadership perceived by employees of their leaders is the most influential factor on employee job satisfaction, commitment to the company and work happiness (Jensen & Luthans, 2006).

Among safety critical organizations such as emergency services, oil and gas exploration, aviation, and petrochemical industries, where the potential for acute catastrophic events exist, authentic leadership increases safety climate, which decreases the level of perceived risk among the workforce (Nielsen et al., 2011). Authentic leadership is characterized by both the personality of the leaders and their leadership responsibility. Authentic leaders advance the understanding of safety issues by teams, motivate others to act safety, and demonstrate they care for the psychological and physical wellbeing of employees (Nielsen et al., 2011). Charismatic leadership has a positive impact on employee engagement and on employee contribution to the goals of the organization (Babcock-Robertson & Strickland, 2010).

Bass (1997) describes the four transformational components as:

1. **Idealized Influence** (Charisma) leaders display conviction; emphasize trust; take stands on difficult issues; present their most important values; and emphasize the importance of purpose, commitment, and the ethical consequences of decisions. Such leaders are admired as role models generating pride, loyalty, confidence, and alignment around a shared purpose. A subjective component of attributed charisma may spin off from idealized influence, a behavioral component, for a fifth transformational component. (Components better describe the conceptually but not empirically distinct constructs. The same leaders tend to be high or low in each, but the behaviors involved are different and require different remediation.)
2. **Inspirational Motivation**: leaders articulate an appealing vision of the future, challenge followers with high standards, talk optimistically with enthusiasm, and provide encouragement and meaning for what needs to be done.
3. **Intellectual Stimulation**: leaders question old assumptions, traditions, and beliefs; stimulate in others new perspectives and ways of doing things; and encourage the expression of ideas and reasons.
4. **Individualized Consideration**: leaders deal with others as individuals; consider their individual needs, abilities, and aspirations; listen attentively; further their development; advise; teach; and coach. (p. 133)

The Five Transformational Leadership Practices taken directly from Kouzes and Posner (2012) include:

1. **Model the Way** (MTW): clarify values by finding your voice and affirming shared ideals; and set the example by aligning actions with shared values.

2. **Inspire a Shared Vision** (ISV): envision the future by imagining exciting and ennobling possibilities; and enlist others in a common vision by appealing to shared aspirations.
3. **Challenge the Process** (CTP): search for opportunities by seizing the initiative and by looking outward for innovative ways to improve; and experiment and take risks by constantly generating small wins and learning from experience.
4. **Enable Others to Act** (EOA): foster collaboration by building trust and facilitating relationships; and strengthen others by increasing self-determination and developing competence.
5. **Encourage the Heart** (ETH): recognize contributions by showing appreciation for individual excellence. (p. 36)

Although leadership practices vary by global region, those work teams with leaders that practiced the elements of transformational leadership had higher positive workplace attitudes than work teams whose leaders that did not (Posner 2013).

Safety-Specific Transformational Leadership

The demonstrated commitment of leaders at all levels of management to safety significantly impacts the level of safety climate and safety performance. Visual commitment to safety includes placing a clear priority on safety when making production decisions and effective communication (Flin, 2003). Supervisors, managers and executive management all influence safety and safety climate in

varying ways that are aligned to their positional influence on the workforce, being direct and focused or indirect and broad-based (Flin, 2003).

If transformational leadership is effective in achieving desired outcomes by mediating a response in team members to elevate their own performance (Bass 1985), what if the impact of transformational leadership is focused on safety? Barling, Kelloway and Loughlin (2002) examined safety-specific transformational leadership. Their model looked at the impact on the level of safety consciousness and perceived safety climate as mediating factors for safety related events and occupational injuries.

Barling et al. (2002) explored four safety-specific transformational elements from a safety leadership lens, including:

Idealized Influence where leaders act as safety role models and bring a focus to safe work as they demonstrate safety is a core value.

Inspirational Motivation where managers compel their teams to achieve safety outcomes beyond what was done previously and take on safety challenges that are beyond individual accountability for even greater organizational impact.

Intellectual Stimulation see leaders challenge the safety status quo beyond compliance and ask teams to advance safety considerations into all aspects of their work and think past conventional thought.

Idealized Consideration where leaders make safety personal with a focus on the individual's own behaviors and attitudes on safety as a starting point towards advancing safety participation and safety consciousness.

Safety-specific transformational leadership impacts perceived team safety climate, which impacts safety related events and the occurrence of occupational injuries (Barling et al., 2002).

Safety-specific transformational leadership practices by management are associated with increased safety participation and safety compliance in both young and older working populations; whereas passive or uninvolved leadership related to safety in the workplace negatively impacts employee perceptions (Mullen et al., 2011). Interestingly, the positive influences of safety-specific transitional leadership on employee safety compliance and safety participation were reduced as management exhibited inconsistent safety-specific leadership behaviors (Mullen et al., 2011). Safety perceptions will be negatively impacted if a leader talks about the importance of safety but does not demonstrate their commitment to safety through their actions.

Safety-Specific Transformational Leadership Can Be Taught

Given the impact leaders have on an organization's safety climate and safety outcomes, Kelloway & Barling (2010) reviewed the existing research to consider leadership development as an intervention on occupational safety. They concluded that leadership development is positively linked to health and safety outcomes (Kelloway & Barling, 2010).

Transformational leadership skills can be effectively taught in a workshop-based training format using lectures, group discussion and goal setting. Safety-specific transformational leadership training interventions prove more effective on perceptions of manager and employee safety climate, safety participation, safety

compliance and safety-related events than general transformational leadership training interventions (Mullen & Kelloway, 2009).

Safety-specific transformational leadership practices can be effectively taught. In half-day group based workshops, safety-specific transformational leadership training interventions for supervisors were found to improve perceived safety climate ratings from their direct reports (Mullen & Kelloway, 2009). In an earlier study, Barling, Weber & Kelloway (1996) found that a one-day workshop focused on transformational leadership followed by four individualized coaching sessions on a monthly basis proved effective in elevating the perceptions of the employee groups of their leaders competencies relating to intellectual stimulation, individual consideration and charisma versus those employees of managers who did not undergo the leadership training. In addition managers that underwent the leadership training saw positive influence on the financial performance of their work groups.

Fletcher (2001) completed baseline 360's with senior managers and directors on safety commitment, safety leadership, and safety consideration in business decisions. 360 evaluations were administered to their direct reports. Following an individualized feedback session with each manager on their results and how others perceived their safety commitment, communication, behaviors and attitudes led to managers increasing their visible safety commitment and communication. Ladyshewsky (2007) also found that goal setting and peer coaching measured by pre and post 360's were effective in increasing leadership competence.

LEADERSHIP, SAFETY CLIMATE & PERFORMANCE

The level and quality of supervisor and management safety practices predict safety climate (Zohar & Luria, 2004). Safety practices involve giving importance to safe production, safety priority, safety clarity and consistency of safety commitment demonstration. Safety climate is a leading indicator and predictor of safety behaviors, performance and outcomes that has been validated across industries and countries (Zohar, 2010).

Safety climate is set at the organizational level (through leadership and policies) but the practices at the supervisory level on carrying out the work is the dominant source for safety climate at the group level (Zohar & Luria, 2005). It is important that a focus on safety leadership actions and behaviors at the supervisory level is aligned to senior management to advance safety performance at the group and individual level, given the direct influence of supervisor impact on the workforce.

Employee Performance

Transformational leadership has a significant and positive impact on the level of employee commitment, performance and job satisfaction (Thamrin, 2012; Muchiri et al., 2012). Posner (2013) found that transformational leadership practices were associated with higher levels of perceived leader credibility by employees; and greater employee morale, retention and productivity (Posner, 2013). Job satisfaction and job motivation are significant predictors of job performance (Springer, 2011).

In contrast, management by exception and laissez-faire leadership approaches were found in part to be associated with negative safety climate and

greater incidence of occupational injury when assessed six months after the leadership and climate surveys being administered (Zohar, 2002).

Wu et al. (2008), through an analysis of causal relationships, showed that safety leadership impacts safety climate, and that safety climate is the precursor for safety performance. Figure 2 shows safety climate as a mediating factor between safety leadership and safety performance. The elements of safety climate examined by the researchers included perceptions of CEO safety commitment, managers' safety commitment, employees' safety commitment, emergency response and perceived risk.

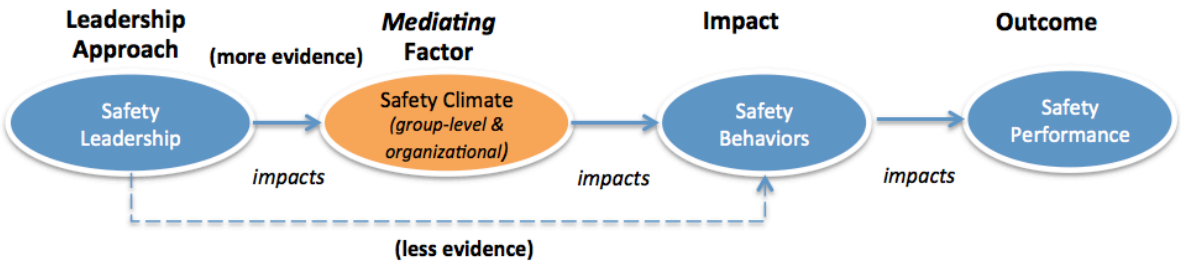

Figure 2: The direct and indirect impact of leadership on safety performance

Safety Participation, Safety Compliance and Working Safely

An analysis of 35 peer-reviewed studies on the impact of safety climate on safety performance by Clarke (2006) demonstrated that higher positive levels of safety climate were associated with higher levels of safety participation and adherence to safe work procedures by the workforce. In addition, the review showed that greater perceived safety climate was associated with lower safety-related events and rates of occupational injuries.

The value to business in taking a focused approach to improve safety climate through safety leadership is realizing greater safety compliance, safe work behaviors and safety involvement of employees, and lower rates of workplace injuries (Clarke, 2006).

General organizational climate positively impacts safety climate, and safety climate is a driving influence on employee compliance to safe work procedures and their level of involvement in workplace safety (Neal et al., 2000). A meta-review showed that transformational leadership is positively associated with employee participation and engagement in safety and active transitional leadership is correlated with safety rule following and compliance (Clarke, 2013). Safety participation and safety compliance are additive and work to reduce the risk of occupational injury.

Safety climate also has been found to predict the occurrence of microaccidents in manufacturing environments five months following the climate perception assessment. Microaccidents are defined as those occupational injures that result from worker actions completing the work causing minor injuries that require medical attention but do not result in lost work days (Zohar, 2000).

Safety Knowledge & Motivation

Vinodkumar and Bhasi (2010) concluded that safety management systems maturity improved working conditions and positively influenced employee safe work practices. Safety management practices included in this study of 1500 workers across eight high risk industries included management commitment, safety training, workers' involvement in safety, safety communication and feedback, safety rules and

procedures, and safety promotion policies. They found that elements that advanced safety knowledge and safety motivation had a direct impact on worker involvement and adherence to safety practices.

Safety Performance

Stokols et al. (2001) in their study of 48 small and medium enterprises (SMEs) in California showed that health and safety regulatory compliance improved in the 12 months following safety outreach training of their managers as compared to a control group of 46 SMEs that received the training after the evaluation.

There is a clear and compelling value proposition for managers to move from knowing about safety, to caring about safety, to taking visual action to enhancing how they embed safety leadership into their management processes. With safety leadership and safety climate training lacking from business schools (Flin, 2003) and that safety leadership can be effectively taught (Mullen & Kelloway, 2009) there is an opportunity to take a systems approach to safety leadership development.

Transformational Leadership Impact Summary

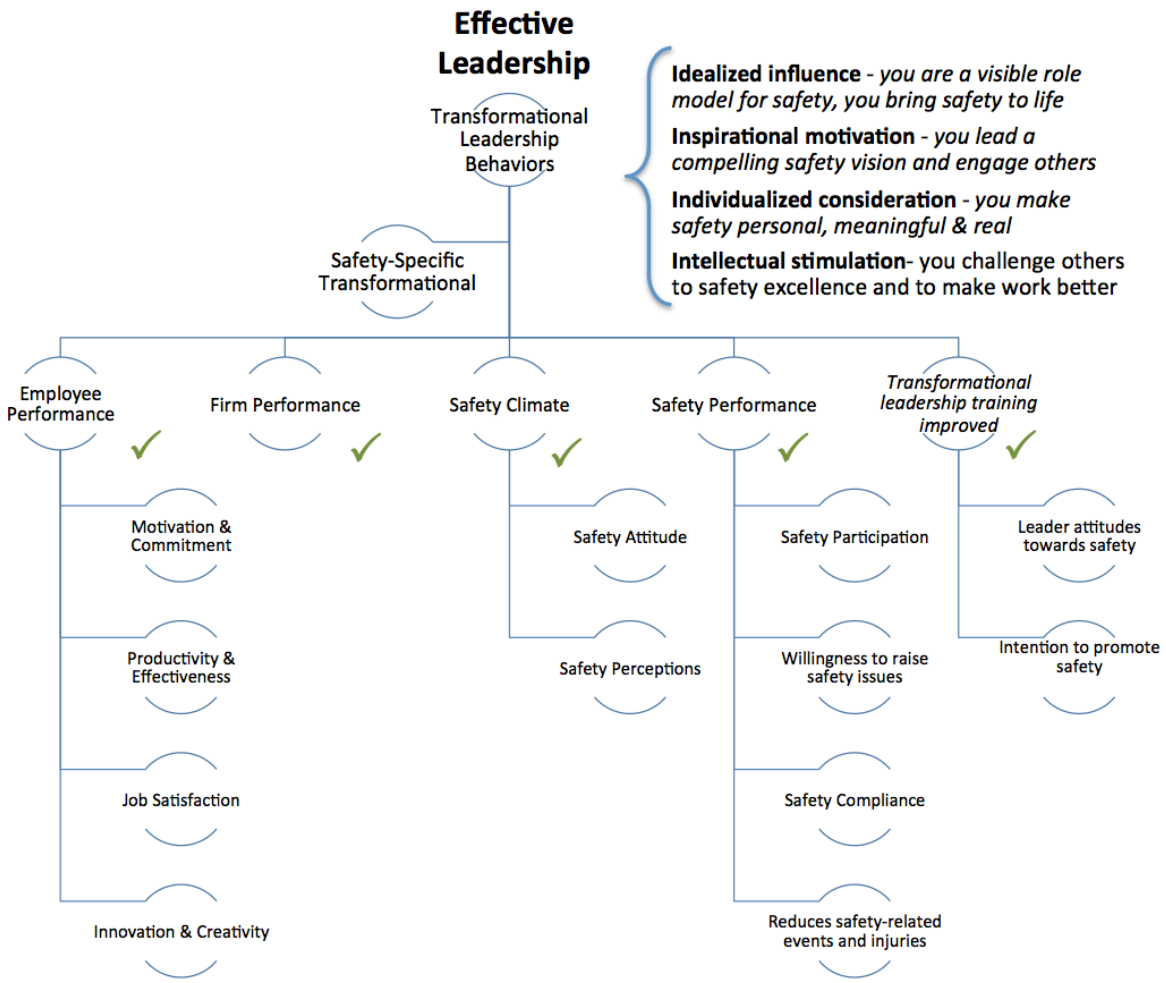

Figure 3: A summary of outcomes for transformational leadership

The impacts of transformational leadership are broad and significant. Figure 3 shows a summary of the positive performance outcomes that have been observed in the literature and serve as a compelling proposition to growing leadership capabilities across industry.

SAFETY LEADERSHIP BEHAVIORS

Rob Jager, chair of the New Zealand Business Leaders' Health and Safety Forum (2013) stated, "Business leaders are the key to the success. If we want safety to be a priority in our workplaces then it must be a priority for our directors, CEOs and senior managers." (p. 2)

The themes to effective safety leadership behaviors revolve around five themes: speaking about safety; acting on safety; focusing on safety; engaging others in safety; and recognizing safety behaviors (Figure 4).

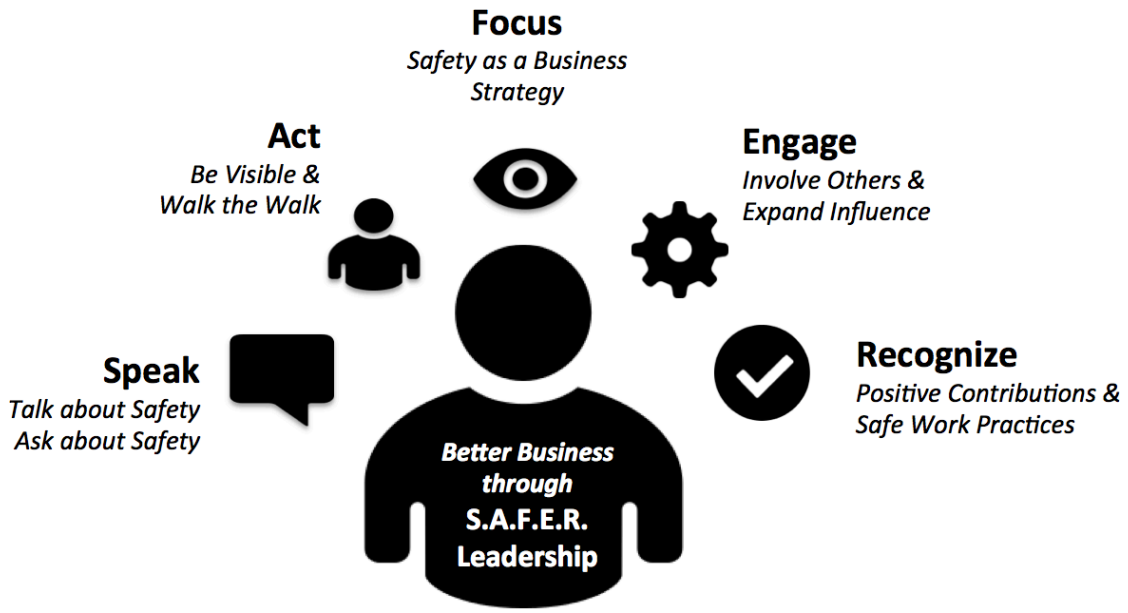

Figure 4: S.A.F.E.R. Leadership, a 'how-to' model for transformational leadership

SPEAK: Effective Leaders Speak About Safety

At a safety leadership forum Stuart MacLean (2013) stated, “What my boss finds interesting, I find fascinating” to emphasis the significant influence senior managers have on the behaviors and motivations of their staff. At the same gathering Dr. E. Kevin Kelloway (2013) stated ”If my boss doesn’t talk about safety…then safety is not important” and presented a call to action to the audience stating that “We would revolutionize safety if every senior manager began every meeting with Tell me about safety?, What’s going on?, Have we had any incidents?, What are we doing to make work safer?, How do we know that we’re making work safer?”

What managers talk about with their team members significantly impacts the level of safety climate and safety performance of the business unit. Research by Zohar and Polachek (2014) has shown that supervisors who received two individualized feedback sessions (six weeks apart) from the researchers on their employee’s perceptions of their last verbal exchange from a safety perspective, resulted in significant improvement in employee safety climate, perceived workload, safety behavior and safety performance when measured three months following the feedback interventions. Team members were asked to comment on the occurrence of safety, productivity and workload messages. For example from a safety perspective, members were asked the extent to which their supervisor made them feel that he/she cared about their safety. The impact on staff provides compelling evidence for supervisors to talk about safety and that relatively little resources

needed in leadership development through feedback can significantly improve safety climate, safety behavior and safety performance.

In a cross-industry study examining how the percentage of unsafe work behaviors were influenced by the percentage of supervisor-worker conversations that contained a safety component, Zohar & Luria (2003) found that maintaining approximately 70 percent of verbal interactions with a safety focus was effective in minimizing or eliminating defined unsafe work behaviors.

Kines et al. (2010) showed that by providing supervisors with bi-weekly coaching on the prominence of safety in their daily verbal exchanges with their work crews significantly increased safety exchanges by a factor of 4.6 combined, with as high a 7 fold increase with one team. In addition significant increases in observed safety work practices of their crews and increased perceived safety climate resulted as compared to the control group with no changes, over the 42 week study. This result in the high-risk, high-variability of tasks and unpredictable work settings of construction, shows the importance and impact of leaders speaking about safety.

Leaders tell stories to advance safety and as a means of motivation and remembering. Storytelling is a catalyst for organizational safety culture change and increases buy-in to improve work practices, work environment, workforce and relationships (Briody et al., 2012). For effective storytelling to impact organizational change, leaders define goals, provide explanation for the need to improve and use exercises to reinforce collaboration and problem solving (Briody et al., 2012).

Safety leadership involves telling stories to effectively deliver messages and motivate others. Refer to Appendix B for a story told at the Health and Safety Forum

(2013) by Lawrence Waterman who oversaw health & safety for the construction of the London 2012 Olympic complex and purported to be the first Olympics without a workplace fatality.

Effective leaders ask questions that prompt dialog with employees and bring a specific focus to safety and the impact on the efficient functioning of work operations. In doing so leaders signal the importance of safety to staff and other stakeholders. Staley (2011) offers the following questions for leaders' to engage their teams:

> What is your biggest safety challenge? What would be the consequence? What controls are in place? What do you do to make sure that risk doesn't happen? What else might you do? How would we manage the consequence if it did happen? What supports do you need? How could the controls fail? How would we know? What's not working, what could we improve? What are our risks, what are we doing about that, how is the workforce engaged and vigilant and how could those controls fail?

Hopkins (n.d) suggests that managers ask the following questions when visiting the work site, "Can you tell me about your job? What could go wrong? How could WE prevent it? Who else could be affected? How can the job be done more safely? How could you get hurt? What kind of injury?" Hopkins suggests the walk abouts be done alone and not in pair as a means to reduce worker intimidation and to have a focused conversation about the work with the employee.

In the *Eurocontrol's* White Paper – May 2013 on Safety Intelligence for ATM CEOs, questions are presented to test the safety intelligence or safety IQ of a leader

within an organization from chair of the board, to CEO, to safety director, to supervisor (Appendix C).

Effective leaders learn from incidents and actively endeavor to control risks that have lead to injury and loss of life. Rear Admiral John Newton at a meeting of federal government leaders told of a personal experience where a fellow crewmember was struck and killed by a snapping cable under excessive strain. Newton described the subsequent engineering design changes undertaken to eliminate the chance of the incident happening again aboard that ship and all other ships in the fleet. Newton (2013) stated, “You got to remember. For every person that is injured or dies, deceased on the job. You’ve got to value the sacrifice. You’ve got to make a commitment to learn and to change your enterprise and make that life somehow valuable going forward.”

Figure 5 provides a summary of leadership actions by role to advance safety leadership, climate and performance through speaking about safety and asking about safety.

Speak: Effective Leaders Speak About Safety		
How	*Who*	*What*
SPEAK *Speak about Safety;* *Ask about Safety;* *Tell Stories;* *Talk-the-Talk*	Owner, CEO, Senior Executive	❑ Present a compelling vision of safety leadership at all levels. ❑ Talk about how safety impacts all business goals including profitability, productivity, efficiency, customer service and HR retention. ❑ Talk about how safe work is a *must-do*, no compromise, only do it if you can do it safely. Make it easy to work safely and hard to work unsafely. ❑ Lead interactions with: Tell me about safety? What are the trends? What's going on? Have we had any incidents? Who was injured? What are we doing to make work safer?' What are the costs? How do we know that we're making work safer? ❑ Talk about safety at company events and stakeholder meetings. ❑ Shift safety from compliance-driven to performance-driven. ❑ Shift safety from a cost-driver to a profit and engagement driver. ❑ Ask directors about safety performance and safety challenges weekly. ❑ Ensure safety is on agenda at management and governance meetings. ❑ Give verbal permission to employees to work safely. ❑ Know specific safety hazards and speak knowledgeably about safe work. ❑ Ask managers about the top five risks and what is being done to control. ❑ Ask employees about hazards they see and ideas to control the risk. ❑ Ask workers what could go wrong. ❑ Talk one on one, connect directly and engage in safety conversations. ❑ The frequency of asking about safety needs to be at the level of other business parameters like productivity and profitability. ❑ When asking about safety, plan to ask about specific relevant risks of the work, rather than high level how's everything going? ❑ Ask: What is going wrong? rather than not wanting to interrupt.
	Director, Manager	*As above, plus* ❑ Ask supervisors about safety performance and safety challenges daily. ❑ Safety on agenda at each operations meeting or production briefing. ❑ Establish regular formal and informal channels for safety improvement. ❑ As a manager, ask a front-line employees about their last conversation with their supervisor.
	Front-line Supervisor	*As above, plus* ❑ Ask workers about work risks and how to make the work better and safer. ❑ Make safety relevant to the work. ❑ Give verbal permission to work safe and to 'stop the line'.

Figure 5: Speak

ACT: Leaders Demonstrate Safety Leadership Through Their Actions

Mahatma Gandhi said, “actions expresses priorities”. A company and its managers will signal what’s important through their actions. As the Gentlemen in Boston (1746) said “actions speak louder than words”. CEOs, senior management and business owners need to demonstrate visible safety leadership (safety caring, safety coaching and safety controlling) in order to create the conditions for active safety climate and high safety performance (Wu et al., 2008). Lawrence Waterman speaking at the Health and Safety Forum (2013) stated “Your actions will have a far greater impact on people's behaviour than anything you might say or write.” (p. 2)

In a study of 1100 construction workers the most significant leadership attribute that impacted positive safety climate, active safety participation and safety compliance was whether the manager ‘walked the walk’ and how they *modeled the way* (Kouzes & Posner, 2012) as an exemplary role model, *idealized influence.* Rear Admiral John Newton (2013) speaking to federal government business leaders said, “You have to walk the plates. You have to know what your troops are doing.” The other dimension of transformational leadership including *intellectual stimulation* and *inspiration motivation* and the transactional leadership approach of *contingent reward*, were also found to be predictive of safety compliance, safety participation and safety climate but to a lesser amount (Hoffmeister et al., 2014).

Management should plan their walk-about strategies and consider how to talk with employees to honestly elicit authentic responses. Ask workers *what might be going wrong*, rather than not wanting to interrupt operations (Hopkins, 2011a). Also when asking about safety, no matter your role or the levels of management between

you and the worker you are engaging, plan to ask about specific relevant risks of the work, rather than high level *how's everything going?*

Connecting senior management directly with workers in the worksite may result in employees seeking to please, being distracted or feeling intimidated. On account of the significant influence leaders have on the workforce, Hopkins (2011a) describes the events leading up to the Deepwater Horizon Gulf of Mexico Oil Well Blowout with two BP/Transocean executive managers onsite completing a visual safety walk-about to recognize the installation for seven years without a lost-time incident. The investigation suggests that the visit influenced the crew discussing the anomalies being observed and the visit did not bring focus to process safety questions, rather remained focused on personal occupational health and safety (Hopkins, 2011a). Hopkins made the following recommendations for senior management: Recognize your own impact on the workforce. Consider both process safety and personal safety within a broader system safety perspective. With safety considerations, don't let chain of command restrict direct conversations about safety. Don't let a sense of not wanting to disrupt on-going work activities, inhibit you from engaging with people on workplace safety or perceived safety concerns. Of course the interruptions introduce risk that should be considered. Don't be hesitant to stop the job. Recognize folks for 'stopping the job' for safety even if the outcome reveals no hazard. Recognize the behavior, not the outcome.

Hopkins (n.d.) in his presentation on *Mindful Leaders* suggests that senior executive spend one hour per week in the field talking to front-line employees, that middle managers spend one hour per day, and that front-line supervisors spend 30

percent of their time in the field talking with workers. Figure 6 provides a summary of leadership actions by role to advance safety leadership, climate and performance.

Act: Effective Leaders Demonstrate Safety Leadership Through Their Actions		
How	*Who*	*What*
ACT *Be Visible; Let your Actions Demonstrate your Commitment to Safety; Walk-the-Walk*	Owner, CEO, Senior Executive	❑ Visit the worksite 1 hour each week and talk/ask about risks to safe ops. ❑ Model safe work (PPE), ie *walk-the-walk.* ❑ Visibly signal safety importance. Send the right signals. Leadership is about what you do and how you do it. Your real priorities are evident through your actions, words and what you talk most about. Role model desired safety behaviors. ❑ Act quickly and visibly to raised safety concerns. See them as opportunities to make work better and increase employee engagement. ❑ Exhibit consistent behavior (safety is the way work is done and how decisions are made). ❑ Attend safety training with the workforce.
	Director, Manager	*As above, plus* ❑ Visit the worksite 1 hour each day and talk/ask about safe ops. ❑ Visibly signal safety importance. ❑ Attend safety training with the workforce. ❑ Act quickly and visibly to raised safety concerns. See them as opportunities to make work better and increase employee engagement. ❑ Participate in incident investigation, inspections and hazards assessments.
	Front-line Supervisor	*As above, plus* ❑ Be on the worksite 30% of time talking with workers about safe production. ❑ Call workers injured on the job and actively remove the barriers to return-to-work.

Figure 6: Act

FOCUS: Effective Leaders Focus on Safety as a Business Strategy

As safety performance impacts business performance, it is relevant to include safety measures within your corporate performance indicators, or balanced scorecard to impact firm strategy and business planning. Kaplan & Norton (1992) stated, “What you measure is what you get.” (p. 71) and proposed the balanced scorecard as having four perspectives of focus each with defined goals and

measures. The quadrants included: Financial Perspective, Internal Business Perspectives, Innovation and Learning Perspective, and the Customer Perspective. Mearns and Håvold (2003) provide the following predictive factors associated with safety climate embedded into an organizations' balanced scorecard that then influence lagging or outcomes measures as identified injury incidence, injury severity and injury frequency:

> (1) Financial: Accident costs, i.e. loss costings. Investment in safety, e.g. safety training budget.
>
> (2) Customer: Levels of communication about health and safety issues. Workforce involvement and "ownership" of health and safety issues.
>
> (3) Internal business: Health and safety policies. Organising for safety (control, communication, co-operation, competence). Demonstration of management commitment and workforce involvement in health and safety. Health and safety auditing. Health surveillance and promotion.
>
> (4) Learning and growth (best practice): Testing of employees knowledge of health and safety policy. Visits by managing director, business unit manager/director to the installation, including face to discussions with members of the workforce. High percentage of staff attending safety committee meetings once a month. Occupational health plan in place, high percentage of plan achieved and health promotion activities offshore. High percentage of corrective actions formally closed out against an agreed time scale of the past year. (p. 415)

Focusing on health and safety is good for business and employee engagement. The level and proficiency of OHS safety management embedded into operations by small and medium-sized enterprises (SMEs) significantly impacts the rate of occupational injuries sustained (Arocena & Nūñez, 2010). The SMEs that focused on both human and technical safety aspects were the safest, followed by firms with solely a technical safety focus. SMEs with no OHS system focus were associated with the highest injury rates (Arocena & Nūñez, 2010).

Roberts et al. (2012) in their case study of project management across high-risk industries, found that the projects aligned to the prevailing corporate climate of the organization and were not explicit in naming health and safety as a priority. There is a need for clear safety rules to guide safe work procedures given the complexity and 'invisibility' of cause and effect relationship within safety critical processes that are beyond the expected scope of individual operators. An individual worker making individual risk management decisions is faced with making a decision that they feel will impact productivity or add more cost. Safety rules for identified risks reduce this point of decision or indecision and the defined rule that benefits from networked knowledge and clarity of accepted action (Hopkins, 2011b).

A review of senior management practices in leading organizational safety and quality improvement in healthcare show the following themes (Øvretveit, 2005):

Leaders develop an improvement strategy and understand the organizational and stakeholder factors that inhibit safety and quality improvement, and assess their readiness for change; create a compelling vision for improvement and define a strategy to achieve that vision; assign clear responsibilities and authority

for safety and quality within each role and create management accountabilities to support effective processes; make system changes to increase the often-lacking safety and quality data captured to be assessed and embedded into decision making processes and performance measures; enhance quality and safety improvement training and education embedded into operations; and advance their communications strategies to improve the flow of two-way improvement information and to motivate, tell stories, lead and recognize achievements in support of organizational quality and safety improvement. (p.424-426)

Figure 7 provides a summary of leadership actions by role to advance safety leadership, climate and performance using safety as a business strategy.

Focus: Effective Leaders Focus on Safety as a Business Strategy		
How	*Who*	*What*
FOCUS *Safety as a Business Strategy*	Owner, CEO, Senior Executive	❑ Safety is integrated into the strategic plan. ❑ Safety is a core value in the business plan and performance reviews. ❑ Move from compliance-based safety to performance-based safety. ❑ Safety considerations are evident in decision-making. ❑ View organizational health and operational efficiency as co-dependent. ❑ Understand how safety impacts other all other measures, ie productivity. ❑ Safety is a continuous and active pursuit. It's a part of all business functions. It's never 'one and done' reserved for new employers or new work changes only. Its how work is done around here. ❑ Safe production considerations are evident in strategic decision criteria. ❑ Make safety central to profitability and competitive advantage. ❑ Safety measures are embedded into scorecard. ❑ Understand the business case for safety. ❑ Survey safety climate and visibly act on the findings in work planning. ❑ Ask workers about their safety communication with managers. ❑ Focus visible resources (time, money and people) for safety performance. ❑ Have safety measures in company goals (leading indicators of climate, behaviors, resource-allocation, business planning and actions that advance safe, productive work).
	Director, Manager	*As above plus* ❑ Ask workers about their safety communication with supervisors. ❑ Focus on an effective hazard identification and control processes based on strong, open two-way communication. ❑ Pursue safety planning and resource allocation. ❑ Focus on safe, sustainable and productive work decisions. ❑ Build in formal and informal risk assessments in all business decisions and employee safe work decisions. ❑ Actively investigate all safety-related events & failures seeking both organizational conditions (work design, expectations, pressures), defenses that didn't work and worker behavior as contributing elements. ❑ Review the investigation reports your supervisor completes, ask about what is happening to fix safety issues.
	Front-line Supervisor	*As above plus* ❑ Supervisors are visible and monitor the work. ❑ Safety is integrated into ops work planning. ❑ Facilitate formal and 'real-time' risks assessments. ❑ Ask workers about safety communication with peers. ❑ Create a continuous improvement philosophy to operational safety. ❑ Improve the work processes, learn from each incident investigation.

Figure 7: Focus

ENGAGE: Effective Leaders Engage Others to Advance Business Outcomes

Leaders that empower and engage their teams by sharing knowledge and improving team cohesion positively influence team performance (Hui-Ling & Yu-Hsuan, 2011). Employee engagement is a key dimension for productivity as the goods and services of companies are made or delivered by frontline employees. Positive employee engagement and employee satisfaction are correlated with firm profitability (Harter, 2002). Through 360-survey feedback from direct reports, the level to which leaders support their teams was the greatest influence on employee engagement (Jessica & Helena, 2011). Employee perceptions on the integrity and effectiveness of their leader were also positively associated with level of employee engagement.

With a focus on customer needs and delivering customer value, there is an opportunity to engage not just those workers that make the goods or deliver the services in safety improvement opportunities but also the customers on the design of products and the systems that produce the service (Carayon, 2006). This is very relevant to healthcare where patient safety is closely linked to staff safety. In healthcare, the involvement and participation of a patient into the decision of how they are moved and transferred significantly impacts risks to both the worker and patient.

How managers and supervisor make safety meaningful matters, versus relying on a written policy working to influence safety work behavior alone. Huang et al. (2004) found that the quality of supervisor support, implementation and coaching employees on corporate safety policies predicted the incidence of injury and level of

employee satisfaction with the company. The ability of leaders to understand, develop and implement safety system elements successfully is described by Fruhen, et al. (2014) as *safety intelligence*. The characteristics (knowledge, skills and abilities) of *safety intelligence* from most influential to least include one's level and proficiency of: social competence, safety knowledge, having a regulatory focus, problem-solving, engaging personality and interpersonal leadership (Fruhen et al., 2014).

Leadership is a verb, not a position. Despite common association with having line authority over direct reports, leadership and influence on the health and safety performance can be exhibited from any level within an organization. Slaunwhite et al. (2009) used peer leaders with no line authority to promote H1N1 voluntary vaccination uptake among their colleagues in healthcare units. Using *peer champions* or *opinion leaders* increased voluntary vaccination rates by 10 percent as compared to those units without peer leadership promotion, clearly demonstrating the influence leadership from any level can have on safety behaviors (Slaunwhite et al., 2009). Opinion leaders are those individuals that peers turn to for direction, influence and sense making.

Staley (2011) concluded that safety leadership is mature within an organization if safety is part of every business decision as an embedded key success factor. He advised to "Demonstrate your interest in safety, not in accidents." Conversations of risks and performance are discussed together as mutually inclusive, dependent, supporting goals. Staley (2011) stated:

With success comes complacency, nothing happens. How do you keep risk awareness living? I've done it 1000 times and nothing has happened. Therefore the perception is the risk has disappeared. Dangerous. That lulls us into a false sense of security. Maintaining a healthy fear and respect for the hazards and asking the questions of how the controls may fail.

Figure 8 provides a summary of leadership actions by role to advance safety leadership, climate and performance through engaging others.

Engage: Effective Leaders Engage Others to Advance Business Outcomes

How	*Who*	*What*
ENGAGE *Involve others; Expand Influence*	Owner, CEO, Senior Executive	❑ Effective leaders are acutely aware that bad news does not move its way up the organizational hierarchy (Hopkins, n.d.). One must engage others to discover issues and opportunities for improvement. ❑ Give staff verbal permission to work safely. ❑ Empower everyone and give them the clear authority to stop-the-line and raise safety concerns. Do not politicize safety. Take every raised safety concern and review for improvement. Involve others in implementing improvement. ❑ Increase worker involvement, authority, responsibility and control in safety. ❑ Ask workers how work could be made safer. ❑ Engage your managers and supervisors in leadership development (transformational leadership). ❑ Challenge everyone to make safety better.
	Director, Manager	*As above plus* ❑ Safety concerns and improvement ideas are seen as ways to enhance operational efficiency and innovation. ❑ Call injured workers and remove barriers to return-to-work. ❑ Engage workers in new work design, they have valuable operational knowledge. ❑ Engage others (those who do the work) and make the work better using their knowledge through participatory work improvement.
	Front-line Supervisor	*As above plus* ❑ Facilitate strong, easy, open two-way communication. ❑ Encourage worker's ideas and follow-up on safe work suggestions. ❑ Take every raised safety concern and review for improvement. Involve others in implementing improvement. ❑ Have workers to do the safe work talks (pre-shift/debrief incidents). ❑ Provide positive, frequent and immediate feedback and coach to success. ❑ Address safety violations promptly and encourage safe work behavior. ❑ Understand if unsafe work is done when no one is watching.

Figure 8: Engage

RECOGNIZE: Effective Leaders Recognize the Contributions Others Make to Advance Safety

As supervisors increased their recognition of safe work behaviors with their teams, injury rates declined and safety worker's perceptions of safety climate increased (Zohar, 2002).Feedback should be proportional to demonstrated behaviors. If there are 90 percent adherence to safe work and 10 percent variance from that, then 90 percent of feedback should be positive. At the Health and Safety Forum (2013), Lawrence Waterman advised leaders to:

> Go into the workplace and congratulate people on some good things you see. Then find something you don't like and call work to a halt. Bring everyone together - even if just for a few minutes - and tell them you're worried about their safety and what the problem is. Keep it positive and don't make it personal. (p. 2)

First seek to catch people doing the right things, and recognize the safe work behavior immediately and frequently. However when observing unsafe behavior, initiating safety conversations is difficult and often not pursued in a manner that supports safe work practice or that doesn't create defensiveness. Frances (2011) provides the following advice: 1. Open the conversation with a phase that lacks judgment such as 'This is a safety moment'. 2. Provide the feedback with honest concern for the wellbeing of the person. 3. Be clear about the risk and how a safe alternative reduces harm to them and others. Step 4: Actively listen to their response to understand if issues exist or work obstacles impede the safe work practice being used. This might include inappropriate design of equipment,

availability of PPE, knowledge of practice, peer-influence or climate, perceived work-pace pressures or organizational factors that impact the ability to sustainably allow safety, productive, quality work to be completed more easily.

Leaders need to treat small problems as tell tale signs of larger organizational culture issues, ie if eye protection is not worn simply asking the worker to put on the safety glasses is not enough. Need to ask why they are not doing the right thing. This will get to the failure of the management system to allow that unsafe action to persist (Hopkins, n.d.).

It's important to recognize but not reward. One can't buy safety outcomes. Reinforce positive motivation by recognizing people for the right behaviors. People are motivated through the attention of their management and by their peers and by their staff (Staley, 2011).

Figure 9 provides a summary of leadership actions by role to advance safety leadership, climate and performance through recognizing safe work behavior.

Recognize:
Effective Leaders Recognize the Contributions Others Make Advancing Safety

How	*Who*	*What*
RECOGNIZE *Recognize positive contributions; Safe work behaviors*	Owner, CEO, Senior Executive	❑ Recognize behaviors, not outcomes. ❑ Embed safety recognition in events. ❑ Catch folks doing the right things. ❑ Celebrate safety messengers. ❑ Coach unsafe behaviors to success. ❑ Recognize the safety work behaviors not the results, get rid of '# days without a last-time injury' that leads people to hide safety issues or not report issues that if fixed could make work safer and more productive. ❑ Positive safety work behaviors are recognized and shared. ❑ Messengers of safety improvement are recognized.
	Director, Manager	❑ Recognize behaviors, not outcomes. ❑ Catch folks doing the right things. ❑ Celebrate safety messengers. ❑ Coach unsafe practice to success. ❑ Show understanding of what team members think about safety and work challenges. ❑ Positive safety work behaviors are recognized and shared.
	Front-line Supervisor	❑ Recognize safe work behaviors, not outcomes. ❑ Deliver proportional recognition (recognize safe work behaviors to the degree they are observed, rather than only on the few unsafe behaviors). ❑ Catch folks doing the right things. ❑ Celebrate safety messengers. ❑ Coach unsafe practice to success. ❑ Show understanding of what team members think about safety and work challenges.

Figure 9: Recognize

S.A.F.E.R. LEADERSHIP MODEL

Figure 10: S.A.F.E.R. Leadership, a 'how-to' model for transformational leadership

Robert Westhaver (2013) speaking to a group of federal government leaders stated, “Safety is not a binder on a shelf, nor the lonely domain of safety folks. Safety must be active, visible and integrated into and across operations and leadership. Effective leaders bring safety to life”.

The S.A.F.E.R. Leadership model provides guidance to business leaders (see Figure 10). It is clear that the quality of leadership has a significant impact on employees achieving work goals, and that transformational leadership is associated with optimizing the contribution of employees to their work and their contribution to collective organizational goals. It is also known that safety-specific transformational leadership improves safety participation, safety compliance, safety performance and safety climate and is a predictor of firm profitability. If these positive leadership

impacts are known then there is a strong value proposition to make meaningful these leadership lessons and pragmatically define what effective leaders do to make work better.

The S.A.F.E.R. Leadership model provides leaders with guidance on the specific behaviors and practices to bring safety to life and positively influence safety climate, safety engagement and performance outcomes within their organizations. The components of the S.A.F.E.R. Leadership Model are: Speak, Act, Focus, Engage and Recognize.

Leaders *speak* about safety; their *actions* make safety meaningful and demonstrates their safety commitment to all employees and stakeholders; they *focus* and connect safety to every part the business; they *engage* the workforce in safety leadership; and they *recognize* folks for championing safety. Leaders create culture with every statement, action, assigned priority, interaction and acknowledgement. Leadership predicts culture. The S.A.F.E.R. Leadership model uses transformational leadership dimensions to define the behaviors of safer leadership to enhance safety culture.

Figure 11 provides a summary of leadership actions by role to advance safety leadership, climate and performance.

Summary of S.A.F.E.R. Leadership Behaviors of Effective Leadership

S.A.F.E.R. Leadership	Owners, CEO, Senior Executive	Director, Manager	Front-line Supervisor
Speak	❑ Talk about safety at work events ❑ Ask directors about safety weekly ❑ Ask '*Tell me about safety*? Where are our risks? *What are we doing about it*?' ❑ Put safety on agenda at Ops & BOD	❑ Ask how to make the work better ❑ Ask supervisors about safety daily ❑ Ask '*Tell me about safety*? Where are our risks? *What are we doing about it*?' ❑ Put safety on agenda at each ops	❑ Ask workers about risks and what are we doing about it? ❑ Make safety relevant to the work ❑ Give verbal permission to work safe and to 'stop the line' ❑ Safety in each production talk
Act	❑ Visit the worksite **1 hour each week** and talk/ask about risks to safe ops ❑ Model safe work (PPE) ❑ Visibly signal safety importance	❑ Visit the worksite **1 hour each day** and talk/ask about safe ops ❑ Model safe work (PPE) ❑ Visibly signal safety importance	❑ Be on the worksite **30% of time** ❑ Model safe work (PPE) ❑ Act promptly on safety ❑ Visibly signal safety importance
Focus	❑ Have safety focus in strategic plan ❑ Have safety measures in scorecard ❑ Survey safety climate & address ❑ Make safety an active pursuit ❑ Ask workers about their safety communication with managers	❑ Embed safety into operations ❑ Safety in performance reviews ❑ Focus visible resources ❑ Make safety an active pursuit ❑ Ask workers about their safety communication with supervisors	❑ Safety is integrated into ops work planning ❑ Facilitate formal and 'real-time' risks assessments ❑ Ask workers about safety communication with peers
Engage	❑ Give staff verbal permission to work safely (and to 'stop the line') ❑ Ask workers about safer work? ❑ The job of a leaders is to bring others in.	❑ Give staff verbal permission to work safely (and to 'stop the line') ❑ Ask workers about safer work? ❑ Call injured workers and remove barriers to return-to-work	❑ Have strong, open two-way communication ❑ Encourage workers ideas ❑ Support workers do the safe work talks (pre-shift)
Recognize	❑ Recognize behaviors, not outcomes ❑ Embed safety recognition in events ❑ Catch folks doing the right things ❑ Celebrate safety messengers ❑ Coach unsafe behaviors to success	❑ Recognize behaviors, not outcomes ❑ Catch folks doing the right things ❑ Celebrate safety messengers ❑ Coach unsafe practice to success	❑ Recognize safe work behaviors, not outcomes ❑ Proportional recognition ❑ Celebrate safety messengers ❑ Coach unsafe practice to success

Figure 11: Summary of S.A.F.E.R. Leadership behaviors by role

Transformational Leadership and S.A.F.E.R. Leadership

Leadership is about action. It's what you do and how you do it that matters.

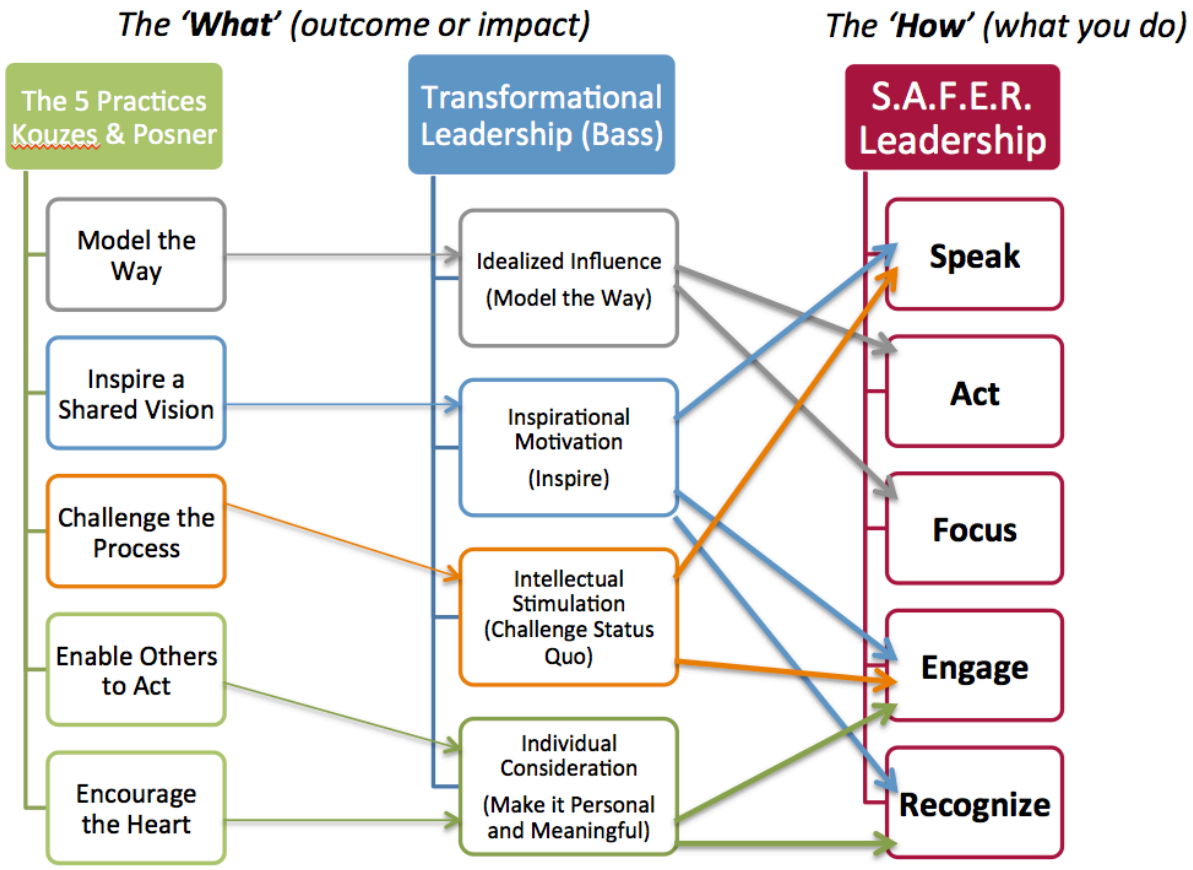

Figure 12: The connected components of transformational leadership and S.A.F.E.R. Leadership

The components of S.A.F.E.R. Leadership well support and are connected to the desired outcomes of the two dominant transformational frameworks by Kouzes and Posner and by Bass (Figure 12). The action-based S.A.F.E.R. Leadership elements provide how-to guidance for leaders seeking to influence others by igniting an intrinsic drive to perform beyond established practice.

Safety Management and S.A.F.E.R. Leadership

Figure 13 shows the linkages of the HSE (1999) organizational elements of safety management with the action-based components of the S.A.F.E.R. Leadership model.

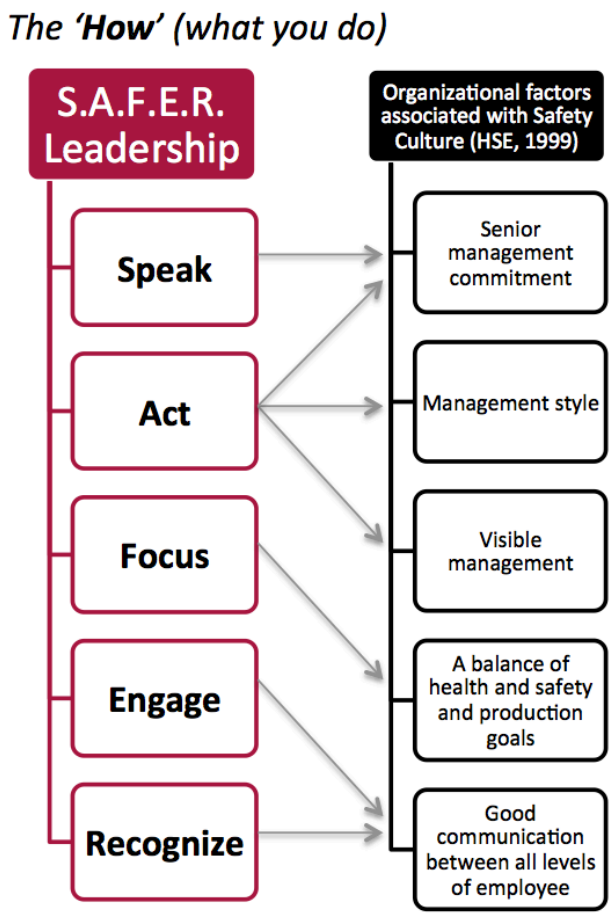

Figure 13: Connecting S.A.F.E.R. Leadership with safety culture factors

Connecting Leadership Approaches with S.A.F.E.R. Leadership

The continuum and alignment of various leadership approaches (see Figure 14) provide a means of assessing the observable action of leaders perceived by others. Using simple observational labels indicating the frequency of observed

S.A.F.E.R. Leadership behaviors (from absent/non-observed to ever-present), ratings can be easily made of demonstrated actions of influence.

Figure 14: S.A.F.E.R. Leadership aligned to leadership approaches

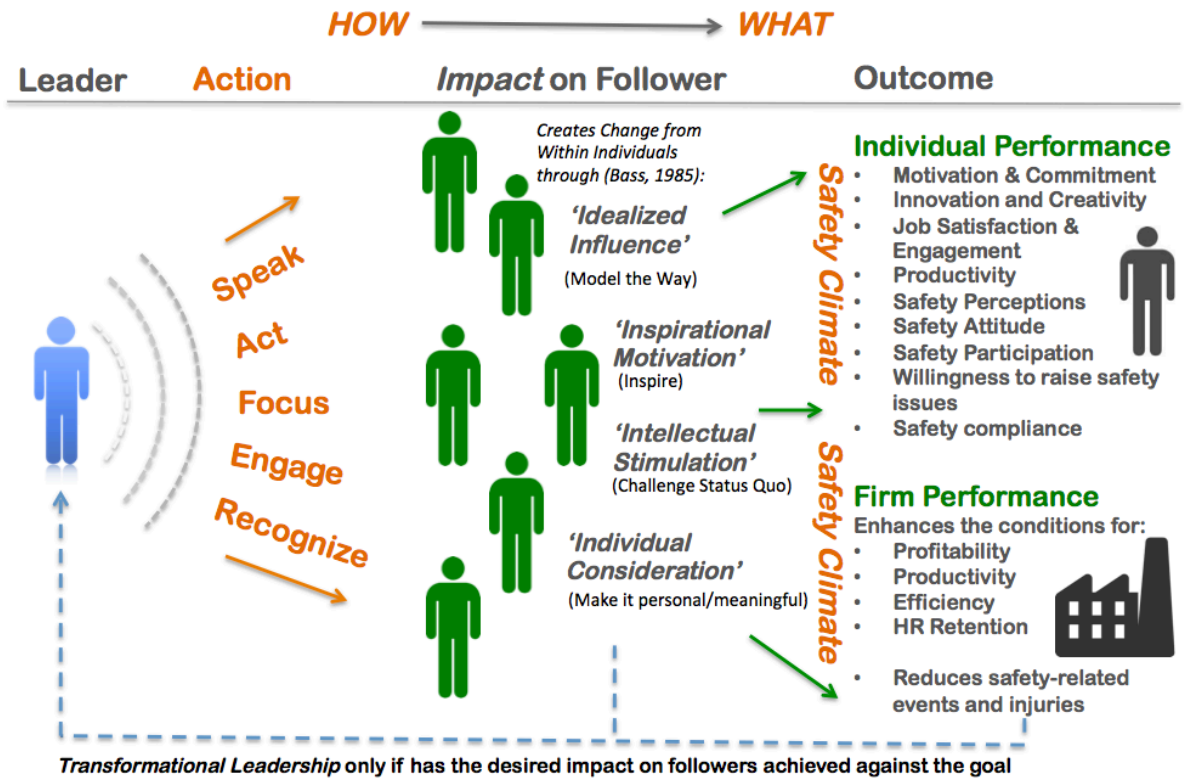

Figure 15: S.A.F.E.R. Leadership actions, impact and outcomes

Much is defined in the literature of transformational leadership and the desired impact on followers but less about what leaders actually do to achieve the impact. Leadership is only transforming or transformational if it brings about intrinsic change in the follower. If it there is no change, then by definition it is not transformational. Figure 15 depicts the S.A.F.E.R. elements and how they are positioned to guide the actions of leaders in order to facilitate the influence and impact on the follower. Transformational leadership and S.A.F.E.R Leadership are distinct constructs that are symbiotic and mutually supportive towards individual and organization performance.

AN INTEGRATED S.A.F.E.R. LEADERSHIP PLATFORM & RESOURCES

Integrated Components of a Safety Leadership System

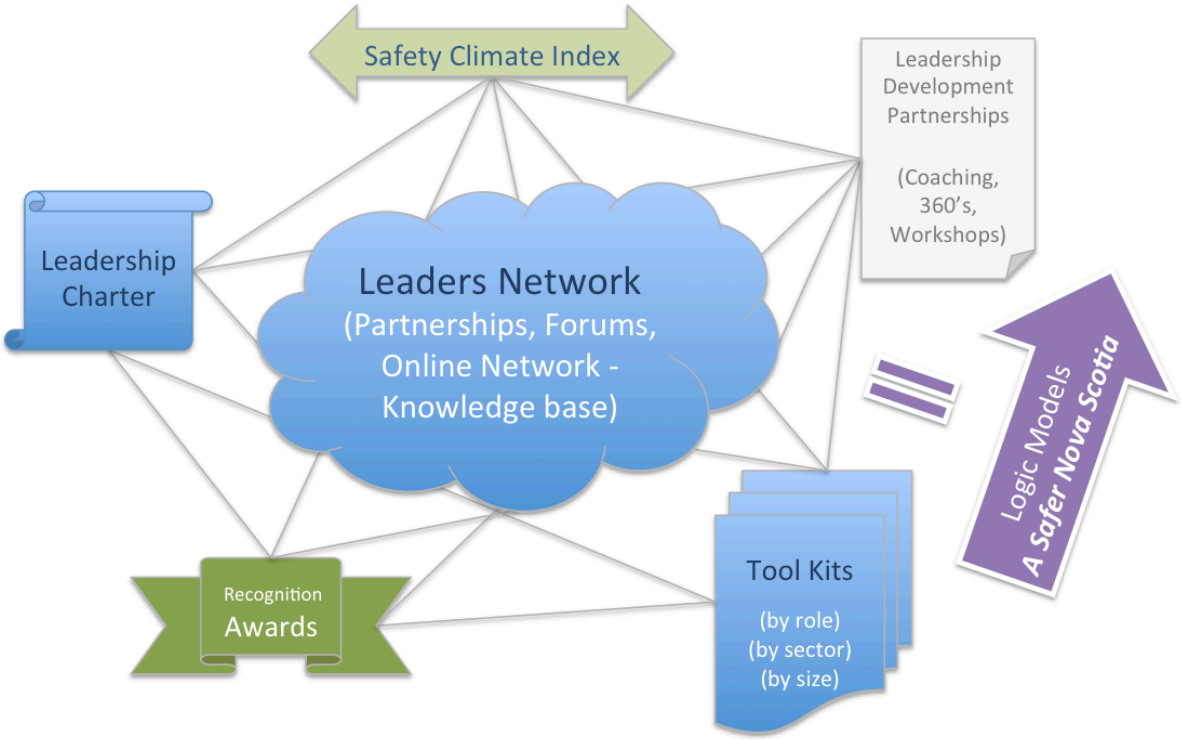

Figure 16: Interconnected resources to advance jurisdictional safety leadership and performance

Advancing safety leadership within a jurisdiction of multiple stakeholders involves two principle goals: expanding leadership networks, and building a mechanism for developing safety leadership capability. Figure 16 provides a model of relevant components and how the interconnectedness may support a broadening of the quality and quantity of safety leadership.

The leaders network provides the infrastructure whereas the programs, tools, resources and development pathways provide the content. Another key

consideration other than infrastructure and content is one of governance. The system needs to be relevant and valuable to workplace leaders, provide efficient ways to assess current leadership capabilities, define development opportunities and provide resources and educational support to advance safety leadership effectiveness.

Safety Leadership System Components

Leadership Forum

Industry has the most direct impact and influence on work and risk. Workplaces are the interface of work, and it is the worker that is most exposed to the associated risks. Business leaders make the decisions and create the climate and conditions that are most relevant to safety performance and outcomes.

Workplace leaders are most relevant to the positive safety leadership change opportunity. In New Zealand, the government has appointed a charismatic and influential business leader to rally his senior executive counterparts to motivate safety leadership practices towards their vision for 'zero harm workplaces'. According to chair Rob Jager (Health and Safety Forum, 2013) ''*The forum is a significant game changer for CEOs: making safety leadership a core competency for business leaders and first priority in their businesses*." (p.1)

Leadership Charter

A safety leadership charter is used by industry and agencies to bring focus to safety leadership and build capacity to improve collective safety performance. It is a tool that seeks to build and extend influence on senior leaders' commitment, vision

and action to advance safety proliferation. Safety leadership charters exist in a few jurisdictions in Canada, with a move by others to consider charter development. WorkSafe Saskatchewan commissioned an independent review of its safety leadership charter and provides recommendations about the desired and effective elements that should be considered in the concept, development, implementation and growth strategies of safety leadership charter initiatives (WorkSafe Saskatchewan, 2014), and include:

- Strategically advance safety leadership capacity development among signatories.
- Be a platform for knowledge sharing and knowledge management, with frequent and visible updates and evolution. Guidance resources arranged by theme and sector are warranted.
- It's design and evolution must be member-driven with a clear value-proposition based on the needs of signatories. Resources and guidance on developing and communicating a vision of safety, establishing internal accountability for safety, safety leadership approaches, business case for safety, and understanding safety metrics are relevant topics for signatories.
- Be based on demonstrated actions with accountability frameworks to engage signatories and evolve their safety leadership practice and influence. An accountability mechanism based on what effective leaders do to advance safety, that is easily administered, be created and endorsed by signatories.
- Promote extra-organizational opportunities for members to be visible leaders in communities and industry.

- Be a robust network capability both in-person and on-line networks to advance the objectives of signatories and provide opportunities for peer-leadership and business-2-business opportunities.
- The charter platform needs to be an efficient connector of people, organizations and influencing stakeholders.
- It needs to be visibly led by industry leaders respected for their leadership and who can maintain a sense of urgency for leaders to move from vision to action on safety leadership. A steering committee made up of influential signatories would keep the needs and value relevant to peers.
- Must highlight peer excellence showcasing its signatories and capturing their leadership lessons in meaningful, accessible and relevant ways.
- Provide a defined succession mechanism as one CEO exits a chartered organization and is replaced by another.
- Provide mandatory executive training to signatories on safety leadership.
- Promote signatories as demonstrating their ongoing commitment to safety leadership practice. (p. 24-26)

Relevance and influence on advancing organizational business goals for members are key factors to sustainability and growth. The S.A.F.E.R Leadership construct may offer value as elements of a safety leadership charter. As it is clear in the literature that leadership style impacts organizational safety climate and performance, a safety leadership charter is an important component of a 'system of systems' focused on safer leadership to grow the network and extend leadership capacity to advance safe, productive and sustainable business.

Recognition Awards Program for S.A.F.E.R. Leadership Behaviors

Integration (through strategic partnerships) into existing recognition and awards programs administered by stakeholders of influence may serve to cross pollinate influence and awareness for mutual value.

Tool Kits

OSHA (2014b) provides online tools to support organizations enhance safety leadership and management systems. Their eTool portal has the following components: (1) Management System and Safety/Health Integration; (2) Safety and Health Checkups; (3) Creating Change; and (4) Safety and Health Payoffs.

Safety Climate Index (Perception Survey and Gap Analysis)

Assessing safety climate is important to predict safety performance and is an indicator of safety leadership effectiveness. Using the S.A.F.E.R. Leadership components and gathering ratings of perceived frequency of leaders' actions may provide a measure of safety climate. Rating across the five S.A.F.E.R. Leadership components, including a rolled-up rating would provide direction for individuals, organizations or sectors to focus safety leadership improvement efforts (Figure 17).

Safety Climate (Safety Leadership) Maturity Index					
Individuals Sampled by Role [Exec: # Managers: # Supervisors: # Front-line Staff: #]					
S.A.F.E.R. Element	*Absent* *(Not observed)* *1-5*	*Reactive by issue* *6-10*	*Proactive by issue* *11-15*	*Ever-present* *16-20*	Element Score
Speak			▼		***S***: 15/20
Act		▼			***A***: 10/20
Focus			▼		***F***: 15/20
Engage	▼				***E***: 5/20
Recognize		▼			***R***: 10/20
Company *Rating*	55/100	***Industry*** *Rating (SIC)*	60/100	***Economy*** *Rating (NS)*	65/100
Linked to Development Actions:		☑Toolkit	☑Workshops	☑Coaching	☑Network

Figure 17: Safety climate maturity matrix across S.A.F.E.R. Leadership dimensions

Having comparative ratings of an organization to their industry sector or the jurisdiction as a whole would also provide situation awareness on their opportunity to improve. The opportunity for future research would be validation studies of this concept of safety climate assessment using the S.A.F.E.R. Leadership framework.

Leadership Development Programs

Figure 18 provides an approach to assess current state, compare to industry peers, and set actions plans based on gaps for leadership development could involve various stakeholders, including educators and developers.

It presents intuitive question-based stages along a development cycle asking business leaders; *where are you now?* And moving to *where do you want to be?*, *How you going to get there?*, and finally *getting there*.

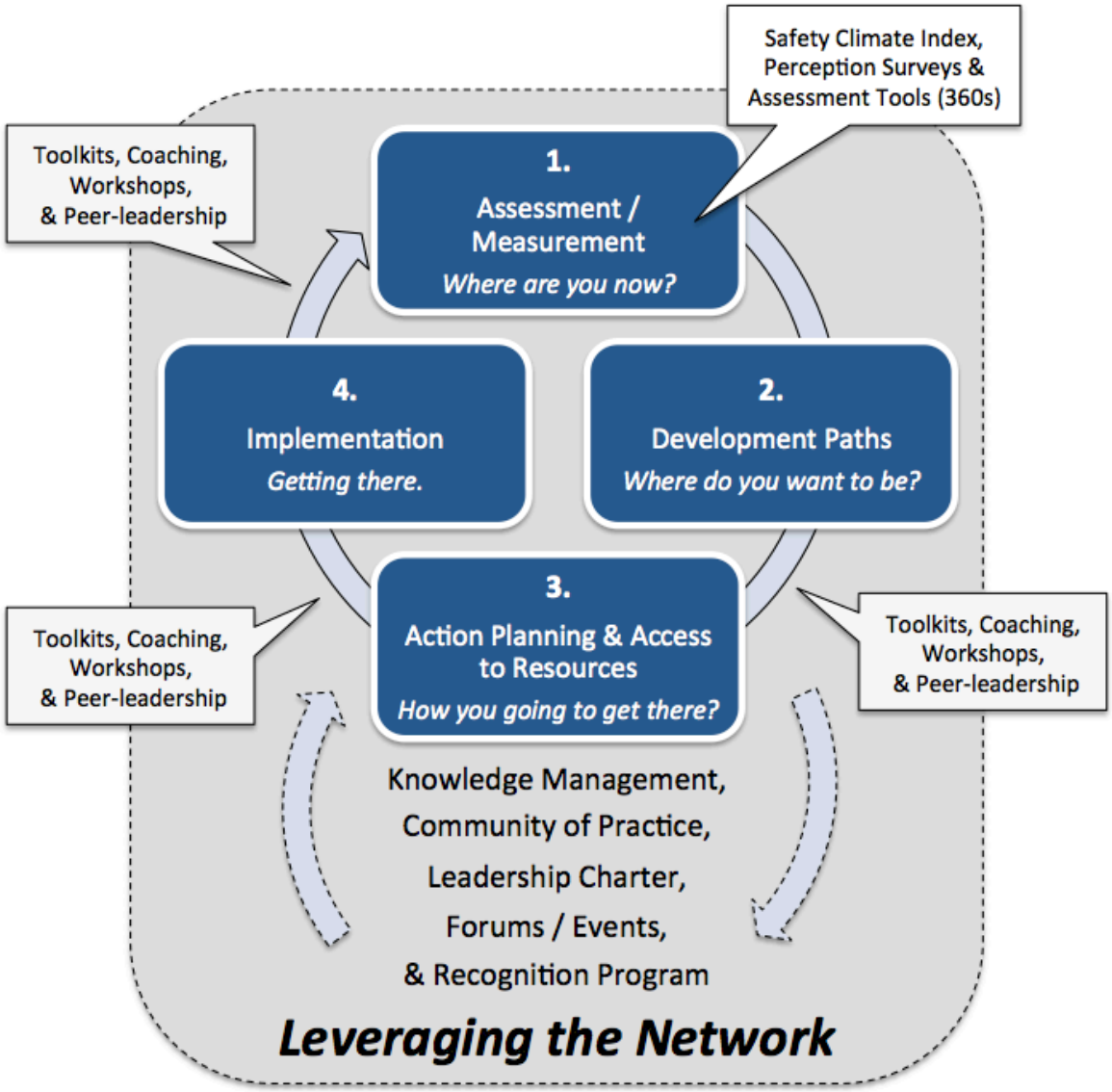

Figure 18: A framework for organizational development for safety leadership

Integrated tools and resources for assessment and development could include; safety climate surveys, 360-feedback assessments and leadership development workshops. Taking the findings from Mullen & Kelloway (2009), include lecture-based modules, peer-discussion, goal-setting, and follow-up coaching on safety leadership that are effective in developing safety leadership capacity in managers and supervisors. Using the S.A.F.E.R Leadership framework

could provide an integrated platform for focused efficiency. Figure 19 provides a vertical integration view that identifies the resources needed to support safety leadership development at multiple levels from the individual to broad-based impact across industries.

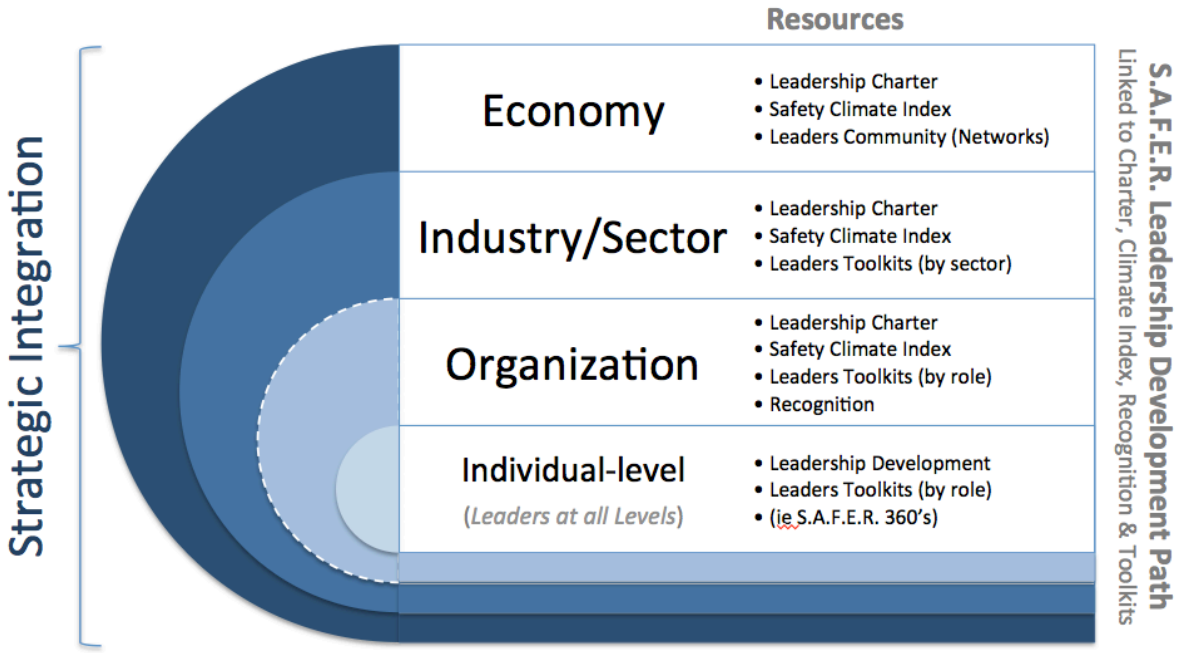

Figure 19: An approach to vertical integration of S.A.F.E.R. Leadership system elements

STAKEHOLDERS OF INFLUENCE: A SYSTEM OF SYSTEMS

As an economy, society and jurisdiction we are at a collective maturity to move from our view of workplace safety as a cost of doing business to explore the value of safety-specific transformational leadership needed to advance safety and performance outcomes.

As we move the concept of safety from cost-driver to profit-driver through transformational safety leadership, we as a provincial collective can strive to make Nova Scotia the safest places to work in Canada. To do so it is vital to engage the stakeholders of influence and collectively align our strengths, focus, expertise and energies, and create the conditions and partnerships to foster better business through safer leadership. Figure 20 places workplaces at the center, as businesses are the direct interface of work, risk and performance. Workplaces are the *creators* of goods and services and their management have the greatest impact on the health and safety of the workforce. Surrounding the business are the *stakeholders of influence* grouped by their primary influencing functions. These include: connectors; legislators and regulators; representatives and advisors; educators and developers. Suppliers and providers are directly connected to workplaces through the supply chain that ends in the ultimate goal of satisfying customer needs. It is important to note that each stakeholder is a workplace onto itself but are presented here relative to their influence on industry.

The workplaces and stakeholders create and exist within a socioeconomic context and culture. All of which exert influence on business and work culture and therefore need to participate and lend their influence on safety leadership.

Aligning to a shared model of safety leadership will provide more focused energies into implementation and bring greater efficiencies and economies of scale to support the safety leadership. S.A.F.E.R. Leadership provides a simple, action-based approach to support safety leadership within industry and across the *stakeholders of influence* (Figure 20).

How stakeholders interface with each other in constructive or destructive ways will impact overall system performance. All stakeholders collectively own innovation, partnerships, continuous improvement, leadership development and growing networked influence. These stakeholders create the conditions for safety performance.

A good example of positive interface and partnership is demonstrated through the provincial Workplace Safety Strategy (LAE & WCB, 2013) that is seeking to bring together stakeholders to advance safety outcomes. The workplace safety strategy brings a focus to leadership, safety culture, small & medium-sized enterprises, education and training, inspection and enforcement, and performance management and measurement. The strategy is a call to action for leaders at all levels to take action to enhance the workplace safety culture of Nova Scotia.

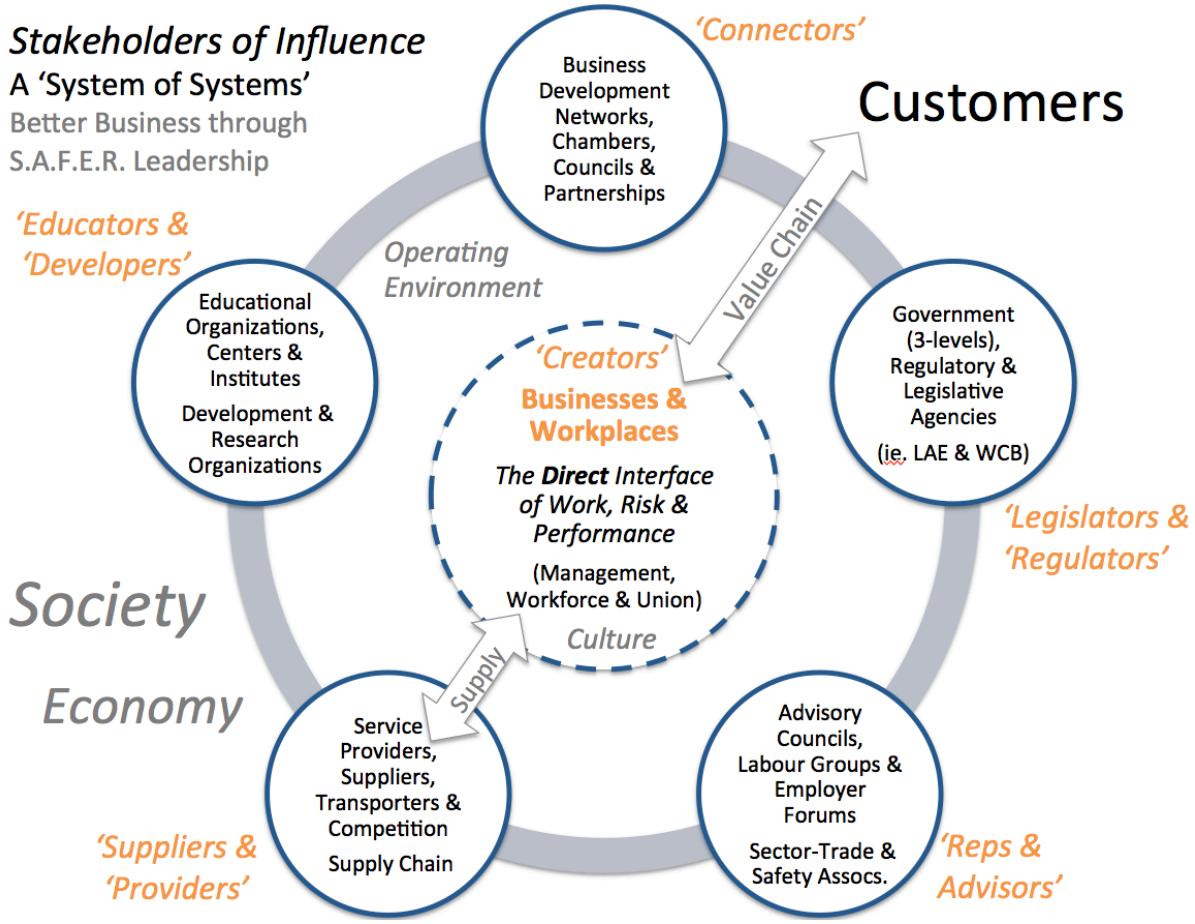

Figure 20: Stakeholders of influence on business climate

Working to impact safety leadership within a complex ecosystem of industries, agencies, associations and education organizations requires a systems-approach (or socio-technical perspective) to influence a goal and align energies of involved stakeholders.

Any one stakeholder is a complex work system. A work system can be described using the following components: have defined goals, comprised of people, applying processes, using technologies, in work environments (infrastructure), within an organizational culture. A work system exists and interacts within an external operating context made up of other complex work systems (stakeholders), within

multiple regulatory frameworks, and under a set of fiscal circumstances (Davis et al., 2014).

Given the multiplicity of stakeholders influencing the safety climate of an economy or jurisdiction, it is valuable to consider an emerging concept that seeks to define the interaction and interfaces of multiple organizations each with different mandates but yet having a shared influence on safety leadership and its development. This concept is a Systems of Systems (SoS). Siemieniuch & Sinclair (2013) define a System of Systems as:

> *SoS are much larger than the systems of which they are composed, and in many cases will be in existence for a much longer than these component systems. They are fundamental to the fabric of society and the functionality of the nation-state*'.

KEY ELEMENTS FOR SUSTAINED ORGANIZATIONAL CHANGE

Ingredients for Organizational Change

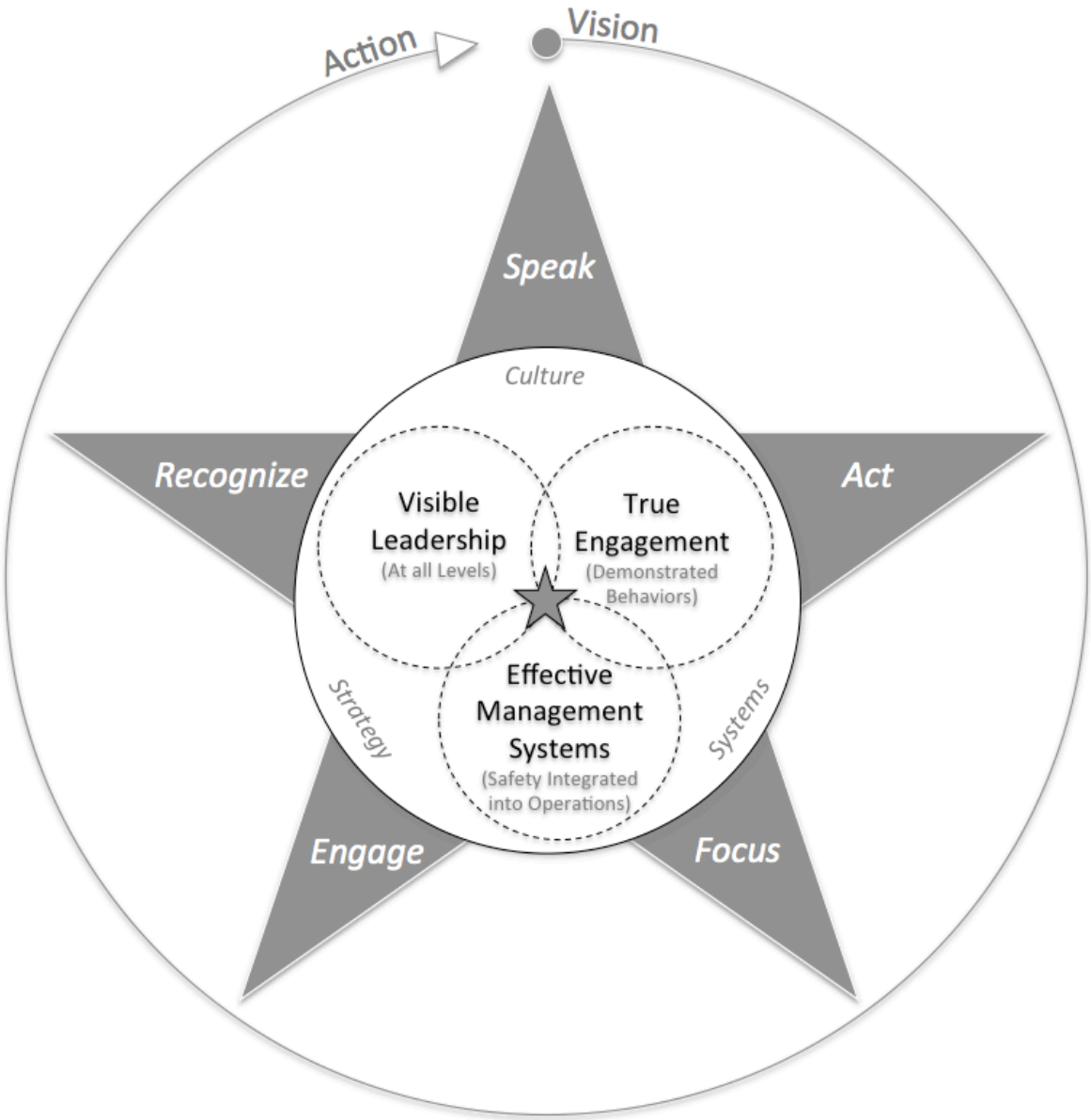

Figure 21: 'Sustainability Triad', key elements for sustained organizational change through S.A.F.E.R. Leadership

The factors for institutionalizing organizational change include: visible leadership, true engagement and effective management systems that have safety embedded into operations and performance management. I refer to these three

elements as the ‘sustainability triad’ to support leaders to move from vision to action and embed change. Safety Leadership begins beyond the safety management system and is represented in the visible leadership and true engagement.

The S.A.F.E.R. Leadership model provides an approach to achieve the elements of the sustainability triad by defining simply the practices and behaviors of effective leaders, and drawing on the benefits of transformational leadership. Safety leadership involves moving from vision to action. As Nelson Mandela said, “Vision without action is only dreaming, action without vision is only passing time, vision with action can change the world”.

The relevant concepts to advance safety leadership include leading from a systems perspective, having strategic focus, being aware of the power of culture. As Peter Drucker stated, “*culture eats strategy over breakfast”*, and demonstrating visible leadership is needed to initiate and sustain positive behavioral change through true engagement.

Recipe for Organizational Change

At a company level, OSHA (2014a) provides a roadmap to senior management to embed safety leadership into the core of their business with the following steps:

1. Obtain Top Management "Buy-in"
2. Continue Building "Buy-in"
3. Build Trust
4. Conduct Self Assessments/Bench Marking
5. Initial Training
6. Establish a Steering Committee
7. Develop Site Safety Vision
8. Align the Organization

9. Define Specific Roles
10. Develop a System of Accountability
11. Develop Measures
12. Develop Policies for Recognition
13. Awareness Training and Kick-off
14. Implement Process Changes
15. Continually Measure performance, Communicate Results and Celebrate Successes
16. On-going Support

To achieve better business through safer leadership leaders need to embed safety as a key value proposition through organizational change. Kotter International (2014) offers the following actions to leaders leading change:

Step 1: Establishing a Sense of Urgency
Step 2: Creating the Guiding Coalition
Step 3: Developing a Change Vision
Step 4: Communicating the Vision for Buy-in
Step 5: Empowering Broad-based Action
Step 6: Generating Short-term Wins
Step 7: Never Letting Up
Step 8: Incorporating Changes into the Culture

Kelloway (2013) concluded to a group of industry leaders at the Leaders Matters conference held in Halifax (Canada) in November 2013 that:

> Leadership is a verb. Leadership is what you do. Begin by acting now. Start ripples. Do something visible to advance and engage safety leadership. Your work is done when every decision includes a component of how to do it safely.

FURTHER RESEARCH

Although the efficacy of safety-specific transformational leadership has been validated there is opportunity in validating the S.A.F.E.R. Leadership model on safety climate, safety performance and business impacts. Additionally assessing the predictive validity and efficacy of using an integrated safety leadership development system centered around S.A.F.E.R. Leadership would be valuable.

There is a need to evaluate the ease and effectiveness of leadership capacity development on an individual's ability to learn and use the leadership approach to influence their teams and enhance organizational and individual outcomes. A longitudinal study of sustained impact in safety climate and business performance should be evaluated.

APPENDIX A

The safety climate perception survey is taken directly from Vinodkumar & Bhasi (2010) was assembled from the most pervasive survey tools used to date.

Management commitment

1. Safety is given high priority by the management.

2. Safety rules and procedures are strictly followed by the management.

3. Corrective action is always taken when the management is told about unsafe practices.

4. In my workplace managers/supervisors do not show interest in the safety of workers.

5. Management considers safety to be equally important as production.

6. Members of the management do not attend safety meetings. (removed)

7. I feel that management is willing to compromise on safety for increasing production.

8. When near-miss accidents are reported, my management acts quickly to solve the problems.

9. My company provides sufficient personal protective equipment for the workers.

Safety training

1. My company gives comprehensive training to the employees in workplace health and safety issues.

2. Newly recruits are trained adequately to learn safety rules and procedures.

3. Safety issues are given high priority in training programmes.

4. I am not adequately trained to respond to emergency situations in my workplace. (removed)

5. Management encourages the workers to attend safety-training programmes.

6. Safety training given to me is adequate to enable to me to assess hazards in workplace.

Workers' involvement

1. Management always welcomes opinion from employees before making final decisions on safety related matters.

2. My company has safety committees consisting of representatives of management and employees.

3. Management promotes employees involvement in safety related matters.

4. Management consults with employees regularly about workplace health and safety issues.

5. Employees do not sincerely participate in identifying safety problems. (removed)

Safety communication and feedback

1. My company doesn't have a hazard reporting system where employees can communicate hazard information before incidents occur. (removed)

2. Management operates an open door policy on safety issues.

3. There is sufficient opportunity to discuss and deal with safety issues in meetings.

4. The target and goals for safety performance in my organization are not clear to the workers.

5. There is open communications about safety issues in this workplace.

Safety rules and procedures

1. The safety rules and procedures followed in my company are sufficient to prevent incidents.

2. The facilities in the safety department are not adequate to meet the needs of my organization. (removed)

3. My supervisors and managers always try to enforce safe working procedures.

4. Safety inspections are carried out regularly.

5. The safety procedures and practices in this organization are useful and effective.

Safety promotion policies

1. In my company safe conduct is considered as a positive factor for job promotions.

2. In my company employees are rewarded for reporting safety hazards (thanked, cash or other rewards, recognition in news letter, etc.)

3. In my company safety week celebration and other safety promotional activities arranged by the management are very effective in creating safety awareness among the workers.

4. There exists very healthy competition among the employees to find out and report unsafe condition and acts.

5. Our supervisor becomes very unhappy and angry when employees find out and report unsafe conditions and acts in our section. (removed)

Safety knowledge

1. I know how to perform my job in a safe manner.

2. I know how to use safety equipment and standard work procedures.

3. I know how to maintain or improve workplace health and safety.

4. I know how to reduce the risk of accidents and incidents in the workplace.

5. I know what are the hazards associated with my jobs and the necessary precautions to be taken while doing my job.

6. I don't know what to do and whom to report if a potential hazard is noticed in my workplace. (removed)

Safety motivation

1. I feel that it is important to maintain safety at all times.

2. I believe that safety at workplace is a very important issue.

3. I feel that it is necessary to put efforts to reduce accidents and incidents at workplace.

4. I believe that safety that can be compromised for increasing production. (removed)

5. I feel that it is important to encourage others to use safe practices.

6. I feel that it is important to promote safety programmes.

Safety compliance

1. I use all necessary safety equipment to do my job.

2. I carry out my work in a safe manner.

3. I follow correct safety rules and procedures while carrying out my job.

4. I ensure the highest levels of safety when I carry out my job.

5. Occasionally due to lack of time, I deviate from correct and safe work procedures. (removed)

6. Occasionally due to over familiarity with the job, I deviate from correct and safe work procedures. (removed)

7. It is not always practical to follow all safety rules and procedures while doing a job. (removed)

Safety participation

1. I help my co-workers when they are working under risky or hazardous conditions. (removed)

2. I always point out to the management if any safety related matters are noticed in my company.

3. I put extra effort to improve the safety of the workplace.

4. I voluntarily carryout tasks or activities that help to improve workplace safety.

5. I encourage my co-workers to work safely.

APPENDIX B

At a gathering of the Business Leaders' Health & Safety Forum, the following story was told by Lawrence Waterman who oversaw health & safety for the construction of the London 2012 Olympic complex (Health and Safety Forum, 2013)

> *Throughout construction a huge emphasis was placed on keeping people and the environment safe. As a result, London became the first Olympic build in history where no workers were killed. The project had an accident frequency rate of 0.16 per 100,000 hours worked - well below the UK building industry's average rate of 0.55.*
>
> *What the London Olympics showed us is that deaths and crippling injuries aren't an unavoidable consequence of work, Waterman says. "It is possible to do it safely." During a recent visit to New Zealand Waterman talked at a Business Leaders' Health and Safety Forum event about the pivotal role leaders play in improving safety among contractors.*
>
> *He recounted an event that occurred early on in the construction, when contractors discovered potentially dangerous contamination during a tunneling operation to take power lines below the ground. As you'd expect, the Olympic Delivery Authority - which oversaw the construction - was under a fair amount of pressure to get the complex completed on time. Moving the power lines was essential to get to the next stage of the work.*
>
> *Despite that, the Olympic Delivery Authority decided that tunneling would stop until an occupational hygienist confirmed the work arrangements had been*

changed so work could be done without making anyone sick. That took several weeks, but then the work recommenced safely.

"By stopping work like that the directors of the Olympic Delivery Authority sent a very clear message that the safety of people was their number one priority. They didn't have to make any more speeches about health and safety being important after that. Everyone already knew it."

APPENDIX C

In the Eurocontrol's White Paper – May 2013 on Safety Intelligence for ATM CEOs, the following questions are presented to test the safety intelligence or safety IQ of a leader within an organization from chair of the board, to CEO, to safety director, to supervisor. The following select questions have been adapted slightly to remove the reference to sector in focus being air navigation service providers (ANSPs) provide an effective focus to assess safety intelligence (Eurocontrol, 2013).

1. What are the top five safety risks for your organization?
2. What is being done about each of them?
3. How often do you give a safety message to staff?
4. Is Safety a standing item on the Board Agenda?
5. Can you name three safety culture strengths and three safety culture weaknesses for your company?
6. What is currently the most significant operational safety threat for your company as evidenced by quarterly incident trend information?
7. What are the top three Human Factors areas your organization needs to focus on to assure safe operational performance?
8. Which are your two best operational units in terms of safety performance? Which are the two most vulnerable?
9. Name two learning points from incidents or safety studies which have been translated into operational practice in your company?
10. Is Safety represented at Director level?
11. Do your discussions with peer organizations include Safety?

REFERENCES

Agarwal, U. A., Datta, S., Blake-Beard, S., & Bhargava, S. (2012). Linking LMX, innovative work behaviour and turnover intentions. *Career Development International, 17,* 3, 208-230.

Arocena, P., & Núñez, I. (2010). An empirical analysis of the effectiveness of occupational health and safety management systems in SMEs. *International Small Business Journal, 28,* 4, 398-419.

Ashley, A., & Patel, J. B. (2003). The Impact of Leadership Characteristics on Corporate Performance. *International Journal of Value - Based Management, 16,* 3, 211-222.

Babcock-Roberson, M. E., & Strickland, O. J. (2010). The relationship between charismatic leadership, work engagement, and organizational citizenship behaviors. *Journal of Psychology: Interdisciplinary and Applied, 144,* 3, 313-326.

Barling, J., & Hutchinson, I. (2000). Commitment vs. Control-based Safety Practices, Safety Réputation, and Perceived Safety Climate. *Canadian Journal of Administrative Sciences / Revue Canadienne Des Sciences De L'administration*, *17,* 1, 76-84.

Barling, J., Loughlin, C., & Kelloway, E. K. (2002). Development and Test of a Model Linking Safety-Specific Transformational Leadership and Occupational Safety. *Journal of Applied Psychology, 87, 3*, 488.

Barling, J., Weber, T., & Kelloway, E. K. (1996). Effects of Transformational

Leadership Training on Attitudinal and Financial Outcomes: A Field Experiment. *Journal of Applied Psychology, 81,* 6, 827.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: The Free Press.

Bass, B. M. (1997). Does the Transactional-Transformational Leadership Paradigm Transcend Organizational and National Boundaries?. *The American Psychologist, 52,* 2, 130.

Bentley, T., & Haslam, R. (2001). A comparison of safety practices used by managers of high and low accident rate post offices. *Safety Science, 37*, 19–37.

Bhat, A. B., Verma, N., Rangnekar, S., & Barua, M. K. (2012). Leadership style and team processes as predictors of organisational learning. *Team Performance Management, 18,* 347-369.

Briody, E., Pester, T. M., & Trotter, R. (2012). A story's impact on organizational-culture change. *Journal of Organizational Change Management, 25, 1*, 67-87.

Burns, J. M. G. (1978). *Leadership*. New York: Harper & Row.

Clarke, S. (2006). The relationship between safety climate and safety performance: A meta-analytic review. *Journal of Occupational Health Psychology, 11,* 4, 315-327.

Clarke, S. (2013). Safety leadership: A meta-analytic review of transformational and transactional leadership styles as antecedents of safety behaviours. *Journal of Occupational & Organizational Psychology, 86,* 1, 22-49.

Carayon, P., & Special Issue: Meeting Diversity in Ergonomics. (2006). Human factors of complex sociotechnical systems. *Applied Ergonomics, 37,* 4, 525-535.

Cooper, P. D. M. (2000). Towards a model of safety culture. *Safety Science, 36*, 2, 111-136.

Cox, S., Tomás, J. M., Cheyne, A. and Oliver, A. (1998), Safety Culture: The Prediction of Commitment to Safety in the Manufacturing Industry*. British Journal of Management, 9*: 3–11.

Cox, S., Flin, R. (1998). Safety culture: philosopher's stone or man of straw? *Work and Stress 12,* 189-201.

Cree, T., Kelloway, E.K. (1997). Responses to occupational hazards: Exit and participation. *Journal of Occupational Health Psychology, 2*, 4, 304-311.

Davis, M. C., Challenger, R., Jayewardene, D. N. W., & Clegg, C. W. (2014). Advancing socio-technical systems thinking: A call for bravery. *Applied Ergonomics, 45,* 2, 171-180.

Doran, G. T. (1981). There's a S.M.A.R.T. way to write management's goals and objectives. *Management Review, 70,* 11, 35-36.

Dul, J., Bruder, R., Buckle, P., Carayon,P., Falzon, P., Marras, W., S., Wilson, J., R., & van der Doelen, B., (2012). A strategy for human factors/ergonomics: developing the discipline and profession. *Ergonomics, 55,* 4, 377–395

Erdogan, B., Enders, J., & Academy of Management Meeting. (2007). Support from

the top: Supervisors' perceived organizational support as a moderator of leader-member exchange to satisfaction and performance relationships. *Journal of Applied Psychology, 92,* 2, 321-330.

Eurocontrol. (2013). *Safety Intelligence for ATM CEOs* [White Paper]. Retrieved January 2, 2014 from Eurocontrol: http://www.eurocontrol.int/sites/default/files/article/content/documents/nm/safety/safety_intelligence_white_paper_2013.pdf

Fabius, R., Thayer, R. D., Konicki, D. L., Yarborough, C., Peterson, K. W., Isaac, F., Loeppke, R. R., Eiseberg, B. S., & Dreger, M. (2013). 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 Environmental Medicine, 55*(9), 993-1000.

Fletcher, C. (2001). Performance appraisal and management: The developing research agenda. *Journal of Occupational and Organizational Psychology, 74*, 4, 473-487.

Flin, R. (2003). Danger: Men at work. *Human Factors and Ergonomics in Manufacturing & Service Industries, 13,* 261-268.

Flin, R., Mearns, K., O'Connor, P., & Bryden, R. (2000). Safety climate: Identifying the common features. *Safety Science, 34*, 177–192.

Frances, D. (2011). Peer-to-Peer Safety Feedback Engaging in Effective Safety Conversations. *Professional Safety, 56,* 11, 38-41.

Fruhen, L. S., Mearns, K. J., Flin, R., Kirwan, B., & Mearns, K. J. (2014). Safety

intelligence: An exploration of senior managers' characteristics. *Applied Ergonomics, 45,* 4, 967-975.

Fry, C. L., & Lee, I. (1989). OSHA Sanctions and the Value of the Firm. *Financial Review, 24,* 4, 599-610.

Gentleman in Boston. (1736). The melancholy state of this province consider'd: In a letter, from a gentleman in Boston to his friend in the country (Boston)

Griffin, M. A., & Neal, A. (2000). Perceptions of Safety at Work: A Framework for Linking Safety Climate to Safety Performance, Knowledge, and Motivation. *Journal of Occupational Health Psychology, 5*, 347-358.

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-Unit-Level Relationship Between Employee Satisfaction, Employee Engagement, and Business Outcomes: A Meta-Analysis. *Journal of Applied Psychology, 87*, 268-279.

Health & Safety Forum: Top CEOs do battle on safety - attacking NZ's poor workplace accident record. (2013). *New Zealand Management, 40*.

Health & Safety Executive (1997). *The Costs of Accidents at Work (HSG96).* Suffolk: HSE Books.

Health & Safety Executive (1999). *Reducing error and influencing behaviour*. Suffolk: HSE Books.

Health & Safety Executive (1999b). *Development of a Business Excellence Model of Safety Culture*. London: HMSO. Retrieved from http://www.hse.gov.uk/research/nuclear/safetycult.pdf

Health & Safety Executive (2001). *Safety culture maturity model*. Sudbury: HSE Books.

Hoffmeister, K., Gibbons, A. M., Johnson, S. K., Cigularov, K. P., Chen, P. Y., & Rosecrance, J. C. (2014). The differential effects of transformational leadership facets on employee safety. *Safety Science, 62,* 68-78.

Hopkins, A., (2011a). Management walk-arounds: lessons from the gulf of mexico oil well blowout (Working Paper No. 79). Retrieved from Australian National University website: http://regnet.anu.edu.au/publications/wp-79-management-walk-arounds-lessons-gulf-mexico-oil-well-blowout

Hopkins, A. (2011b). Risk-management and rule-compliance: Decision-making in hazardous industries. *Safety Science, 49,* 2, 110-120.

Hopkins, A. (n.d.). *Mindful Leadership - Professor Andrew Hopkins (Preview)* [video file]. Retrieved from https://www.youtube.com/watch?v=xyqNWrkz7hs

Huang, Y.-H., Chen, P. Y., & Krauss, A. D. (2004). Quality of the Execution of Corporate Safety Policies and Employee Safety Outcomes: Assessing the Moderating Role of Supervisor Safety Support and the Mediating Role of Employee Safety Control. *Journal of Business and Psychology, 18,* 4, 483-506.

Hui-Ling, T., & Yu-Hsuan, C. (2011). Effects of empowering leadership on performance in management team: Mediating effects of knowledge sharing and team cohesion. *Journal of Chinese Human Resource Management, 2*, 1, 43-60.

Jensen, S. M., & Luthans, F. (2006). Entrepreneurs as authentic leaders: impact on employees' attitudes. *Leadership & Organization Development Journal, 27,* 8, 646-666.

Jessica, X., & Helena, C. T. (2011). How can leaders achieve high employee engagement?. *Leadership & Organization Development Journal*, 32, 4, 399-416.

Kaplan, R. S., & Norton, D. P. (1992). The Balanced Scorecard - Measures That Drive Performance. *Harvard Business Review, 70,* 1, 71.

Kelloway, E. K. (2013, November). *Safety Leadership*. Speech presented at the Leaders Matters conference, Halifax, NS, Canada.

Kelloway, E. K., & Barling, J. (2010). Leadership development as an intervention in occupational health psychology. *Work & Stress, 24,* 3, 260-279.

Kelloway, E. K., Mullen, J., & Francis, L. (2006). Divergent effects of transformational and passive leadership on employee safety. *Journal of Occupational Health Psychology, 11,* 1, 76-86.

Kelloway, E. K., Sivanathan, N., Francis, L., & Barling, J. (2005). Poor leadership. In L. Barling, E.K. Kelloway & M.R. Frone (Eds.), *Handbook of work stress* (1st ed., Vol. 1, pp. 89-112). Thousand Oaks, CA: Sage Publications.

Kines, P., Andersen, L. P. S., Spangenberg, S., Mikkelsen, K. L., Dyreborg, J., & Zohar, D. (2010). Improving construction site safety through leader-based verbal safety communication. *Journal of Safety Research, 41,* 5, 399-406.

Kotter International. (2014). The 8-Step Process for Leading Change. Retrieved August 29, 2014, from https:// http://www.kotterinternational.com/our-principles/changesteps

Kouzes, J.M. and Posner, B.Z. (2012), *The leadership challenge*. San Francisco, CA: Jossey-Bass.

Krause, T. R., Groover, D. R., & Martin, D. K. (2010). Preventing Incidents & Fatalities: Eight Questions Every Senior Leader Should Ask. *Professional Safety, 55,* 6, 46-53.

Ladyshewsky, R. K. (2007). A strategic approach for integrating theory to practice in leadership development. *Leadership & Organization Development Journal, 28,* 5, 426-443.

LAE & WCB (2013). *A Workplace Safety Strategy for Nova Scotians 2013–2017*. Retrieved from https://novascotia.ca/lae/documents/WorkplaceSafetyStrategy.pdf

MacLean, S. (2013, November). *Leadership*. Speech presented at the Leaders Matters conference, Halifax, NS, Canada.

Mearns, K., & Håvold, J. I. (2003). Occupational health and safety and the balanced scorecard. *The TQM Magazine, 15,* 6, 408-423.

Mearns, K., Whitaker, S. M., & Flin, R. (2003). Safety climate, safety management practice and safety performance in offshore environments. *Safety Science, 41,* 8, 641-680.

Mullen, J. E., & Kelloway, E. K. (2009). Safety leadership: A longitudinal study of the effects of transformational leadership on safety outcomes. *Journal of Occupational and Organizational Psychology, 82, 2*, 253-272.

Mullen, J., Kelloway, E. K., & Teed, M. (2011). Inconsistent style of leadership as a predictor of safety behaviour. *Work and Stress, 25, 1*, 41-54.

Muchiri, M. K., Cooksey, R. W., & Walumbwa, F. O. (2012). Transformational and

social processes of leadership as predictors of organisational outcomes. *Leadership and Organization Development Journal, 33,* 7, 662-683.

National Energy Board. (2014). Advancing Safety in the Oil and Gas Industry – Statement on Safety Culture. Retrieved from http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/sftycltr/ sftycltr-eng.html

Neal, A., Griffin, M. A., & Hart, P. M. (2000). The impact of organizational climate on safety climate and individual behavior. *Safety Science, 34, 1*, 99-109.

Newton, J. (2013, November). *Safety Leadership*. Speech presented at the Fall Federal Forum, Halifax, NS, Canada.

Nielsen, M. B., Eid, J., Mearns, K., & Larsson, G. (2013). Authentic leadership and its relationship with risk perception and safety climate. *Leadership and Organization Development Journal, 34,* 4, 308-325.

O'Dea, A. (2001). Site managers and safety leadership in the offshore oil and gas industry. *Safety Science, 37,* 1, 39-57.

OSHA. (2014a). Strategic Map for Change and Continuous Improvement for Safety and Health. Retrieved August 10, 2014, from https://www.osha.gov/SLTC/etools/safetyhealth/mod4_strategicmap.html

OSHA. (2014b). Safety & Health Management Systems eTool. Retrieved August 10, 2014, from https://www.osha.gov/SLTC/etools/safetyhealth/

Øvretveit, J. (2005). Leading improvement. *Journal of Health Organization and Management, 19,* 6, 413-430.

Parker, D., Lawrie, M., & Hudson, P. (2006). A framework for understanding the development of organisational safety culture. *Safety Science, 44,* 6, 551-562.

Posner, B. Z. (2013). It's how leaders behave that matters, not where they are from. *Leadership & Organization Development Journal, 34*(6), 573-587.

Roberts, A., Kelsey, J., Smyth, H., & Wilson, A. (2012). Health and safety maturity in project business cultures. *International Journal of Managing Projects in Business, 5,* 4, 776-803.

Roi, R. C., & Mitchell, P. (2006). Leadership, corporate culture and financial performance. (ProQuest Dissertations and Theses.)

Siemieniuch, C. E., Sinclair, M. A., (2014). Extending systems ergonomics thinking to accommodate the socio-technical issues of Systems of Systems. *Applied Ergonomics, 45*, 85-98.

Slaunwhite, J. M., Smith, S. M., Fleming, M. T., Strang, R., & Lockhart, C. (2009). Increasing vaccination rates among health care workers using unit "champions" as a motivator. *The Canadian Journal of Infection Control / Revue Canadienne De Prévention Des Infections, 24,* 3, 159-64.

Springer, G. J. (2011). A Study of Job Motivation, Satisfaction, and Performance among Bank Employees. *Journal of Global Business Issues, 5,* 1, 29-42.

Staley, B. (2011). *Dr Bruce Staley Speaking at the ConocoPhillips Conference - Full Video* (video file]. Retrieved from https://www.youtube.com/watch?v=Sx8-W1hwG90

Stewart, J. M. (2002). *Managing for world class safety*. New York: John Wiley & Sons.

Stokols, D., McMahan, S., Clitheroe, H. C., & Wells, M. (2001). Enhancing corporate

compliance with worksite safety and health legislation. *Journal of Safety Research, 32,* 4, 441-463.

Thamrin, H. M. (2012). The Influence of Transformational Leadership and Organizational Commitment on Job Satisfaction and Employee Performance. *International Journal of Innovation, Management and Technology, 3,* 5, 566.

Vinodkumar, M. N., & Bhasi, M. (2010). Safety management practices and safety behaviour: Assessing the mediating role of safety knowledge and motivation. *Accident Analysis and Prevention, 42,* 6, 2082-2093.

Westhaver, R. (2013, November). *Coaching to Success*. Speech presented at the Fall Federal Forum, Halifax, NS, Canada.

WCB NS (2013). *Annual report*: *what matters most*. Retrieved from http://www.wcb.ns.ca/app/DocRepository/5/BrochuresPublications/wcb_annual_report_2013_web2.pdf

WorkSafe Saskatchewan. (2014). *Saskatchewan Leadership Charter Project.* Retrieved from http://www.worksafesask.ca/wp-content/uploads/2013/11/SK-Leadership-Charter-Project_Final-Report_final-version.pdf

Wu, T.-C., Chen, C.-H., & Li, C.-C. (2008). A correlation among safety leadership, safety climate and safety performance. *Journal of Loss Prevention in the Process Industries, 21*, 307-318

Zacharatos, A., Barling, J., & Iverson, R. D. (2005). High-Performance Work Systems and Occupational Safety. *Journal of Applied Psychology, 90, 1*, 77-93.

Yueng-Hsiang, H., Leamon, T. B., Courtney, T. K., DeArmond, S., Chen, P. Y., &

Blair, M. F. (2009). Financial Decision Makers' Views on Safety. *Professional Safety, 54,* 36-42.

Zohar, D. (1980). Safety climate in industrial organizations: Theoretical and applied implications. *Journal of Applied Psychology, 65, 1*, 96-102.

Zohar, D. (2000). A Group-Level Model of Safety Climate: Testing the Effect of Group Climate on Microaccidents in Manufacturing Jobs. *Journal of Applied Psychology, 85*, 4, 587-596.

Zohar, D. (2002). The Effects of Leadership Dimensions, Safety Climate, and Assigned Priorities on Minor Injuries in Work Groups. *Journal of Organizational Behavior, 23,* 1, 75.

Zohar, D., & Luria, G. (2003). The use of supervisory practices as leverage to improve safety behavior: A cross-level intervention model. *Journal of Safety Research, 34,* 5, 567-577.

Zohar, D., & Luria, G. (2004). Climate as a social-cognitive construction of supervisory safety practices: Scripts as proxy of behavior patterns. *Journal of Applied Psychology, 89*(2), 322-333.

Zohar, D., & Luria, G. (2005). A Multilevel Model of Safety Climate: Cross-Level Relationships Between Organization and Group-Level Climates. *Journal of Applied Psychology, 90,* 4, 616-628.

Zohar, D. (2010). Thirty years of safety climate research: Reflections and future directions. *Accident Analysis & Prevention, 42,* 5, 1517-1522.

Zohar, D., & Luria, G. (2010). Group Leaders as Gatekeepers: Testing Safety

Climate Variations across Levels of Analysis. *Applied Psychology, 59,* 4, 647-673.

Zohar, D., & Polachek, T. (2014). Discourse-based intervention for modifying supervisory communication as leverage for safety climate and performance improvement: A randomized field study. *Journal Of Applied Psychology, 99*(1), 113-124.