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Maximising Safety Performance via Leadership Behaviours

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Research has been demonstrating for years that one of the key drivers to effective safety, health and environmental outcomes is that concept known as "top down" support[1]. One respected author has been more direct by stating:-

> "…..The presence of health and safety professionals does not seem to guarantee high safety performance. Rather it is active, genuine, and continuous management support that is the key to providing a safe, healthful working environment for employees[2]."

Yet beyond these somewhat accepted; yet often not acted upon observations, there does not appear to be much in the way of overt attention displayed.

It is the purpose of this article to explore the impact that managers, particularly local site specific managers, can have as "key influencers" within local safety performance. To do this we shall need to explore, in a fundamental way, some key elements of workplace culture. Yet even before we take that journey a detour is required.

Consider the professions of chemistry, physics, metallurgy, engineering etc (what are sometimes referred to as the "hard" professions due to their reliance upon the "hard" sciences. What is it that drives those professions in terms of the work that they do? I would put it to you that this process is the concept of "empirical" or "scientific method". Let's have a look at what it is.

The scientific method involves following seven general steps in sequence. In some cases steps may be combined to reduce the number to five, but more often than not the procedure will consist of seven steps, with each step consisting of additional sub-steps. The basic steps are:

1. Make Observations
2. Ask Questions
3. Make a Hypothesis
4. Explore Methods of Testing
5. Experimentation
6. Examine Result
7. Reach Conclusions

And finally.....You may find that your progression of research and experimentation does not necessarily follow these steps exactly as given, and that's okay. The purpose of the scientific method is not to prescribe a routine which cannot be varied, but rather to provide a systematic method of asking questions, proposing hypothesis, and doing the testing to determine the correct answers. After testing your hypothesis, you may be unhappy with the results and may decide to retest your hypothesis with additional testing, propose another hypothesis, gather more data, or ask another question.

The scientific method is not cast in concrete but it is systematic, straightforward and easy enough to learn and use in order that non-scientists can make use of it for their own interests. And interestingly, many scientific discoveries come about by accident, by getting unexpected results and accidentally asking questions that had not even been asked.

I am now going to leave the detour behind yet continue to reference aspects of that brief side trip. In order to make the point I am going to be occupationally harsh and choose as an example a profession which is known to be grounded in hard science i.e. engineering. Consider the path to management that

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1 Philson, C.S. (1998), *Workplace Safety Accountability*, Occupational Health and Safety, Vol 67, No 4, pp. 20-24

2 Erikson, D (1997), *The Relationship between Corporate Culture and Safety Performance*, Professional Safety, Vol 12, No 42, pp. 29-33

many engineers take. Whilst not universal, for many it is a developmental process that largely is a reward for the demonstration of excellent technical skill in their profession eg engineering (you could consider almost any profession here eg, law, accounting, plumbing, facilities management etc). Yet in almost all promotional pathways there comes a point where the competencies required start moving away from that of being a highly competent technical engineer, or lawyer, or accountant etc. How many make a study of management and leadership best practice on their "way to the top". I shall put it to you that we are talking about a relatively small number. Many develop their leadership competencies by "trial and error" and spend much of their time "protecting" their competencies; rather than developing them. I shall come back to this point also a little later.

Allow me to step back to our brief understanding into "hard" science or scientific method. We don't give it a second thought that prior to determining the form of construction of a roof truss we shall have to do the math to ensure that it shall be able to tolerate all the demands that might be required of it. If we were to just build a cosmetic structure, without considering all the engineering required, then it is entirely likely that as soon as the structure is placed under some strain it shall literally fall on somebody's head.

Now spend a moment thinking about the majority of safety systems out there! One of the most popular of the past couple of decades is behavioural safety. I am the first to cheer the development and implementation of behaviour based safety systems; they have acknowledged and enhanced the application of belief systems coupled with behavioural observation to deliver improved safety performance within an infinite number of organisations. Unfortunately many behavioural safety programs have grounding in transactional management theory and when we crunch the numbers and look at the organisational gains associated with transactional management the outcome results are quite poor. Behaviour based safety systems that have contingent rewards systems associated with them would likely have better outcomes. Although when the strain gets too great they don't deliver. In other words they fall on someone's head.

So let's think about what are some of the factors that might act as influencing vehicles as far as enhanced safety performance is concerned. What is it then that stops things falling on your head? One group from Australia have developed a model of safety performance which draws upon more traditional understandings around work performance in general[3]. They then go on to describe two (2) key aspects of safety performance as being:-

Safety Compliance - The term *safety compliance* is used to describe the core activities that need to be carried out by individuals to maintain workplace safety. These behaviours include adhering to standard work procedures and wearing personal protective equipment.

Safety Participation - The term *safety participation* is used to describe behaviours that do not directly contribute to an individual's personal safety, but which do help to develop an environment that supports safety. These behaviours include activities such as participating in voluntary safety activities, helping co-workers with safety-related issues, and attending safety meetings.

The largest of questions is what do we need to do more of to maximise safety compliance and safety participation within our workplaces. Once we get these aspects right, outcomes such as reduction in injury rates etc shall naturally follow.

Thus the safety systems that fly couple aspects of Transformational Leadership within their behavioural paradigms.

Now we are getting closer to the purpose of this article. You don't believe me do you? What are the real world consequences of ignoring Transformational Leadership within safety system design; and then what is the "payoff" when we actually do ensure Transformational Leadership is an integral foundation of the safety system.

So let us have a look at some of the research exploring these relationships. In other words if we are going to be talking about the impact of leadership behaviour on safety performance then we need to take a leaf out of the "hard" sciences; otherwise the engineers etc may find it difficult to believe! It is fairly commonly accepted that the relationship between management and safety outcome has some form of intricate linkage.[4]

When some researchers exploring safety climate/culture crunched their numbers they found some common relationships between a range of variables eg supervision & management, existence of a

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[3] Neal, A, & Griffin, M. (2002), *Safety Climate and Safety Behaviour*, Australian Journal of Management, Vol 27, pp. 67-76

[4] Health Education Authority (1999), *More to Work than this - Developing and Sustaining Workplace health in the NHS*. HEA. London.

safety system, risk taking behaviour, work pressure, and work competence.[5] A further group concluded when they looked at over a dozen safety climate outcome measures the common theme was "management safety activity".[6] The United States Occupational Health and Safety Administration (OSHA) have recognised the "power" of leadership and have defined "management leadership" as a key program element in safety system design.[7] The U.K. Health and Safety Regulator apparently is aware of this and associates the organisational factors influencing safety culture as follows.

- Senior management commitment.
- Management style.
- Visible management.
- Good communication between all levels of employees (management action).
- A balance of health and safety and production goals (management prioritisation).

Some well regarded Canadian researchers[8] have argued that leadership is one of the most critical determinants of workplace safety performance. They go on to express the belief, supported by much research[9,10], that leadership plays an integral role in developing and maintaining the safety climate within an organisation.

It doesn't take a lot of time to see the relationship which is clearly self evident. The impact of management, and more importantly, leadership is a key "influencer" on any effective safety management system. We may have all sorts of reasons for not wanting to look in this mirror; nevertheless the "hard data" doesn't lie. Tends to add some support to Erikson's prior observations, does it not (p1)?

Consider the further observation that "….the foundation to any process, policy, or cultural shift is built upon management's total commitment to the change. Half hearted commitment to a new change will result in failure[11]".

It has to be said that managers "behave badly" when they send the wrong signals to the workforce by their language and their actions, especially in relation to prioritisation and their time allocation. This last factor is probably the most crucial, as time is the most precious resource for senior managers, who are well aware of Benjamin Franklin's maxim, "time is money."

Why is time so crucial? Because it is the strongest signal of commitment from busy managers with little time to spare. Just think about the issue as regards the staff meeting. When I teach time management to teams; some of the premises that often pop up are; arriving late is a sign of disrespect to the others present, or a marker of arrogance with the metalanguage being similar to "my time is more valuable than yours therefore I am more valuable than you". Of course this may not be true; you might have slipped in the hall and had to get yourself back together.

If you are verbalising the importance of safety but you are being seen to "fit it in" around your other responsibilities; rather than fitting your "other priorities" around safety then you are going to be in for a rough ride.

It has also been noted that managers should frequently emphasise the importance of safety; regularly, loudly and with conviction (people are smart: lip service is often identified early).

> "On a personal basis, managers at the most senior level demonstrate their commitment by their attention to regular review of the processes that bear on safety, by taking direct interest in the more significant questions of safety or product quality as they arise, and by frequent

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5 Flin, R. et al. (2000), *Safety Climate: Identifying the Common Features*, Safety Science, 34, 177

6 Guldenmund, F. (2000) *The Nature of Safety Culture: A Review of Theory and Research*, Safety Science, 34, 215.

7 *Program Evaluation Profile* (PEP), Occupational Safety & Health Administration, 200 Constitution Avenue, NW, Washington, DC 20210

8 Barling and Zacharatos, A. (1999), *High performance safety systems: Management practices for achieving optimal safety performance*, paper presented at the 25th annual meeting of the Academy of Management, Toronto, CANADA

9 Hoffman D.A. & Morgeson, F.P. (1999), *Safety-related behavior as a social exchange: The role of perceived organizational support and leader-member exchange*, Journal of Applied Psychology, Vol. 84, no. 2, pp. 286–296

10 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, Vol. 85, No. 4, pp. 587–96.

11 Philson, C.S. (1998), *Workplace Safety Accountability*, Occupational Health and Safety, Vol 67, No 4, pp. 20-24

> citation of the importance of safety and quality in communications to staff.[12]"

It is at this point I detour back to our original detour again! Before I do though let me throw in a quote attributed to Henry Kissinger (former US Secretary of State).

> "If you do not know where you are going, every road will get you nowhere. "

Now let's begin to have a closer look at where we are going by way of further exploring that relationship between empiricism and leadership theory. There are more theories about leadership than sand on the beach! Indeed most of us have our own unique approach that we would struggle to verbalise if asked to do so. That is probably not a bad thing to do; sit down and try and identify the foundations of your own leadership style[13]. Why do you manage/lead the way you do? Anyway enough of the "homework". We shall now have a look at one of the very few approaches to leadership that has a thorough grounding in empirical research. Full Range Leadership.

OK. So now we know how we act as managers and leaders has a direct and measurable impact upon our people. Do we know how much?

Oops, time for another detour (I need to keep those synapses firing). One of the most seminal works I have read over the past several years is "Good to Great" by Jim Collins[14]. Whilst this book, based upon its own foundation of "hard" research, has all sorts of "ideas" that are worth exploring, it is a fundamental hypothesis that Collins was forced to reject which is of immense impact to the current story. Collins states that:-

> "I gave the research team explicit instructions to downplay the role of top executives so that we could avoid the simplistic "credit the leader", or "blame the leader" common today" (p.21)

It is clear from Collins other comments that he attempted to maintain this position and strongly advocated it within meetings of the research team. As it turned out he had to "give it up", the data was so overt that it could not be minimised, no matter how much he might have wanted to. Thank goodness for that! Out of this constant revisiting of the data was born the concept of the Level 5 Leader. It is shown that to take a business from being a good business to being a great business requires a Level 5 Leader within the business at the time the transition is made. Enough said; read the book! The salient message is even when the professional business analyst (empiricist) enter an experiment from the perspective that they want to disprove something, the intrinsic role of leadership, and are forced to reject their pre-conceptions (hypothesis), we see scientific method at work. In other words Collins went in there looking for "rocket science" beyond the role of leadership and left with the "Level 5 leader being the most significant influencer to the system".

Level 5 Hierarchy

Another concept that is in play here is something which has become known as Emotional Intelligence or EQ. Emotional Intelligence, although a relatively new term, is not something that past organisational psychologists or human resource specialists have been unaware of. "Human Relations Training" occurred as early as the 1950's with a Penn State program[15] that targeted self-awareness, empathy, and leadership competencies in supervisors. Numerous other studies[16,17,18] have demonstrated strong

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12 IAEA: (1997) *Examples of Safety Culture Practices*, Safety Report Series No. 1, Intl. Atomic Energy Authority, Vienna.

13 Visit www.theleadershipcollege.com to access a range of Self Assessments.

14 Collins, J. (2001). *Good to Great: Why some Companies Make the Leap and Others Don't.* Harper-Collins; New York.

15 Schied, F. (1995). *How did Humans become Resources Anyway?: HRD & the Politics of Learning in the Workplace.* Adult Education Research Conference, University of Alberta in Edmonton: 1995

16 Ashforth, B.E. & Humphrey, R.H. (1995). *Emotion in the Workplace: A Reappraisal.* Human Relations, 48(2), pp. 97-125.

results from training and competencies such as self-management, achievement orientation, self-awareness, empathy, and social skills. Quite aside from formal studies, astute observers have long noted that many top performing supervisors and managers possess such personal skills that separate "the sheep from the goats". This is one time when it's better to be a sheep than a goat.

A number of influences have no doubt converged to concentrate attention on the area of emotional intelligence. Howard Gardner's work introduced the concept of multiple intelligences[19]. This is a broader concept than EQ as it includes non-emotional abilities, but it certainly started people thinking about attaching other concepts to the term "intelligence." Changes in the workplace are also contributing to the interest in EQ. It is a truism at this point to talk about the rapid pace of change, the knowledge worker, and horizontally organised companies; however, these realities require more flexible, emotionally perceptive, and interpersonally skilled leaders. Another influence is the awareness that intelligence alone has only limited predictive power in selecting at the highest levels. There is a restricted range of intellectual abilities among top performers; however, the range of the EQ competencies shows considerable variability.

In addition to the growing body of literature suggesting that EQ competencies are related to managerial and leadership effectiveness, there is also evidence that EQ competencies contribute to bottom line results. Goleman[20] strongly asserts that the business effects achieved by leaders with EQ strengths are mediated through the climate the leader creates (climate reflects people's sense of their ability to do their jobs). In a large beverage firm, using standard methods to hire division presidents, 50% left within two years, mostly because of poor performance. When they started selecting based on emotional competencies such as initiative, self-confidence, and leadership, only 6% left in two years. The executives selected based on emotional competence were far more likely to perform in the top third based on salary bonuses for performance of the divisions they led: 87% were in the top third. In addition, division leaders with these competencies outperformed their targets by 15 to 20 percent. Those who lacked them under-performed by almost 20%[21].

In a related study where supervisors in a manufacturing plant received training in emotional competencies such as how to listen better and help employees resolve problems on their own some key observations were[22]:-

- lost-time accidents were reduced by **50 percent** (Don't miss this one!)
- formal grievances were reduced from an average of **15 per year to 3 per year**
- the plant exceeded productivity goals by **$250,000**.

In a far earlier study[23] where supervisors received similar training it was found that productivity increased by approximately 17%. The interesting observation was that in a matched group of supervisors, who did not receive such development, there was no change in the productivity of their work areas.

Competency research in over 200 companies and organizations worldwide suggests that about one-third of this difference, which discriminates amongst the "top performers", is due to technical skill and cognitive ability while two-thirds is due to emotional competence[24].

I am hoping that all these pieces of the jigsaw are beginning to take on some shape for you? In concluding our look at EQ, Goleman cites an insurance industry study in which climate created by CEO's among their direct reports predicted business performance of the entire unit. Now remember that point! Time to do a U-turn.

Do we know how to create such climates. We surely do! Its called Full Range Leadership. Heard that before I hope? Having said all that it just so happens there is recent research[25] which locates a

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17 Williams, W.M. & Sternberg, R.J. (1988). *Group Intelligence: Why some Groups are better than Others*. Intelligence, Vol. 12, pp. 351-377.

18 Eysenck, S.B., Pearson, P.R., Easting, G. & Allsopp, J.F. (1985). *Age norms for Impulsiveness, Venturesomeness and Empathy in Adults.* Personality and Individual Differences, 6(5), pp. 613-619.

19 Gardner, H. (1983). *Frames of Mind*. New York: Basic Books Inc.

20 Goleman, D (2001). *The Emotionally Intelligent Workplace: How to Select For, Measure, and Improve Emotional Intelligence in Individuals, Groups, and Organisations*. Jossey-Bass: New York

21 McClelland, D. C. (1999). *Identifying Competencies with Behavioural-event Interviews.* Psychological Science, 9(5), pp. 331-339.

22 Pesuric, A., & Byham, W. (1996,). *The New Look in Behaviour Modelling*. Training and Development, July Edition, pp. 25-33.

23 Boyatzis, R. (1982). *The Competent Manager: A Model for Effective Performance.* New York: John Wiley and Sons.

24 Goleman, D. (1998). *Working with emotional intelligence*. New York: Bantam

25 Coetzee, C & Schaap, P. (2003) *The Relationship Between Leadership Styles and Emotional Intelligence*. Department of Human Resource Management, University of Praetoria, SA (In Press)

relationship between EQ competencies and Full Range Leadership. So we have to have a look don't we?

Yes we do! Information of that sort is priceless. It was Bernie Bass[26] who was one of the instrumental thinkers behind the Full Range Leadership (FRLM™) approach to transformational leadership. Later Bruce Avolio[27] took over the mantle and is currently one of the world's leading thinkers in this field. Together they, in partnership with many international collaborators, developed an assessment tool which is known as the Multifactor Leadership Questionnaire (MLQ)[28,29]. It is the MLQ which gives the Full Range Leadership Model a visible shape for many leaders and is able to show, with a level of empirical certainty, how an individual leaders competencies are impacting upon those around them. Sound familiar?

So lets have a look at the key leadership competencies that make up this powerful understanding of how we lead our people to *achieving beyond expectation*.

Essentially the FRLM™ is able to identify nine predictive leadership competencies. These are:-

Passive/Avoidant Behaviours

Laissez Faire (Transformational Safety Descriptor – The Invisible Man[30])

"I'm really not concerned whether you do this or not…..doesn't really matter to me""

This Laissez Faire manager is not really a leader as they tend to withdraw from the leadership role and offer little in terms of direction or support. They avoid making decisions, are disorganised and let others do as they please.

This style of leadership, if you call it that, has an observable de-motivating effect on those they are supposed to be leading.

Management by Exception – Passive (Transformational Safety Descriptor – The Fireman[30])

'…I'm pretty laid back though if I happen to see something happening you can be sure I'll let you know "

Passive MBE Leaders tend to be somewhat laissez-faire but take action when problems occur or mistakes are made. They are not systematic in the way they go about doing things

They avoid unnecessary change and only intervene when exceptional circumstances become apparent; in other words they are primarily reactive to situations such as process failures etc.

Just like the Laissez Fare; a Leader who uses a lot of MBE-P will have a de-motivating effect upon those around them.

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26 Bass, Bernard M. (1985). *Leadership and Performance Beyond Expectation*. New York: The Free Press.

27 Avolio, Bruce J. (1999). *Full Leadership Development: Building the Vital Forces in Organisations*. Thousand Oaks, CA: Sage.

28 Bass, B. M. and Avolio, B. J. (1997), Full Range Leadership Development, Manual for Multifactor Leadership Questionnaire, Mind Garden Inc., San Francisco.

29 Antonakis, J., Avolio, B.J., and Sivasubramaniam N. (2003), Context and Leadership: an Examination of the Nine-factor Full-range Leadership Theory using the Multifactor Leadership Questionnaire, The Leadership Quarterly, 14, pp 261–295

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Transactional Management Behaviours

Management by Exception – Active (Transformational Safety Descriptor – The Policeman[30])

"I am systematically watching to see if you don't …… you can be sure I'll let you know"

In contrast the Active MBE Leader pays very close attention to any problems and has extensive and accurate monitoring and control systems in place to provide early warning of problems.

Taken on its own this style is ineffective in producing sustained performance. This style tends to produce only moderate performance in the short term. Those around the MBE-A see a leader "watching" systematically and regularly.

Contingent Reward (Transformational Safety Descriptor – The Dealer[30])

"If you do as we agreed I'll give you recognition & rewards……."

This is the classic transactional style. The Leader who relies upon Contingent Reward sets clear goals and rewards accomplishment through a variety of ways. This means that their employees perform up to the expected levels.

If you want to get your people to "go that extra mile" – a more transformational style is needed.

The underlying assumption in the transaction is a sense of co-operation "you do this for me and I'll do that for you."

Transformational Influencing Behaviours

These are far more powerful for their ability to influence those around the leader than any of the transactional styles[31].

There are five (5) related leadership styles which collectively and individually are called Transformational.

> "Transformational leadership is a process of influencing in which leaders change their associates awareness of what is important, and move them to see themselves and the opportunities and challenges of their environment in a new way. Transformational leaders are proactive: they seek to optimise individual, group and organisational development and innovation, not just achieve performance "at expectations". They convince their associates to strive for higher levels of potential as well as higher levels of moral and ethical standards"[32].

Research supports these transformational styles across cultures; different organisational types, and at different organisational levels[33].

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31 Bass, B.M., Avolio, B., Jung, D.I., & Berson. Y. (2003), *Predicting Unit Performance by Assessing Transformational and Transactional Leadership*, Journal of Applied Psychology, Vo.l 88, No 2., pp 207-218.

32 *Multifactor Leadership Questionnaire Feedback Report* © 1996, 2002 by Bernard M. Bass and Bruce J. Avolio, All rights reserved.

33 Bass, B.M. (1997), *Does the transactional/transformational leadership paradigm transcend organizational and national boundaries*? American Psychologist, Vol. *52*, pp. 130-139.

SO HOW DO WE ACHIEVE "PERFORMANCE BEYOND EXPECTATION"

Idealised Attributes (Transformational Safety Descriptor – The White Knight[30])

"I know we can achieve this…I am proud of you"

The Leader who demonstrates Idealised Attributes appears determined with a sense of purpose. A positive role model who demonstrates out of the ordinary capability.

Leaders like this are often described as charismatic with a high degree of morality, trust and integrity.

They tend to address crisis 'head on' and celebrate success with their people.

Individualised Consideration (Transformational Safety Descriptor – The Carer[30])

"I care about your development as a person and professionally…"

The IC Leader is caring and empathetic and provides challenges and opportunities for others.

They assist those around them move beyond their own expectations.

This Leader is an active listener and strong communicator.

Intellectual Stimulation (Transformational Safety Descriptor – The Innovator[30])

"Give yourself the freedom to think creatively about this….you never know what you might achieve"

Intellectual Stimulation allows the Leader to encourage others to think through issues and problems for themselves so that they develop their own abilities.

Frequently used by parents, this is a less common approach in organisations; and yet it is extremely powerful.

Inspirational Motivation (Transformational Safety Descriptor – The Motivator[30])

"I have no doubt you can achieve this, just look how well you've done in the past……"

The Leader who utilises Inspirational Motivation excels at convincing those around them of their abilities, this type of leader has the ability to motivate people to achieve superior performance beyond expectation.

They create a readiness for change and encourage a broad range of interests.

Idealised Behaviours (Transformational Safety Descriptor – The Missionary[30])

"I have every confidence that we can all do this together"

The Leader who utilises Idealised Behaviours expresses a sense of mission that results in high levels of trust and ethics amongst those around them.

In turn those around the IB Leader perform beyond expectation in the most challenging of circumstances with high levels of commitment and self sacrifice.

The application of the transformational Influencing behaviours result in extra effort beyond expectation. All the transformational influencing behaviours are related; yet they are also demonstrably distinct. They create a greater readiness for change, greater flexibility, greater capacity for innovation etc.

Further application of a Full Range of leadership behaviours results in more inclusive ways of dealing with diverse interests to build common commitments to shared visions.

Or as Bernie Bass said in '85[34]:-

"performance beyond expectation & the achievement of potentials beyond expectations".

So we have now briefly described the FRLM™ factors and you are likely to have seen aspects of your own style within them. Now we get to the important stuff. How do we relate your leadership competencies within the FRLM™ to the outputs of your people and consequently your organisations safety performance. Just be patient, we'll get there. First though we need to go back and crunch some numbers!

What is displayed below is what is known as a Correlation Matrix. Essentially a correlation is a numerical descriptor of the relationship between two variables. For example we know that not everybody who smokes dies of smoking related illness; although we recognise that there is a significant relationship between smoking and death (Correlation 0.68). If everybody who smoked died then the correlation would be 1.00. If there was no relationship at all between smoking and death then the correlation would be 0.00. That is the briefest introduction to statistics that you are ever likely to encounter although it is necessary so that you appreciate the "power", of the information in the following Tables[35].

Table 1: Correlation of Leadership Characteristics with Organisational Outcomes

TRANSFORMATIONAL LEADERSHIP

Organisational Outcomes	**Amount of Extra Effort**	**Relations to Higher-Ups**	**Effectiveness**			**Job Satisfaction**
			Unit	**Job**	**Organisational**	
Transformational Leadership Characteristics:						
Idealized Influence	+0.95	+0.90	+0.76	+0.80	+0.96	+0.80
Inspirational Motivation	+0.98	+0.86	+0.85	+0.75	+0.89	+0.76
Intellectual Stimulation	+0.92	+0.75	+0.71	+0.62	+0.77	+0.72
Individualised Consideration	+0.97	+0.76	+0.76	+0.77	+0.83	+0.75

[34] Bass, B.M., (1985). *Leadership and Performance Beyond Expectations*, New York: Free Press

[35] Brown, W., Birnstihl, E.A., & Wheeler, D.W. (1996), *Leading Without Authority: An Examination of the Impact of Transformational Leadership Cooperative Extension Work Groups and Teams*, Journal of Extension, Vol 34, No 5.
This study was conducted using the four factor model of the MLQ. The current model utilises the five factor model described previously.

Table 2: Correlation of Leadership Characteristics with Organisational Outcomes

TRANSACTIONAL & INACTIVE LEADERSHIP

Organisational Outcomes	**Amount of Extra Effort**	**Relations to Higher-Ups**	**Effectiveness**			**Job Satisfaction**
			Unit	**Job**	**Organisational**	
Transactional Leadership Characteristics:						
Contingent Reward	+0.77	+0.60	+0.69	+0.60	+0.64	+0.75
Management by Exception	0.00	+0.06	+0.38	-0.11	-0.05	+0.36
Inactive Leadership						
Laissez Faire	-0.23	-0.11	+0.10	+0.10	-0.49	-0.07

At first glance this might look a bit daunting. Hang in there it really isn't. We're just going to have a bit of a look at some of the numbers. Let's start at the bottom of the Matrix. What is the correlation between an Inactive Laissez Faire management style and the amount of extra effort put in by the Leaders people?

How about trying another one? What is the correlation (or relationship) between the transactional style Management by Exception and Organisational Effectiveness, Management by Exception and Job Satisfaction?

It's not that difficult to read a Correlation Matrix after all is it? Now that you know how, I'm going to speed up a little.

It is clear when you have a Laissez Faire management style that you have a negative impact upon most of the business outcome measures. Similarly there are many of us who "manage by exception", thinking that this is the way to go about our business as a manager. After all we are employed as managers so therefore we should ensure that subordinate staff are not doing the wrong thing. Isn't that right? Yet for all that managing, take a look at how much extra effort our people are putting in for us; absolutely nothing. I would make the point here that many safety implementation strategies of a traditional nature have a large measure of Management by Exception inclusions. Yet the research clearly shows that behaviours which fall into this categorisation are generally ineffective. Yet we find a positive correlation (be it quite small +0.36) with job satisfaction. So clearly some people like being the "fireman" or "policeman" despite it being ineffective in terms of the "bigger picture". Maybe it gives us something to do?

Have a look at Contingent Reward. Clearly it works. A correlation of +0.77 is a relatively robust relationship.

Remember that the correlation between smoking and death is only +0.68. Look at how important that +0.68 is to individual and political decision making. For decades the "Big Seven" denied that such a relationship existed. So evidently +0.77 is not something to be ignored. And it isn't. Nearly all organisations are founded upon the foundation of Contingent Reward and it seems to work pretty well. It similarly contributes to a reasonable level of Job Satisfaction (keep looking at the Correlation Matrix as we unpack the data).

Contingent Reward will not though, of itself, lead to "breakthrough outcomes" within the business. How many times do we hear "How much will it cost to fix"; rather than "What do we need to put in place to move past this obstacle". Very different language with very different "meaning". Just paying our people more, thinking that they will continue to work harder and move toward exhaustion for us, does not work. There is a clear point at which Contingent Reward reaches a ceiling and something else is required to develop that "breakthrough" or "transition point".

I hope you are sensing the relationship with Collins "Good to Great" observations here?

So what is that something else? I would put it to you, based upon the data, that it is the transformational leadership competencies.

Don't take my word for it.

Check out the Correlation Matrix again.

Table 1: Correlation of Leadership Characteristics with Organisational Outcomes

TRANSFORMATIONAL LEADERSHIP

Organisational Outcomes	**Amount of Extra Effort**	**Relations to Higher-Ups**	**Effectiveness**			**Job Satisfaction**
			Unit	**Job**	**Organisational**	
Transformational Leadership Characteristics:						
Idealized Influence	+0.95	+0.90	+0.76	+0.80	+0.96	+0.80
Inspirational Motivation	+0.98	+0.86	+0.85	+0.75	+0.89	+0.76
Intellectual Stimulation	+0.92	+0.75	+0.71	+0.62	+0.77	+0.72
Individualised Consideration	+0.97	+0.76	+0.76	+0.77	+0.83	+0.75

All of the transformational competences have correlations exceeding +0.90 when associated with Extra Effort; this is unprecedented (ranges previously reported tend to be in the range of 0.70 through 0.80). If we subjectively use the smoking correlation of +0.68 as a marker for our thinking then the transformational markers demand attention. I would go so far as to suggest (based upon the data alone) that to ignore such powerful evidence and not seek to implement transformational competencies within our leadership skill set is irresponsible in the extreme. Just an opinion; maybe a bit strong and you can choose to reject it; although the evidence does support it.

An interesting observation that I have made is the Job Satisfaction correlation similarities between Contingent Reward and the transformational competencies. They are essentially equivalent; all hovering about a relationship of around +0.75. In other words Job Satisfaction as a stand alone measure is not indicative of outcome and productivity etc. Yet how many businesses conduct their "job satisfaction surveys" thinking that if they get a good number then their people are working harder. Sadly the data does not support such a conclusion. On the basis of this data a Transformational Leader will not necessarily increase the job satisfaction of the workplace; they will certainly increase the net performance though.

Are You a Transformational Leader?

With all we have looked at; this is a pretty fair question. How do we determine an individual leader's transformational leadership competencies? There must be a way? There is!

It is called the Multifactor Leadership Questionnaire (MLQ). The MLQ is the global leader when working with many people to further develop their transformational competencies.

So how do we go about the MLQ Assessment Process? It is not that difficult at all. The MLQ is a short standardised questionnaire which is completed by the leader and those around them. Many people refer to this as a 360 degree (360°) assessment process. The results of the MLQ are then collated and an extremely detailed report is generated. It is worth mentioning that research has shown that the MLQ is able to be effectively used across cultures[36,,37,38]; this is a powerful observation in itself.

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[36] Davis, D. D., Guaw, P., Luo, J., & Maahs, C. J. (1997). *Need for Continuous Improvement, Organization Citizenship, Transformational Leadership, and Service Climate in a Chinese State Enterprise*. Paper presented to Society for Organizational and Industrial Psychology, St. Louis, MO.

[37] Geyer, A.L. & Steyrer, J. (1998). *Transformational Leadership, Classical Leadership Dimensions and Performance Indicators in Savings Banks*. Leadership Quarterly, *47*, 397-420.

Key elements of the MLQ Report demonstrate the perceptions of the leader's behaviour from all levels, including their own. Through working with an accredited Full Range Leadership™ Coach the leader is able to target transformational competencies that would benefit from direct attention. These decisions are supported via a very solid research base indicating where attention is best focused.

One of the key drivers of the MLQ Process is the belief that both transactional and transformational competencies are judged via behaviours, and that such behaviours are able to be learned. In other words leadership competencies are trainable. This is not to be underestimated. It means that no matter what our "style"; if we have the commitment to further development it is achievable[39].

You have now been on quite a journey, and I hope it has required the synapses to fire. Now I need to try and draw it all together; after all we are demonstrating the relationship between leadership behaviours and safety performance.

To do this let's break down a little the levels of leadership within the business. Leadership exists at all levels! There is no doubt that all managers must demonstrate their safety commitment, but three of the principal levels of management; supervisors, line managers, and senior managers, on the basis of the evidence have greater influencing roles within an effective safety management system.

Supervisor

"The supervisor or foreman is the key man in industrial accident prevention. His application of the art of supervision to the control of worker performance is the factor of greatest influence in successful accident prevention.[40]"

Only more recently have we begun to examine the influence of the supervisor on safety, and several recent studies have begun to show how safety is related to first-line supervisory leadership style and team management skills[41,42]. These indicate that more humanistic styles of leadership, in which supervisors actively demonstrate their concern for the well-being of their teams, are especially important in the management of safety. The bells they are a ringing, I hope?

Line Manager

The influence of line managers on safety performance has received pretty scant attention in the world of empirical research, apart from some work conducted greater than twenty five years ago[43].

Notwithstanding the limited empirical evidence, the importance of the line manager on safety is directly acknowledged within almost all workplace health & safety legislation throughout the world; particularly in New South Wales (Australia)[44].

Some new research is examining the effects of site managers on workplace safety in relation to their attitudes and behaviours[45]. One study surveyed 231 workers operating on six North Sea installations operated by the same company. The questionnaires used covered supervisor commitment to safety, leadership style, worker autonomy, worker participation in safety activities, cohesion, and cooperation in the workforce.

It also measured two dependent variables: workers' self-reported safety initiative behaviours and workers' rule compliance. The results indicated that workers' safety initiative was related to their feelings of identification with the organisation, whereas their self-reported rule compliance behavior was predicted by their perceptions of supervisor commitment to safety, transformational leadership, and work group cohesion. I am hoping the volume of the bells is increasing?

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38 Sarros, J.C. and Santora, J.C. (2001). *Personal Values and Executive Leadership: Global Comparisons and Practical Implications*, Paper presented at the 2001 Academy of Business and Administrative Sciences International Conference, Quebec City, CANADA, 12th – 14th July 2001

39 Parry, K. W. & Sinha, P. (2002). *Success at Developing Transformational Leadership through the Full Range Leadership Development (FRLD) Programme*. Australian and New Zealand Academy of Management (ANZAM) Annual Conference, Beechworth, Victoria, 4-7 December.

40 Heinrich, H. (1959). *Industrial Accident Prevention*, fourth edition, McGraw Hill, London 22.

41 Mearns, K. (1997): *Human and Organisational Factors in Offshore Safety*, Report (OTH 543), HSE Books, Suffolk.

42 Simard, M. and Marchand, A. (1994). *The Behaviour of First Line Supervisors in Accident Prevention and Effectiveness in Occupational Safety*, Safety Science 17, 169.

43 Andriessen, J. (1978). *Safe Behaviour and Safety Motivation* Journal of Occupational Accidents, 1, 363-373.

44 *NSW Consolidated Regulation* (2001). NSW Workcover Authority, Government Printing Service, Macquarie Street, SYDNEY

45 O'Dea, R. Flin (2001). *Site Managers and Safety Leadership in the Offshore Oil and Gas Industry*, Safety Science 37 (1) pp. 39-57.

Senior Manager

Senior managers and directors, who are often studied in relation to business successes (Good to Great is just one example amongst the plethora; one of the greatest though), may be regarded as a neglected species when it comes to safety performance

This is a little perplexing given they sit at the top of the tree and the ultimate responsibility is levelled at them under law. Hopkins is one of the few authors who has directly approached the question of what Senior Managers can do to directly impact upon their safety cultures[46].

Let us remember the Longford case in Victoria (Australia). The defence of the Company was that it was not their fault; it was the fault (if fault lied anywhere) with particular operators. The extensive investigations concluded that such was not the case. The Company was found to be responsible by way of ineffective safety culture and attracted some of the largest fines in the history of OH&S jurisprudence within that State.

> "After its exhaustive seven-month investigation, the Commission has blamed Esso for the explosion and fire, which killed two workers and left Victoria without gas for two weeks. The workers, who the company claimed were at fault, have been cleared. The Royal Commission says the real cause was Esso's failure to adequately train its employees, or give up-to-date operating procedures to guide them. Today's findings have been welcomed by everyone, except Esso. The company still faces outstanding civil litigation for more than a billion dollars in compensation…."[47]

So now we're getting down to it are we not! What strategies can be given to senior managers to enable them to develop and maintain an effective safety culture in their organisations.

Before I answer that question let's have a look at some more recent work of Professor Julian Barling and his colleagues[48] from Canada. They recently published a study which explored the impact of transformational leadership competencies on some specific safety measures; eg occupational injury rates. Within many organisations this is the number they wish to see influenced. Barling's work provided strong support for a model which predicted a reduction in occupational injury rates; it was safety specific transformational behaviours which were the key influencers within his model.

Even more recently Yule and colleagues[49] investigated the association between senior managers' perceived leadership style and safety outcomes of their work areas. They identified two elements of transformational leadership style (intellectual stimulation, idealised consideration) and one element of transactional leadership (contingent reward) that were found to be significantly associated with lower accident rates.

In a further recent study[50] it has been suggested that consistent demonstration of the charismatic aspect of the transformational behaviours, as measured by the MLQ 5X™, results in those around the leader perceiving increased commitment to workplace safety within the occupational environment.

So it would seem that the research evidence is beginning to catch up to the theoretical thinking that I have been positing within this presentation.

So let's come back to the key question, and the purpose of this presentation:-

- What strategies can be given to senior managers to enable them to develop and maintain an effective safety culture in their organisations?

The most obvious strategy is that we develop a transformational leadership culture throughout the organisation which shall then directly impact upon the way that all the "speed bumps" and "collisions" are resolved.

Transformational leadership culture may well be something you have not come across before. Consider for a moment you develop a free thinking, problem solving, transformational leader within an organisational culture which is highly transactional. You will not likely achieve the "beyond expectations"

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46 Hopkins, A. (1995). *Making Safety Work*, Allen and Unwin, Sydney.

47 Sacottelli, L (1999). *Royal Commission finds Esso at Fault in Longford Disaster*. Transcript from PM Archive - Monday, 28 June,

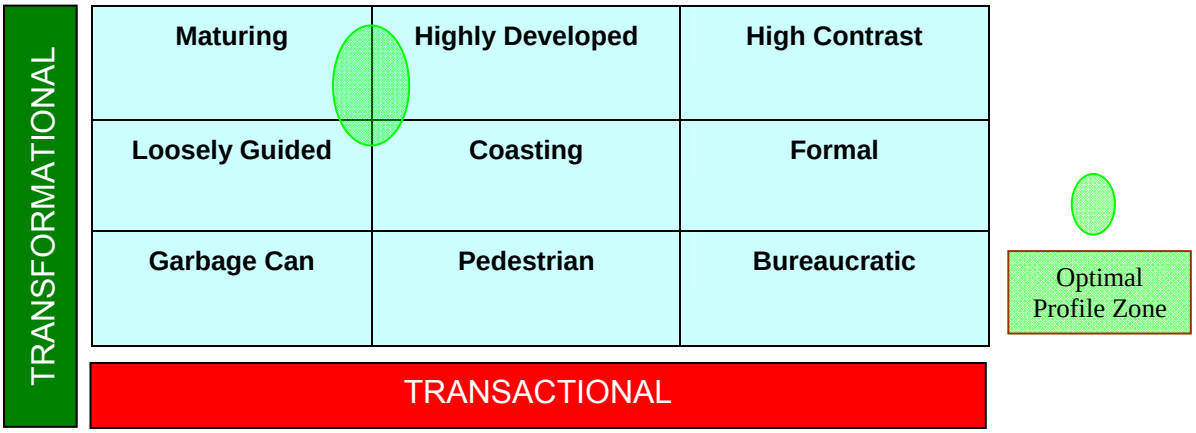
48 Barling, J., Loughlin, C., and Kelloway, E.K. (2002), *Development and Test of a Model Linking Safety-Specific Transformational Leadership and Occupational Safety*, Journal of Applied Psychology, Vol 87, No 3. pp. 488-496.

49 Yule, S., Flin, R. & Murdy, A. (In Press) *Investigating Leadership using the Multifactor Leadership Questionnaire*, Academy of Management Journal

50 Bryden, R. & Flin, R. (in prep) *Senior Managers' Leadership Style and Safety.*

safety outcomes that you wish to observe. So how do you determine where the organisation is as regards the goals of the FRLM™?

You incorporate the Organisational Description Questionnaire[51] (ODQ™) within your armoury of tools to assist with the overall goal of developing a transformational leadership culture throughout the business. In this way the developing organisation/leaders are able to gain a sense of where they are now as regards the transformational journey, and also are able to set relatively clear goals as regards where they need to be in order to maximise their outcomes.



From the resulting graphical display of the organisation's place within the ODQ™ Matrix the leader is able to, in co-operation with the organisation, begin to set goals for development both individually and collectively. The ODQ™ is a very powerful influencing vehicle for assisting the business better map out its journey toward greater effectiveness within the transformational leadership culture journey and, by so doing, maximise its objective of achieving optimal safety performance.

It has also been noted that managers should frequently emphasise the importance of safety; regularly, loudly and with conviction (people are smart: lip service is often identified early).

> "On a personal basis, managers at the most senior level must demonstrate their commitment by their attention to regular review of the processes that bear on safety, by taking direct interest in the more significant questions of safety or product quality as they arise, and by frequent citation of the importance of safety and quality in communications to staff.[52]"

By adopting an integrated approach to the implementation of Full Range Leadership™ within an organisation's cultural systems, the evidence is clearly beginning to show direct and indirect impacts upon safety outcome measures[37,38,39]. In striving toward a Best Practice implementation of Transformational Safety[45] the integration of the ODQ™ (organisational transformational perspective) with the MLQ™ (individual Full Range Leadership development) would be the strategy of choice.

The key questions I have hoped to address within this article might be:-

- Can the same leadership styles commonly associated with business outcomes also influence safety performance?
- If so, which elements of leadership style may be most relevant to safety leadership?

Visionary, idealised, and role-model styles of leadership may encourage people to work harder, to be more efficient, and to be more innovative. There is ample literature to support this and I have referenced some of it, but a leader who treats employees as individuals, allows them to think for themselves, and accept responsibilities to take initiatives is more likely to lead a successful and safe business.

It is this type of Full Range™ Leader who is most likely to contribute toward a powerful state of Transformational Safety[53] within their organisation.

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51 Bernard M. Bass and Bruce J. Avolio. (1994, 1996, 2004), *The Organisational Description Questionnaire*,. All rights reserved.

52 IAEA: (1997) *Examples of Safety Culture Practices*, Safety Report Series No. 1, Intl. Atomic Energy Authority, Vienna.

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PROFILE

A highly experienced and innovative corporate and counselling psychologist who has synthesised these frameworks into a value adding experience for a large and varied customer base. David is very focused upon the needs of his customers and this is evidenced by a business that continues to prosper within a referral network created by customer satisfaction.

David has highly developed interpersonal and groupwork skills and this has resulted in recognition both nationally and internationally for his pragmatic ability to deliver the most complex information in an entertaining and successful style.

David's expertise in the world of occupational safety is highly regarded and he is regularly sought after as a speaker at conference venues and corporate events throughout the World.

David is the Creator of the internationally recognised Transformational Safety Model and regularly assists organisations assess and develop their safety management systems toward worlds Best Practice.

SKILLS SUMMARY

- Metallurgist, in a "past life", makes David one of the very few Safety Psychologist's in the world with such a **powerful industrial history**.
- Highly experienced **Groupwork Facilitator**.
- Demonstrated **Program Development** skills within a variety of industrial environments.
- **Leadership Development** and **Change Management** strategist within organisational settings.
- Developed and implemented the **POWER© Management Systems**; an integrated management skillset collection.
- Development and provision of **Safety Management Systems** for both domestic and international consumption.
- Creator of the **SAFE-T-NET Technologies**; which is an integrated suite of safety products that place safety system development within an empirically based psycho-behavioural framework – and in multiple languages as well!
- Internationally recognised as one of the foremost commentators on **Full Range Leadership** and associations with corporate and safety outcomes.
- **Industrial History** and a pragmatic ability to relate within all levels of an organisation; from the Stock Room to the Board Room.
- Industry leader in the development of **Trauma Recovery Solutions** within organisational frameworks.
- **Experienced presenter** to both small groups and large convention centres.

David G Broadbent
Technical Safety Specialist – Global

CAREER HIGHLIGHTS

- Director of Strategic Management Systems; a customer focused organisational psychology practice.
- Development of a trauma education package for one of Australia's largest multi-national corporations.
- Creator of The Transformational Safety System©; the World's only integrated safety culture assessment system incorporating Transformational Leadership© Theory.
- Creator of the SAFE-T-NET Technologies; a fully integrated multi-lingual relationship based safety development system.

QUALIFICATIONS

- Bachelor of Arts (Psych-Hons) - 1987
- Certificate IV in Assessment & Workplace Training – 2000
- Advanced Trauma Specialist – International Critical Incident Stress Foundation - 2000
- Advanced Coach – MLQ Leadership Development Systems – 2001

EMPLOYMENT HISTORY

Managing Director - Strategic Management Systems Pty Ltd

Incorporating: The Leadership College – Leadership Development Solutions throughout the Asia-Pacific
The Safety Site – International Provider of Integrated Workplace Safety Systems
DG Broadbent & Associates – Organisational and Counselling Psychologists
TransformationalSafety.Com – Integrated Safety Culture Analysis and Reporting

Key Deliverables:

Leadership Development

- Designed the Lead to Succeed© Program - An outcome oriented leadership development program incorporating Full Range Leadership principles.
- Developed Good to Greater© - The Asia-Pacific's first experiential workshop incorporating the seminal works of Jim Collins' Good to Great.
- Developed Project to Success© - A Project Management education primer with particular emphasis upon integrated leadership competencies.
- Created the ATLAS© Paradigm: A leadership competency framework for developmental coaching.

Safety Culture Analysis

- Developed and implemented the Integrated Safety Culture Assessment© model drawing upon contemporary safety culture research.
- Regularly provides strategic advice to both domestic and international clients in regard to safety enhancement programs.
- Developed and provides a cross-cultural multi-lingual safety culture assessment system.
- Created The Transformational Safety System©: The worlds first fully integrated safety culture enhancement system incorporating Full Range Leadership Theory.
- Created the Process Safety Questionnaire (PSQ) – the Worlds first integrated Process Safety perception survey instrument.

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Occupational Health and Safety

- Assisted a key regional employer reduce their workers compensation exposure from $1,200,000 to $60,000 across three (3) years.
- Assisted a key regional employer improve their occupational injury return to work rate from 35% to 100% within a twelve (12) month cycle.
- Developed an integrated EAP/Injury Management System for a high stress work environment which improved return to rates from 0% to >80% within a twelve (12) month cycle.
- NSW Workcover accredited Rehabilitation Provider with the highest sustained Return to Work Rate for the preceding fifteen (15) years.
- Has assisted global corporations with review and design of safety management systems.
- Designed and implemented the globally recognised Safety-Net Technologies – an internet based safety system library targeted at maximising employee engagement with "The System".
- Internationally qualified to audit against ISO18001: Occupational Health Management System Development and Implementation.
- Nationally qualified to audit against AS/NZS 4801:2001: Occupational health and safety management systems - Specification with guidance for use.

Coaching

- Foundation Member of the International Association of Coaches (IAC).
- Regularly provide corporate interventions using industry recognised coaching frameworks; eg GROW, ACHIEVE, and the IAC-15 Proficiencies.

Risk Assessment

- Development and implementation of Australia's only risk management training programs based upon Operational Risk Management (ORM) principles: the risk management protocols utilised by the US Navy Seals.
- Regularly conducts Risk Assessments/Incident Investigations for numerous organisations.

Trauma Management

- Provider of Trauma Recovery Solutions throughout Australia
- Advanced qualifications in Critical Incident Stress Management (CISM)
- Technical Adviser to the AMCOR Global Trauma Education Program – involved film scripting, on-camera involvement, and individual training of actors etc
- Creation and publication of the "Managing Trauma in the Workplace" Employers Guide – individually licensed to workplaces.

PAPERS PRESENTED

"Leading the Way to Optimal Safety Performance", A Global Developmental Workshop for the International Council of Mining and Metals, The One Great George Street, LONDON, UNITED KINGDOM, 24th- 25th March 2011

"**Developing a Functional Safety Culture through High Reliability Operations",** Health & Safety: Cultivating High Reliability Organisations in Africa: South African Academy of Occupational Safety and Health, Southern Sun Grayston Hotel, SANDTON:JOHANNESBURG, SOUTH AFRICA, 26th – 27th January 2011

"The Development of The Transformational Safety Culture Improvement System and its application to safety improvement within the Petrochemical Sector", XXVIIIth International Congress of Applied Psychology, MELBOURNE, AUSTRALIA, 11th – 16th July 2010

"Transformational Safety Leadership: It all comes home to South Africa – From Bass to Broadbent", A Professional Development Workshop convened by Murray & Roberts Cementation, Lonmin Resources and the South African Chamber of Mines, Lonmin Game Farm, RUSTENBURG, SOUTH AFRICA, 23rd September 2009

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"Situational Awareness and Collective Mindfulness: A powerful combination to address Human Error outcomes in South Africa", The 6th Annual SAFEmap Africa Competency Based Safety Conference, JOHANNESBURG, SOUTH AFRICA, 18th September 2009

"Culture & Leadership: An exothermic business transaction". TRANS-NET Professional Development Symposium, Corporate Training Centre, JOHANNESBURG, SOUTH AFRICA, 17th September 2009

"Developing an effective Safety Culture framework within a global business identity", The Vesuvius Asia Pacific Safety Symposia, The Sarjuna Resort, KUALA LUMPUR, MALAYSIA, 4th – 7th August 2009

"Effective Safety Leadership - Transforming Safety Leadership within High Reliability Organisations", The 4th Total Safety Culture Conference, Amora Hotel, SYDNEY, AUSTRALIA, 28th – 31st July 2009

"Oh !@#$!, Where did that come from", Keynote Address, Safety Institute of Australia Queensland Conference, Brisbane Conference and Exhibition Centre, BRISBANE, AUSTRALIA, June 18th 2009

"Misdirection, ,misperception, and misunderstanding: An experiential journey through some of the "white noise" surrounding behavioural safety systems," 2nd Annual BBS in Heavy Industries ASPAC Conference, Rendezvous Hotel, MELBOURNE, AUSTRALIA, 27th-28th November 2008

"Transformational Safety and Local Government: The Challenges of Transitional Environments," The Workplace Health and Safety Conference 2008 ; The Times They Are A Changing, Local Government Association of Queensland, Gold Coast International Hotel, Surfers Paradise, Queensland, AUSTRALIA, 7th – 9th May 2008

"Transforming Safety on the Veldt: A safari through the land of safety leadership with special reference to the South African context?" The SAFEmap Africa Competency Based Safety Symposium, Airport Sun International, Johannesburg, SOUTH AFRICA, 14th September, 2007

"Leading Lean: Transforming your Safety Culture within Manufacturing during the 21st Century?" The Association for Manufacturing Excellence – Pacific Rim Conference, Sofitel Convention Centre, MELBOURNE, AUSTRALIA, 14th-17th August, 2007

"Safety Culture, Employee Participation and Engagement ", SAFEGUARD National Health and Safety Conference, SkyCity Convention Centre, AUCKLAND, NEW ZEALAND, 30th April - 1st May 2007

"What kind of Safety Leader are you?", SAFEGUARD National Health and Safety Conference, SkyCity Convention Centre, AUCKLAND, NEW ZEALAND, 30th April - 1st May 2007

"Transforming Safety – Beyond Behaviour and Towards Belief", Keynote Address, New Zealand National Workplace Health & Safety Awards, SkyCity Convention Centre, AUCKLAND, NEW ZEALAND, 1st May 2007

"Safety Leadership and the Cultural Framework: Breaking Through the Glass Ceiling of Safety Performance", Safety in Action 2007, Melbourne Convention and Exhibition Centre, MELBOURNE, AUSTRALIA, 20th – 22nd March 2007

"Leading your business toward the Holy Grail: A transformational exploration of how your leadership impacts safety performance", The Safety Conference 2006, Sydney Olympic Centre, SYDNEY, AUSTRALIA, 17th – 19th October 2006

"Leading your Safety Culture toward Best Practice: Integrating the Transformational Safety Culture Improvement System within traditional BBS Programs", Safety in Action 2006, Melbourne Convention and Exhibition Centre, MELBOURNE, AUSTRALIA, 16th – 18th May 2006

"Maximising Safety Performance via Leadership Behaviours", 28th International World Congress of Psychology, BEIJING, CHINA, 8th -13th August 2004

"Leadership Styles and their Impact upon Safety Outcomes", Transfield-Worley Best Practice Conference, ADELAIDE, AUSTRALIA, 22nd – 23rd March 2004

"Managing Traumatic Incidents in the Workplace", Futuresafe 2001, Brisbane Convention and Exhibition Centre, BRISBANE, AUSTRALIA, 6th -8th June 2001

"Critical Incident Stress Management in the Workplace", Huntersafe 2001 - Managing Workplace Risk, Newcastle City Hall, NEWCASTLE, AUSTRALIA, 8th – 9th March, 2001

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"**Occupational stress and rehabilitation; The need to give 'em EAP's**", Third National Employee Assistance Professionals Association of Australia Conference, 9th -10th November, 1994, AIRPORT SHERATON, SYDNEY, AUSTRALIA

"**Occupational Stress Management: A practitioners perspective**", Professional training developed for Queensland Psychology