

#### **Individual differences**

How are the areas of individual difference related to safety performance?

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#### **Individual differences**

#### Previous research:

(Limited research with specific focus on safety performance)

- Impulsiveness
- Conscientiousness
- Recognition of risk

linked to injury

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#### **Individual differences**

#### **Guiding beliefs**

- There are critical differences between people that are linked to variations in safety performance.
- These differences can be identified and moderated to improve individual and organisational safety performance.

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### PROJECT ONE 2003

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#### **PROJECT ONE**

#### Two objectives:

- Develop measures to investigate links between individual differences and safety performance;
- Behaviour change;

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#### **PROJECT ONE**

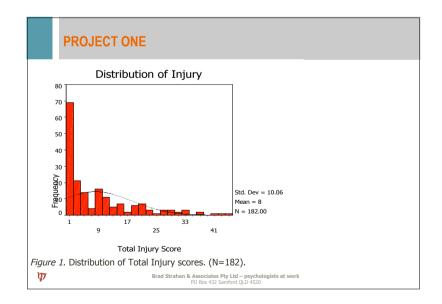
#### 2003 Project: Behavioural Predictors of Injury

The number of injury events over previous 3 years

LTI x 10
 Medical Treatment – Alternate duties x 8
 Medical Treatment – normal duties x 4
 First Aid Treatment x 2
 Report only x 1

- Sum = Total Injury Severity Score
- Scores adjusted for time employed if < 3 years

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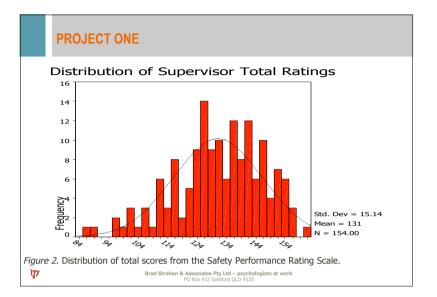
#### **PROJECT ONE**

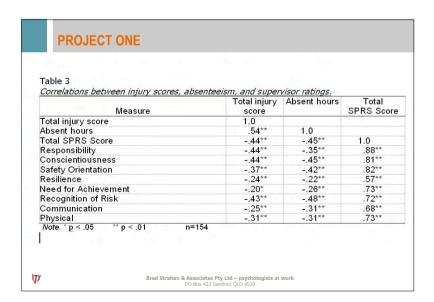
#### Individual differences:

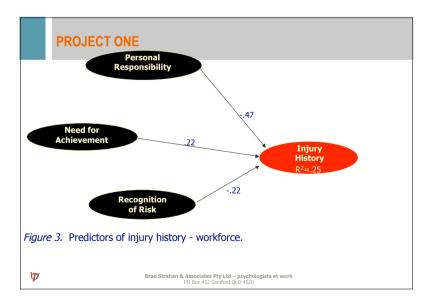
Measured by supervisor ratings on Safety Performance Rating Scale.

- Responsibility: demonstrating a sense of ownership of personal safety outcomes:
- · Conscientiousness: adhering to work and safety procedures:
- Impulsiveness: rushing into tasks or situations before assessing the risks;
- · Resilience: managing the tensions and stresses of the workplace;
- Achievement: demonstrating an orientation to achievement;
- · Recognition of risk: recognising and avoiding unsafe situations and risks;
- Communication: reporting unsafe situations, talking with others about unsafe behaviour;
- Physical: managing fitness for work and physical capacity for the job;

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#### **PROJECT ONE**

#### Stage Two analysis:

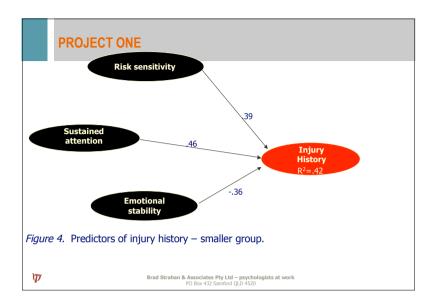
- Identified a smaller group who represented the best (n=14) and worst (n=16) safety performers;
- Completed Cognitive and Personal Factors Inventory a computer based assessment of individual differences.

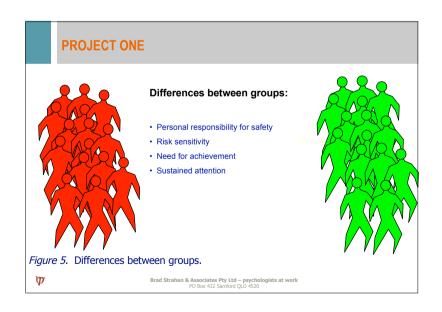
#### Analyses:

- Predicting total injury severity scores
- Differences between groups

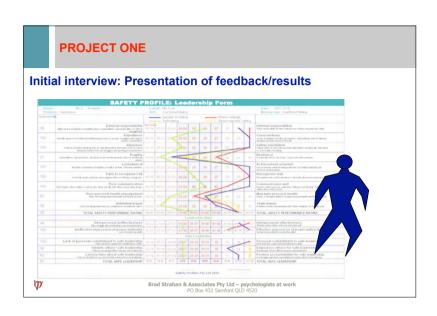
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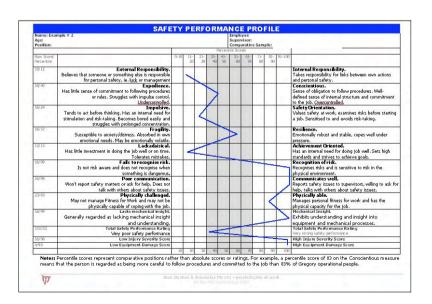
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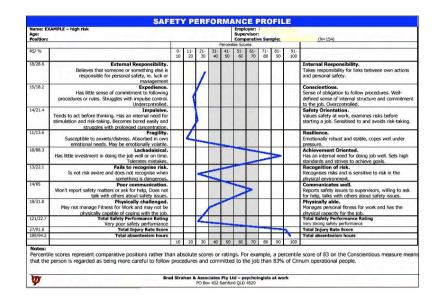


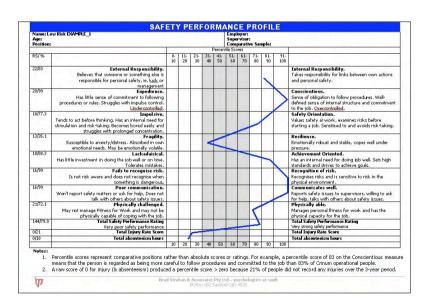


# PROJECT ONE The intervention (aimed at behaviour change): Interviews giving feedback on results of supervisor rating Conversation about likely outcomes of current style "Keep doing what you've always done, you'll get what you've always got" Identifying keys areas where change is required Identifying any relevant supports required Setting goals and schedule of monitoring "Individual development plan" Brad Strahan & Associates Pty Ltd – psychologists at work PO Box 432 Samford QLD 4520









### PROJECT TWO 2004 -

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#### SUPERVISOR'S SAFETY PERFORMANCE PROFILE Supervisor: Comparative Sample: Across site supervisors RAW SCORES Supervisor's ratings Eutomal Parnoncibili personal safety. Conscientious. Sense of obligation to follow procedures. Well-defined sense rules. Struggles with impulse control. Lindercontrolle. Impulsive of internal structure and commitment to the job. Salety Orientation. Impulsive. Tends to act before thinking, Has an internal need for stimulation and risk-taking, Becomes bored easily and struggles with prolonged concentration. 20 Values safety at work, examines risks before starting a job. Sensitised to and avoids risk-taking. Fragility. Susceptible to anxiety/distress. Absorbed in own emotional 19, 20. Emotionally robust and stable, copes well under pressure. Advisement Chented. Has an internal need for doing job well. Sets high standards and othere to achieve goals. Recognition of Ist. Recognition of Ist. Recognition sits: and is sensitive to risk in the physical component of the physical component of the physical sets of the physical sets well. Recognition sits: and is sensitive to risk in the physical component and in the physical physical physical physical physical sets of the physical couplety for the physical sets of the physical sets of the physical physical sets of the p Has little investment in doing the job well or on time. Tolerates mistakes. Fails to recognise risk. Is not risk aware and does not recognise when something is Is not rise, wwee and open for recognize when solverhind; as displayed. Won't report safety matters or safe for help, Does not talk with the solver safety matters or safe for help, Does not talk with the solver safety issues. Physically challenged. May not manage Fitness for Work and may not be physically 14 capable of oping with the tyb. Lacks mechanical ineight. Exhibits understanding and insight into equipment and mechanical processes. 159(17 | Total Safety Performance Rating | 10 | 110 | 120 | 33 | 34 | 35 | 26 | 26 | 12 | 75 | 130 | 1623 | 3469 | Performance Rating | 122 | 122 | 123 | 124 | 124 | 125 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 45/34

#### **PROJECT TWO**

#### Open-cut Metaliferous Operation

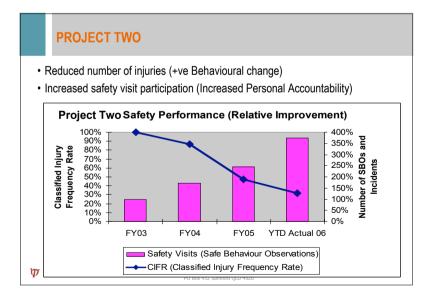
#### Starting position:

- Organisation in trouble in terms of safety performance;
  - · Emphasis on Leadership:
  - •The functioning of the leader is reflected in the performance of the team
  - •"Safety Performance is symptomatic of an organisation's operating discipline"
  - •"You get what you're prepared to put up with"

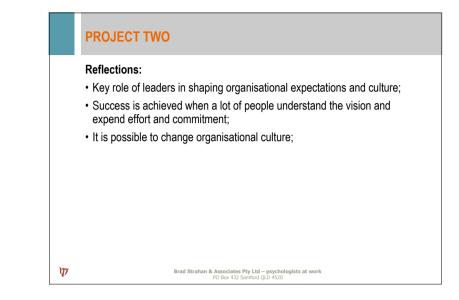
#### Strategy:

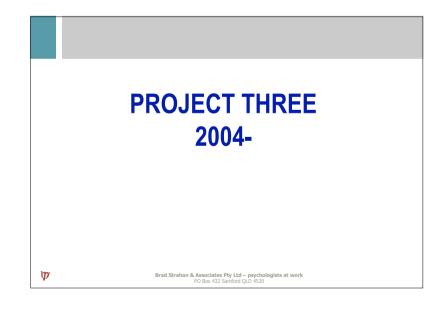
- Start at the top Engage the leadership/management team (measure, feedback, set goals for change, continue the conversation)
- Outline a direction for organisational change and a set of expectations/goals and standards work on accountabilities!!;
- · Watershed conversations that mark out change;
- Stage 1 Leadership team, Stage 2 Workforce.

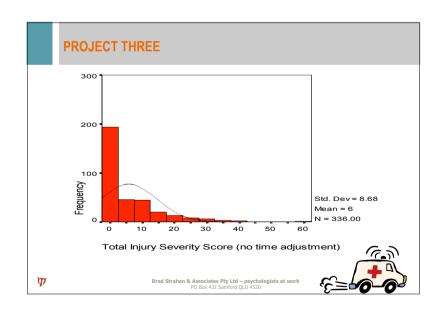
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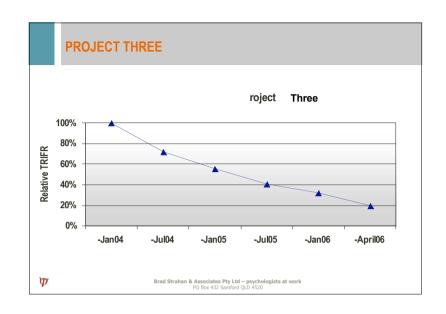
# PROJECT TWO Incident Reporting (Hazard/Risk Identification, Personal Accountability and Maturity) Corrective Action Closeout (Increased Personal Accountability) Project Two Safety Performance (Relative Improvement) 200% 150% 200% 150% 10

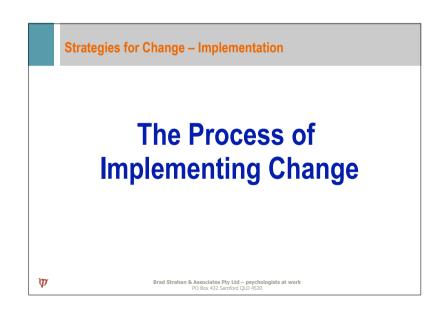


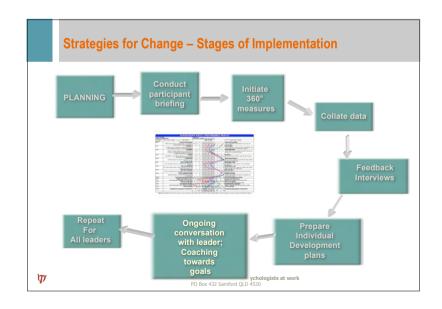




DE		Table 1 Injury Severity Scores (not time corrected).									
PR	ROJECT THREE	Injury Severity Scores	Frequency	Percent	Valid Percent	Cumulative Percent					
		0	122	36.3	36.3	36.3					
		1	25	7.4	7.4	43.8					
		2	47	14.0	14.0	57.7					
		3	8	2.4	2.4	60.1					
		4	25	7.4	7.4	67.6					
		5	4	1.2	1.2	68.8					
		6	6	1.8	1.8	70.5					
		7	2	.6	.6	71.1					
		8	13	3.9	3.9	75.0					
		9	2	.6	.6	75.8					
		10	14	4.2	4.2	79.8					
		11	2	.6	.6	80.4					
		12	13	3.9	3.9	84.2					
		14	7	2.1	2.1	86.3					
		15	1	.3	.3	86.6					
		16	6	1.8	1.8	88.4					
		17	6	1.8	1.8	90.2					
		18	2	.6	.6	90.8					
		20	7	2.1	2.1	92.9					
		22	4	1.2	1.2	94.0					
		23	1	.3	.3	94.3					
		24	4	1.2	1.2	95.5					
		25	1	.3	.3	95.8					
		26	2	.6	.6	96.4					
		28	3	.9	.9	97.3					
		30	1	.3	.3	97.6					
		31	1	.3	.3	97.9					
		32	1	.3	.3	98.2					
		33	1	.3	.3	98.5					
		34	1	.3	.3	98.8					
		36	1	.3	.3	99.1					
		40	1	.3	.3	99.4					
		42	1	.3	.3	99.7					
W	Brad Strahan & As	61	1	.3	.3	100.0					
	PO	Total	336	100.0	100.0						







#### **Strategies for Change – Implementation**

#### Phase 1:

- · Engage the leadership team
  - Measuring individual performance;
  - Giving feedback:
    - Mirrors;
    - Cobwebs;
  - Setting goals;
  - Monitoring individual performance towards goals;
  - Typical safety initiatives triggered by the process of engaging leaders:
    - Take 5, JHA's, Safety Visits (procedural level);
    - "Stop for a Clean Start" Weekly clean-up (Organisational level);
    - Goes towards building "news of difference" and a culture of safety;
  - Key context for conversation;
  - Events that imply senior management are prepared to back up the words with action.

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#### **Strategies for Change – Implementation Fundamentals**

Make a difference where it counts (biggest bang for your buck):

- Previous projects identified specific behaviour linked to injury history;
- Develop procedures that control these behavioural patterns:
  - Impulsiveness: Take 5, JHAs;
  - Recognition of risk: Safety Visits, Risk assessments, reporting procedure;
  - Personal responsibility / accountability: Close-out time frames, Safety Visits, & follow-up on achievement towards personal goals on Development Plan,
- Building an organisation that is "risk sensitive", considered, and accountable.

#### Strategies for Change - Implementation

#### Phase 2:

- · Engage the workforce
- Significant improvement in overall safety performance is usually achieved as a result of Phase 1 – progress acknowledged by workforce;
  - Management are serious about safety!!
  - Briefing sessions to introduce program to workforce:
    - "Next step involves everyone taking a step forward and accepting a responsibility for personal improvements in safety performance";
  - Measure individual performance, give feedback and design an individual development plan;
  - Monitor individual progress towards goals continue the discussion;
  - Follow-up interviews (x 2) for all employees with measures of achievement towards personal goals;
  - In addition: provide professional support for individuals with special needs.

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#### **Strategies for Change – The Measures**

#### The Measures

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#### The Measures..

#### Safety Performance Rating Scale (SPRS)

- · Provide the structure and language for the conversations;
  - Numbers are important for a numerically oriented audience;
- · Basic Form:
  - Critical human factors inherent in driving individual safety performance;
- · Leadership Form:
  - Basic Scales + Leadership Scales;
  - Critical dimensions of leadership inherent in driving organisational safety performance;

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#### The Measures...

#### SPRS - Leadership Form Subscales:

- · Basic scales
- +
- Leadership Grid: defined by the dimensions
  - Interpersonal effectiveness: capacity to maintain effective relationships;
  - Influence: capacity to make the tough decisions;
- · Leadership Style: Constructive, Aggressive, Passive
- · Safety Leadership:
  - Personal commitment: walking the talk;
  - Empowerment: encouraging/supporting others to work towards safety performance;
  - Accountability: holding others accountable for their safety performance;

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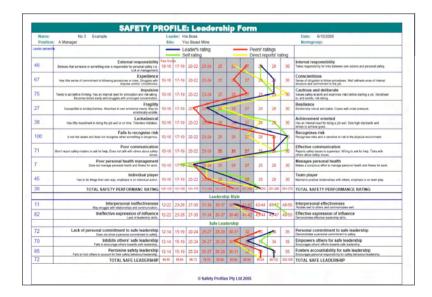
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#### The Measures..

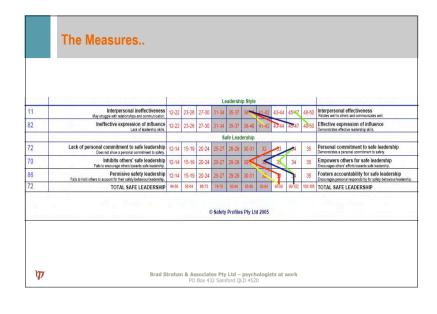
#### SPRS - Basic Form Subscales:

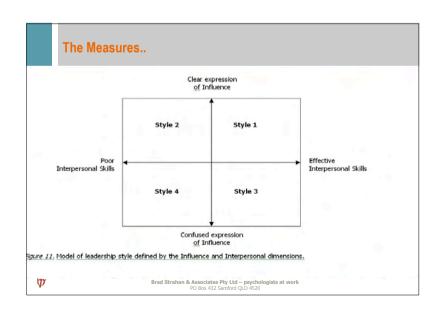
- Responsibility: a person's demonstrating a sense of responsibility for their own safety
- Conscientiousness: adhering to work and safety procedures
- Impulsiveness: rushing into tasks or situations before assessing the risks
- Resilience: managing the tensions and stresses of the workplace
- · Achievement: demonstrating an orientation to achievement
- · Recognition of risk: recognising and avoiding unsafe situations and risks
- Communication: reporting unsafe situations and talking with others about unsafe behaviour
- Health: managing personal health and fitness in preparation for the job
- Team player: understanding the mutual obligations between people in relation to safe behaviour
- Mechanical insight: understanding and looking after equipment and machinery
- Independence: maintaining an independent position in the face of peer pressure

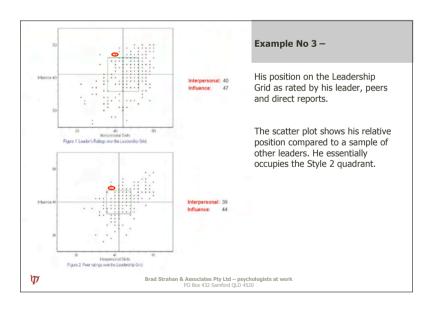
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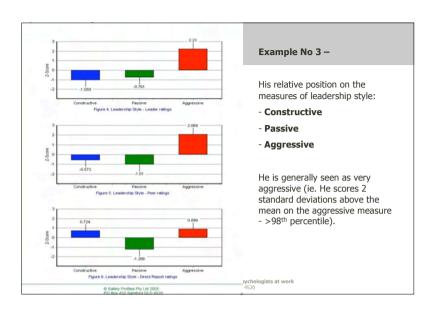


	SAFETY P	KOI	ILE	ii Le	ade	ersi	пр і	orr	n			and the second		
Name: No 3 Example			Leader: His Boss								Date: 6/10/2005			
Position		Site: You Beaut Mine										Normgroup:		
eader percentil			Leader's rating  Self rating			=		eers' ra irect re	itings ports' ri	ating				
46	External responsibility  Believes that someone or something else is responsible for personal safety (i.e. luck or management).	10-16	10000	20-22	23-24	25	20-	J.	3	29	30	Internal responsibility Takes responsibility for links between own actions and personal safety.		
67	Expedience Has little sense of commitment to following procedures or rules. Struggles with impulse control. Uncontrolled.	10-16	17-19	20-22	23-24	25	2	27	28	1	30	Conscientious Sense of obligation to follow procedures. Well defineds ense of internal structure and commitment to the job.		
75	Impulsive  Tends to act before thinking. Has an internal need for stimulation and risk-taking.  Becomes bored easily and struggles with prolonged concentration.	10-16	17-19	20-22	23-24	25	26	1	28		30	Cautious and deliberate Values safety at work and examines risks before starting a job. Sensitise to, and avoids, risk-taking.		
27	Fragility Susceptible to anxiety/distress. Absorbed in own emotional needs. May be emotionally volatile.	10-16	17-19	20-22	23-24	25	26	27	28	29	30	Resilience Emotionally robust and stable. Copes well under pressure.		
38	Lackadasical Has litle investment in doing the job well or on time. Tolerates mistakes.	10-16	17-19	20-22	23-24	25	20	27	28	29	30	Achievement oriented Has an internal need for doing a job well. Sets high standards and strives to achieve goals.		
100	Fails to recognise risk Is not risk aware and does not recognise when something is dangerous.	10-16	17-19	20-22	23-24	25	26	27	28	7	>	Recognises risk Recognises risks and is sensitive to risk in the physical environment.		
71	Poor communication  Won't report safety matters or ask for help. Does not talk with others about safety issues.	10-16	17-19	20-22	23-24	25	26	27	29	1	-30	Effective communication Reports safety issues to supervisor. Willing to ask for help. Talks with others about safety issues.		
7	Poor personal health management Does not manage personal health and fitness for work.	10-16	17-19	20-5	23-24	25	26	27	28	29	30	Manages personal health Makes a conscious effort to manage personal health and fitness for work		
45	Individual player Has to do things their own way, emphasis is on individual action.	10-16	17-19	20-22	23-24	25	20	22	28	29	30	Team player Maintains positive relationships with others, emphasis is on team play.		
36	TOTAL SAFETY PERFORMANC RATING	100-130	131-150	151-170	171-190	191-210	2114230	231-240	241-250	251-260	281-278	TOTAL SAFETY PERFORMANCE RATING		









## Reflections: learning from previous projects

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#### Reflections on the Process to Date

#### Recognition of:

- Value of focus on the individual:
  - Individual accountability one-on-one conversation;
  - Recognition of the tensions around individual responsibility and our embeddedness in "culture";
- Value of feedback on personal performance and critical conversations:
  - Acknowledges each persons' uniqueness and allows a more in-depth response to each person's situation;
  - Offers direction and suggestions about change;
  - Goal setting is critical, follow-up is even more important;

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#### **Reflections on the Process to Date**

#### Recognition of:

- · Role of leadership:
  - Process needs to be seen to be driven by site boss;
  - Provides a language and structure for thinking about leadership;
  - Identifies any alignment; issues;
  - Value for leaders in sitting in on conversations with their people;
  - Some follow-up coaching can be required;
- The importance of follow-up:
  - Understand the post-interview process continue the conversation;
  - Monitor progress towards goals and effectiveness of supports;

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#### **Reflections on the Process to Date**

#### Recognition of:

#### • The Process, Resources and Structure:

- Process has rigour, structure and credibility;
- Measures are easily understood and have demonstrated validity;
- Interviews are structured, facilitated and provide a controlled environment for the tough discussions to take place;

#### · Significant growth within individuals

- Individual focus can identify and follow-up with people special needs;
- Lots of stories of personal gain and growth ranging from the small to the dramatic;



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#### **Questions & discussion**

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