



TO MAKE A DIFFERENCE



























































Rob Nicholls Metro Vancouver Jim Marshall WorkSafeBC



DEVELOPING SAFETY MANAGEMENT SYSTEMS

What is it and why do it? Essential elements and WorkSafeBC requirements





Rob Nicholls, CRSP

- Manager, Metro Vancouver Safety, Security & Emergency Management Division
- Private Consultant to industry, government and Department of National Defense
- X Manager of BC Rail's Safety, Security & Police Departments
- Captain (V) with Sea to Sky Fire/Rescue for >20 years.
- X Provincial Coroner for Sea to Sky corridor
- Hazardous Materials Emergency Response Team leader and instructor, provincial and industry teams





Jim Marshall

- Manager, WorSafeBC, Client Service Manager, Account Management, Lower Mainland.
- Former Senior Manager, Safety Health and Security, WorkSafeBC
- Developed Award winning Safety Management System, (Society of Technical Writers, 1997)
- Factories Act Inspector, Steel Mills and Heavy Industry, UK
- Former Radio Announcer, 104.3 FM, Calgary
- Started working career in the mid-sixties as a Mechanical Engineer in a Steel Mill in Europe
- Masters Degree in Education and Adjunct Teacher of Education Principles and Curriculum Design at Vancouver College.





Opening Caveat.....

- There is more than one way to skin a cat (and to implement a *Safety Management System*)
- We'll share some of the successes, and some of the challenges we've experienced with some of the Safety Management Systems we've developed/implemented/inherited/repaired
- Cherry pick what may work for you and punt the rest – you know your organization better than any consultant





Rules of Engagement....

- Please participate there is a wealth of talent, knowledge, expertise and experience in this room..... PLEASE SHARE IT
- Jim and I welcome your questions, comments and war stories throughout the session





Does your organization share any of these safety challenges?

- Fragmented programs?
- Silos, no consistency or continuity across organization, "unique" requirements?
- Poor communication of safety?
- Unclear roles & responsibilities?
- Safety Department perceived as being responsible for safety – expected to be everything to everybody?
- Confrontational relationship with Regulators?





Safety Challenges Cont'd

- Duplication/Redundancies/Gaps galore?
- Reactive rather than proactive?
- Driven by lagging indicators rather than leading indicators?
- A "flavour of the day" environment?
- An us-and-them relationship with unions/management towards safety?
- Dysfunctional/apathetic JHSC's?
- Just in need of a change? (if you always do what you've always done....)





Then what can be done to effect and support change?

- Build a strong, capable and cohesive safety resource base to support (lead, drive, subvert, workaround) the organization's safety efforts
- Provide a single repository, one-stop shopping for all safety records, forms, files and related information
- Develop, implement and maintain an effective, efficient, integrated, and sustainable Safety Management System. (The right thing to do and maybe a forthcoming WSBC requirement?)





Critical Success Strategies

- Communication (not worth the paper it's written on if not known) – NASA example, info flip VS 6" binder
- Walk the talk An organization will achieve the type of safety culture it <u>visibly demonstrates</u> it wants to achieve
- Remember the definition of insanity
- Kiss principle remember who the stakeholders are (not building a SMS for other safety professionals)





Success Strategies Cont'd

- Development & Execution; involve stakeholders
 = ownership & better programs
- One size doesn't fit all (rationale for a Safety Management System - cascading model)
- Difference between compliance and safety
- Take care of the lions and tigers, don't chase field mice – "Bang for the Buck" concept
- Attack the low-hanging fruit, get some wins under your belt to build success and momentum





Lastly and most importantly....

- INTEGRATE
- INTEGRATE
- And INTEGRATE





Parallel Approaches in Business and SMS

The Business Approach		The Safety Approach
Mission -	" SMS is the safety approach to the business "	Mission -
Vision -		Vision -
Corporate Goals -		Safety Goals -
Policies -		Policies -
Requirements -		Requirements -
Business Processes:		SRA Processes:
Identify Non-Compliance		Identify Hazards / Non- Compliance
Implement Solutions		Implement Hazard Controls
Measure Performance		Measure Performance
Lessons Learned		Lessons Learned – Improve Process
Repeat the Process		Repeat the Process



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WORK <mark>SAFE BC</mark>

Safety - There is no Silver Bullet!







You need to take a multi-faceted machine gun type approach...







12 key Components of our SMS:

- 1. Safety Policy, Annual Targets
- 2. Safety Authorities, Responsibilities and Accountabilities (Key to an IRS)
- 3. Employees Involvement
- 4. Compliance- Regulations/Standards
- 5. Risk Management Processes
- 6. Risk Control Strategies





SMS Components Cont'd.

- 7. Incident Reporting, Investigation and Analysis
- 8. Skills, Training and Supervision
- 9. Safety Performance Data Collection and Analysis
- 10. Safety Audit and Evaluation
- 11. Corrective Action Development, Approval and Monitoring
- 12. Documentation





Safety Policy

A safety policy should:

- demonstrate senior management's commitment to safety;
- set the organization's safety philosophy and guide the establishment of goals and objectives, policies, procedures, and programs;
- be communicated to all employees and to other stakeholders (e.g. unions); and
- be periodically reviewed and revised.





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A place to work safely and effectively

Workers, management and unions; we all have important roles in advancing this common objective.

Our mutual commitment to ongoing improvement to workplace safety is what's needed for us all to go home safely at the end of each day.

Accidents and injuries are not an inevitable consequence of coming to work.



Collectively we have made steady progress in improving workplace safety and there is still more we can do.

Be conscious of doing your part in making the workplace safe for you and your co-workers.

Workers:

- Always work safely.
- Adhere to procedures and policies established for the safety of everyone.
- Report all observed safety concerns that cannot be immediately corrected.
- · Encourage respect for workplace safety with your co-workers.

Managers and Supervisors:

- Adopt and develop programs supportive of a safe workplace.
- Provide workers with the tools, training and support that complement our safety initiatives.
- Encourage and facilitate correction of safety concerns in a timely fashion.
- Be responsive and collaborative when safety concerns are brought to your attention.

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Chief Administrative Officer

Vice President Teamsters

President GVRD Employees Union

Union Representatives:

- Encourage and support effective programs and policies geared toward workplace safety.
- Advocate on behalf of workers seeking advice and direction on matters of safety.
- Encourage reporting of and early correction of workplace hazards.
- Foster worker respect for safety in the workplace.
- Be responsive and collaborative when safety concerns are brought to your attention.





Annual Safety Targets

Annual safety performance targets should

- be measurable, meaningful and realistically achievable;
- promote continual safety improvement;
- be tailored to the needs of the organization; and
- be set at each relevant level in the organization.





Safety Authorities, Responsibilities and Accountabilities

- identification of a senior manager/administrator with overall responsibility for maintaining and implementing the Safety Management System;
- safety roles, responsibilities, authorities and relationships of all organizational units and all classes of employees who manage, perform or verify work affecting safety;




These can be demonstrated through....

- an organization chart that shows both the chain of safety responsibilities and the linkages
- job descriptions that include safety responsibilities and authorities,
- performance evaluation systems that include safety criteria, and
- reward and recognition programs that reinforce safe behaviours and practices as well as the achievement of safety objectives.





Employee Involvement

- Consult with employees and link the targetsetting process with the organization's risk management process
- Experienced employees may also be a good source of expert judgment for evaluating the probability and severity of safety issues and concerns where quantitative, historical data are not available
- JHS Committees Value VS existence
- Perception surveys





Employee Involvement Cont'd

- Employees and their representatives should be involved in the development of risk control strategies, particularly for risks that they have identified.
- Employees should be informed of actions that are being taken or that are planned to address the safety issues and concerns they have identified. Feedback is essential to ensure continued participation.





Compliance- Regs/Standards

- procedures to ensure that the organization is aware of its legal obligations with respect to public and employee safety and to monitor changes;
- procedures for evaluating compliance with regulatory requirements, reporting the results of such evaluations and making recommendations.
- Process for effecting change (Regulations and/or Standards)





SMS Structure







Risk Management Processes

Identification of Safety Issues and Concerns

- Mechanisms for employees to identify safety issues and concerns on a routine, ongoing basis that have high levels of visibility and participation
- Analytical methods such as failure mode and effect analysis, hazard and operability studies, and fault-tree analysis for new equipment, systems, and procedures where experience and a safety history are not available
- Special consideration of safety issues and concerns related to human factors, third-party interfaces and the introduction of significant changes to operations





Risk Management Processes Cont'd

- Feedback from Safety Management System processes such as incident and accident investigation, safety data collection and analysis, proficiency testing, and internal audit
- HIRA tool <u>HIRA NEW.xls</u>





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Safety by Design

Influencing the future Workplace







Rationale for Good Design



Consequences of Poor Design









Concept of Affordances

Physical quality of an object that encourages an unspoken action.

- A handle always says PULL
- A button always says PUSH
- If something has a flat top expect things to be laid on top of it.



Poor Design!!





Cultural Stereotypes

- Up = On, Down = Off
- Clockwise to increase
- Red = Stop, Green = Go
- Hexagon = Stop



Some stereotypes are International, others Western or North American

Know your audience!





HSI - Human System Interaction

Technology Centered Design

- Machine does what it can
- Worker fills in where the machine lacks

Training won't fix a bad design!







Effect of Good/Bad Design

Many of our day to day design decisions may not result in life or death consequences, but they can affect:

- Efficiencies
- Morale
- Productivity
- Absenteeism
- Accident Rates
- Injury Rates
- Product Quality
- Costs (production, maintenance, training)

Here are some examples of engineering design successes...





















Incident Reporting, Investigation and Analysis

- procedures for internal and external accident and incident notification and reporting, including third-party reporting (e.g., Utilities, WSBC);
- a formal link to the risk management process; and
- procedures for reporting and documenting findings, conclusions and recommendations, and for ensuring implementation of recommendations and corrective actions.





Skills, Training and Supervision

- identification of required position qualifications;
- identification of required qualification and training of contractors and other third parties whose activities may directly affect the organization's safety;
- procedures for ensuring that employees have received the necessary safety management skills training and technical safety training and certification, and that qualifications are kept current;



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Safety Training – Do we do enough? (we spend enough!) Do we do it well?

- Needs based VS calendar based
- What is technical and what is safety?
- Key service providers relevant, specific, incorporate your standards, programs, SWP's
- "Situational Awareness" training VS engineering controls, SWP, PPE, other
- Safety Management Skills training for key supervisory/management staff – enabling





Safety Performance Data Collection and Analysis

- identification of the safety data to be collected to assess performance with respect to the organization's annual safety targets and to meet other analytical requirements;
- procedures for analysis of the data and feedback into the risk management process and periodic senior management review of safety data analysis.
- <u>sfty.doc</u>





Safety Audit and Evaluation

- periodic audits of the performance of the components of the organization's Safety Management System, including audit frequencies, methodologies, responsibilities and reporting processes;
- audits by suitably qualified personnel who are impartial and objective; e.g. external and/or an autonomous Corporate Safety group;





Corrective Action Development, Approval and Monitoring

The key to the effectiveness of a *Safety Management System* is the feedback loops that ensure that corrective action is taken:

- procedures for developing corrective actions that focus on ensuring that the problem, incident or accident does not recur;
- procedures for formal monitoring of the implementation of corrective actions.





Documentation (Information Management)

- The Safety Management System should be documented and readily available to those with defined responsibilities in the System. Procedures for updating and distributing the documentation should be specified.
- The documentation should show how each of the requirements is being met, including references to process and procedure documents, standards, guidelines, manuals, job descriptions, organization charts, etc., the current edition number or date, and the locations where these documents can be found.
- The Safety Management System document may be a summary document that references other documents.





Information Management Cont'd.

- Knowledge (information) is a powerful thing
- One stop shopping
- Real time
- One version of the truth
- Accessible to all
- Link to, rather than provide, critical/dynamic documents (i.e.: regulations, codes, procedures, etc)





Objectives

- 1. Essential element of a Safety Management System.
- 2. Brief overview of the relationship with CSA, OH&S Reg and WorkSafeBC's Certification program.
- 3. Review injury and accident history, compare and contrast with CU.
- 4. Reifying the system: Create awareness and understanding of the Safety Management System though links to the JHSC, Baseline Evaluation's and Disability Management engaging injured workers in the planning stage and job analysis..





OH & S Management Systems Z1000-06



Note from CSA Website:

Canada currently ranks among the worst of the developed nations in occupational health and safety, with an average of almost three people a day dying as a result of workplace injuries and disease.

In 2004, 928 workers died from work related injuries and disease.



WorkSafeBC O H & S Regulation, Part 3: Rights and Responsibilities



IRS:

Underlying Philosophy of the Safety Management System Establishes Joint Responsibility;

Defines JHS committee roles, Defines Worker Roles, Define Supervisor Role; Promotes the Occupational Health and Safety Culture in the workplace;

Develops self reliance in employees;

Develops and maintains employee-employer partnership Ensures compliance with the Reg.

MA



WorkSafeBC Partners Program & Certificate of Recognition



Partners in Injury and Disability Management Program. Financial Incentive Program to encourage employers to adopt management systems, in OH&S and RTW. 190 Construction Industry employers received \$1.5 million & 109 Oil and Gas employers \$346,000


Deming Circle of Continuous Improvement



- 25 Municipalities with Assessable payroll over \$10m.
- Highest IR in sector group, 9.7
- Lowest IR in sector group, 2.8
- Average IR in sector, 5
- Highest ER in sector group 34.8% Surcharge
- Lowest ER in sector group 2.8% Surcharge
- Average ER in sector group 5.8% Surcharge





CU 7530003 / 753004 Injury Rate for selected 25 employers

2007 Ave IR; 5.2- Highest IR 13.9

2008 Ave IR; 5 – Highest IR 9.7







- 190 Municipalities in Public Sub Sector
- 629 Active Registered Employers
- Assessable payroll \$1,830,963,498
- Assessments for 2008 \$25,272,532.63
- Savings at Base Rate \$1.5m





- 9,100 claims were accepted (short-term disability, longterm disability and fatal claims)
- The average fully reserved claim costs was approximately \$10,700.
- This compares to about \$13,400 for all-BC claims
- 27 Fatal claims (22 industrial disease)





CU 753004 Breakdown



Total Days Lost	Total Claims Costs	Average Days per Claim	Average Cost per Day
56,839	\$17,955,926.98	36	\$315.91
156 years of Lost time	258 ft	es	RTW one day earlier on all claims in 2008 \$603 338
	Total Days Lost 56,839	Total Days LostTotal Claims Costs56,839\$17,955,926.98Image: Stars of Stars of Lost timeImage: Stars of Stars o	Total Days LostTotal Claims CostsAverage Days per Claim56,839\$17,955,926.9836Image: Second colspan="3">Image: Second colspan="3"56,839\$17,955,926.9836156Image: Second colspan="3">Image: Second colspan="3"156Image: Second colspan="3"Image: Second colspan="3"156Image: Second cols



Source 2006 Decision Net

WORK SAFE BC

- Average length of claim 36 days
- Provincial average is 47 days
- Average claim length dropped by 2 days since 2007
- 2 x \$315.91 x 1910 LTD Claims = \$1,206,776.20





Safety Cultural Change - Hermeneutics to Reification

Internal Responsibility	Internalize IRS: External Audit, rewrite, Compliance;	
Ladder	<u>Commitment:</u> External Audit; Rewrite DMS (PJDA). Ensure Safety Equipment (First Aid)	
<u>Involv</u> Work	vement: place Monitoring; Update JHA/SPO/PJDA	
Engagement: Education & T Regular work	raining for senior management in SMS; place Inspections	R THR
Understanding Set organizational OH&S objectives and targets Operationalize the SMS with Joint Management meetings		
<u>Awareness:</u> Complete a Baseline Audit; Write OH & S Policy Stateme	nt, if required re-write written program	
<u>Contact:</u> Review existing SMS; JHSC; DMP (I Education & training for new workers	njured Workers), , supervisors & workers	





Disability Management Using DM at the Front End

- Physical Job Demands Analysis
- Fundamental Part of the Ergonomic Assessment Program
- Identifies the relationship of the worker, the physical and mental activity, and the tools and environmental requirements of each job
- Identifies human hazards through investigation repetitiveness of tasks
- Identifies the potential hazards
- Critical for constructing Alternate Work Duties





Firefighters Boot Project



Injury Awareness Joint Pilot Program

- •WorkSafeBC / City of Vancouver / Richmond
- •Upward trend in ankle and knee injuries
- Identified by Case Manager & Captain
- Verified through data review
- •36 Firefighters from 5 Fire Halls
- Poster Campaign









 Estimate my experience rating?



Consultation on the Loss of Earnings Assessment Policy

Fatalities

Shipbuilding worker exposed to asbestos dust

E



Health Care Providers

(PDF 621kb / booklet)

An illustrated handbook that explains how the back works, provides tips for avoiding injury, and

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- Prevention Officers are front and centre of WorkSafeBC's business model
- 180,000 employers and 1.9 million workers
- Education consultation and enforcement
- Authority in workplace Safety and
- Technical support to the claims ar

The only acceptable injury rate is zero.

When a worker reports for work he or she deserves to work in a safe and healthy environment.

That same worker deserves to return home safely.





In closing.....

- Thank you for your time, input and attention
- Any questions, comments or suggestions?





