



Leading to Safety: How Top Organizational Leaders Impact Safety

Prepared for:
WorkSafe Saskatchewan

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June 2016

Executive Summary

This report addresses questions of *if* and *how* top leaders influence safety in their organizations. Analyzing survey data collected between 2012 and 2015 from nearly 13,000 frontline employees, supervisors, senior managers, and CEOs/owners from 145 different Saskatchewan-based organizations, we find that executive leadership has a **positive** impact on safety.

Analysis provides moderate to strong evidence that top organizational leaders drive organizational safety climate and safety outcomes, likely through a trickle down process: from CEO to senior managers and, eventually, frontline workers. Top organizational leader commitment to safety, as reported by their senior managers, was consistently associated with:

- **Higher employee-reported safety compliance behaviours (e.g., following safety policies and procedures)**
- **Higher employee-reported proactive safety behaviours (e.g., taking initiative to support safety by, for example, making suggestions for safety improvements)**
- **Lower employee-reported lost-time injuries**

Further, the results suggest that a genuine commitment to safety in the executive suite is associated with these broader organizational performance benefits:

- **A more engaged workforce**
- **Lower employee turnover intentions (and potential savings related to hiring, training, lost productivity)**
- **Potentially higher organizational performance**

This report also highlights the role that safety-orientated senior management performance reviews can play in supporting a culture of safety in organizations. Lastly, this report makes recommendations related to sharing these results with organizational leaders and developing executive interventions to improve safety.

Acknowledgements

I thank Bruce Anderson, Heather Getz, Phil Germain, Larry Hiles, Gord Moker, and Andy Rauska for their support of this research as well as the participating CEOs, business owners, senior managers, and employees who generously gave their time to furthering knowledge of workplace safety in Saskatchewan. Thank you to my friend and co-author, Dr. Tunde Ogunfowora (University of Calgary), who conducted the advanced statistical analysis reported in section 4.4 of this report and made an extraordinary contribution to the related research publication. I also thank Dr. Morina Rennie (University of Regina), Dr. Nick Turner (University of Calgary) and Dr. Adrian Pitariu (University of Regina) for their feedback at various points in the past four years, and Dayle Ehr (Sun Country Health Region) who originally developed the proposal for this research and was instrumental in the successful launch of project in 2012. This project would not have been possible if not for the support of the project's skilled research assistants: Emily Barber, J.D. Bell, Heather Bryant, Daisy Cao, Carly Dueck, Dayle Ehr, Caillin Elliot, Janelle Gerard, Angela Gilroy, Kayla Hordos, Mike Jesse, Courtney Kozakewycz, Sarah Novak, and Shannon Owings.

This research-consulting project was funded by WorkSafe Saskatchewan. The project's findings have been presented at the 2015 Society for Industrial and Organizational Psychology Conference in Philadelphia, PA, the 2014 National Safety Congress and Expo San Diego, CA, the 2013 Administrative Sciences Association of Canada Conference in Calgary, AB, and in the Journal of Applied Psychology.

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1.0 Introduction

1.1 Background

This report summarizes the findings from safety surveys completed by nearly 13,000 employees belonging to 145 different Saskatchewan-based organizations. The research occurred over three phases between June 2012 and April 2015. The primary aims of the project are to assess the impact of CEO leadership on safety climate in organizations, assess the safety-related activities of signatories to the Saskatchewan Health and Safety Leadership Charter, and provide high quality safety performance bench marking information to participating organizations.

This project began in early 2012 when the Saskatchewan Workers' Compensation Board engaged the Centre for Management Development in the Faculty of Business Administration at the University of Regina to conduct an evaluation of the Saskatchewan Health and Safety Leadership Charter Program. Between May 2012 to May 2013, we interviewed signatories to the Charter, and surveyed frontline employees, managers, senior managers, and CEOs from 59 organizations. The results of this first phase of the project were summarized in a publicly available report published in July 2013.¹

Phase 2 of the project, which spanned August 2013 to April 2014, involved surveys of frontline employees, managers, senior managers, and CEOs from 55 organizations. Phase 3 was conducted between August 2014 and April 2015 and involved similar participant groups from 31 organizations.

This report summarizes the responses to the surveys offered in Phase 2 and 3 of the project and provides analysis of combined data from the three phases of the project.

¹ See Tucker, S and Diekrager, D. (July 2013). Saskatchewan Leadership Charter Project. http://www.worksafesask.ca/wp-content/uploads/2013/11/SK-Leadership-Charter-Project_Final-Report_final-version.pdf

1.2 Deliverables

The Centre for Management Development (CMD) has provided the following deliverables over the three phases of the project:

- A report outlining the findings of Phase 1 (submitted in July 2013).
- A final report summarizing the findings of Phases 2 and 3 of the project.
- One hundred and forty-five confidential safety bench marking reports for Saskatchewan-based organizations.
- 18 presentations of the project's findings to Chamber of Commerce branches, Saskatchewan WCB events, industry safety association meetings, organizations, and North American occupational safety conferences.

2.0 Phase 2 (2013-2014): Signatory, Senior Management, and Employee Survey

The first purpose of Phase 2 of the project was to share the results of the first phase with a wide-variety of industry and other stakeholder groups in Saskatchewan and abroad. Second, data collection continued to further assess the impact of top organizational leadership on safety. Third, safety bench marking reports were provided to participating Charter organizations.

2.1 Presentations and Other Knowledge Transfer Activities

The results of Phase 1 of the project and related research on leadership and safety climate were presented at these events:

- Administrative Sciences Association of Canada Conference, Calgary, AB (May 2013)
- Association of Workers Compensation Boards, Prevention Committee, Toronto, ON (May 2013)
- BC Safety Charter administrators, Regina, SK (June 2014)
- ENFORM Saskatchewan, Regina, SK (August 2013)
- Estevan Chamber of Commerce, Estevan, SK (November 2013)
- Moose Jaw Chamber of Commerce, Moose Jaw, SK (May 2014)
- Two anonymous organizations, Regina, SK (November 2014)
- National Safety Congress and Expo, San Diego, CA (September 2014)
- Safe Saskatchewan Board of Directors, Regina, SK (April 2014)

- Saskatchewan Health and Safety Leadership Charter event, Saskatoon, SK (June 2013)
- Saskatchewan Safety Associations, Regina, SK (June 2013)
- Saskatchewan Heavy Construction Safety Association, Regina, SK (September 2013)
- Saskatchewan Mining Association, Regina, SK (July 2013)
- Saskatchewan Motor Safety Association, Regina, SK (August 2013)²
- Saskatchewan Health Sector OH&S Practitioners Group, Regina, SK (September 2013)
- Saskatchewan Business Magazine (April/May 2013)³
- WorkSafe Saskatchewan event, Prince Albert, SK (November 2013)

2.2 Overview of Survey Methodology

In April 2013 a recruitment letter was sent to 71 Charter signatories who participated in Phase 1 of the project. The recruitment letter informed organizations of the purpose and procedure of the study. In return for their participation, organizations were offered a confidential interim and final report of employee-reported safety culture perceptions in their organization and, if requested, feedback on employee engagement and employee turnover intentions. A consent form and sample safety report was also attached to the recruitment letter. Organizations interested in participating in the study were asked to confirm their participation by e-mail or phone. The recruitment letter was followed up by phone in May and again by e-mail in June, 2013. A final recruitment e-mail was sent in December, 2013. The same recruitment letter, consent form, and sample report was later sent to the remaining 238 Charter signatories who did not participate in Phase 1 of the research in May 2013. They also received a follow-up e-mail and phone call in June and July, 2013.

Phase 2 differed from Phase 1 in that the benchmarking reports were also made available to non-Charter signatories. We also used more methods to publicize the benchmarking reports in Phase 2. First, in May 2013, an e-mail version of the recruitment package was sent to every Saskatchewan-based Chamber of Commerce, large scale safety association, and large rural municipalities to gain interest from governing bodies that could provide us with positive exposure to their members. Second, the author of this report and research assistant (Courtney Kozakewycz) made presentations at industry association meetings in July and August which included 2012 research findings, the benefits of participating in the study, and to answer any questions. An e-mail summary and phone call follow-up was completed after each meeting. Third, an article highlighting the importance of safety culture in Saskatchewan and promoting the free customized safety report available through the 2013 Saskatchewan Safety Survey was published in the April/May 2013 issue of Saskatchewan Business Magazine. The information presented in the article was also published on the WorkSafe Saskatchewan website. Fourth, a

² Webinar available at <https://www.youtube.com/watch?v=KXy0Lz-H9sU>

³ Article available at <http://www.uregina.ca/business/assets/about-us/news/2013/SaskBusiness-May2013.pdf>

presentation was made at the Charter event held in Saskatoon in June, 2013. The presentation emphasized important findings from the 2012 study and urged new and existing Charter signatories to participate in the study as part of their commitment to workplace safety. A recruitment package was sent to each new Charter signatory and an e-mail follow-up was sent two weeks later followed by a phone call.

Finally, in October 2013, about 1000 recruitment packages, which included a copy of the Saskatchewan Business Magazine article, were sent via Canada Post to non-Charter organizations that belonged to under-represented business sectors in the research including automotive dealerships, agricultural suppliers, and food service organizations. Unfortunately, the response rate to this effort was only 1%.

An interim report was sent out to each participating organization beginning in December 2013. This document reported on the employee rated organizational safety climate score for the organization and, if requested, employee engagement and turnover intention scores. Additional batches of interim reports were sent every few weeks as organizations completed the survey process. A sample interim report was e-mailed to all current Charter signatories as well as the major non-Charter targeted organizations to improve buy-in to the study benefits.

Three surveys were used to collect responses from three employee groups: employees and supervisors, senior managers, and the CEO or equivalent organizational leader. The method of collecting data for CEOs, senior managers, and employees was the same as in Phase 1 of the project. With the exception of using hard copy surveys for some frontline employees, all surveys were administered through SurveyMonkey.com, a secure password protected website. Before beginning the survey, participants were asked to read a letter of information and provide informed consent online. CEO's and senior managers received a customized e-mail invitation and two reminder e-mail messages two weeks and one month after the initial invitation. A coding system was developed to identify participants within the same organization to allow matching of organizational leadership, senior management, and frontline employee surveys. In organizations that operated in one location, all surveys were coded with the same organizational code. In organizations that operated in more than one location, each location was given a distinct sub-code.⁴

Overall, 55 organizations agreed to participate in Phase 2 of the project. Table 1 describes participating organizations by sector.

⁴ If each location had only one level of management, the front line employees were asked to refer to top management in their organization, as opposed to top management in their location. If each location had two or more levels of management, the front line employees were asked to refer to top management in their location, as opposed to top management of the organization.

Table 1: Characteristics of participating organizations (N = 55)

Industry code	Number of participating organizations
Agriculture	0
Building Construction	4
Commodity – Wholesale – Retail	10
Development – Mineral Resources	3
Government and Municipal	19
Manufacturing and Processing	9
Road Construction	3
Service Industry	5
Transportation and Warehousing	1
Utility Operations	1

Appendix 1 includes copies of the employee, senior manager, and CEO surveys. The senior manager and employee surveys were nearly the same as the ones used in Phase 1 of the project. However, for Phase 2, the CEO survey was entirely new with questions focused on the nature of and challenges associated with evaluating senior manager safety performance as part of the job performance process.

The next sections summarize the descriptive results of each survey category (i.e., CEO, senior manager, and employee survey categories).

2.1 CEO Survey Results

Forty-six CEOs (or equivalent, e.g., owners) completed a survey. Most represented Charter organizations (70%) and came from an operations background (69%) prior to assuming leadership of the organization.

Table 2 shows that the majority of respondents (64%) include safety performance as a component of overall senior management performance evaluation. Conversely, 24% do not include safety in senior management performance evaluation. We also asked if the organizational leader has reviewed the organization's health and safety policy statement in the last year. The vast majority (91%) agreed or strongly agreed that they had read the statement.

Table 2: CEO safety-related actions

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. When conducting performance evaluations of my senior management team, I include safety performance as a component of the evaluation.	7%	17%	13%	44%	20%
2. I have reviewed the organization's health and safety policy statement in the last year.	7%	2%	0%	47%	44%

To explore how safety is measured in the process of senior manager performance evaluation and any related challenges to including safety in the performance evaluation process, we asked two related questions. First, respondents were asked: “How is health and safety performance measured as a component of senior management performance evaluation?” And second, “What, if any, challenges have you encountered when assessing senior management health and safety performance as a component of senior management performance evaluation? Appendix 2 shows all of the comments (with all identifying information removed). The comments suggest organizational leaders are using a range of approaches with the most common being tracking and goal setting with key performance indicators (e.g., number and severity of lost time and non-lost time injuries, number of near misses, WCB costs) and senior manager safety behaviours (e.g., involvement with OHS committee, quality of safety communication with employees, participating in safety initiatives and proactive safety actions). Here is an exemplar approach to executive safety performance evaluation:

“Health and Safety is measured from a number of perspectives: 1) Defining the contribution made to overall H&S culture through observations of behavior (e.g., do they walk the walk). 2) Defining the contribution made to overall H&S culture through participation in formal initiatives that are recognized as supporting the culture (i.e., OH&S Committee, OH&S work order resolution, etc). 3) Overall safety performance within the manager's ownership (continuous improvement initiatives, traditional measures such as Lost Time Accidents, Medical Aids, Medical Treatments, etc) Additionally, the site has a variable pay system that incorporates safety as one of the key elements/performance measures that pays out (or takes away).”

Although several respondents mentioned not experiencing any difficulties measuring senior manager safety performance, others identified these challenges: low commitment among senior managers to improving safety, defining key performance measures, identifying key safety performance indicators other than injuries (e.g., safety culture, psycho-social factors), subjective nature of measuring performance, and time constraints. One organizational leader

offered this insight about it sometimes being a struggle to have safety performance on par with traditional measures of organizational performance:

“Saskatchewan people have a culture of "getting the job done". It is a mind shift to put safety first when it requires training time and a financial commitment that takes away from other direct customer services where long standing and measurable objectives have been in place for which they are held accountable. Safety pays off in the long run, but there are short-run obstacles.”

2.2 Senior Manager Survey Results

Two hundred and eighty-three senior managers (i.e., direct reports to the top organizational leader) completed a survey. The most common functional area was operations (30%), human resources (10%), finance (8%), accounting (7%), health and safety (6%), and sales (4%). Table 3 shows that most senior managers responded that safety was included as part of their performance evaluation (66%).

Table 3: Safety performance included in job performance (senior manager reported)

	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
Safety performance is a component in senior management performance evaluations.	1%	14%	18%	40%	26%

To assess if and how top organizational leaders impact on safety climate (broadly defined as the relatively priority put on safety relative to other organizational priorities), we measured senior manager perceptions of their leader’s ethical behaviour and commitment to safety. The distribution of the responses to the statements related to these measures are shown in Figures 1 and 2. The results of the analysis of these data are reported in the next section of this report.

Figure 1: CEO ethical behaviour (senior manager reported)

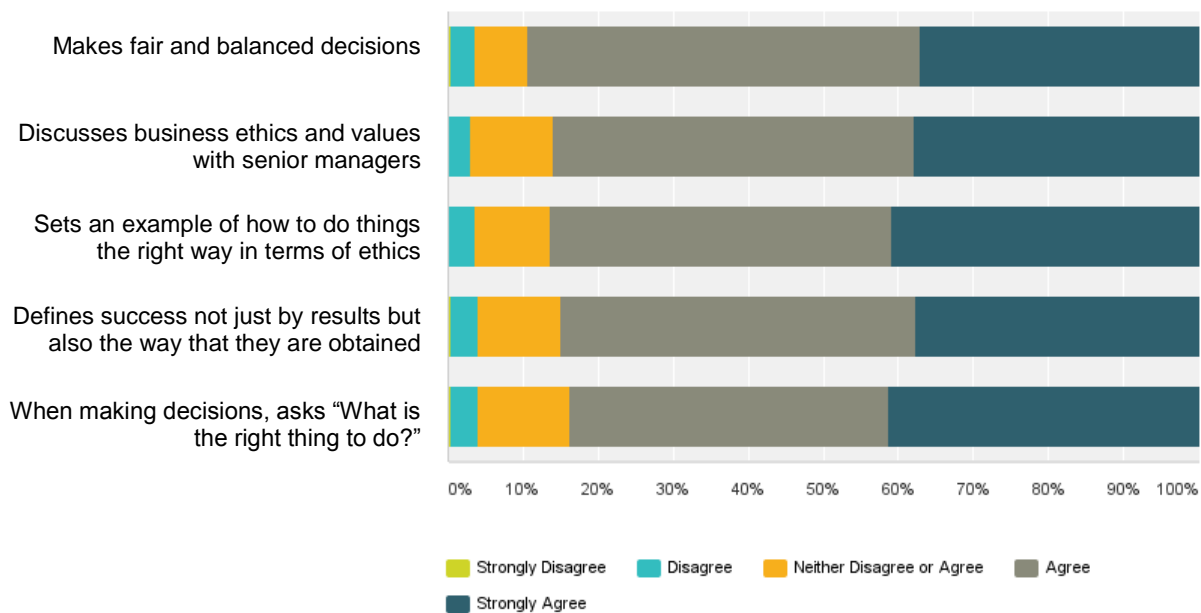
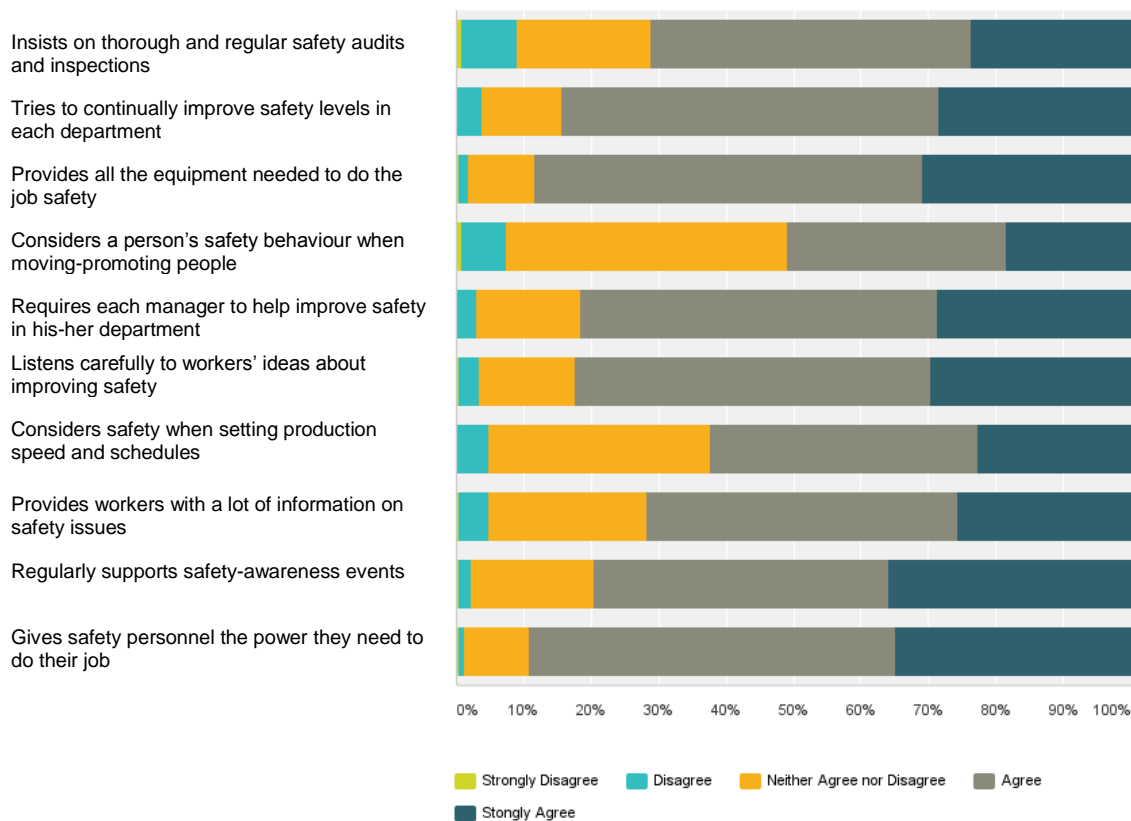


Figure 2: CEO commitment to safety (senior manager reported)



2.3 Employee Survey Results and Organizational Analysis

There were 5,318 responses to the employee survey (33% of the responses were from individuals in a supervisory role). The average number of responses from each organization was 190 (range 1 to 928 responses).

Average employee tenure was 10.5 years (SD = 10.2 years) and 52% of respondents were female. In terms of occupational groups, 7.4% of all participants identified as general labourer (e.g., custodian, construction labourer), 8.7% as production staff (e.g., assembly, machine operator), 12.4% skilled/trades staff (e.g., nurse, electrician), 21.7% administrative staff (e.g., clerical worker, data entry), 30.5% professional staff (e.g., accountant, engineer) and 20% as other (e.g., supervisor).

Table 4 shows the average scores for safety climate, employee turnover, and employee engagement among participating organizations by sector. Given the very small number of participating organizations in the study, these scores cannot be said to represent the safety climate conditions of a sector as defined by WCB rate code.

All study variables in the employee survey demonstrated excellent reliability (alpha range .75 to .97). Tables 5 and 6 show the relationships among the main study variables in the employee survey at the *individual* and *organizational* level. The *individual* level correlations are the relationships among the scores provided by each participant whereas the *organizational* level correlations are the relationships among the average of employee scores for each organization. Note that the number of responses for employee turnover intentions and employee engagement are lower than the other variables because some organizations did not request these scores.

Table 4: Average Scores by Sector

Phase 2		
	Number of Organizations	Score
Safety Climate	55	3.63
Agriculture	-	-
Building Construction	4	3.96
Commodity-Wholesale-Retail	10	3.60
Development-Mineral Resources	3	3.94
Government-Municipal	19	3.42
Manufacturing-Processing	9	3.64

Road Construction	3	4.09
Service Industry	5	3.72
Transportation-Warehousing	1	3.50
Utility Operations	1	3.81
Turnover Intentions	40	2.35
Agriculture	-	-
Building Construction	4	2.28
Commodity-Wholesale-Retail	7	2.29
Development-Mineral Resources	2	1.97
Government-Municipal	15	2.49
Manufacturing-Processing	5	2.27
Road Construction	1	2.34
Service Industry	5	2.29
Transportation-Warehousing	-	-
Utility Operations	1	2.43
Employee Engagement	47	4.27
Agriculture	-	-
Building Construction	4	4.44
Commodity-Wholesale-Retail	8	4.28
Development-Mineral Resources	3	4.37
Government-Municipal	16	4.24
Manufacturing-Processing	7	4.17
Road Construction	3	4.42
Service Industry	5	4.25
Transportation-Warehousing	-	-
Utility Operations	1	4.25

Table 5: Cross-sectional correlations among employee reported variables at the individual level of analysis ($N = 2,145 - 5,318$).

Variable	Mean	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Gender	.52														
2. Tenure	10.54	.03													
3. Supervisor commitment to safety	3.77	-.10	-.15												
4. Supervisor laize-faire safety	2.50	-.02	.01	-.41											
5. Top management commitment to safety	3.54	-.10	-.12	.71	-.32										
6. Safety compliance behaviour	4.10	-.06	-.07	.50	-.22	.48									
7. Safety pro-activity behavior	3.80	-.11	-.02	.44	-.16	.46	.65								
8. Safety in supervisor performance evaluation	3.52	-.16	-.09	.45	-.16	.49	.38	.42							
9. Safety in employee performance evaluation	3.52	-.17	-.10	.46	-.15	.49	.39	.44	.89						
10. Job engagement	4.26	.04	-.03	.35	-.17	.38	.45	.40	.29	.29					
11. Job turnover intentions	2.35	-.06	.05	-.40	.31	-.44	-.26	-.21	-.24	-.22	-.42				
12. Injuries	.40	-.08	-.03	-.11	.14	-.15	-.08	-.02	.03	.04	-.06	.20			
13. Non-lost time injuries	.48	.00	.03	-.10	.08	-.19	-.08	-.05	-.04	-.03	-.08	.17	.54		
14. Lost time injuries	.05	-.01	.04	-.09	.07	-.11	-.05	-.02	-.01	-.02	-.03	.09	.18	.16	

Notes: Females = 1; Males = 0. * statistically significant correlation .03 to .04, $p < .05$; .05 to .07, $p < .01$.

Table 6: Cross-sectional correlations among employee reported variables at the organizational level of analysis (N = 34-55).

Variable	Mean	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. CEO ethical leadership**	4.23														
2. CEO commitment to safety**	3.96	.35													
3. Top management commitment to safety*	3.63	.14	.63												
4. Supervisor commitment to safety*	3.87	-.04	.45	.85											
5. Supervisor laize-faire safety*	2.43	.01	-.13	-.51	-.60										
6. Safety in senior management performance evaluation***	3.48	.12	.29	.15	.04	-.29									
7. Safety in senior management performance evaluation**	3.73	.23	.59	.45	.30	-.08	.33								
8. Safety in supervisor performance evaluation*	3.66	-.07	.47	.63	.60	-.28	.15	.48							
9. Safety in employee performance evaluation*	3.66	-.10	.50	.67	.64	-.30	.15	.46	.96						
10. Job engagement*	4.27	.15	.17	.59	.45	-.38	-.01	.07	.19	.28					
11. Job turnover intentions*	2.35	-.36	-.42	-.58	-.51	.45	.04	-.42	-.43	-.40	-.35				
12. Injuries*	.44	-.02	-.13	-.18	-.07	.05	-.22	-.09	.22	.18	-.03	-.06			
13. Non-lost time injuries*	.47	-.08	-.08	-.14	.10	-.17	-.29	-.30	.03	.10	-.05	.00	.65		
14. Lost time injuries*	.05	-.02	-.32	-.54	-.48	.36	.04	-.16	.01	-.16	-.45	.28	.51	.04	

Notes: Females = 1; Males = 0. * Employee reported, ** Senior manager reported, *** CEO reported. Statistically significant correlations .in bold, $p < .05$.

The bolded correlations in Table 6 indicate statistical significance at the organizational level of analysis. Of note, CEO commitment to safety was moderately positively correlated with TMT and supervisor commitment to safety (correlations ranging .63 and .45). This suggests that the priority put on safety can span the different levels in an organizational hierarchy.

Relatedly, CEO commitment to safety was positively associated with safety-orientated performance evaluation practices for TMTs, supervisors, and employees. This practice, in particular, may be a tool that top organizational leaders can use to reinforce the importance of safety in their organization.

Importantly, CEO, TMT, and supervisor commitment to safety were each negatively associated with organizational level lost-time injuries (as reported by employees). Conversely, passive supervision in organizations was positively related to lost time injuries.

Finally, in terms of non-safety related outcomes, employee turnover intentions were negatively related with CEO, TMT, and supervisor commitment to safety. Thus, in organizations where employees perceived there is a priority put on safety, employees were less likely to think about leaving their organization compared to organizations in which employees perceived there was a relatively lower priority put on safety.

2.4 Evaluation of Safety Climate Reports

In return for participating in Phase 2 of the project, participating organizations were provided with a free confidential report of employee-reported safety climate perceptions in their organization and, if requested, feedback on employee engagement and employee turnover intentions. Initially, participants were provided with an “interim report” within about four months after their participation. This report included an overall safety climate score for their organization and by organizational location (if applicable). In May 2014, participating organizations were provided with a “final report” which included benchmarking safety climate scores for each of the ten WCB rate codes (shown in Table 4) and a ranking of scores from the participating organizations from 1 to 55. Appendix 3 shows a copy of a sample final report.

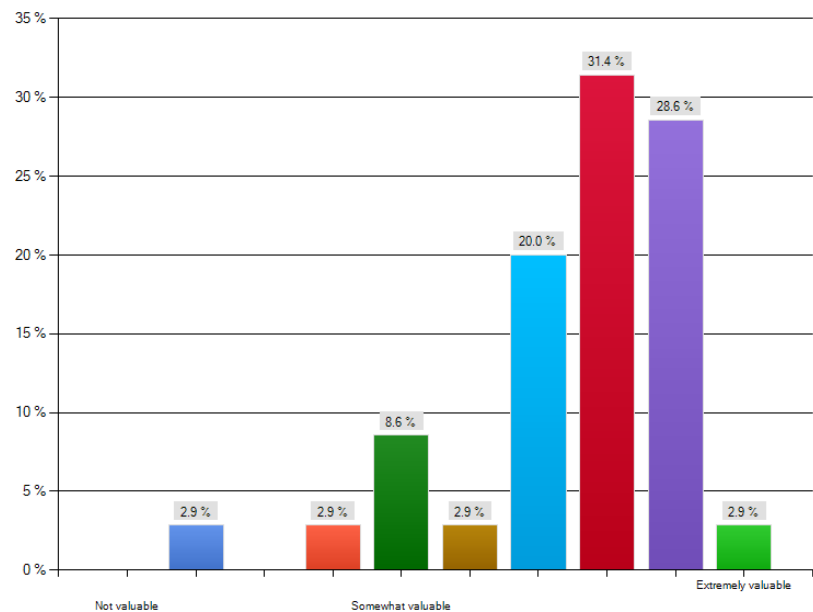
In June 2014, participating organizations were invited to provide anonymous feedback on the quality and value of their report as well as how their organization used the information in their report. Thirty-five participants (27 Charter and 7 non-Charter) responded to the survey’s questions.⁵

First, participants responded to the question “How valuable is the information contained in your safety climate report to your organization?” on a 10-point scale (ranging from “not valuable” to

⁵ All survey responses were gathered before the detailed safety climate reports were distributed.

“extremely valuable”). Over 90 percent of respondents indicated the reports were somewhat to extremely valuable (see Figure 3).

Figure 3: Perceived value of safety climate report



Participants were also asked how likely their organization would be to participate in the employee surveys next year. Seventy-seven percent of respondents indicated they were very likely to participate, 11 percent of respondents indicated they were likely to participate and 12 percent indicated they were unlikely and very unlikely to participate again. Table 7 compares the satisfaction and likelihood of future participation in Phase 1 and 2 of the project. Overall, the perceived value of the report increased by 22% and the likelihood of participating next year increased by 11%.

Table 7: Safety climate report satisfaction survey, 2012 and 2013/14

	2012	2013/14	Percentage change
Value of report (out of 10)	6.15	7.54	22%
Participating next year (Percentage likely or very likely to participate)	77%	88%	11%

To better understand how the information in the bench marking reports in Phase 2 was used by organizations we asked two related questions: “How has the information in your safety climate report been used in your organization? Has the information been shared with your CEO/owner/organization leader and senior management team?” Appendix 4 shows the thirty-three responses to this question. Taken together, the comments suggest that the information in

the bench marking reports is discussed by senior managers and CEOs, and used as a basis for planning safety-related improvements.

Finally, we asked for specific ideas for improving the safety climate reports. There were 20 responses, which are summarized in Appendix 5. This feedback was considered prior to the beginning of Phase 3 of the project. Due to necessity of keeping the survey short, additional items suggested in the feedback, could not immediately be added to the next survey (i.e., in Phase 3). Further, due to time constraints related to producing the final reports, additional analysis and reporting is not feasible at this time.

3.0 Phase 3 (2014-2015): Signatory, Senior Management, and Employee Survey

Data collection for the third phase of the project took place between July 2014 and April 2015. The approach to recruitment was similar in many ways to Phase 2. However, due to resource constraints, the survey was not promoted in presentations to chamber of commerce branches and industry groups, or in trade publications, nor was it advertised to non-Charter organizations that had not participated in the past. .

We sent email invitations along with a copy of a sample bench marking report to all 2014 signatories in the Charter, Charter and non-Charter organizations that had participated in the survey in 2013 or 2012, and existing Charter members who had not previously participated. All categories of organizations (e.g., new signatories, existing signatories) received at least two reminder email invitations and two phone call reminders.

Overall, 31 organizations agreed to participate in Phase 3 of the project. Table 9 describes participating organizations that provided employee responses (N = 23) by sector.

Table 9: Participating organizations by sector (N = 23)

Industry code	Number of participating organizations
Agriculture	0
Building Construction	3
Commodity – Wholesale – Retail	4
Development – Mineral Resources	0
Government and Municipal	8
Manufacturing and Processing	4
Road Construction	2
Service Industry	2
Transportation and Warehousing	0
Utility Operations	0

The senior manager and employee surveys were the same as the ones used in Phase 2. However, the CEO survey included questions about CEO perceptions of a key organizational performance indicator and how performance compared to others in their sector (see Appendix 6 for a copy of the Phase 3 CEO survey). The method of administering the surveys for CEOs, senior managers, and employees was the same as in the previous phase of the project.

Next, we discuss the descriptive findings of each survey. This information is presented in nearly an identical format to Phase 2, allowing for comparisons between the two phases.

3.1 CEO Survey Results

Twenty-four CEOs (or equivalent, e.g., owners) completed a survey. Most represented Charter organizations (92%) and came from an operations background (82%) prior to assuming the top leadership role in their organization.

Table 10 shows that the majority of respondents (62%) include safety performance as a component of overall senior management performance evaluation. Conversely, 26% do not include safety in senior management performance evaluation. We also asked if the organizational leader has reviewed the organization's health and safety policy statement in the past year. A large majority (88%) agreed or strongly agreed that they had read the statement.

Table 10: CEO safety-related actions

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. When conducting performance evaluations of my senior management team, I include safety performance as a component of the evaluation.	13%	13%	13%	29%	33%
2. I have reviewed the organization's health and safety policy statement in the last year.	8%	0%	4%	46%	42%

To explore the relationship between safety climate and organizational performance, we asked CEOs to rate the relative performance of their organization to other organizations in their sector. Specifically, we asked CEOs “Aside from safety, what is the most important performance measure (e.g., profit, sales, client/patient satisfaction) for organizations in your sector?” Table 11 identifies the frequency of responses and Table 12 shows the CEOs rating of the relative performance of their organization to other organizations in their sector on the key performance measure for their organization. The majority (67%) indicated their organization’s performance was above or well above average for their sector. In section 3.3, we analyzed the CEO data with the responses from senior managers and employees.

Table 11: Most important measure of organizational performance aside from safety

Performance Measure	Number
Profit	4
Client satisfaction	3
Customer satisfaction	2
Quality	2
Resident/family and staff opinion	2
Revenue	2
Citizen satisfaction	1
Client quality of care	1
Customer service	1
Donor satisfaction	1
Employee satisfaction	1
Net contribution	1
Patient satisfaction	1
Productivity	1

Table 12: Relative organizational performance to other organizations

	Don't know	We are well below average	We are below average	We are average	We are above average	We are well above average
How does your organization's performance on the measure identified in the previous question compare with the performance of organizations in your sector?	8%	0%	4%	21%	46%	21%

3.2 Senior Manager Survey Results

One hundred and twenty senior managers completed a survey. The most common functional area was operations (33%), human resources (12%), accounting (8%), finance (7%), and other (31%) (e.g., engineering, sales). Table 13 shows most senior managers (78%) responded that safety was included in their performance evaluation.

Table 13: Safety performance included in job performance (senior manager reported)

	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
Safety performance is a component in senior management performance evaluations.	2%	10%	10%	43%	35%

To assess the top organizational leader's impact on safety climate we measured senior manager perceptions of their leader's ethical behaviour and commitment to safety. The distribution of the responses to the statements related to these measures are shown in Figures 4 and 5. Both measures demonstrated excellent reliability (alphas = .92)

Figure 4: CEO ethical behaviour (senior manager reported)

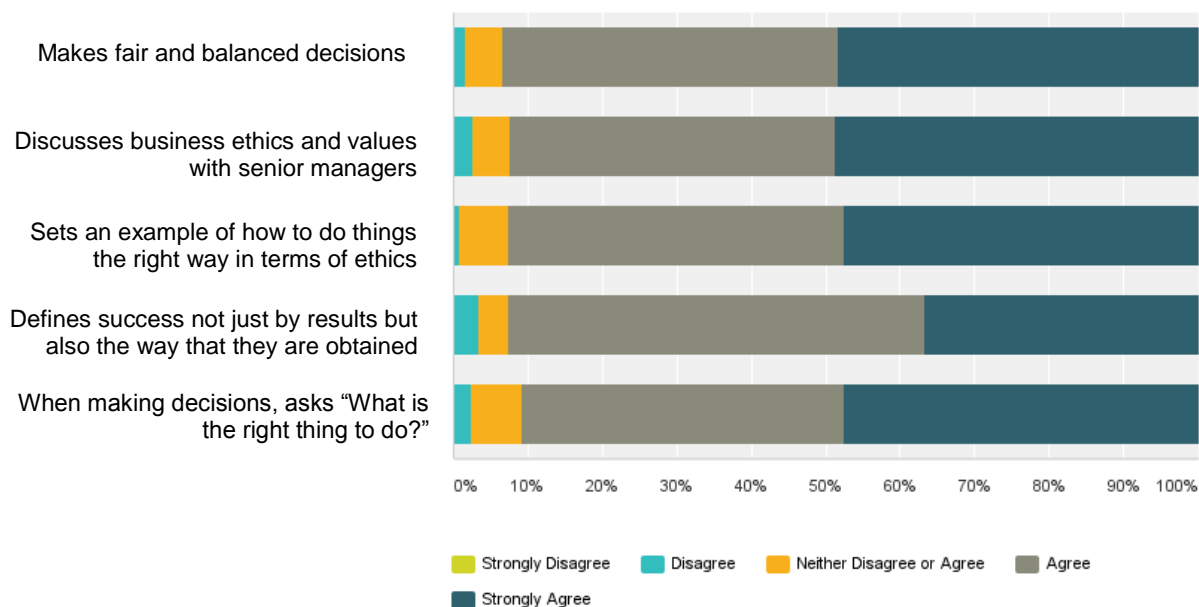
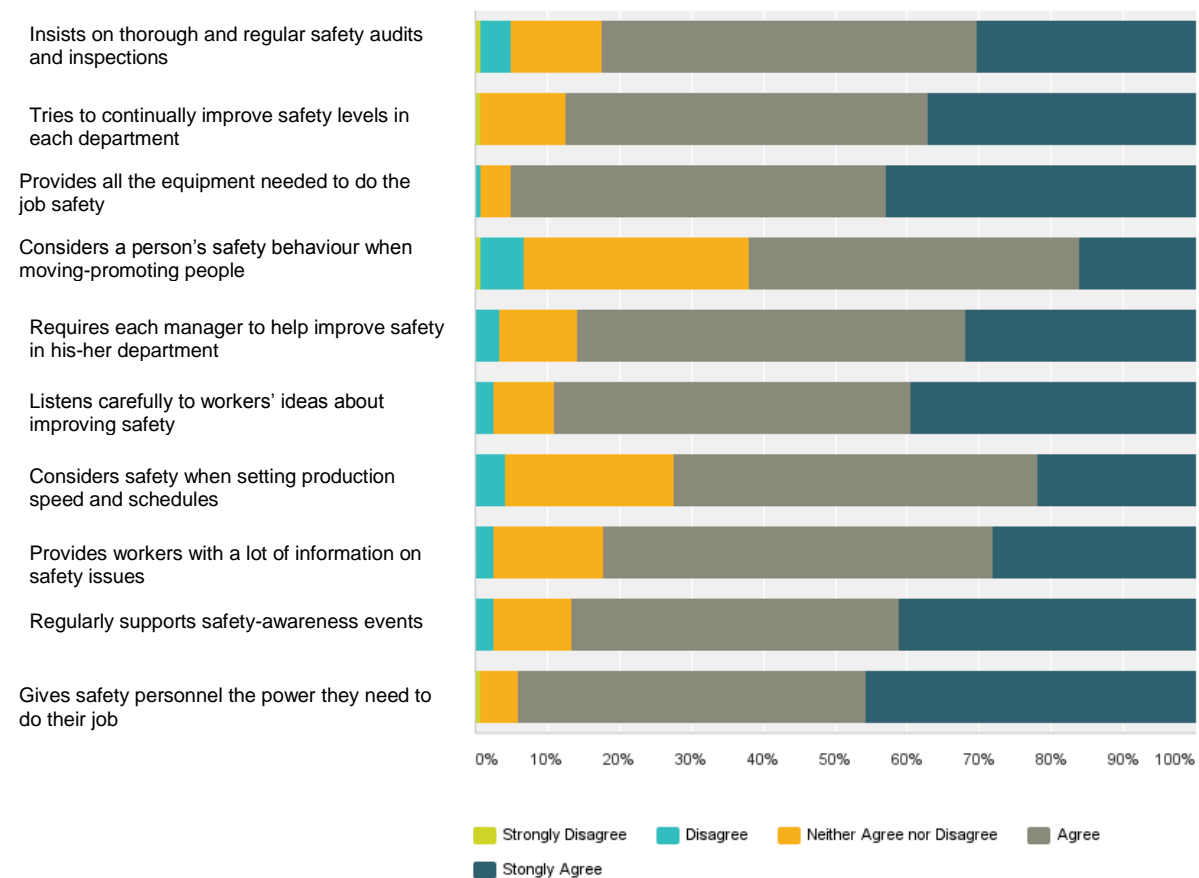


Figure 5: CEO commitment to safety (senior manager reported)



3.3 Employee Survey Results and Organizational Level Analysis

There were 2,889 responses to the employee survey (33% were responses from individuals in a supervisory role) from 23 organizations. The average number of responses from each organization was 125 (range 10 to 492 responses).

Average employee tenure was 10.69 years (SD = 10.03 years) and 50% of respondents were female. In terms of occupational groups, 8% of all participants identified as general labourer (e.g., custodian, construction labourer), 13% as production staff (e.g., assembly, machine operator), 19% skilled/trades staff (e.g., nurse, electrician), 27% administrative staff (e.g., clerical worker, data entry), and 34% professional staff (e.g., accountant, engineer).

Table 14 show the average scores for safety climate, employee turnover, and employee engagement among participating organizations by sector. Again, given the very small number of participating organizations in the study and the nature of the research, these scores are unlikely to be representative of safety climate conditions of a sector.

All study variables in the employee survey demonstrated excellent reliability (alpha range .75 to .97). Tables 15 and 16 show the relationships among the main study variables in the employee survey at the individual and organizational level of analysis. The number of responses for employee turnover intentions and employee engagement are lower due to these variables being optional.

Table 14: Average Scores by Sector

2014		
	Number of Organizations	Score
Safety Climate	23	3.82
Agriculture	-	-
Building Construction	3	4.41
Commodity-Wholesale-Retail	4	3.71
Development-Mineral Resources	-	-
Government-Municipal	8	3.55
Manufacturing-Processing	4	3.92
Road Construction	2	4.03
Service Industry	2	3.77

Transportation-Warehousing	-	-
Utility Operations	-	-
Turnover Intentions	18	2.19
Agriculture	-	-
Building Construction	3	1.68
Commodity-Wholesale-Retail	4	2.15
Development-Mineral Resources	-	-
Government-Municipal	7	2.39
Manufacturing-Processing	2	2.54
Road Construction	1	1.67
Service Industry	1	2.34
Transportation-Warehousing	-	-
Utility Operations	-	-
Employee Engagement	21	4.37
Agriculture	-	-
Building Construction	3	4.65
Commodity-Wholesale-Retail	4	4.36
Development-Mineral Resources	-	-
Government-Municipal	7	4.26
Manufacturing-Processing	4	4.32
Road Construction	2	4.53
Service Industry	1	4.20
Transportation-Warehousing	-	-
Utility Operations	-	-

Table 15: Cross-sectional correlations among employee reported variables at the individual level of analysis (*N* = 2,878-1,080)

Variable	Mean	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Gender	.50														
2. Tenure	10.70	.07													
3. Supervisor commitment to safety	3.83	-.04	-.15												
4. Supervisor laize-faire safety	2.52	-.05	-.07	-.36											
5. Top management commitment to safety	3.67	-.11	-.14	.72	-.24										
6. Safety compliance behaviour	4.17	-.01	-.14	.48	-.17	.49									
7. Safety pro-activity behavior	3.88	-.08	-.06	.46	-.12	.52	.66								
8. Safety in supervisor performance evaluation	3.59	-.15	-.14	.46	-.08	.55	.41	.44							
9. Safety in employee performance evaluation	3.59	-.16	-.16	.45	-.06	.54	.41	.45	.89						
10. Job engagement	4.28	.00	-.10	.43	-.12	.43	.50	.46	.33	.32					
11. Job turnover intentions	2.36	-.03	.02	-.39	.33	-.41	-.26	-.19	-.20	-.17	-.41				
12. Injuries	.39	-.09	-.05	-.17	.15	-.14	-.10	-.05	.02	.02	-.10	.25			
13. Non-lost time injuries	.43	.01	-.02	-.17	.06	-.18	-.09	-.06	-.10	-.10	-.07	.19	.51		
14. Lost time injuries	.04	.00	.00	-.08	.07	-.06	-.03	.02	-.01	.00	-.01	.08	.18	.19	

Notes: Females = 1; Males = 0. * statistically significant correlation .04 to .05, $p < .05$; .05 >, $p < .01$.

Table 16: Cross-sectional correlations among employee reported variables at the organizational level of analysis (N = 13-25).

Variable	Mean	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Organizational performance***	3.91																
2. CEO ethical leadership**	4.37	-.04															
3. CEO commitment to safety**	4.15	.10	.56														
4. Top management commitment to safety*	3.81	.51	-.30	.40													
5. Supervisor commitment to safety*	3.95	.45	-.14	.33	.82												
6. Supervisor laize-faire safety*	2.43	-.41	-.23	-.35	-.41	-.57											
7. Safety in senior management performance evaluation***	3.58	-.20	.48	.29	.03	.09	-.29										
8. Safety in senior management performance evaluation**	3.99	.00	.00	.62	.54	.44	-.17	.15									
9. Safety in supervisor performance evaluation*	3.79	.35	-.35	.30	.86	.70	-.29	.00	.58								
10. Safety in employee performance evaluation*	3.81	.35	-.35	.29	.84	.72	-.26	.08	.59	.98							
11. Safety compliance*	4.21	.45	.07	.61	.70	.62	-.40	.13	.36	.71	.69						
12. Safety proactivity*	4.00	.41	.01	.57	.82	.75	-.40	.23	.49	.84	.84	.88					
13. Job engagement*	4.35	.56	.17	.67	.70	.65	-.60	.21	.45	.59	.55	.71	.68				
14. Job turnover intentions*	2.25	-.12	.10	-.09	-.44	-.27	.39	-.40	-.12	-.46	-.43	-.33	-.33	-.73			
15. Injuries*	.39	.01	-.26	-.20	.14	.26	.07	-.52	.13	.30	.25	-.02	.09	.00	.06		
16. Non-lost time injuries*	.40	-.07	.30	-.03	-.10	.29	-.11	.12	-.04	-.11	-.08	-.06	.02	.14	.11	.39	
17. Lost time injuries*	.03	-.16	.35	-.24	-.38	-.23	.40	-.19	-.34	-.30	-.31	-.25	-.27	-.43	.43	.43	.32

Notes: * Employee reported, ** Senior manager reported, *** CEO reported. Statistically significant correlations in bold.

The bolded correlations in Table 16 indicate statistical significance at the organizational level of analysis. These results replicate some of the findings in Phase 2 (see Table 6), however, due to the smaller number of organizations participating in Phase 3 (N = 18-25) it is more difficult to find statistical significant relationships due to low statistical power. For example CEO, TMT, and supervisor commitment to safety are each negatively associated with organizational lost-time injuries but none of these relationships are statistically significant. However, as in Phase 2, passive supervision in organizations is positively related to organizational lost time injuries.

CEO, TMT, and supervisor commitment to safety were positively associated with employee compliance and proactive safety behaviours. Thus, in organizations where employees perceived there was a priority put on safety, they were more likely follow safety procedures and, for example, more likely to voluntarily suggest improvements to safety than in organizations where employees perceived a lower commitment to safety. Higher commitment to safety was also positively associated with organizational job engagement.

Finally, CEO-rated performance of their organization (in terms, for example, relative profit or client satisfaction) was positively associated with employee-rated TMT commitment to safety. Although the sample size for this analysis was small (N = 18) and the variation in the performance rating scores was limited (i.e., only one CEO rated their organization's performance below average for this sector), this result indicates that safety and organizational performance may co-exist.

4.0 Analysis of Combined Phase 1-3 Survey Data

To gain further insight into the impact of top organizational leadership on employee safety behaviours and injuries, the data collected over the three phases of the project were combined and analyzed. Table 17 summarizes the number of organizations, CEOs, senior managers, and employees that participated in each phase of the project. Overall, 102 *different* organizations participated in the project with 68, 25, and 9 organizations participating in one, two, and three phases, respectively.

Table 17: Break down of Participation Numbers by Project Phase

	Phase 1	Phase 2	Phase 3	Total
Number of organizations	59	55	31	145
Number of CEOs	56	46	24	126
Number of senior managers	262	283	120	665
Number of employees	4,750	5,318	2,889	12958

To increase the power of the statistical analysis and potentially make stronger inferences about relationships among the study variables, four unique data sets were created and analyzed (see below). Readers should be cautioned that most of these analyses are exploratory in nature

and use simple statistics.⁶ In the future, advanced statistical modeling of the data will be conducted.

1. This first data set is comprised of organizational scores from the 102 different organizations that participated in at least one phase of the project. These data provide the largest sample of organizational scores and the most statistical power for organizational level analysis (i.e., using an average score for each organization).
2. The second data set consists of organizational scores from 65 different organizations that participated in phases 2 and/or 3 of the project. In these phases of the project employees responded to questions about the number of lost time injuries, non-lost time injuries, passive safety supervision, and supervisory and employee safety-orientated performance evaluation, variables which were not included in the Phase 1 survey.
3. The third data set consists of organizational scores from 31 different organizations that participated in at least two phases of the project. This data set, though small, provides an opportunity to analyze the relationships among variables over two points in time, with approximately one year between each survey.
4. The last data set is comprised of organizational and individual scores from single location organizations that participated in Phase 1 and 2 of the project. This data set was analyzed by Dr. Tunde Ogunfowora (University of Calgary), and is the basis for an academic paper.

4.1 First data set (Cross-sectional, N = 102)

The correlation results in the large cross-sectional data set (i.e., of data collected at one point in time from each organization) replicate the results reported in each phase of the project. CEO commitment to safety (reported by senior managers) is positively correlated with employee reports of supervisor commitment to safety, safety compliance, and proactive safety behaviour. Furthermore, safety-oriented senior management performance evaluations (as rated by both senior managers and CEOs) is positively associated with employee-rated top management commitment to safety and safety behaviours. Finally, both employee-reported TMCS and SCS were positively associated with general job engagement and negatively associated with intentions to leave the organization. Surprisingly, none of the study variables were related to employee self-reported measure of minor physical injuries.

Overall, these results in Table 19 indicate CEO and senior management commitment to safety is associated with safety-specific (e.g., positive employee safety behaviours) and general organizational (e.g., higher engagement and lower turnover) benefits.

⁶ For example, readers should be aware that agreement statistics (e.g., ICC(1) and ICC(2)) have only been calculated for a subsample of the data set.

Table 19: Cross-sectional correlations among employee reported variables at the organizational level of analysis (N = 43-102)

Variable	Mean	1	2	3	4	5	6	7	8	9	10
1. CEO ethical leadership**	4.23										
2. CEO commitment to safety**	3.99	.42									
3. Top management commitment to safety*	3.62	.06	.48								
4. Supervisor commitment to safety*	3.85	-.07	.36	.72							
5. Safety in senior management performance evaluation***	4.06	.05	.52	.32	.12						
6. Safety in senior management performance evaluation**	3.70	.25	.67	.42	.34	.50					
7. Safety compliance*	4.16	.08	.42	.61	.63	.40	.38				
8. Safety proactivity*	3.91	.06	.41	.69	.69	.39	.40	.85			
9. Job engagement*	4.34	-.01	.16	.38	.49	.09	.18	.55	.58		
10. Job turnover intentions*	2.33	-.15	-.02	-.37	-.26	.00	-.15	-.09	-.30	-.34	
11. Injuries (index)*	.44	-.01	-.14	-.01	-.02	-.07	.06	-.09	-.02	-.11	.01

Notes: * Employee reported, ** Senior manager reported, *** CEO reported. Statistically significant correlations in bold.

4.2 Second data set (Cross-sectional, N = 65)

The second data set is comprised of organizational scores from 65 different organizations that participated in either Phase 2 and/or 3 of the project. Employees responded to additional survey questions not collected in the Phase 1 survey. These measures included the number of lost time injuries and non-lost time injuries, passive supervision, and supervisory and employee safety-orientated performance evaluations. The analysis discussed in this section primarily focuses on these variables.

Overall, the correlation results (see Table 20) replicate the vast majority of the results presented in the analysis summarized in section 3.3. Of note, senior management-reported CEO commitment to safety is negatively related to employee-reported intentions to leave their organization. This suggests that employee turnover intentions were higher in organizations led by CEOs who demonstrated a weak commitment to safety.

The findings indicate that commitment to safety at different organizational levels is related to lower experience of lost time injuries. Employee self-reported lost time injuries were negatively associated with senior manager-reported CEO commitment to safety. Further, lost time injuries

were negatively related to TMCS and SCS. Lost time injuries were also negatively related to job engagement and positively related to turnover intentions.

Senior manager reported CEO commitment to safety was positively associated with senior manager, supervisor, and employee safety-orientated performance evaluations. Further, the results suggest that when safety-related performance evaluation is strongly embedded at the senior management level, it also exists at lower levels in the organization and is related to enhanced compliance and proactive safety behaviour.

Finally, employee-reported passive supervisor safety leadership (defined as not proactively acting on safety concerns in the workplace) was associated with higher lost time injuries and higher turnover intentions, and lower safety behaviours and lower job engagement.

Table 20: Cross-sectional correlations among employee reported variables at the organizational level of analysis ($N = 40-65$).

Variable	Mean	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. CEO ethical leadership**	4.26															
2. CEO commitment to safety**	4.00	.40														
3. Top management commitment to safety*	3.65	.13	.63													
4. Supervisor commitment to safety*	3.87	-.06	.42	.82												
5. Passive supervisor safety leadership*	2.42	.01	-.13	-.50	-.58											
6. Safety in senior management performance evaluation***	3.63	.12	.33	.21	.03	-.26										
7. Safety in senior management performance evaluation**	3.78	.25	.60	.45	.29	-.08	.38									
8. Safety supervisor performance evaluation*	3.68	-.08	.47	.65	.59	-.28	.21	.49								
9. Safety employee performance evaluation*	3.68	-.11	.49	.69	.63	-.29	.23	.47	.96							
10. Safety compliance*	4.13	.06	.62	.74	.63	-.30	.26	.31	.53	.62						
11. Safety proactivity*	3.91	.09	.65	.80	.70	-.34	.24	.43	.72	.78	.86					
12. Job engagement*	4.29	.20	.25	.61	.42	-.39	.06	.12	.31	.35	.54	.51				
13. Job turnover intentions*	2.32	-.32	-.42	-.62	-.49	.44	-.04	-.42	-.51	-.47	-.42	-.41	-.48			
14. Injuries (index)*	.41	-.09	-.20	-.20	-.06	.03	-.28	-.12	.18	-.14	-.29	-.14	-.05	-.06		
15. Non-lost time injuries*	.45	-.09	-.13	-.20	.09	-.14	-.32	-.28	-.03	.03	-.09	-.08	-.12	.09	.65	
16. Lost time injuries*	.04	-.04	-.33	-.54	-.47	.36	-.06	-.18	-.03	-.17	-.58	-.43	-.43	.32	.51	.08

Notes: * Employee reported, ** Senior manager reported, *** CEO reported. Statistically significant correlation .26 to .39, $p < .05$; .40>, $p < .01$.

4.3 Third data set (Longitudinal N = 31)

Analysis of survey responses collected over two or more time points allows researchers to make stronger conclusions about the causal relationships among variables compared to survey responses collected at a single point in time. Another benefit of longitudinal data analysis is that it enables researchers to assess the stability of variables over time.

The longitudinal data set is comprised of scores from organizations that participated two years in a row (i.e., in either Phase 1 and 2 or Phase 2 and 3), hereafter referred to as Time 1 (T1) and Time 2 (T2). The sample consisted of 31 organizations in total, a relatively small sample size for statistical analysis, which makes detecting statistically significant relationships challenging. A sample size of 50 or more organizations is advantageous for this kind of analysis.

The correlation results shown in Table 21 provide a measure of the stability of employee and senior manager reported scores on the key study variables. All of the variables demonstrated medium to high consistency over time (i.e., correlations over .50), with top management commitment being the most strongly correlated over time (.84). Relatively lower correlations – ranging between .50 and .70 – may be a result of year-over-year changes in who the organizational CEO is (i.e., the focal individual evaluated by senior managers) and changes in the composition of the senior management team (i.e., the group that rated the CEO/owner).

Table 21: Correlations between variables at Time 1 (T1) and Time 2 (T2) (N = 26-31)

Variable	Mean (T1)	Mean (T2)	T1-T2 correlation	Stability
1. CEO ethical leadership**	4.32	4.29	.57	Medium
2. CEO commitment to safety**	3.96	3.97	.51	Medium
3. Top management commitment to safety*	3.63	3.69	.84	High
4. Supervisor commitment to safety*	3.84	3.92	.80	High
5. Safety in senior management performance evaluation**	3.77	3.86	.71	High
7. Safety compliance*	4.20	4.13	.68	Medium
8. Safety proactivity*	3.92	3.92	.70	High

Notes: * Employee reported, ** Senior manager reported. Statistically significant correlation $.60 > p .001$.

To examine the relationships among conceptually relevant predictor variables (e.g., top management commitment to safety) and outcome variables (i.e., lost-time injuries) over time, scores for T1 predictor variables were correlated with the T2 scores for outcome variables one year later.

Table 22 shows that with the exception of CEO ethical leadership, all predictor variables were associated with outcome variables and most relationships were statistically significant. The small sample size could limit the ability to detect statistically significant relationships between other variables. In particular the non-significance between the predictor variables and employee turnover intentions (a variable that some organizations opted out of in their survey) at the traditional statistical significance value of $p < .05$ is likely due to a sample size of 23 organizations.

Table 22: Correlations between variables at Time 1 (T1) and Time 2 (T2) (N = 23-31)

Predictor Variable (T1)	Outcome Variable (T2)				
	Lost time Injuries*	Safety Compliance*	Safety Proactivity*	Turnover Intentions*	Engagement*
1. CEO ethical leadership**	-.03	.09	.03	-.32	.06
2. CEO commitment to safety**	-.35 [†]	.53**	.60**	-.40 [†]	.27
3. Top management commitment to safety*	-.33 [†]	.56**	.65***	-.37 [†]	.45*
4. Supervisor commitment to safety*	-.24	.59***	.64***	-.32	.36 [†]
5. Safety in senior management performance evaluation**	-.42*	.57**	.60**	-.45*	.47*

Notes: * Employee reported, ** Senior manager reported, *** CEO reported. Statistically significant correlation [†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

4.4 Forth data set (Multi-level cross-sectional, N = 54)

Using Phase 1 and 2 data from 54 single location organizations, the author and co-authors developed and tested a conceptual model linking CEO ethical leadership to frontline employee self-reported injuries. Dr. Tunde Ogunforawa (University of Calgary) conducted the related statistical analyses and is a co-author on the related research paper along with Dayle Ehr, a graduate of the University of Regina.⁷

⁷ The related peer-reviewed research article is available at:
<http://psycnet.apa.org/psycarticles/2016-28694-001.pdf&uid=2016-28694-001&db=PA>

We propose that CEO ethical leadership indirectly impacts employee injuries through the *collective* social learning experiences of different groups of organizational actors – including members of the top management team (TMT), organizational supervisors, and frontline employees. However, we argue that the influence of CEOs on workplace safety is not absolute. We propose that an HR practice – safety-orientated TMT performance evaluations – can replace the need for an ethical CEO in achieving workplace safety. We found support for our collective social learning model using data from 2,714 frontline employees, 1,398 supervisors, and 229 members of top management teams in 54 organizations. CEO ethical leadership positively influenced CEO commitment to safety, which in turn positively influenced organizational supervisors' reports of senior management commitment to safety. Supervisors' support for safety was associated with fewer employee injuries at the individual level (Figure 6). Lastly, in a separate analysis, we found that when safety is embedded in TMT performance evaluations, it compensated for low CEO ethical leadership and produced a strong top management support for safety (Figure 7).

Figure 6: Linking CEO ethical leadership to frontline employee self-reported injuries

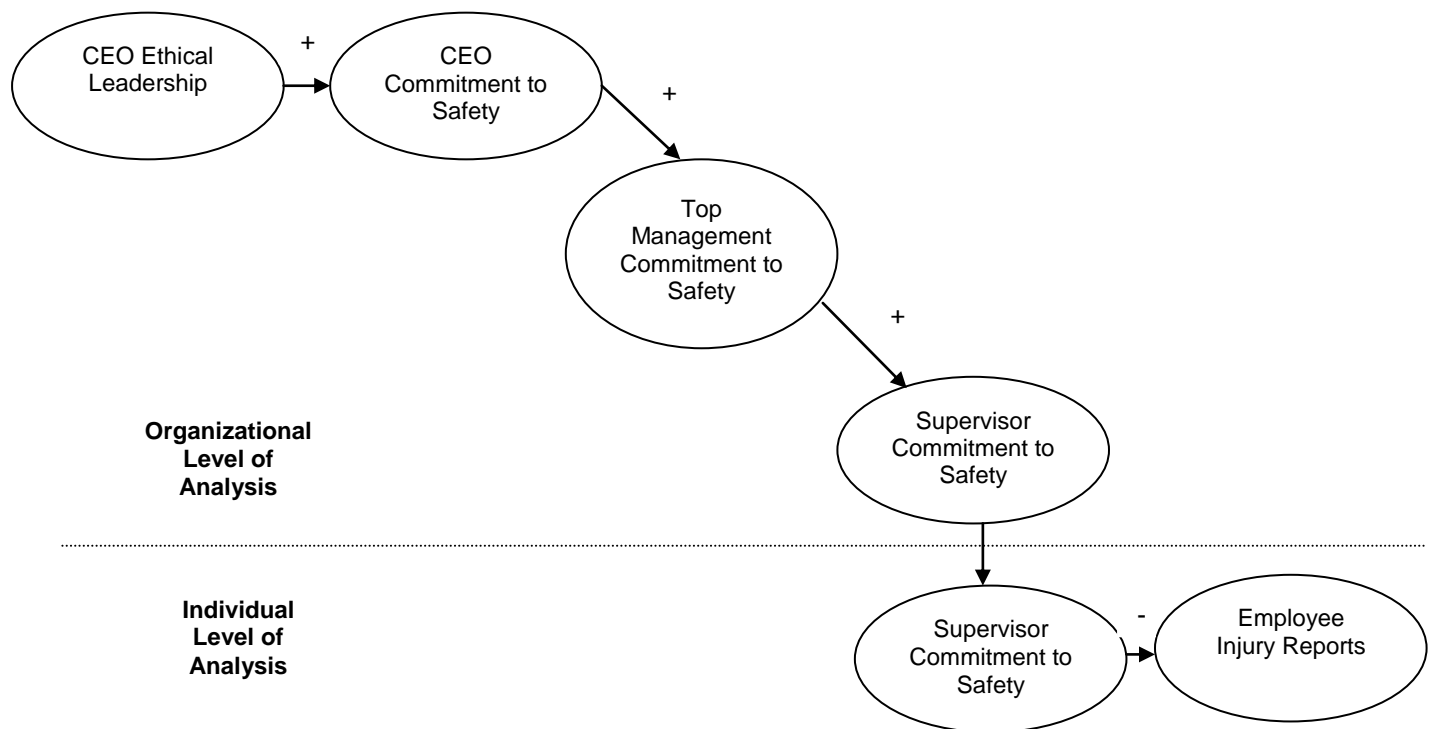
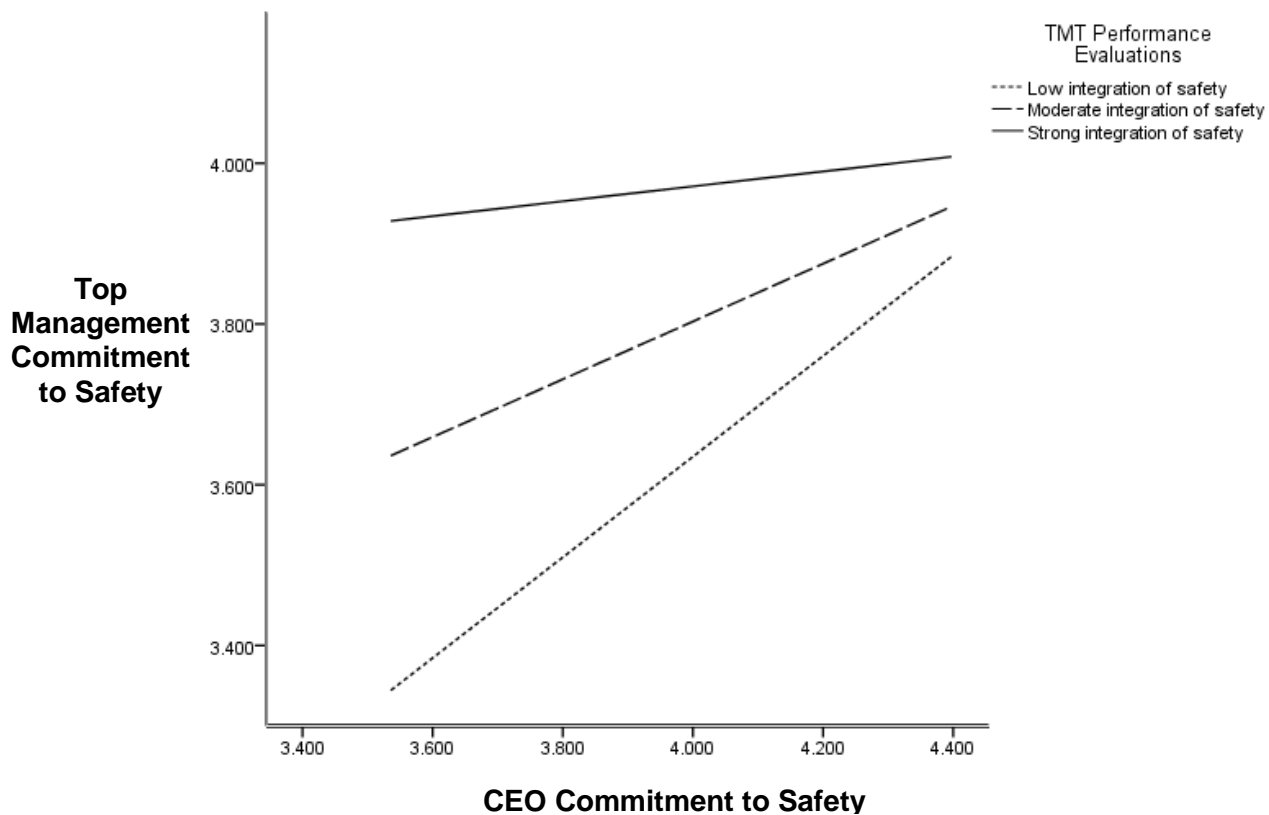


Figure 7: The moderating effect of TMT safety-orientated performance evaluations on ethical CEO-driven executive safety climate and TMT-driven organizational safety climate.



This research design has three advantages over the correlation analysis reported in the previous three data sets. First, the analysis tests indirect and mediated relationships among the study variables. For example, in the previous data sets CEO ethical leadership did not relate to many variables. In the current analysis, we found that CEO leadership has an indirect effect on top management commitment to safety and supervisory support for safety *through* CEO commitment to safety. This suggests that general CEO ethical leadership behaviours may indirectly drive organizational safety climate and ultimately frontline employee safety outcomes.

Second, the analysis assesses the impact of organizational safety climate on individual employee-reported outcomes (i.e., both individual perceptions of supervisory support for safety and self-reported injuries). This approach provides a finer-grained assessment of the influence of organizational safety climate on injuries than correlation analysis.

The final strength of this analysis is that top management commitment to safety is based on supervisor perceptions only, whereas the previously reported results are based on both supervisor and frontline employee reports concerning top management commitment to safety.

Analyzing data collected from separate sources minimizes single source bias and enables researchers to make stronger inferences about the relationships among variables.

5.0 Discussion of Results of Phase 1-3 Data Analysis

Taken together the survey data collected in Phases 1 to 3 provide moderate to strong evidence that top organizational leaders drive organizational safety climate and safety outcomes, likely through a trickle down process. While this conclusion may not come as a surprise to some in the field of OHS – for example, the role of CEOs in fostering a culture of safety is acknowledged and celebrated by programs such as the Saskatchewan Health and Safety Leadership Charter and, in the U.S., the National Safety Council’s “CEOs Who Get It” awards – research on the impact of CEO behaviours and organizational safety outcomes is scarce.

Based on data collected from nearly 13,000 employees in over 100 organizations in Saskatchewan, the current findings suggest that top organizational leader commitment to safety, as reported by their senior managers, is consistently associated with:

- **Higher employee-reported safety compliance behaviours (e.g., following safety policies and procedures)**
- **Higher employee-reported safety proactivity behaviours (e.g., taking initiative to support safety by, for example, making suggestions for safety improvements)**
- **Lower employee reported lost-time injuries**

While strong CEO commitment to safety is important to safety performance, the findings suggest that senior management safety-orientated performance evaluations may independently enhance organizational safety climate by focusing the attention of executives on ways to improve safety performance.

The findings also bolster the business case for safety. Specifically, the stronger the commitment to safety at the executive level, the more engaged employees were with their work. Employees also reported lower turnover intentions. In addition, in Phase 3 of the project, CEO-reported organizational performance (e.g., in terms of profit, client satisfaction) was positively associated with employee-reported perceptions of top management commitment to safety. In other words, the higher the top organizational leader rated their organizational performance, the high employees rated organization safety climate. In sum, this set of results suggests that a genuine commitment to safety in the executive suite is associated with these broader organizational performance benefits:

- **A more engaged workforce**
- **Lower employee turnover intentions (and potential savings related to hiring, training, lost productivity)**
- **Potentially higher organizational performance**

A final objective of the project was to compare top leader commitment to safety, safety climate, and safety outcomes between Charter and non-Charter organizations. Graphical evidence produced by the Saskatchewan WCB suggests that since the Charter was adopted, Charter organizations, as a group, report a sharper decline in WCB-reported injuries than non-Charter organizations. Unfortunately, despite our efforts to recruit non-Charter organizations to participate in the research, the number of such organizations was insufficient for conducting statistical comparisons.

6.0 Recommendations and Future Directions

Two broad recommendations flow from the results of this research:

Recommendation 1: A communications strategy should be developed to share actionable messages from this research with organizational leaders in Saskatchewan. For instance, safety should be positioned as being consistent with and beneficial to high organizational performance. Further, messaging should communicate practical guidelines for explaining how to embed safety in an executive performance review procedures (e.g., what to measure, how to measure indicators, and how to effectively communicate safety priorities in the executive suite).

Recommendation 2: Given that this evidence suggests that top organizational leaders can drive safety performance through their words and actions, steps should be taken to foster executive commitment to safety by developing and pilot testing an executive-focused leadership training intervention that emphasizes continuous improvement in safety and organizational performance.

Participants in Phase 2 and 3 of the project provided several suggestions for improving the relevance and impact of the employee perception survey and benchmarking reports. A common suggestion concerned assessing employee psychological health, which has received growing attention since the Canadian Mental Health Association (CMHA) established a national standard in 2013. In the summer of 2015, the author of this report conducted a search for a validated survey measure of psychological health climate. This involved a search of the published peer-reviewed literature and contact with occupational health psychology researchers, as well as researchers affiliated with the CMHA psychological health project.

Currently, only one validated measure is available, Hall et al.'s (2010) 12-item measure of psychological safety climate. Six items from this measure were incorporated into the 2015/16 employee survey.

Our ability to recruit organizations to participate in the safety survey is not only influenced by the relevance and quality of the information summarized in our bench marking report, but also by the length of the survey. Survey fatigue and the perception of value is a significant barrier to recruiting organizations. Given the size of the data set from Phase 1 to 3 (i.e., nearly 13,000 responses from over 100 organizations) and the strength of the findings, some of which have been subject to independent peer-review, it was possible to drop some survey questions and add others in order to enhance the relevance of the benchmarking report and explore different research questions. A revision process led to a 20% reduction in the length of the 2015/16 survey. Discontinued survey items were related to safety behaviours, injuries (as measured by the injury index), and non-lost time injuries. The 2015 employee survey focuses on self-reported lost time physical injuries (a variable which figured prominently in results reported in this report), psychological health climate, employee psychological health (Kessler et al., 2002), and self-reported lost time days due to work-related psychological illness.

There is also a need to deepen our understanding of the relationship between safety performance and key organizational performance indicators. Thus, related data collection will continue to further explore these relationships.

Another practical question to explore is how and how long it takes a new top organizational leader to improve an organization's safety culture.

7.0 Conclusion

This project has three broad aims: 1) to assess CEO perceptions of the Health and Safety Leadership Charter; 2) to systematically study the impact of top organizational leadership on safety climate and safety outcomes; and 3) to compare employee perceptions of safety in Charter and non-Charter organizations.

Phase 1 of the project provided insight into the first goal, whereas Phases 2 and 3 primarily focused on the second goal. And on this point, the evidence fairly consistently shows that when CEOs demonstrate a high level of commitment to safety, employees collectively report increased safety behaviour, fewer lost-time injuries, lower turnover intentions, and higher job engagement. Moreover, the results of Phase 3 of the project demonstrate that CEO-defined organizational performance (e.g., profit) was positively related to employee-reported senior management commitment to safety, indicating that top performing organizations tend to

manage safety well and vice-versa. Viewed differently: lower top management team commitment to safety was associated with lower CEO-rates of organizational performance.

Due to the small number of non-Charter organizations participating in Phases 2 and 3 it was not possible to compare Charter and non-Charter organizations in terms of safety climate, safety behaviour, and injuries.

On the question of the efficacy of the Saskatchewan Health and Safety Leadership Charter, the concluding remarks from the Phase 1 report, which are provided below remain relevant for guiding the future of the program and evaluating its success:

“The Charter is not a panacea for Saskatchewan’s high rate of work-related injuries. Alongside enforcement, education, and training programs, the Charter program has the potential to support radical change that is needed in the way Saskatchewan business owners, executives, managers, and workers think and act on opportunities to improve workplace and non-workplace safety. The contribution of the Charter program to cultural change primarily depends on two factors. First, it will depend on the resolve of organizational leaders to carry through on their commitment to the Charter principles. We believe that implementing accountability mechanisms, which are developed by Charter members themselves, will help foster commitment and protect the credibility of the Charter program. Second, the Charter program must offer innovative and accessible supports (e.g., information on best practices in safety management) that will help enable new and existing Charter signatories to continuously improve safety. Such information and support mechanisms must be designed to meet the diverse needs of Charter members (e.g., urban, rural, small, medium, and large organizational members).”

8.0 References

Hall, G. B., Dollard, M. F., & Coward, J. (2010). Psychosocial safety climate: Development of the PSC-12. *International Journal of Stress Management*, 17(4), 353-383.

Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S. L., Walters, E.E. & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, 32(06), 959-976.

Tucker, S., Ogunfowora, B., & Ehr, D. (2016). Safety in the c-suite: How chief executive officers influence organizational safety climate and employee injuries. *Journal of Applied Psychology*. <http://psycnet.apa.org/psycarticles/2016-28694-001.pdf&uid=2016-28694-001&db=PA>

9.0 Appendices

Appendix 1: Phase 2 CEO, Senior Manager, and Employee Surveys

CEO/Owner Survey - 2013 Saskatchewan Safety Survey

Consent Form

I understand that this project was approved by the Research Ethics Board at the University of Regina. If I have any questions or concerns about my rights or treatment as a research participant, I may contact the Chair of the Research Ethics Board at 585-4775 or by e-mail: research.ethics@uregina.ca.

I have read the protocol outlined in the recruitment letter and voluntarily agree to participate. The procedure and goals of the study have been explained to me by the researchers and I understand them. I understand that I am free to withdraw from this study at any time without penalty. I understand that data from this study may be published and that my identity and the identity of my organization will be kept confidential. I have received a copy of this consent form for my records.

By completing and submitting the questionnaire, YOUR FREE AND INFORMED CONSENT IS IMPLIED and indicates that you understand the above conditions of participation in this study.

1. Please respond to the following statements.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
When conducting performance evaluations of my senior management team, I include safety performance as a component of the evaluation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have reviewed the organization's health and safety policy statement in the last year.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. How is health and safety performance measured as a component of senior management performance evaluation?

3. What, if any, challenges have you encountered when assessing senior management health and safety performance as a component of senior management performance evaluation?

CEO/Owner Survey - 2013 Saskatchewan Safety Survey

4. What functional area(s) did you work in PRIOR to your current position?

- ☐ Accounting
- ☐ Finance
- ☐ Health and Safety
- ☐ Human Resource Management
- ☐ Information Technology
- ☐ Legal
- ☐ Operations
- ☐ Research and Development

Other (please specify)

5. Are you a member of the Saskatchewan Health and Safety Leadership Charter?

- ☐ Yes
- ☐ No

Senior Manager Survey - 2013 Saskatchewan Safety Survey

Consent Form

Project Title: Saskatchewan Safety Survey

Researcher(s): Sean Tucker, University of Regina and Courtney Kozakewycz, University of Regina

Purpose of the Research:

- The purpose of this study is to understand how organizational leaders impact the safety culture of an organization.
- This survey is part of a broader study that will compare the safety climates of Saskatchewan organizations and the variables that contribute to their differences.

Procedures:

- After providing your consent to participate in this study, you will participate in a ten minute survey.
- We recommend that you print a copy of this consent form for your records.

Funded by: Saskatchewan Workers Compensation Board (WCB) and Safe Saskatchewan. The WCB has provided remuneration to the primary researcher to carry out consulting tasks such as analysis for custom safety climate reports, data analysis, and drafting a final report for the project.

Potential Risks:

- There are no known or anticipated risks to you by participating in this research.

Potential Benefits:

- At the conclusion of the project, we will provide the WCB, Safe Saskatchewan, and your organization with a report summarizing the project's findings.

Confidentiality:

- Your identity and the identity of your organization will be kept strictly confidential in this research.
- The survey will not ask you to self-identify. However, your responses are coded to identify participants within the same organization to allow matching of organizational leadership, senior management, and employee surveys. A master list containing the coding system and the identity of organizations will be kept behind a password protected computer, separate from responses.

Storage of Data:

Data will be stored on a password protected online survey tool, a password protected computer, and a password protected external hard drive, which is stored in a locked office at the University of Regina. The data will be stored indefinitely.

Right to Withdraw:

- Your participation is voluntary and you can answer only those questions that you are comfortable with. You may withdraw from the research project for any reason, at any time without explanation or penalty of any sort.

Questions or Concerns:

- This project was approved by the Research Ethics Board at the University of Regina. If you have any questions or concerns about your rights or treatment as a research participant, you may contact the Chair of the University of Regina Research Ethics Board at 585-4775 or by e-mail: research.ethics@uregina.ca.

- Contact the researcher(s) using the below information:

Sean Tucker, PhD
Assistant Professor
Faculty of Business Administration
University of Regina
Regina, SK
S4S 0A2

Senior Manager Survey - 2013 Saskatchewan Safety Survey

Phone: 306-337-3244

Email: sean.tucker@uregina.ca

Courtney Kozakewycz
Research Assistant
Faculty of Business Administration
University of Regina
Regina, SK
S4S 0A2
Email: kozakewc@uregina.ca

Consent:

By completing and submitting the questionnaire, YOUR FREE AND INFORMED CONSENT IS IMPLIED and indicates that you understand the above conditions of participation in this study.

Your identity will remain STRICTLY CONFIDENTIAL in this research. Your organization will not know if you participated in the survey or your responses to the survey questions. Your HONEST answers are appreciated.

1. Which business function does your job position reside in?

- ☐ Accounting
- ☐ Finance
- ☐ Health and Safety
- ☐ Human Resource Management
- ☐ Information Technology
- ☐ Legal
- ☐ Operations
- ☐ Research and Development
- ☐ Other (please specify)

Senior Manager Survey - 2013 Saskatchewan Safety Survey

2. Please respond to the following statements about the Saskatchewan-based head of your organization (e.g., CEO, owner). He/she...

	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
Makes fair and balanced decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discusses business ethics or values with senior managers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sets an example of how to do things the right way in terms of ethics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Defines success not just by results but also the way that they are obtained	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When making decisions, asks "What is the right thing to do?"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Please respond to the following statement. In my organization...

	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
Safety performance is a component in senior management performance evaluations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Please respond to the following statements about the Saskatchewan-based head of your organization (e.g., CEO, owner). He/she...

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
...insists on thorough and regular safety audits and inspections.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...tries to continually improve safety levels in each department.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...provides all the equipment needed to do the job safely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...considers a person's safety behaviour when moving-promoting people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...requires each manager to help improve safety in his-her department.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...listens carefully to workers' ideas about improving safety.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...considers safety when setting production speed and schedules.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...provides workers with a lot of information on safety issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...regularly supports safety-awareness events (e.g. presentations, ceremonies).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...gives safety personnel the power they need to do their job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Employee Survey - 2013 Saskatchewan Safety Survey

Consent Form

Project Title: Saskatchewan Safety Survey

Researcher(s): Sean Tucker, University of Regina and Courtney Kozakewycz, University of Regina

Purpose of the Research:

- The purpose of this study is to understand how organizational leaders impact the safety culture of an organization.
- This survey is part of a broader study that will compare the safety climates of Saskatchewan organizations and the variables that contribute to their differences.

Procedures:

- After providing your consent to participate in this study, you will participate in a ten minute survey.
- We recommend that you print a copy of this consent form for your records.

Funded by: Saskatchewan Workers Compensation Board (WCB) and Safe Saskatchewan. The WCB has provided remuneration to the primary researcher to carry out consulting tasks such as analysis for custom safety climate reports, data analysis, and drafting a final report for the project.

Potential Risks:

- There are no known or anticipated risks to you by participating in this research.

Potential Benefits:

- At the conclusion of the project, we will provide the WCB, Safe Saskatchewan, and your organization with a report summarizing the project's findings.

Confidentiality:

Your identity and the identity of your organization will be kept strictly confidential in this research.

- The survey will not ask you to self-identify. However, your responses are coded to identify participants within the same organization to allow matching of organizational leadership, senior management, and employee surveys. A master list containing the coding system and the identity of organizations will be kept behind a password protected computer, separate from responses.

Storage of Data:

Data will be stored on a password protected online survey tool, a password protected computer, and a password protected external hard drive, which is stored in a locked office at the University of Regina. The data will be stored indefinitely.

Right to Withdraw:

- Your participation is voluntary and you can answer only those questions that you are comfortable with. You may withdraw from the research project for any reason, at any time without explanation or penalty of any sort.

Questions or Concerns:

- This project was approved by the Research Ethics Board at the University of Regina. If you have any questions or concerns about your rights or treatment as a research participant, you may contact the Chair of the University of Regina Research Ethics Board at 585-4775 or by e-mail: research.ethics@uregina.ca.

- Contact the researcher(s) using the below information:

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Email: kozakewc@uregina.ca

Consent:

By completing and submitting the questionnaire, YOUR FREE AND INFORMED CONSENT IS IMPLIED and indicates that you understand the above conditions of participation in this study.

Your identity will remain STRICTLY CONFIDENTIAL in this research. Your organization will not know if you participated in the survey or your responses to the survey questions. Your HONEST answers are appreciated.

1. What is your role within your organization?

- ☐ General labourer (e.g., custodian, construction labourer)
- ☐ Production staff (e.g., assembly, machine operator)
- ☐ Skilled/trades staff (e.g., nurse, electrician, pipefitter)
- ☐ Administrative staff (e.g., clerical worker, data entry)
- ☐ Professional staff (e.g., accountant, engineer)

Other (please specify)

2. How many years have you worked for this organization? If less than one year indicate ".5"

3. What is your gender?

- ☐ Female
- ☐ Male

Employee Survey - 2013 Saskatchewan Safety Survey

4. Does your job primarily involve supervisory responsibilities?

☐ Yes

☐ No

5. Please respond to the following statements. My DIRECT SUPERVISOR...

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Stongly Agree
Encourages us to raise safety concerns.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourages us to report all incidents and accidents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sets a good safety example by "walking the talk".	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Actions are consistent with his/her words.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Holds regular meetings to communicate safety issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Considers safety when developing standard work practices and procedures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enforces health and safety practices and procedures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Refuses to ignore safety rules when work falls behind schedule.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insists we wear our personal protective equipment even if it is uncomfortable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Makes sure we have the proper tools and equipment needed to do the job safely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Avoids making decisions that affect safety on the job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fails to intervene until safety problems become serious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Waits for things to go wrong before taking action on safety problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Employee Survey - 2013 Saskatchewan Safety Survey

6. Please respond to the following statements. TOP MANAGEMENT in this organization...

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Reacts quickly to solve the problem when told about safety hazards.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insists on thorough and regular safety audits and inspections.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tries to continually improve safety levels in each department.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provides all the equipment needed to do the job safely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is strict about working safely when work falls behind schedule.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quickly corrects any safety hazards (even if it's costly).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provides detailed safety reports to workers (e.g. injuries, near accidents).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Considers a person's safety behaviour when moving-promoting people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Requires each manager to help improve safety in his-her department.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Invests a lot of time and money in safety training for workers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uses any available information to improve existing safety rules.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Listens carefully to workers' ideas about improving safety.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Considers safety when setting production speed and schedules.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provides workers with a lot of information on safety issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regularly holds safety-awareness events (e.g. presentations, ceremonies).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gives safety personnel the power they need to do their job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Rate the frequency you have experienced the following work-related injuries in the previous THREE months.

	Never	Once	Two or three times	Four or five times	More than five times
Strain or sprain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scratch or abrasion (superficial wound)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cut, laceration, or puncture (open wound)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work-related burn or scald	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bruise or contusion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Employee Survey - 2013 Saskatchewan Safety Survey

8. How many work-related injuries at this job have you had in the past THREE months that DID NOT result in you taking time off work

- ☐ None
☐ One
☐ Two
☐ Three
☐ Four
☐ Five or more

9. How many work-related injuries at this job have you had in the past THREE months that resulted in you taking time off work

- ☐ None
☐ One
☐ Two
☐ Three
☐ Four
☐ Five or more

10. Please rate YOURSELF on the following statements.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I use all the necessary safety equipment to do my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use the correct safety procedures for carrying out my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I ensure the highest levels of safety when I carry out my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I promote the safety program within the organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I put in extra effort to improve the safety of the workplace.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I voluntarily carry out tasks or activities that help to improve workplace safety.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Employee Survey - 2013 Saskatchewan Safety Survey

11. Please respond to the following statements.

	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
Safety performance is a component in supervisor performance evaluations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safety performance is a component in employee performance evaluations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try my hardest to perform well on my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel energetic at my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At work, I focus a great deal of attention on my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often think of leaving my organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is very possible that I will look for a new job soon.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I may choose again, I will choose to work for my current organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix 2: Phase 2 Senior Manager Safety-Orientated Performance Review

Number	Measuring safety as a component of senior management performance evaluation?	Challenges measuring senior management safety as a component of senior management performance evaluation
1	We are currently including action into the senior management's performance plan to allow for measurement in 2014-15.	Until this year we did not set specific measurable targets.
2	Incidents and injuries in their areas of responsibility and actions taken. Qualitative information such as how often they speak to their management teams about safety.	Not everyone as committed as they should be. Not given same level of priority as other objectives.
3	We have set goals and targets and my expectations are based on this as is the executive's performance review.	None really. We are building a safety culture and everyone knows that safety in the workplace is a 1st priority for us. We will manage safety no differently than how we manage our other businesses. Senior management knows this and is committed.
4	It is measured from the perspective of identifying what action/activities has the manager undertaken to advance health and safety in the past year. For key work areas, injury rates are tracked and discussed if reduction targets/activities not be achieved.	
5	Frequency and severity is tracked but is not tied specifically to senior management performance through a leadership development review process or through a management incentive program.	No measurable goal.
6	Performance metrics are in place with respect to employee injury and employee engagement.	Establishing performance metrics with a goal of zero injuries has been challenging as there is a belief by some that this is not achievable. Although there is commitment to zero injuries, the goal of achieving is a mindset change.
7	It is one of our core values and therefore is embedded in every component. We discuss it specifically and indirectly.	Nothing significant.
8	Qualitatively at this point in time. Just beginning to define metrics.	Defining key metrics
9	We review safety issues on a quarterly basis.	Some senior managers do not believe it is their responsibility to manage safety
10	Several ways: WCB rates incident reports & accident reports; Safety Committee meetings and tours; and Visual on the floor management.	It is understandable, very little challenge when assessing performance
11	It is included in the [senior manager's] performance plan with a requirement to achieve a 10% reduction in incidents.	It needs to be more than measuring the results or incidents, looking for more tools to measure other factors.
12	Included as part of [senior manager's] expectations around reducing the incidence of workplace injuries. This should then cascade down through performance management for managers.	Reinforcing the broad definition of workplace safety; not just the "physical" aspects, but the psycho-social aspects and understanding the significance of these on performance.
13	Participation in safety initiatives and training.	Somewhat subjective process.
14	They are measured on the basis of have we hurt any employees and or patients. We measure employee injuries and we measure all potential harm to patients.	We don't have real time data and sometimes it takes too long to create action and fix the problem.
15	By incident.	Lack of consistency in reporting to their level.

Number	Measuring safety as a component of senior management performance evaluation?	Challenges measuring senior management safety as a component of senior management performance evaluation
16	We have them sign off on all safety paperwork and evaluate their comments.	It's hard to tell their commitment and/or knowledge from signed paperwork.
17	It isn't.	It's not seen as a significant strategic priority of the company.
18	All Managers have been mandated in their performance expectations to reduce the frequency of incidents by 10 % over the current fiscal year and insure that all incidents are reported and fully investigated.	Benchmarking safety performance and gaining a full understanding of the current state of safety awareness has been challenging. We have achieved significant buy in for the need to make safety the "way we do business" but accessing sufficient resources to create broad awareness and drive accountability has been difficult.
19	Health & Safety Performance is an integral part of [my organization's] senior management performance evaluation. The Company's performance and the individuals contribution to the Company's Health & Safety overall performance is reviewed on a weekly and monthly basis, as well as every six month and is reflected in their Personal Performance Plan (PPP) and their Bonus payout. (Contribution of the safety performance on the bonus payout is 33%)	I can confidently say that we have not have any challenges when assessing senior management health and safety performance. The key to the success is establishing set targets and expectations for the company as well as for the individuals and to everyone to these expectations.
20	Specific examples of behaviors that demonstrate understanding of safety policy are recorded as part of the performance evaluation process	As this is a standard part of our performance evaluation process do not typically encounter any challenges.
21	The reporting and administration of the safety programs of our company are important to every employee and knowledge of these reports to the senior managers is of critical importance to the success of the program.	Few challenges other than senior managers not attaching the same significance to their input as their staff achieves.
22	Health and safety goals are added to annual performance goals for all site supervisor and managerial personnel.	The goals are accepted and promoted at the highest level in the organization.
23	Subjectively based on our compensation costs and accounting for our trend.	Continuity based on tenure in our human resource department. [Substantial turnover in HR in the past five years]
24	Health and safety is not a key performance area in itself, but is a component of training, staff relations and communication. These KPA's account for 20% of management's non-financial portion of the evaluation.	The biggest challenge is in determining the thoroughness and effectiveness of safety training as well as policy administration and enforcement.
25	Not measured.	
26	Ensuring that the mandatory OHS meetings are being held, that all OHS standards are met, and that all safety concerns are handled by the committee.	Our company took health and safety seriously, however, we did not have a "worksafe" attitude until we hired our HR Manager who has implemented a full safety program at each of our locations. Safety is now an "attitude" that we help our staff work towards.

Number	Measuring safety as a component of senior management performance evaluation?	Challenges measuring senior management safety as a component of senior management performance evaluation
27	Unfortunately I would have to say that H & S has not been part of the senior management performance evaluation. I guess I would have to say that the senior management that report to me generally do not have health and safety concerns. Basically all are office jobs and as such they generally are not exposed to safety issues. I have likely commented in evaluations regarding taking holidays or attempting exercise programs but this would not be the norm.	As per my previous response, I generally do not comment on H & S in the evaluations. In regards to health issues - i.e exercise, vacations, smoking - I do find the exercise and smoking health issues sensitive to bring up.
28	Through their involvement in OH&S.	There are no challenges.
29	With key performance figures.	There is an overall understanding in our senior management team.
30	For operations, partly through performance indicators (all safety incidents frequency rate) and for all by leading indicators showing participation to building our safety culture (safety visit including discussion with operations workers)	Main challenge is to find a way to involve positively support departments like Legal, Communications, HR, etc...
31	Key performance indicators.	Concern that we might still have 'blind spots.'
32	It is included in their work plans and has now been part of staff meetings.	Some challenges are that they don't take it seriously or put it on the back burner.
33	Time lost injuries, at fault accidents, lack of project completion caused by health and safety related issues.	Saskatchewan people have a culture of "getting the job done". It is a mindshift to put safety first when it requires training time and a financial commitment that takes away from other direct customer services where long standing and measurable objectives have been in place for which they are held accountable. Safety pays off in the long run, but there are short-run obstacles.
34	It is not specifically measured but it is a very important part of our company culture.	None in recent years since we made it part of our company culture.
35	By visual and near miss evaluations to correct situations.	Being able to stress the importance of safety.
36	Job performance and input from management to achieve zero harm goals. If our objectives aren't met or if the senior manager's projects have health and safety problems, injuries etc. then the senior manager's performance is adversely effected.	Convincing them of the importance of strong health and safety management of the field crews. Understanding and being committed to companies health and safety goals.
37	It is not.	
38	Number of accidents in area. Safety initiatives/activities.	Need more proactive safety measures. Difficulty in some understanding the value of behavior observations.
39	Ensuring that the Service Manager is enforcing daily completion of Job Hazard Assessment forms by his/her team of technicians.	Difficult to quantify with numbers --- hundreds of these forms get completed annually --- evaluation is done without exact numbers - therefore it is a subjective evaluation.
40	One on one with each manager.	Time factor.

Number	Measuring safety as a component of senior management performance evaluation?	Challenges measuring senior management safety as a component of senior management performance evaluation
41	Health and Safety is measured from a number of perspectives. 1) Defining the contribution made to overall H&S culture through observations of behavior (do they walk the walk) 2) Defining the contribution made to overall H&S culture through participation in formal initiatives that are recognized as supporting the culture (i.e. OH&S Committee, OH&S work order resolution, etc). 3) Overall safety performance within the manager's ownership (continuous improvement initiatives, traditional measures such as Lost Time Accidents, Medical Aids, Medical Treatments, etc) Additionally, the site has a variable pay system that incorporates safety as one of the key elements/performance measures that pays out (or takes away)	Not many as safety is one of our company's stated values.
42	Determine how the manager is communicating safety to his/her subordinates.	Very difficult to measure.
43	Our outcomes on safety, sick, overtime etc. Our staff surveys which ask them if we make safety a priority. 360 degree reviews.	We are continuing to identify areas where we believe we can strengthen our focus on safety.

2013-14 Saskatchewan Safety Survey Final Safety Climate Report <Your Organization's Name>

November 4, 2014

**Produced by:
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Executive Summary

This report benchmarks your organization's safety climate, employee engagement, and employee turnover intention scores with scores from 55 other Saskatchewan-based organizations. Overall, your organization's safety climate score:

- Increased by 6.0% between 2012 and 2013
- Ranked 9th among 55 participating organizations
- Ranked first among 3 participating organizations in your sector

This report provides detailed information about your organization's safety climate and suggestions for improving safety in your organization.

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About this Report

This report follows up on the interim safety climate report your organization recently received. It contains the results summarized in your interim report as well as valuable benchmarking information; specifically the average safety climate, employee engagement, and employee turnover intention scores from 55 organizations that participated in this research.

This report was produced by the Centre for Management Development at the University of Regina and is provided at no charge thanks to funding from WorkSafe Saskatchewan. Your organization's results are strictly confidential: only the report's authors have access to the findings and related data. At the end of this report, we provide suggestions for improving your organization's safety climate score.

Safety Climate: The Key to Organizational Safety Performance

The words you speak and the actions you and your management team take influence the way your employees behave in regards to safety. Safety climate is a key mechanism by which you can influence injury rates in your organization. It begins with your employees observing your commitment to their safety and wellbeing. Employees will begin to form a perception of the value of safety in your organization. When these perceptions are shared among your employees, an organization's safety climate is formed (Zohar, 2010). Research shows that a strong organizational safety climate is associated with lower injury rates (Christian, Bradley, Wallace & Burke, 2009; Nahrgang et al., 2011). Unlike WCB reported injuries, which are a lagging indicator of safety performance and may be inaccurate due to injury underreporting, employee perceptions of safety climate are a reliable leading indicator of safety performance. Measuring employee safety climate perceptions on an annual basis allows you to benchmark safety performance within your organization overtime.

2013-14 Survey Methodology

Information was obtained through online or hard copy surveys completed by your frontline supervisors and employees. Before beginning the survey, participants were asked to read a letter of information and provide informed consent. A coding system was developed to match employee surveys to their organization. A total of 5,318 employees from 55 organizations completed surveys between July 2013 and April 2014.

Your organizational safety climate score was calculated by averaging employee responses to a validated 16-item questionnaire (Zohar & Luria, 2005). A five point response scale was used (1 = strongly disagree; 5 = strongly agree) with higher scores reflecting a stronger safety climate. Two optional measures – employee turnover intentions (i.e., likelihood of an employee quitting) (Cammann, Fichman, Jenkins, & Klesh, 1979) and employee engagement (Rich, LePine, & Crawford, 2010) – were measured using 3-item validated questionnaires. All survey items are shown in Appendix 1.

Summary of 2013-14 Results

Table 1a shows your organization's weighted average scores for safety climate, turnover intentions (optional), and employee engagement (optional) by year. Employee perceptions of safety climate increased by 6.0% between 2012 and 2013. Over the same period employee turnover intentions decreased by 6.0% and employee engagement scores increased by less than .5%.

Table 1a: Safety climate, turnover intentions, and employee engagement scores by year

	2012	2013	Change over Previous Year	
Safety Climate	3.74	3.96	6.0%	
Turnover Intentions	2.38	2.24	6.0%	
Engagement	4.19	4.20	<.5%	

Table 1b shows the overall average safety climate, turnover intentions, and employee engagement scores across the 55 participating organizations by Workers' Compensation Board rate code and year of participation.

Table 1b: Average safety climate, turnover intentions, and employee engagement scores for all participating organizations by year and sector

	2012		2013	
	Number of Organizations	Score	Number of Organizations	Score
Safety Climate	59	3.57	55	3.63
Agriculture	-	-	-	-
Building Construction	2	4.04	4	3.96
Commodity-Wholesale-Retail	8	3.73	10	3.60
Development-Mineral Resources	-	-	3	3.94
Government-Municipal	30	3.32	19	3.42
Manufacturing-Processing	8	3.74	9	3.64
Road Construction	2	4.14	3	4.09
Service Industry	8	3.93	5	3.72
Transportation-Warehousing	1	3.70	1	3.50
Utility Operations	-	-	1	3.81
Turnover Intentions	59	2.30	40	2.35
Agriculture	-	-	-	-
Building Construction	2	2.36	4	2.28
Commodity-Wholesale-Retail	8	2.28	7	2.29
Development-Mineral Resources	-	-	2	1.97
Government-Municipal	30	2.35	15	2.49
Manufacturing-Processing	8	2.52	5	2.27

Road Construction	2	-	1	2.34
Service Industry	8	2.44	5	2.29
Transportation-Warehousing	1	2.30	-	-
Utility Operations	-	-	1	2.43
Employee Engagement	59	4.22	47	4.27
Agriculture	-	-	-	-
Building Construction	2	4.35	4	4.44
Commodity-Wholesale-Retail	8	4.36	8	4.28
Development-Mineral Resources	-	-	3	4.37
Government-Municipal	30	4.39	16	4.24
Manufacturing-Processing	8	4.36	7	4.17
Road Construction	2	4.46	3	4.42
Service Industry	8	4.34	5	4.25
Transportation-Warehousing	1	4.35	-	-
Utility Operations	-	-	1	4.25

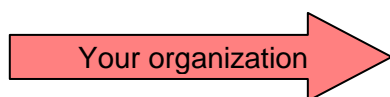
Tables 1c and 1d list the average safety climate scores for each participating organization and by sector, from highest to lowest, and identify your organization's score with a red arrow.

Organizations should exercise caution when interpreting their ranking for several reasons. First, we strongly encourage organizations to bench mark their scores with other organizations in their sector (Table 1c) to ensure a fair comparison. Second, the response rate to the survey varied across organizations with some organizations surveying all of their employees and others involving a low percentage of their employees. Therefore, the scores for organizations with relatively few respondents may be less reliable. Lastly, employees in office settings were more likely than employees in non-office settings to respond “neither agree nor disagree” to the safety climate survey statements. The effect of this is that organizations with high proportion of employees who work in an office environment have scores closer to the middle value of the survey response scale (i.e., 3 out of 5). Again, we strongly encourage organizations to compare their score with the scores of organizations in their sector (Table 1c).

Table 1c: Average safety climate score for each participating organization ranked highest to lowest by sector*

* Agriculture (1); Building Construction (2); Commodity-Wholesale-Retail (3); Development – Mineral Resources (4); Government and Municipal (5); Manufacturing and Processing (6); Road Construction (7); Service Industry (8); Transportation-Warehousing (9); Utility Operations (10)

	Rank	Sector	Score
	1	2	4.53
	2	2	4.28
	3	2	3.93
	4	2	3.11
	1	3	3.94
	2	3	3.86
	3	3	3.82
	4	3	3.79
	5	3	3.74
	6	3	3.64
	7	3	3.50
	8	3	3.44
	9	3	3.19
	10	3	3.05
	1	4	3.96
	2	4	3.94
	3	4	3.94
	1	5	4.19
	2	5	3.87
	3	5	3.77
	4	5	3.73
	5	5	3.67
	6	5	3.64
	7	5	3.57



8	5	3.55
9	5	3.53
10	5	3.50
11	5	3.39
12	5	3.25
13	5	3.21
14	5	3.18
15	5	3.10
16	5	3.08
17	5	3.05
18	5	2.98
19	5	2.70
1	6	4.03
2	6	3.99
3	6	3.86
4	6	3.86
5	6	3.81
6	6	3.74
7	6	3.60
8	6	3.60
9	6	2.29
1	7	4.43
2	7	4.14
3	7	3.70
1	8	3.98
2	8	3.96
3	8	3.85
4	8	3.45
5	8	3.38
1	9	3.50
1	10	3.81

Table 1d: Average safety climate score for each participating organization ranked highest to lowest with sector*

* Agriculture (1); Building Construction (2); Commodity-Wholesale-Retail (3); Development – Mineral Resources (4); Government and Municipal (5); Manufacturing and Processing (6); Road Construction (7); Service Industry (8); Transportation-Warehousing (9); Utility Operations (10)

Rank	Sector	Score
1	2	4.53
2	7	4.43
3	2	4.28
4	5	4.19
5	7	4.14
6	6	4.03
7	6	3.99
8	8	3.98
Your organization	9	3.96
	10	3.96
	11	3.94
	12	3.94
	13	3.94
	14	3.93
	15	3.87
	16	3.86
	17	3.86
	18	3.86
	19	3.85
	20	3.82
	21	3.81
	22	3.81
	23	3.79
	24	3.77
	25	3.74
	26	3.74
	27	3.73
	28	3.70
	29	3.67
	30	3.64
	31	3.64
	32	3.60
	33	3.60
	34	3.57
	35	3.55

36	5	3.53
37	5	3.50
38	3	3.50
39	9	3.50
40	8	3.45
41	3	3.44
42	5	3.39
43	8	3.38
44	5	3.25
45	5	3.21
46	3	3.19
47	5	3.18
48	2	3.11
49	5	3.10
50	5	3.08
51	5	3.05
52	3	3.05
53	5	2.98
54	5	2.70
55	6	2.29

Tables 2 to 4 break down the results by location along with the number of survey responses.

Table 2: Safety climate scores by year and location

	Number of Responses			Safety Climate	
	2012	2013		2012	2013
X	150	132	↓	3.80	4.05 ↑
Y	32	28	↓	3.70	3.80 ↑

Notes: * If fewer than 10 employees completed the survey, specific results are not provided.
Average scores were calculated using a weighted average of the total number of employee responses.

Table 3: Employee turnover intentions scores by year and location

	Number of Responses			Turnover Intentions	
	2012	2013		2012	2013
X	150	132	↓	2.37	2.20 ↓
Y	32	28	↓	2.45	2.43 ↓

Notes: * If fewer than 10 employees completed the survey, specific results are not provided.
Average scores were calculated using a weighted average of the total number of employee responses.

Table 4: Employee engagement scores by year and location

	Number of Responses			Employee Engagement	
	2012	2013		2012	2013
Regina	150	132	↓	4.20	4.18 ↓
Saskatoon	32	28	↓	4.15	4.26 ↑

Notes: * If fewer than 10 employees completed the survey, specific results are not provided.
Average scores were calculated using a weighted average of the total number of employee responses.

2013-14 Results by Safety Climate Statement

Accompanying this report is an Excel file containing the average score for each of the 16 safety climate statements by year and location (if applicable). This information can be used to identify changes in employee perceptions of specific safety behaviours over time.

Figure 1 shows the percentage distribution of responses to each safety climate statement by response category (e.g., strongly agree). Figures 2 and 3 show the distribution of responses by location.

Figure 1: Distribution of responses to safety climate statements (All locations)

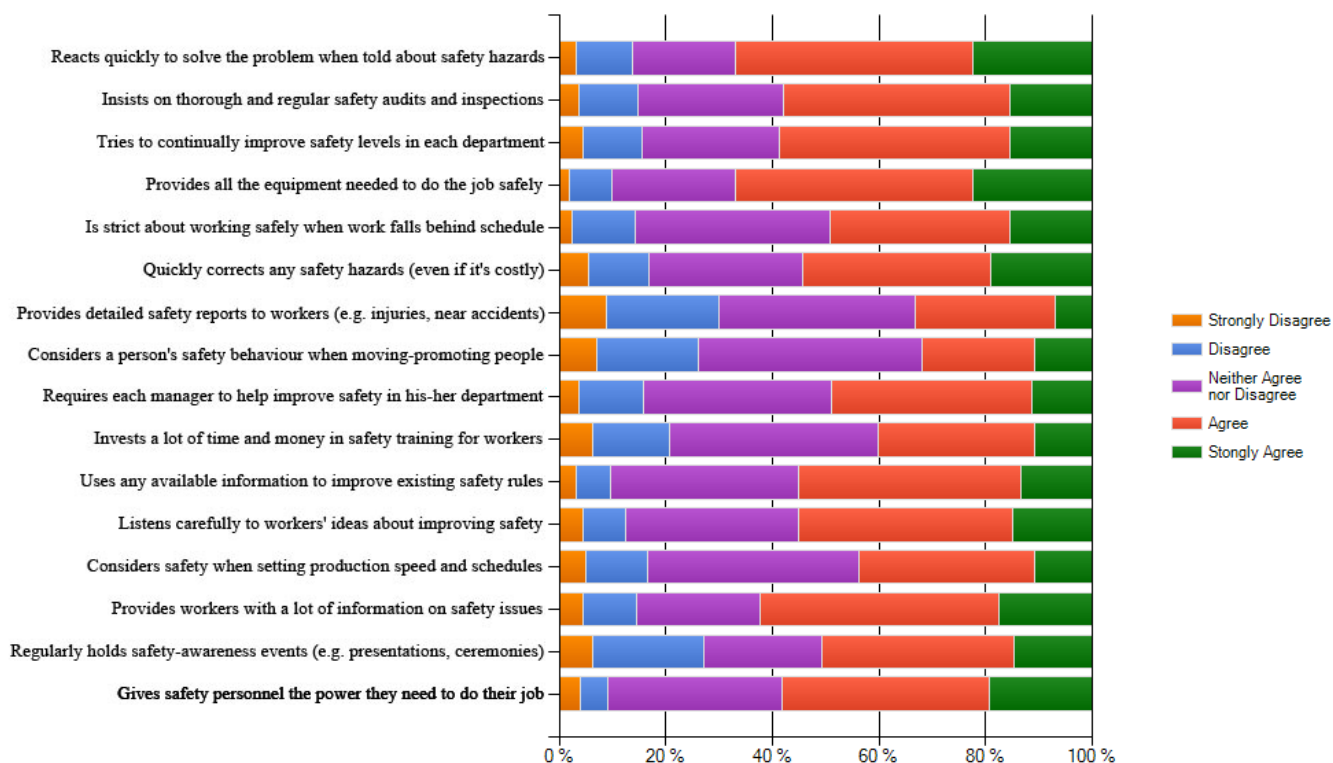


Figure 2: Distribution of responses to safety climate statements (X)

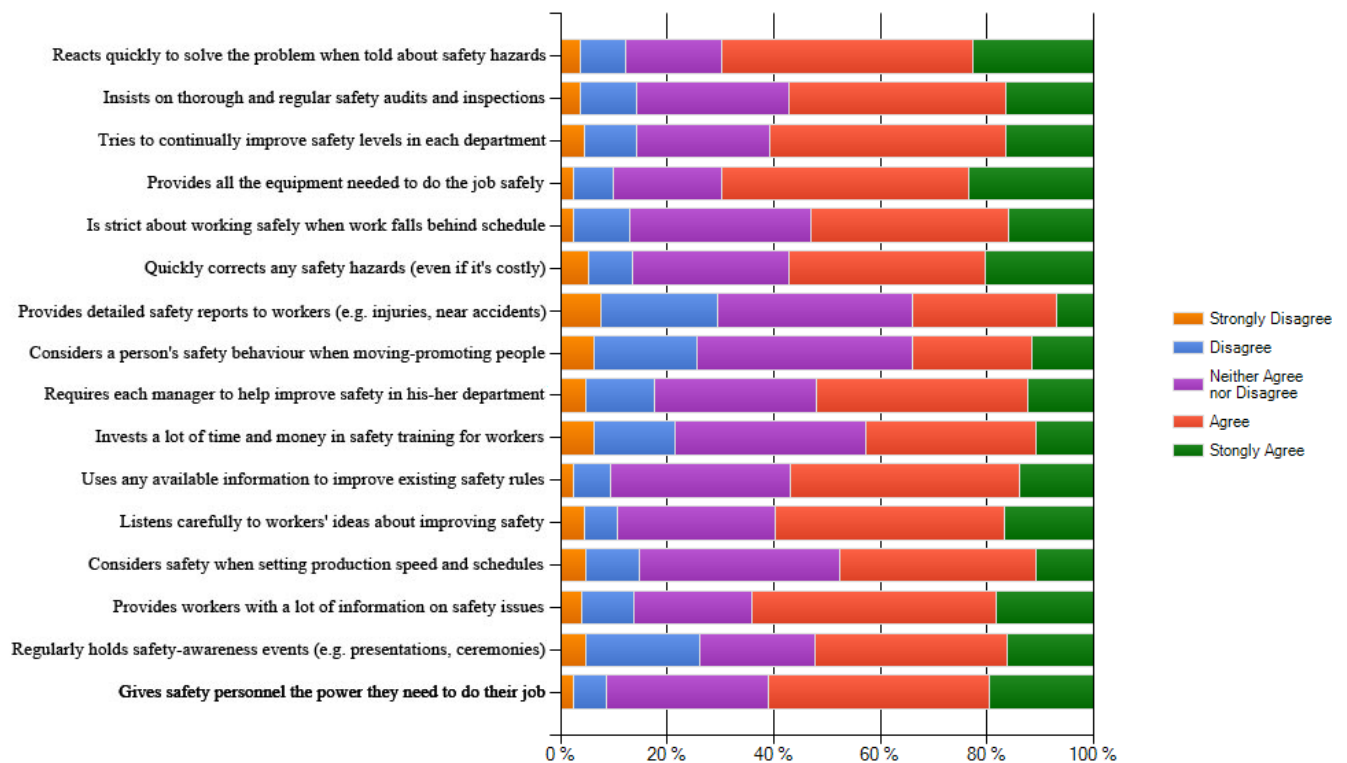


Figure 3: Distribution of responses to safety climate statements (Y)

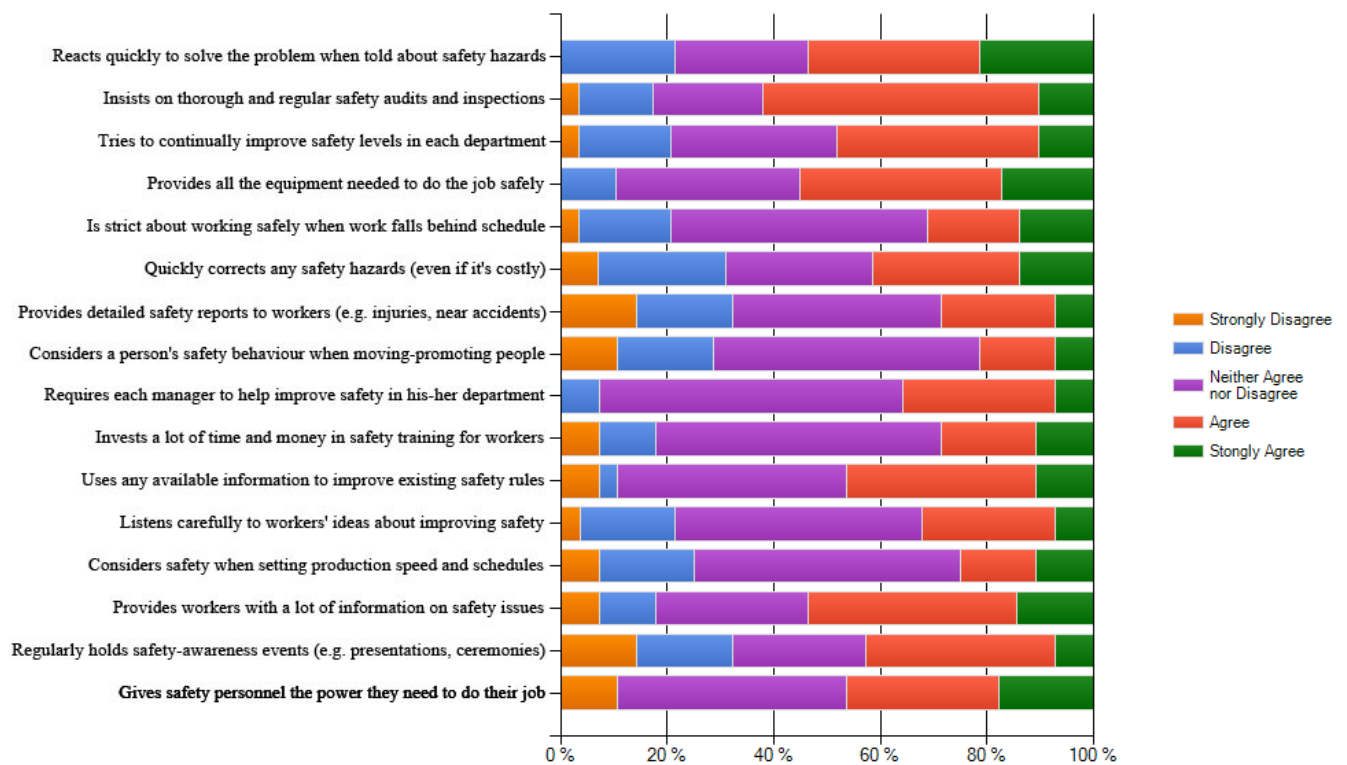


Table 5 ranks the overall average score for each safety climate statement from highest to lowest. These scores were calculated by converting the response choices to numbers with stronger agreement associated with higher scores (e.g., 1 = strongly disagree; 5 = strongly agree). Tables 6 and 7 rank the average scores, from highest to lowest, for these statements for each location.

Table 5: Safety climate statements ranked highest to lowest average score (All locations)

Safety Climate Item	Average Score
Provides all the equipment needed to do the job safely	4.20
Reacts quickly to solve the problem when told about safety hazards	4.15
Gives safety personnel the power they need to do their job	3.65
Provides workers with a lot of information on safety issues	3.61
Uses any available information to improve existing safety rules	3.56
Insists on thorough and regular safety audits and inspections	3.55
Tries to continually improve safety levels in each department	3.54
Listens carefully to workers' ideas about improving safety	3.53
Quickly corrects any safety hazard (even if it's costly)	3.51
Is strict about working safely when work falls behind schedule	3.48
Requires each manager to help improve safety in his-her department	3.41
Considers safety when setting production speed and schedules	3.33
Regularly holds safety-awareness events (e.g., presentations, ceremonies)	3.32
Invests a lot of time and money in safety training for workers	3.24
Considers a person's safety behaviour when moving-promoting people	3.10
Provides detailed safety reports to workers (e.g., injuries, near accidents)	3.01

Table 6: Safety climate statements ranked highest to lowest average score (X)

Safety Climate Item	Average Score
Provides all the equipment needed to do the job safely	4.35
Reacts quickly to solve the problem when told about safety hazards	4.05
Gives safety personnel the power they need to do their job	3.70
Provides workers with a lot of information on safety issues	3.65
Listens carefully to workers' ideas about improving safety	3.61
Uses any available information to improve existing safety rules	3.59
Tries to continually improve safety levels in each department	3.59
Quickly corrects any safety hazard (even if it's costly)	3.59
Insists on thorough and regular safety audits and inspections	3.56
Is strict about working safely when work falls behind schedule	3.54
Requires each manager to help improve safety in his-her department	3.42
Considers safety when setting production speed and schedules	3.39
Regularly holds safety-awareness events (e.g., presentations, ceremonies)	3.38
Invests a lot of time and money in safety training for workers	3.26
Considers a person's safety behaviour when moving-promoting people	3.14
Provides detailed safety reports to workers (e.g., injuries, near accidents)	3.04

Table 7: Safety climate statements ranked highest to lowest average score (Y)

Safety Climate Item	Average Score
Provides all the equipment needed to do the job safely	4.50
Reacts quickly to solve the problem when told about safety hazards	4.20
Insists on thorough and regular safety audits and inspections	3.52
Provides workers with a lot of information on safety issues	3.43
Gives safety personnel the power they need to do their job	3.43
Uses any available information to improve existing safety rules	3.39
Requires each manager to help improve safety in his-her department	3.36
Tries to continually improve safety levels in each department	3.34
Is strict about working safely when work falls behind schedule	3.21
Quickly corrects any safety hazard (even if it's costly)	3.17
Invests a lot of time and money in safety training for workers	3.14
Listens carefully to workers' ideas about improving safety	3.14
Considers safety when setting production speed and schedules	3.04
Regularly holds safety-awareness events (e.g., presentations, ceremonies)	3.04
Provides detailed safety reports to workers (e.g., injuries, near accidents)	2.89
Considers a person's safety behaviour when moving-promoting people	2.89

Bench Marking and Enhancing your Organization's Safety Climate

Research studies consistently find that employees in organizations with a strong safety climate experience fewer injuries than organizations with a weak safety climate. To enhance your organization's safety climate and prevent injuries, you and your senior management team should focus on the behaviours and actions shown in Tables 5 to 7, especially the behaviours ranked lowest by your employees.

To strengthen your organization's safety climate, we recommend:

1. Carefully analyzing your organization's safety climate scores over time (if applicable), by location (if applicable), and in relation to the scores of other participating organizations in your sector. Using the information in this report and in the attached Excel file, develop and improve processes to address low scoring safety behaviours and actions.

2. Demonstrating your commitment to safety and including safety performance as part of the senior management performance evaluation process. Recent research conducted in Saskatchewan found that top management commitment to safety has a cascading effect in an organization: when an organizational leader demonstrates a genuine commitment to safety, their senior managers are more likely to commit to safety in the eyes of frontline employees. This research also found that the more organizational leaders held their senior managers accountable for safety performance the higher frontline line employees rated management's commitment to safety.

3. Establishing safety-related performance goals and annually measuring safety climate in your organization to identify successes and areas for improvement.

4. Calculating the return on investment of health and safety investments. Over time investments in safety often pay for themselves through, for example, savings from lower employee turnover, return-to-work, absenteeism, and WCB premium costs.

5. Utilizing information on best safety management practices available through your industry safety association.

We Welcome Your Feedback on this Report

Our goal is to provide your organization with a straightforward summary of your employees' safety climate perceptions that you can use to improve safety in your organization. If any information in this report is unclear or if you have suggestions about how we can present the results in a more meaningful and actionable way, please contact Dr. Sean Tucker by email, at sean.tucker@uregina.ca, or by phone, at 306-337-3244. Thank you!

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Survey Measures

Organizational Safety Climate (Zohar & Luria, 2005)

Employees responded to 16 items on a 5-point rating scale that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Top management in this organization...

1. Reacts quickly to solve the problem when told about safety hazards.
2. Insists on thorough and regular safety audits and inspections.
3. Tries to continually improve safety levels in each department.
4. Provides all the equipment needed to do the job safely.
5. Is strict about working safely when work falls behind schedule.
6. Quickly corrects any safety hazard (even if it's costly).
7. Provides detailed safety reports to workers (e.g., injuries, near accidents).
8. Considers a person's safety behaviour when moving-promoting people.
9. Requires each manager to help improve safety in his-her department.
10. Invests a lot of time and money in safety training for workers.
11. Uses any available information to improve existing safety rules.
12. Listens carefully to workers' ideas about improving safety.
13. Considers safety when setting production speed and schedules.
14. Provides workers with a lot of information on safety issues.
15. Regularly holds safety-awareness events (e.g., presentations, ceremonies).
16. Gives safety personnel the power they need to do their job.

Turnover Intentions (Cammann, Fichman, Jenkins, & Klesh, 1979)

Employees responded to 3 items on a 5-point rating scale that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).

1. I often think of leaving my organization.
2. It is very possible that I will look for a new job soon.
3. If I may choose again, I will choose to work for the current organization. (Reverse-coded)

Employee Engagement (Rich, LePine, & Crawford, 2010)

Employees responded to 3 items reflecting their physical, emotional, and cognitive engagement on a 5-point rating scale that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).

1. I try my hardest to perform well on my job.
2. I feel energetic at my job.
3. At work, I focus a great deal of attention on my job.

Appendix 4: Phase 2 Feedback on the Impact of Benchmarking Reports

Number	Response Text
1	The areas with the lowest scores have have action items on our 2014 safety improvement plan.
2	The information was shared at senior management forum to all of our senior directors, the climate score has been added to our corporate EHS dashboard and the CEO sent out a story to all employees with a copy of the survey results.
3	We often wondered where we rated. What it has done is gave us a place to start improvements! Yes it was shared with the senior management team!
4	The information has yet to be shared and discussed to determine next steps.
5	This is the second of these surveys that have been completed and they have been shared with the senior management team.
6	YES
7	I believe it has been shared with Executive Management. Although I haven't seen this year's. I'm not sure how it's used, since I think you need several years experience with it for it to be useful (e.g. we scored 3.7 last year and 3.9 this year, so we'r
8	The information is being used to determine areas for improvement within departments and also an overall assessment on the safety climate of the organization. This information has been shared with the GM and Senior Management team.
9	Yes, the senior leadership and the whole organization will be provided with a communication of results
10	I used the report to compare against previous results. The information has not been shared with executive. Thanks for the reminder!
11	Not yet, but soon.
12	Its been shared with the CEO. Information is poorly presentation and difficult to understand or not presentated efficiently to utilize the information. I am disappointed with the report. I don't believe this was a value-added activity for our company. Hes
13	The information has been shared with the CEO and will soon be shared with the leadership group.
14	Yes.
15	As a gauge of the employees preceptions of the safety climate at [name omitted]. To identify if there are any gaps or issues that the employees feel are affecting the safety climate.
16	Results have been shared with the [omitted] and Safety Champion. Information is being used to address (through specific goals/objectives in Health and Safety planning) identified gaps or areas to improve upon.
17	Information has been shared with the General Manager. I will be selecting data specific to certain departments to present to them.
18	Our senior management team reviewed and discussed the results and then we also shared with our Occ Hlth Committees as well. All found the info valuable and look forward to continuing to participate. In reviewing, we assessed what we were doing well and
19	The information is sent to the CEO/organizations leaders for review, questions, concerns, comments and any identified processes that might need to be undertaken on negative issues identified. After their review, the overall data is shared at the regional
20	Shared with above, plus reported to our board at the last meeting.
21	It was shared with senior management and other relevant teams.
22	The information is used to help guide future safety initiatives in an effort to continuously improve our organizations safety climate and reduce injury rates. Information has not yet been shared with senior management.
23	The information has been shared and discussed with the senior management team. We are using the report as one point of reference to introduce and implement a clearly understood network of individual accountabilities from the CEO down to the worker for the
24	The information is used to support the Health and Safety program direction. The information is shared with the President and Vice presidents, Senior management team
25	Haven't done much yet. Will look at more closely in our slow season.
26	Yes, it has given us areas that we need to concentrate on. CEO senior managment are aware of the summary contents on the report,however we have not as yet had a meeting to discuss what actions need to be taken.
27	Management has reviewed findings, no change in current safety policy has been planned.
28	Yes, it has been shared with our senior management team. As an organization we need to ensure more employee participation so our report is more meaningful to us.
29	We are currently in a structure re-organization so we have not had the chance to meet and discuss the survey results.
30	An overview of the results have been shared. Still strategizing - no firm plan yet.
31	It has increased awareness of safety issues . I am the CEO.
32	Not yet.
33	Information has been shared with the owners and senior management team. We have instituted a safety "chat" into ALL of our meetings. We have become more diligent in having a safety briefing before each job starts. It appears our biggest downfall was com

Appendix 5: Phase 2 Suggestions for Improving Benchmarking Reports

Number	Response Text
1	Add narrative section on best practices and rate usage of them.
2	Link the 16 questions to leadership elements (i.e., these 4 questions relate to accountability, these 4 questions relate to communication, etc.)
3	Not sure at this time.
4	Prefer use of an even-numbered rating scale. A 5-point scale allows for an opt-out with Neither Agree or Disagree, which really is a "no opinion/no answer". Feedback was triggered on Question 7 as it listed only types of physical injuries (e.g., strain, sprain, scratch, cut, burn or bruise). In [omitted], we see a lot of psychological injuries as a result of exposure to violent incidents. We also have indoor air quality issues that result in allergic/medical type injuries. Perhaps consideration for these other categories need to be covered if this question is to remain on the survey. Then again, not sure what the relevance is for this question? Would like to see a summary of the results where employees rated themselves on their safety behaviors (Question 10). A lot of times, employees blame the supervisor/employer for their safety and do not realize that they too have responsibility themselves. Perhaps more questions could be explored that capture if an employee has raised a safety issue and participated in its resolution. This could be a measurement of employee involvement in safety - part of the WRS process.
5	It would be great in larger organizations like ours to have the report broken down into work units. We believe and expect that there are likely significant differences in perceptions amongst different departments/work units
6	I think it should be more qualitative - what are people saying about safety in the organization? I find a score out of 5 is of very limited practical use - what do you do with that?
7	Process worked well especially the online component. For field staff with no access to computers the process was more cumbersome.
8	I can't think of any specific things to improve.
9	Make it a usable business document - not so much like an academic research paper.
10	Information contained in the report was sufficient, but I believe the report could have been presented to our management group to help explain the report and what we, as an organization could do to improve our safety culture.
11	I believe that it is very comprehensive.
12	Can't think of any changes or improvements to improve the current survey/report. As this was our first year to participate in the study, we are looking forward to participating in 2015 so as to compare our results year over year.
13	We look forward to reviewing our results as compared with other areas of [in our sector].
14	It is important for us due to our size, geographics and employee base that the method of distribution / collection of sample surveys remain the same as to continue to track positives and negatives. For many of us, grass roots employees do not have good access to do surveys online - therefore paper surveys will still be required - increased cost for this method may be the hindrance to future participation.
15	I would be helpful to have more information as a comparison about how we are doing with the engagement and turnover intentions questions as compared to similar organizations to us.
16	No suggestions.
17	The report is clear and easy to interpret. I have no recommendations to make.
18	None so far.
19	I feel that some other questions could have been added, but the process of collecting the data and providing the reports was well organized and valuable. We are still waiting for the province wide all organization report promised spring of 2014.
20	Report is fine but you could gather more feedback in shops such as ours with paper documents that we could have people fill out and have one of our people collect or if you would prefer have one of your people show up during our weekly safety meetings and have the documents filled out right then and there. While it is good to preserve the integrity of the results with secrecy, this is a safety survey not election results.

Appendix 6: Phase 3 CEO Survey

CEO/Owner Survey - 2014 Saskatchewan Safety Survey

Consent Form

I understand that this project was approved by the Research Ethics Board at the University of Regina. If I have any questions or concerns about my rights or treatment as a research participant, I may contact the Chair of the Research Ethics Board at 585-4775 or by e-mail: research.ethics@uregina.ca.

I have read the protocol outlined in the recruitment letter and voluntarily agree to participate. The procedure and goals of the study have been explained to me by the researchers and I understand them. I understand that I am free to withdraw from this study at any time without penalty. I understand that data from this study may be published and that my identity and the identity of my organization will be kept confidential. I have received a copy of this consent form for my records.

By completing and submitting the questionnaire, YOUR FREE AND INFORMED CONSENT IS IMPLIED and indicates that you understand the above conditions of participation in this study.

CEO/Owner Survey - 2014 Saskatchewan Safety Survey

1. Please respond to the following statements.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
When conducting performance evaluations of my senior management team, I include safety performance as a component of the evaluation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have reviewed the organization's health and safety policy statement in the last year.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

CEO/Owner Survey - 2014 Saskatchewan Safety Survey

2. Aside from safety, what is the MOST IMPORTANT performance measure (e.g., profit, sales, client/patient satisfaction) for organizations in your sector?

3. Please respond to the question below.

	Don't know	We are well below average	We are below average	We are average	We are above average	We are well above average
How does your organization's performance on the measure identified in the previous question compare with the performance of organizations in your sector?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

CEO/Owner Survey - 2014 Saskatchewan Safety Survey

4. What functional area(s) did you work in PRIOR to your current position?

- ☐ Accounting
- ☐ Finance
- ☐ Health and Safety
- ☐ Human Resource Management
- ☐ Information Technology
- ☐ Legal
- ☐ Operations
- ☐ Research and Development

Other (please specify)

5. Are you a member of the Saskatchewan Health and Safety Leadership Charter?

- ☐ Yes
- ☐ No