

Technical Paper: Root cause analysis of distracted driving in Ontario logging operations

Table of Contents

Executive Summary

- 1. Risk Assessment Project:** The Subject of Inquiry
- 2. Background:** Revisiting the 2017 Risk Assessment Workshop Results
- 3. Root-Cause Analysis:** Risk Statement
- 4. Root-Cause Analysis Workshop:** A Bipartite and Collective Process
- 5. Root-Cause Analysis Workshop Participants:** Industry, Public Health, System Partners
- 6. “Fishbone” Diagram:** 51 Causal Factors
- 7. Top 10 Primary Causal Factors**
- 8. Critical controls to address primary causal factors of substance use in workplace**
- 9. Next Steps: What we should focus on immediately**
- 10. References**
- 11. Appendix I –VI:** “Fishbone Diagram” for Secondary, Tertiary and Quaternary Causal Factors
- 12. Appendix A:** Risk Assessment Methods/Standards
- 13. Appendix B:** Workshop Contacts
- 14. Appendix C: Poster: Top 10 health and safety risks in Ontario logging operations**
- 15. Appendix D: Poster: Top 10 causes of distracted driving in Ontario logging operations**

Executive Summary

Over two years, a volunteer group of industry subject matter experts met face-to-face to conduct a risk assessment of the Ontario logging industry, and later, a root cause analysis of its top health and safety risk.

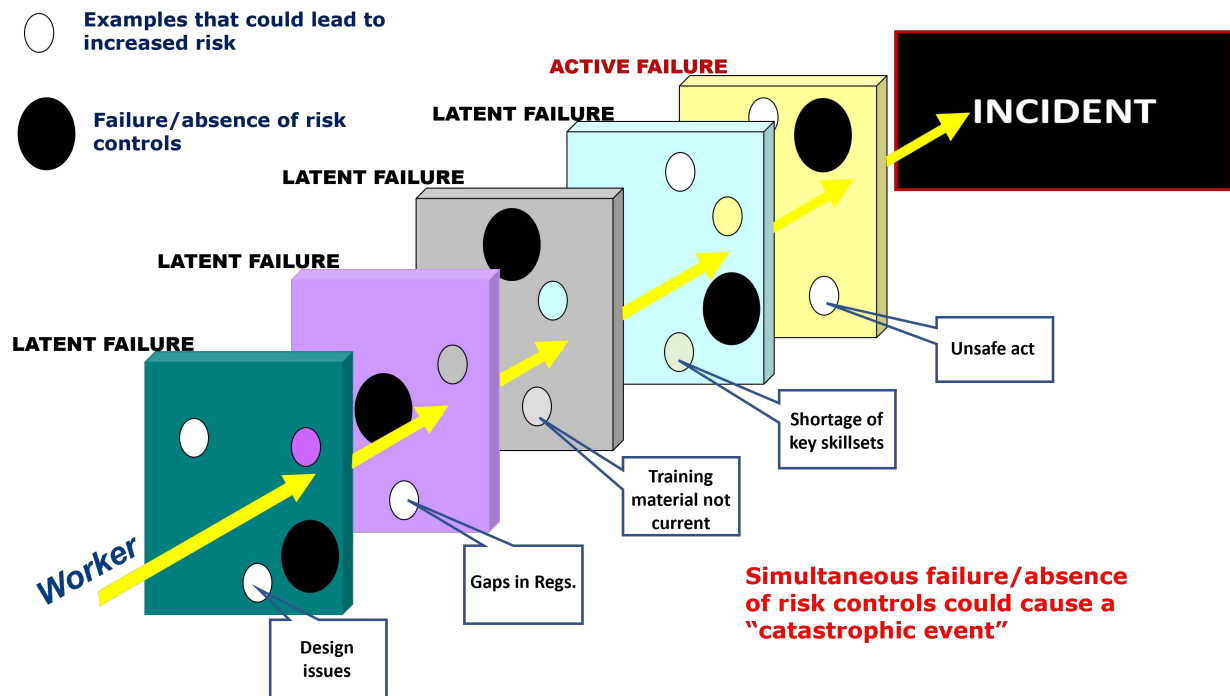
The group of 16 representatives from management, labour, government, and not-for-profit organizations, was facilitated by Sujoy Dey, Ph.D., Corporate Risk Officer at the Ministry of Labour (MOL). In advance of the workshop, each industry expert submitted their top health and safety concerns, and during risk assessment workshop, more than 80 identified risks were reviewed and discussed by the group. Both management and labour agreed the top risk was distracted driving.

The experts' root cause analysis workshop determined the top 10 causal factors for distracted driving in the workplace, as well as specific controls for each. Next steps include an immediate focus on the five most common systemic weaknesses regarding substance use and workplace health and safety:

- Proper engagement of, and involvement of the worker and management on safety (e.g. policy, guideline, and training development and messaging). High practicality and quality in a two-way conversation with worker and management
- Availability of mental health training and support (understanding “mental health first-aid”)
- Clear, concise, know-your-audience, practical and trustworthy policies (purpose, implementation, execution, enforcement)
- Supervisors to embrace and enforce “safety first”
- Supervisors to be approachable and proactive

WSN, in partnership with the Sustainable Forest Initiative (SFI), is developing a Safe Driving on Forest Roads training program. When completed, this project will assist in communicating the hazards of distracted driving and other hazards on forest roads. A team of industry representative from across Ontario as well as representatives from SFI and WSN are currently working on conducting background research and assessment of leading practices for consideration in the development of this new program. This longer-term control activity supports the work of the logging root cause analysis team results.

1. Risk Assessment Project: The Subject of Inquiry



Pictured above: The “swiss cheese” model of simultaneous failure, or absence of risk controls, that could cause a “catastrophic event.” In this model, when there are latent failures in design, gaps in regulation, outdated training material, shortage of skillsets, and an unsafe act, all the “holes” in the system line-up to potentially cause a critical injury or fatality.

2. Background: Revisiting the 2017 Risk Assessment Workshop Results

In November 2017, a volunteer group of subject matter experts met face-to-face for a logging workplace risk assessment at Workplace Safety North (WSN) headquarters in North Bay, Ontario. The group of 16 representatives from management, labour, government, and not-for-profit organizations, was facilitated by Sujoy Dey, Ph.D., Corporate Risk Officer at the Ministry of Labour (MOL).

In advance of the workshop, each person submitted top health and safety concerns, so during the one-day workshop, all 83 identified risks were reviewed and discussed by the group. When it came time for the final vote on the top risks, only the five workers and four managers from the logging industry were allowed to vote. In order to ensure an open and fair voting process, handheld electronic devices recorded votes anonymously. Both labour and management agreed: the top dangers logging workers face include distracted driving, substance use, and machinery danger zones.

“As they identified specific conditions and situations that could result in injury or illness, we asked the group, ‘What keeps you up at night?’” says Dr. Dey, “And both workers and managers agreed: the top three risks are distracted driving, substance use, and machinery danger zone infractions.”

Logging operations use large trucks and mobile mechanical harvesting equipment such as feller-bunchers, chippers, and delimbers, and many high-risk concerns involve the danger zone around machinery, including not properly locking out equipment or improper equipment isolation, getting caught in or compressed by mobile equipment, and not locking out mobile equipment to do maintenance around blades.

Top 10 health and safety risks in Ontario logging operations

1. Mobile equipment: Distracted driving.
2. Substance use: Under the influence of alcohol, prescription or other drugs.
3. ‘Struck by’: Machinery danger zone infractions.
4. Machine lock out, guarding: Not properly locking out, improper equipment isolation.
5. Workers taking shortcuts: Gaps in training, coaching, supervision.
6. Working alone: In remote locations.
7. Regulation: Working directly on public access roads.
8. Fatigue: Fatigue-induced incidents.
9. Lifting equipment: Lifting logs or trees.
10. Maintenance: Mechanics standing on equipment or cylinders to perform maintenance.

“Distracted driving can have serious unintended adverse effects on the safety and well-being of the driver, other workers, and the community in general,” says Tom Welton, WSN General Prevention Services Director, “and in the case of logging operations, distracted driving while using heavy equipment has a high potential of serious – if not fatal – injury to workers.

“Worker visibility, the danger zone surrounding equipment, and onboard distractions such as cell phone or FM radio use while operating machinery – especially large pieces of dangerous equipment – have high potential for serious issues in this safety-sensitive work,” says Welton. “The risk assessment workshop provided direct feedback from industry experts about their perception of the workplace, and by using these leading indicators, WSN can be more proactive in providing health and safety services to industry.”

The results of the workshop were reviewed by the WSN advisory committee for Forestry, Paper, Printing, and Converting industries, which moved toward the next step: a detailed analysis of the root causes of distracted driving in the workplace, and the creation of an effective prevention plan.

What is distracted driving?

Distracted driving happens when a driver's attention is taken away from the driving task because they are focused on something else. In the case of logging operations, this could be, for example:

- Texting
- Talking on the phone – hands-free or not
- Talking on two-way radio
- Looking up information on the phone
- Looking at social media on the phone
- Eating or drinking
- Using GPS navigation system

The risk of a collision goes up when a driver's eyes and attention are taken off the road. This is because distraction impairs performance and reduces a driver's awareness. It makes drivers slower to notice and less able to safely respond to critical events on the road. Or they may miss them entirely.

Distracted driving statistics in Canada

Distracted driving contributed to an estimated 21 per cent of fatal collisions and 27 per cent of serious injury collisions in 2016, according to Transport Canada. These statistics are part of an upward trend of distracted driving-related collisions, up from 16 per cent of fatal collisions and 22 per cent of serious injury collisions a decade earlier.

<https://www.tc.gc.ca/en/services/road/stay-safe-when-driving/distracted-driving.html>

Now considered more common and therefore more hazardous than drunk driving, distracted driving needs to be considered as socially unacceptable as drunk driving. Unfortunately, the 'macho' logging culture tends to be dismissive of distracted driving. Videos and campaigns like #PutDownThePhone and new smartphone features that automatically let's others know that you're busy driving are starting to help get the message across.

3. Root-Cause Analysis: Risk Statement

Based on the results of the sawmills risk assessment, the following risk statement was selected by the Workplace Safety North Advisory Committee (Forestry, Paper, Printing, and Converting) for Root-Cause Analysis using the “Fishbone” approach:

“Distracted driving of vehicles or mobile equipment can have serious unintended adverse effects on the safety and well-being of the driver, operator, fellow workers, and the community.”

4. Root-Cause Analysis Workshop: A Bipartite and Collective Process

- Workshop participants were peer-recognized industry and system experts.
- Workshop process was open, transparent, and collaborative.
- All participants met face-to-face; there was no teleconferencing.
- Ranking and prioritization of causal factors for substance use was voted on by industry management and labour only; MOL and WSN did not vote.

Validation of the results, in addition to workshop subject matter expert participants, included having the results presented and discussed: among sawmill industry constituents, at conferences and health and safety meetings, as well as at Workplace Safety North advisory board meetings for the Ontario forestry, paper, pulp and converting sector.

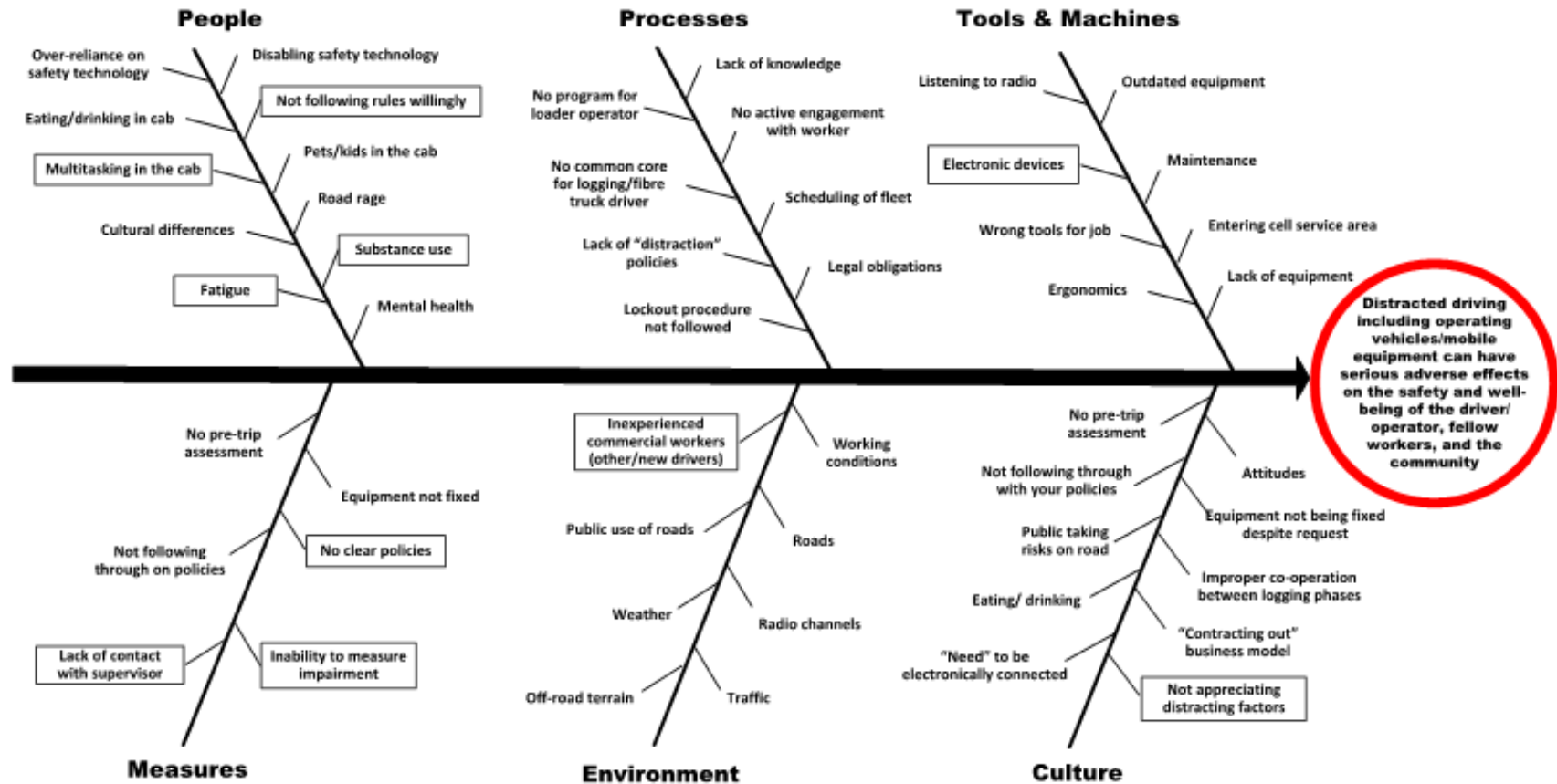
5. Workshop Participants: Industry, Public Health, System Partners

Participants from the following organizations attended:

- Rayonier
- Resolute Forest Products
- Westwind Forest Stewardship
- Bizhiki Management
- Renewable Forest Products
- FP Innovations
- Workplace Safety North
- Ministry of Labour

6. “Fishbone” Diagram: Primary Causal Factors

Root Cause Analysis for Distracted Driving



CLOSE-UP of fishbone diagram: Primary causal factors of substance use in the workplace

Tools and methods, culture, processes, environment, people, measures

51 Causal Factors

Priority Rank	Category	Primary Causal Factors
1	Tools/Machines	Electronic devices (e.g. Phones, FM radios, etc.)
2	People	Fatigue
3	Culture	Not appreciating distracting factors
4	Measures	Lack of contact with supervisor
5	People	Substance use
6	Measures	Inability to measure impairment (e.g. drug test)
7	People	Multi-tasking in the cab
8	Measures	No clear policies
9	Environment	Inexperienced commercial workers (contract, new drivers)
10	People	Not following rules willingly
11	Tools/Machines	Entering cell service area
12	Process	No common core training for logging or fibre truck driver
13	Culture	"Need" to be electronically connected
14	Environment	Roads
15	Culture	Not following through with workplace policies
16	People	Road rage
17	People	Eating or drinking in cab
18	Environment	Working conditions
19	Culture	Attitudes
20	Culture	Public taking risks on road
21	Environment	Radio channels
22	Process	Lack of knowledge
23	Culture	No pre-trip assessment
24	Measures	No pre-trip assessment
25	Process	No active engagement with worker
26	Environment	Weather
27	People	Mental health
28	Culture	Equipment not being fixed despite request
29	Culture	Improper co-operation between logging phases
30	Measures	Not following through on policies
31	Tools/Machines	Maintenance
32	Environment	Public use of roads
33	Process	Lack of "distraction" policies
34	Environment	Off-road terrain
35	Environment	Traffic
36	Process	Lock-out procedure not followed
37	Process	No program for loader operator
38	Culture	Eating/drinking
39	Tools/Machines	Wrong tools for job
40	Measures	Equipment not fixed
41	People	Cultural differences
42	Process	Legal obligations
43	Tools/Machines	Lack of equipment
44	People	Over-reliance on safety technology
45	Tools/Machines	Outdated equipment
46	Tools/Machines	Ergonomics
47	People	Disabling safety technology
48	People	Pets or kids in the cab
49	Tools/Machines	Listening to radio
50	Process	Scheduling of fleet
51	Culture	"Contracting out" business model

7. Top 10 Primary Causal Factors: List of Controls

1. **Electronic devices** (phones, FM or two-way radios)
2. **Fatigue** (long work hours)
3. **Not appreciating distracting factors** (become dulled to over time, poor road conditions)
4. **Lack of contact with supervisor** (isolated, independent work environment)
5. **Substance use** (alcohol, drugs)
6. **Inability to measure impairment** (e.g. drug tests)
7. **Multi-tasking in the cab** (using two-way radio, phone)
8. **No clear policies** (e.g. communication and reinforcement)
9. **Inexperienced commercial workers** (contract, new drivers, new to bush roads)
10. **Not following rules willingly** (speeding, load management)

Next, the industry group of subject matter experts got down to work to develop controls that could be put in place for the main causal factors, and address the risk of distracted driving in the workplace.

8. Critical controls to address primary causal factors of substance use in workplace

Note: Control lists are not in any order of priority

1. Electronic devices (e.g. Phones, FM or two-way radios)

- Understanding that electronic need may be an addiction
- Involve the worker in the development of a distracted driving policy
- Enforce cell phone policy and legislation (including 2-way radio)
- Ability to get the message through via good policy delivery. Cut through the monotony (dullness, boring) of training on the policy
- Proper engagement and involvement of the worker and management on safety (e.g. policy, guideline, and training development and messaging). High practicality and quality in a two-way conversation with worker and management
- Re-enactment of real situations or conditions, and consequences
- Using health and safety association (Workplace Safety North) to reinforce training on an ongoing basis
- Understand that using typical classroom training for hands-on and outdoor workers (truckers) does not really work
- Supervisor buy-in and involvement in the messaging
- Cannot manipulate GPS while moving
- Hands-free system for two-way radio. Key it on the steering wheel
- Industry to focus investment on required technology to mitigate this TOP risk for distracted driving (Budget this in!)
- Permanent line item for budgeting safety in organizations
- Invest in research, data and analytics to demonstrate need
- No “band-aid” response to a near-miss or incident. Understand why it happened and proactively make an educated response to mitigation
- App for disabling technology (e.g. phone calls, texts, social media notifications are blocked)
- Access to cell phone records and drug testing for any workplace incident/damage
- Load check stations/pulling off the road to allow cell phone use when stopped
- Need research on determining distraction on driver assistance system
- Recognize upfront that effective intervention early is a value-added cost to the operation (cost-benefit)

2. Fatigue

- Effective anti-impairment policy program (to include cumulative effects due to stress, fatigue, trauma, medication, time management)
- Basic awareness training for everyone in the workplace (including how to recognize impairment)
- Specific training for supervisors, scalers, mill security, health and safety representatives and key personnel (e.g. Understanding substance use, recognizing and dealing with impairment)
- Use of electronic logbooks
- Need recognize fatigue related to commuting to work (additional driving)
- Availability of mental health training and support (understanding “mental health first-aid”)
- Awareness that fatigue can affect cognitive function
- Good communication regarding fatigue (clear, concise, know-your-audience, practical and trustworthy)
- Give people ability to talk without fear (Multiple communication avenues)
- Supervisors should be approachable and proactive
- Supervisors should embrace and enforce “safety first”
- Employer develops outreach program as part of training

- Promote healthy lifestyle and safe culture
- Fatigue Management Systems (e.g. Eye-scan monitoring devices)

- Peer support system in the workplace

3. Not appreciating distracting factors

- “Safety first” company values: “Walk the talk”
- Proper engagement and involvement of the worker and management on safety (e.g. policy, guideline, and training development and messaging). High practicality and quality in a two-way conversation with worker and management
- Top-down leadership to demonstrate safety first values (i.e. Production does NOT trump safety)
- Supervisors should be approachable and proactive
- Supervisors to embrace and enforce “safety first”
- Macho culture (attitudes) cannot trump risk assessments
- Proper risk assessment: Cumulative effects of “minor” transgressions lead to a higher risk (e.g. coffee drinking not a high risk by itself, but a “risk” when driving in an ice storm)
- Foster culture that recognizes risks of distracted driving (e.g. drinking coffee when negotiating a curve or in an ice storm)
- Workplan and schedule to minimize “lone worker” or high-risk times (e.g. family celebrations and emergencies, vacation, electronic devices, etc.)
- Recognize that differences in distractions that can affect all jobs (e.g. heavy equipment operators as well as drivers)

4. Lack of contact with supervisor

- Competent supervision: ability to judge, gauge or measure safety issues with the worker and take corrective actions or plan for intervention
- Recognize upfront that effective supervision is a value-added cost to the operation
- Routine engagement with worker (frequency of contact)
- Risk assessment of hazard situation or conditions (e.g. new worker) to determine frequency of contact with worker
- Actual contact required (face-to-face or remote) for “supervisory role” and not just to discuss production issues
- Task review to check if workload and expectations for supervisor is reasonable, relevant and effective (e.g. an owner-supervisor)
- Proper engagement and involvement of the worker and management on safety (e.g. policy, guideline, and training development and messaging). High practicality and quality in a two-way conversation with worker and management
- Supervisors should be approachable and proactive
- Trained woodlands supervisors (someone with operational experience)
- Supervisor succession planning or supervisor mentorship program available and implemented
- Workplan and schedule to account for time with supervisor

5. Substance use

- Effective anti-impairment policy program (to include cumulative effects due to stress, fatigue, trauma, medication, time management)
- Basic awareness training for everyone in the workplace (including how to recognize impairment)
- Specific training for supervisors, scalers, mill security, health and safety representatives and key personnel (e.g. understanding substance use, recognizing and dealing with impairment)
- Availability of mental health training and support (understanding “mental health first-aid”)
- Awareness that substance use can affect cognitive function
- Good communication regarding substance use (clear, concise, know-your-audience, practical and trustworthy approach)
- Recognize that upfront investment in mental health programs is a value-added cost to the operation
- Workplan and schedule to minimize “lone worker” or high-risk times (e.g. family celebrations and emergencies, vacation, electronic devices)
- Random drug and alcohol testing
- Give people ability to talk without fear (multiple communication avenues)
- Support and resources availability (e.g. community support, crisis counselling)
- Promote healthy lifestyle and safe culture

6. Inability to measure impairment

- Clearly defined, effective, well-written and well-communicated policies
- Policy should be inclusive of all substances (alcohol, prescription, and recreational drugs)
- Basic awareness training for everyone in the workplace (including how to recognize impairment)
- Specific training for supervisors (e.g. recognizing and dealing with impairment)
- Understanding the impact of human rights with regards to workplace impairment policies
- Needs assessment/survey for employees at the worksite
- Availability of mental health training and support (understanding “mental health first-aid”)
- Random drug/alcohol testing
- Good communication regarding substance use (clear, concise, know-your-audience, practical, and trustworthy approach)
- Research on root-cause (statistics) factors affecting impairment at the workplace

7. Multitasking in the cab

- Address multitasking in your distracted driving policy
- Eliminate unnecessary tasks (e.g. Checking phones, any pre-trip tasks) using proper work/trip planning
- Proper engagement and involvement of the worker and management on safety (e.g. policy/ guideline/ training development, messaging). High practicality and quality in a two-way conversation with worker and management

8. No clear policies

- Proper engagement and involvement of the worker and management on safety (e.g. policy/ guideline/ training development, messaging). High practicality and quality in a 2-way conversation with worker and management
- Support for the policy (buy-in) needs worker engagement and involvement (See previous point)
- Understanding on the purpose of the policy
- Proper implementation plan (clear, concise, know-your-audience, practical and trustworthy)
- Effective execution of the policy (clear, concise, know-your-audience, practical and trustworthy)
- Enforcement of the policy (clear, concise, know-your-audience, practical and trustworthy)
- Auditing accuracy and compliance of the policy (clear, concise, know-your-audience, practical and trustworthy)
- Modelling/ demonstration of the policy by supervisor (show and lead by example)

9. Social acceptance - controls

- More organized, structured, and formalized training program for new recruits
- Government to better understand and recognize the special needs of the forestry industry in order to tailor certification to meet those needs
- Address the specific needs in training program for forestry related jobs (e.g. log haul, float operator)
- Driver training courses to include off-road driving, not just highway operation
- Better collaboration between industry and trades towards providing programs that have emphasis on a “safety culture”
- Greater awareness in the industry to collectively address this issue
- Clear communication of risks due to distracted driving
- Customize communication (to fit driver needs) of rules and procedures
- Refresher training
- Better highway signage
- Use of in-cab coaching initiation phase or tag along truck with experienced driver
- Assign to simple routes
- Guide to in-vehicle (dashboard, console) controls if unfamiliar truck model
- Rules limiting use of VHF or CB radio to safety and operational needs (no chatting)
- Give clear and concise directions to loading sites (new drivers not familiar with road names and landmarks experienced drivers may use)
- Familiarization with seasonal driving conditions
- If available, provide truck with automated transmission (driver does not need to worry about clutch and shifting)
- Guide to in-vehicle (dashboard, console) controls if unfamiliar truck model

10. Not following rules willingly

- Consistency in a progressive discipline program
- Having a personal commitment to safety like reporting near-misses, other incidents that compromise safety
- Recognizing and rewarding safe work practices/innovations/performance
- Measurement comparison of time needed to do the work (e.g. How much time does it take to travel from point A to point B when following all the rules?)
- Promote worker-worker intervention culture in the workplace
- Proper engagement and involvement of the worker and management on safety (e.g. policy/guideline/training development, messaging). High practicality and quality in a two-way conversation with worker and management
- Effective training program for workers and supervisors
- Organized labour/unions and management support safe work including fair and consistent progressive discipline
- Supervisors to be approachable and proactive
- Supervisors to embrace and enforce “safety first”

9. Next Steps: What we should focus on immediately

Based on a scan of controls identified for the top 10 primary causal factors, it is beneficial, as a start, to focus right away on the following five common mitigation actions (current systemic weaknesses)

- A) Proper engagement of, and involvement of the worker and management on safety** (e.g. policy/guideline/training development, messaging). High practicality and quality in a two-way conversation with worker and management
- B) Availability of mental health training and support** (understanding “mental health first-aid”)
- C) Clear, concise, know-your-audience, practical and trustworthy policies** (purpose, implementation, execution, enforcement)
- D) Supervisors to embrace and enforce “safety first”**
- E) Supervisors to be approachable and proactive**

WSN, in partnership with the Sustainable Forest Initiative (SFI), is developing a Safe Driving on Forest Roads training program. When completed, this project will assist in communicating the hazards of distracted driving and other hazards on forest roads. A team of industry representative from across Ontario as well as representatives from SFI and WSN are currently working on conducting background research and assessment of leading practices for consideration in the development of this new program. This longer-term control activity supports the work of the logging root cause analysis team results.

10. References

1. Clearing the Haze: The Impacts of Marijuana in the Workplace; Human Resources Professionals Association (HRPA)
2. Policy on Drug and Alcohol Testing; Ontario Human Rights Commission, 2016
3. Workplace Strategies: Risk of Impairment from Cannabis; Canadian Centre for Occupational Health and Safety, June 2017
4. Reducing Alcohol-related Harm in Canada: Toward a culture of Moderation – Recommendations for a national alcohol strategy, April 2017
<http://www.ccsa.ca/Resource%20Library/ccsa-023876-2007.pdf>
5. Alcohol and the Workplace; Alberta Health Services, 2017
<https://www.albertahealthservices.ca/assets/info/hp/edu/if-hp-edu-amh-alcohol-in-theworkplace.pdf>
6. Workplace Strategies for Mental Health: An Initiative of the Great-West Life Centre for Mental Health in the Workplace
<https://www.workplacestrategiesformentalhealth.com/psychological-health-and-safety/impairment-policy>

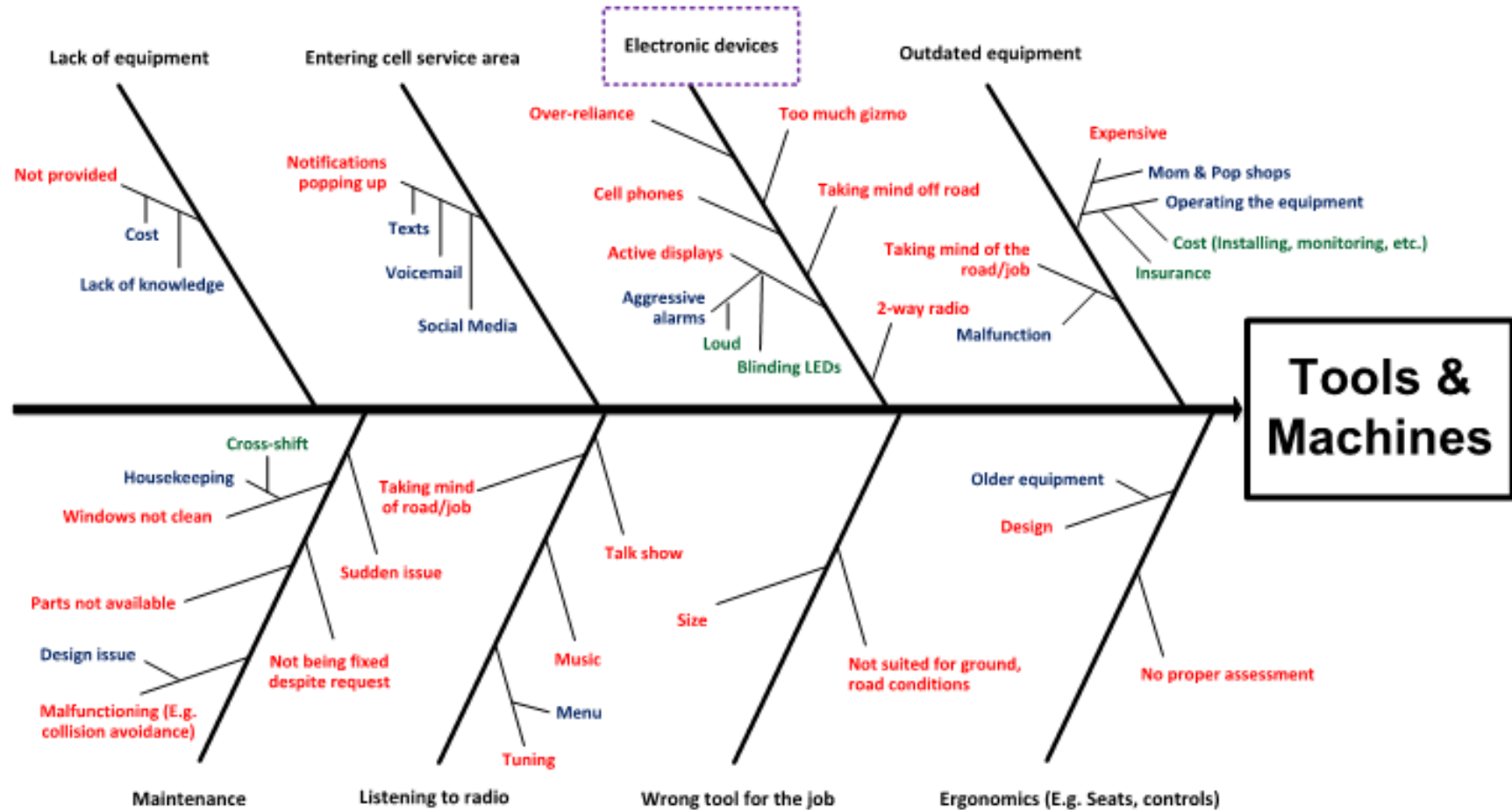
Related

Top 10 health and safety risks in Ontario logging operations

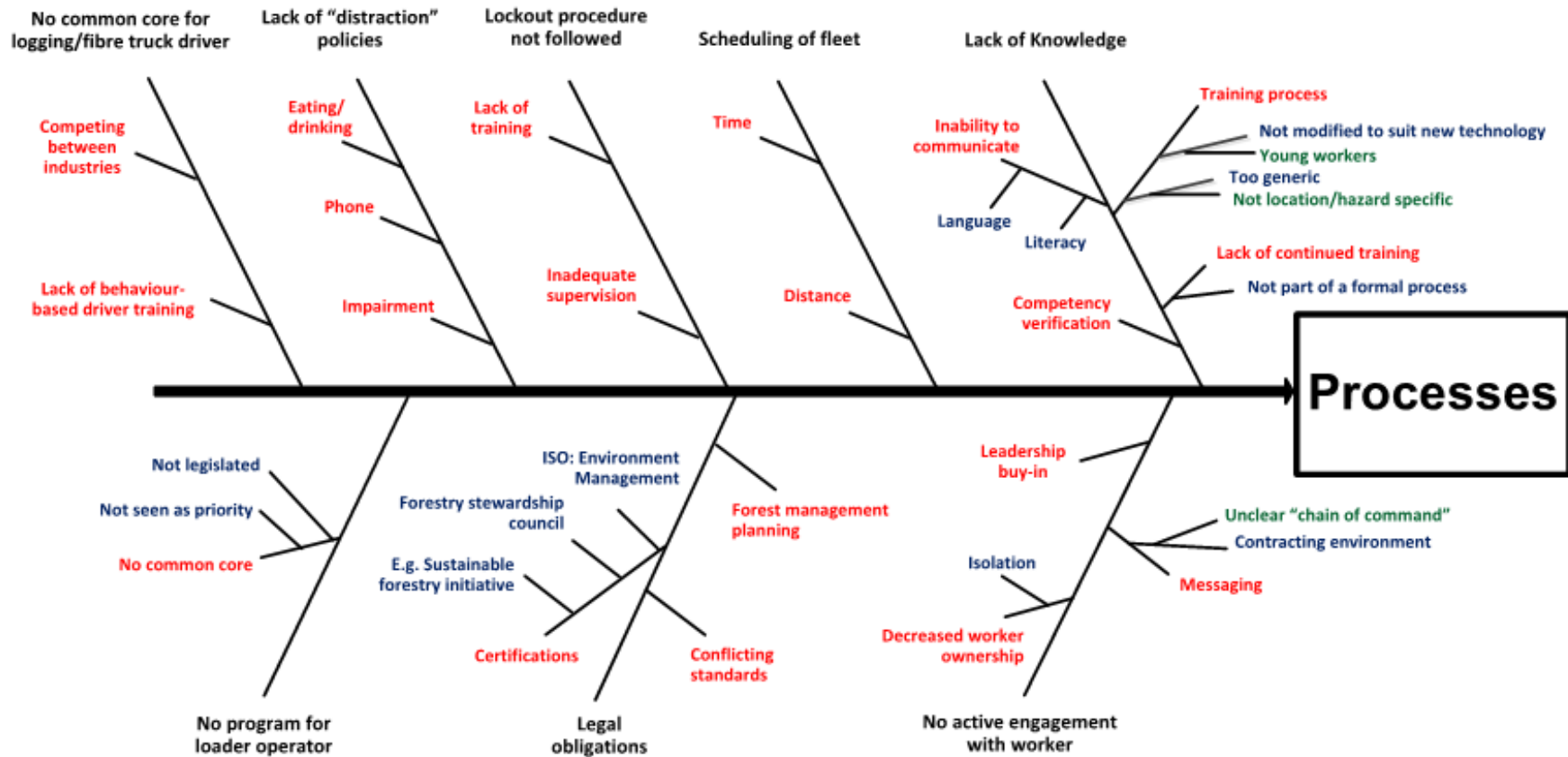
<https://www.workplacesafetynorth.ca/news/news-post/distracted-driving-top-health-and-safety-risk-logging-operations>

11. Appendix I –VI: “Fishbone Diagram” for Secondary, Tertiary and Quaternary Causal Factors

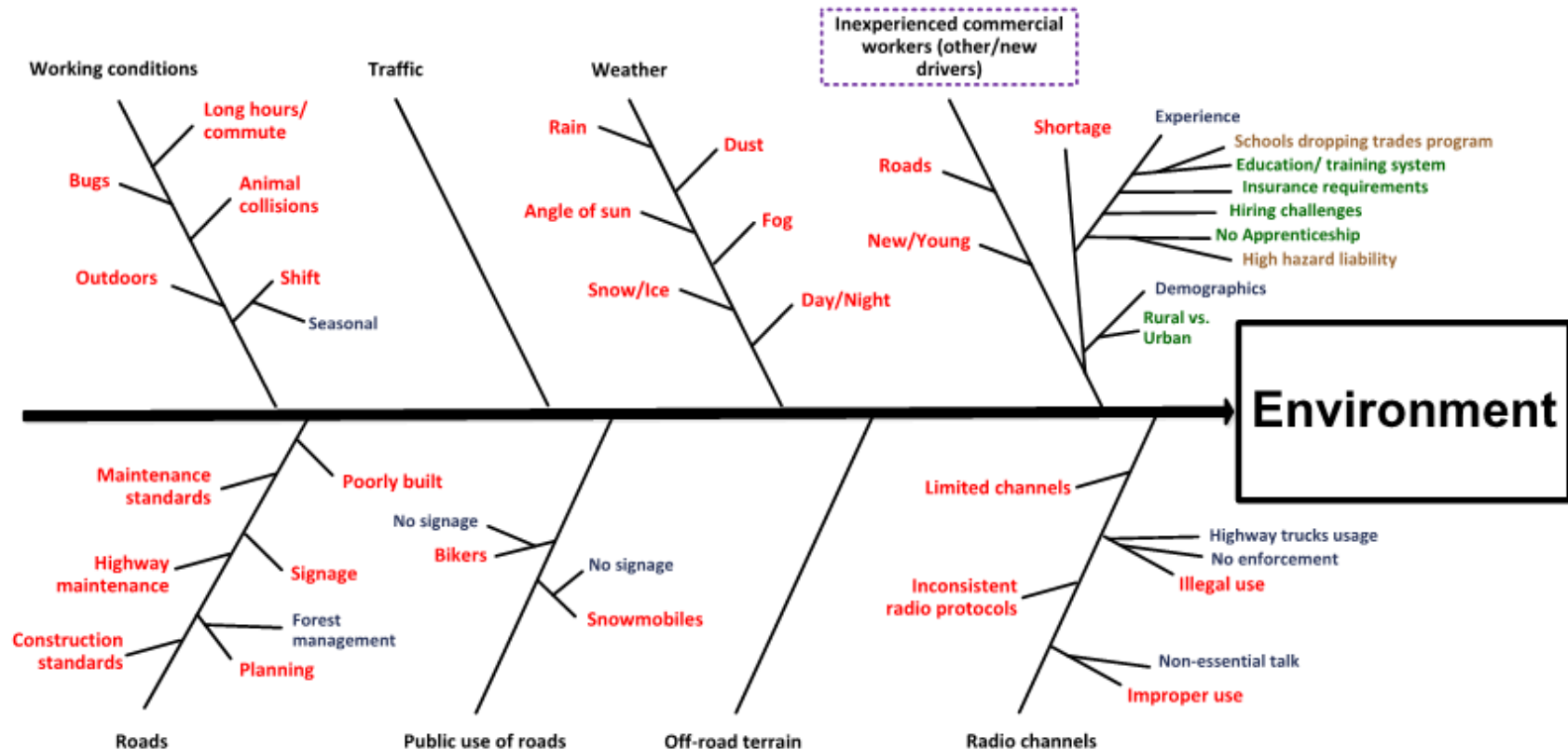
Root cause Analysis: Distracted Driving – Tools & Machines



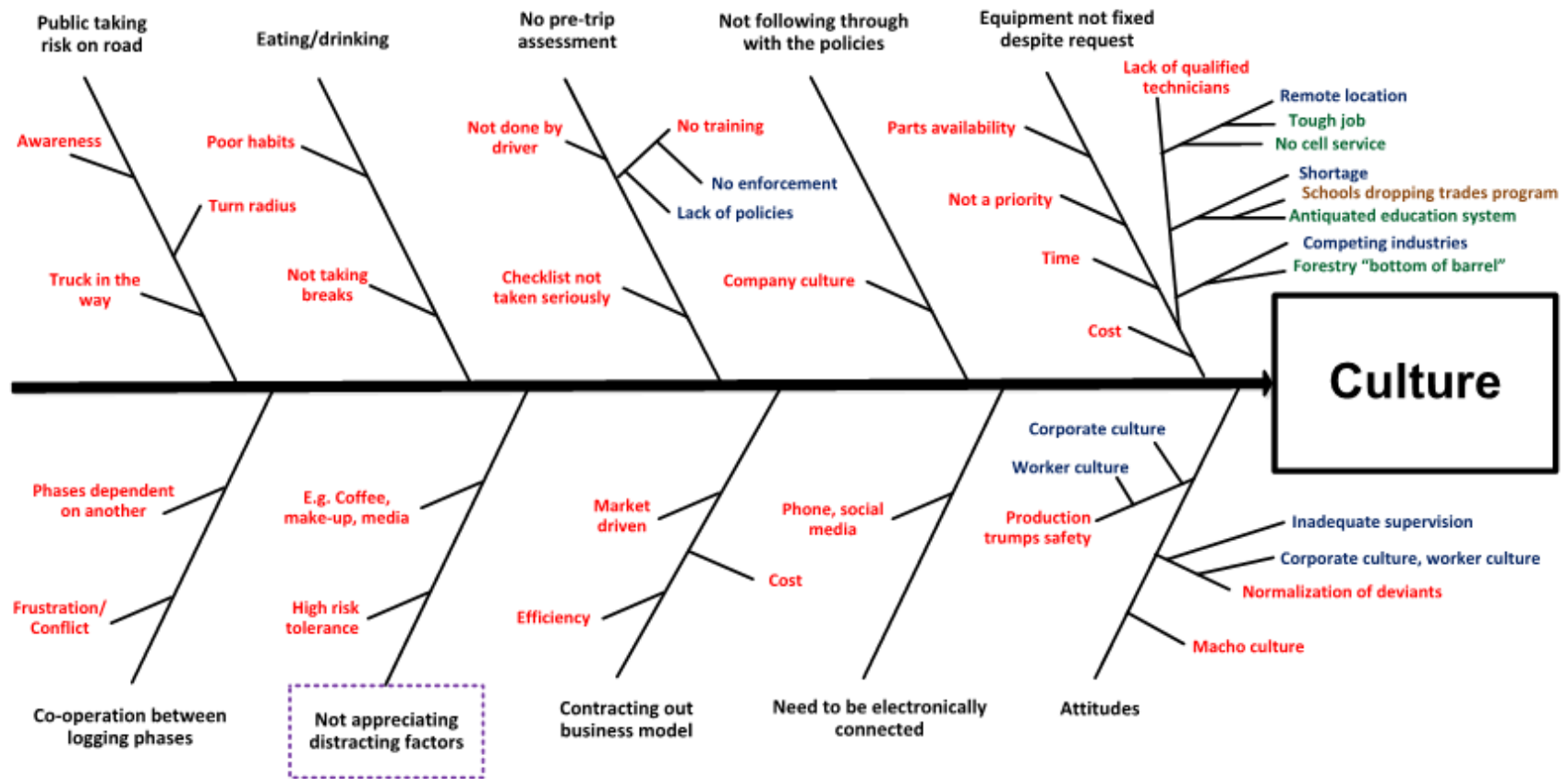
Root cause Analysis: Distracted Driving – Processes



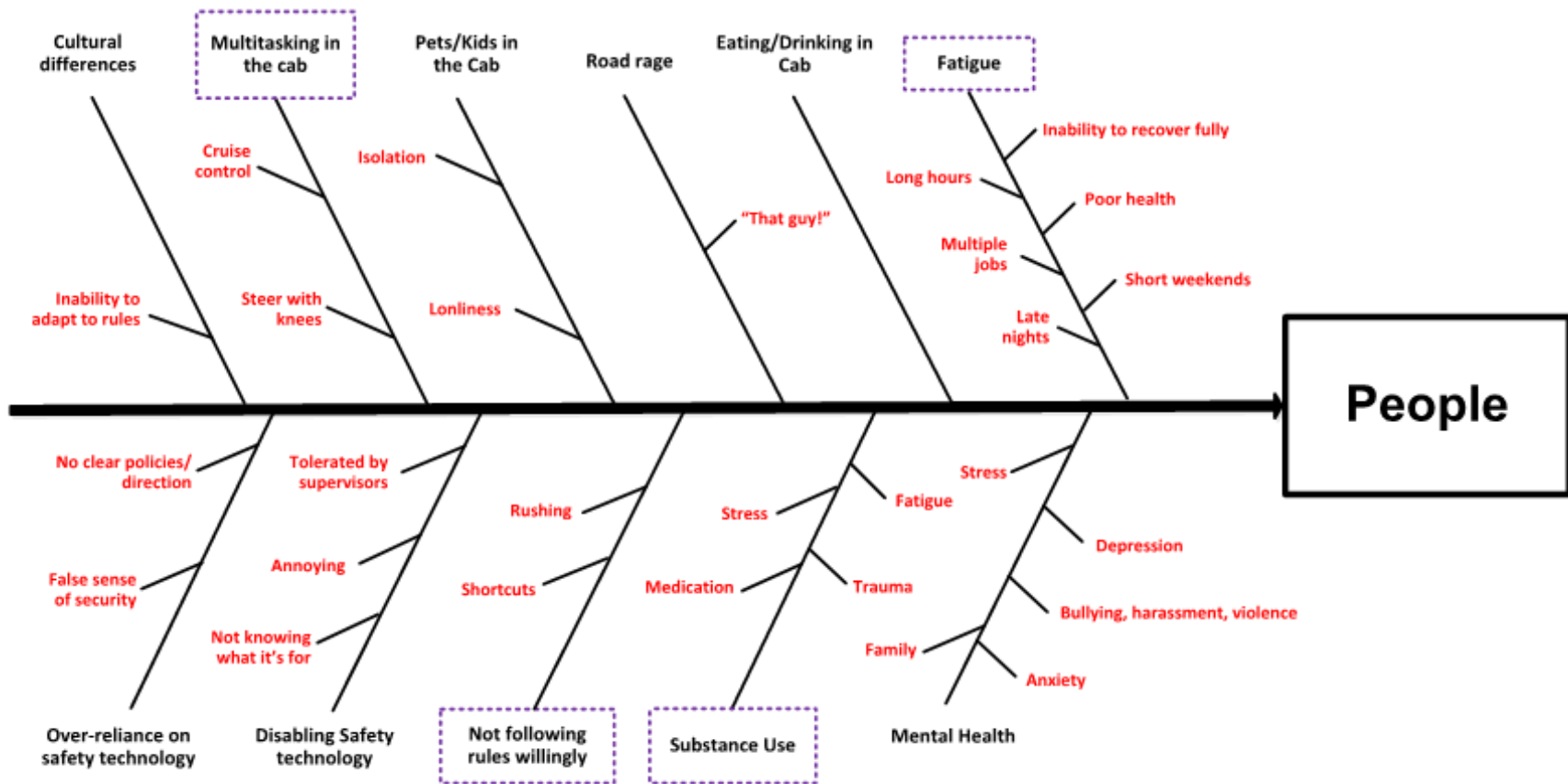
Root cause Analysis: Distracted Driving – Environment



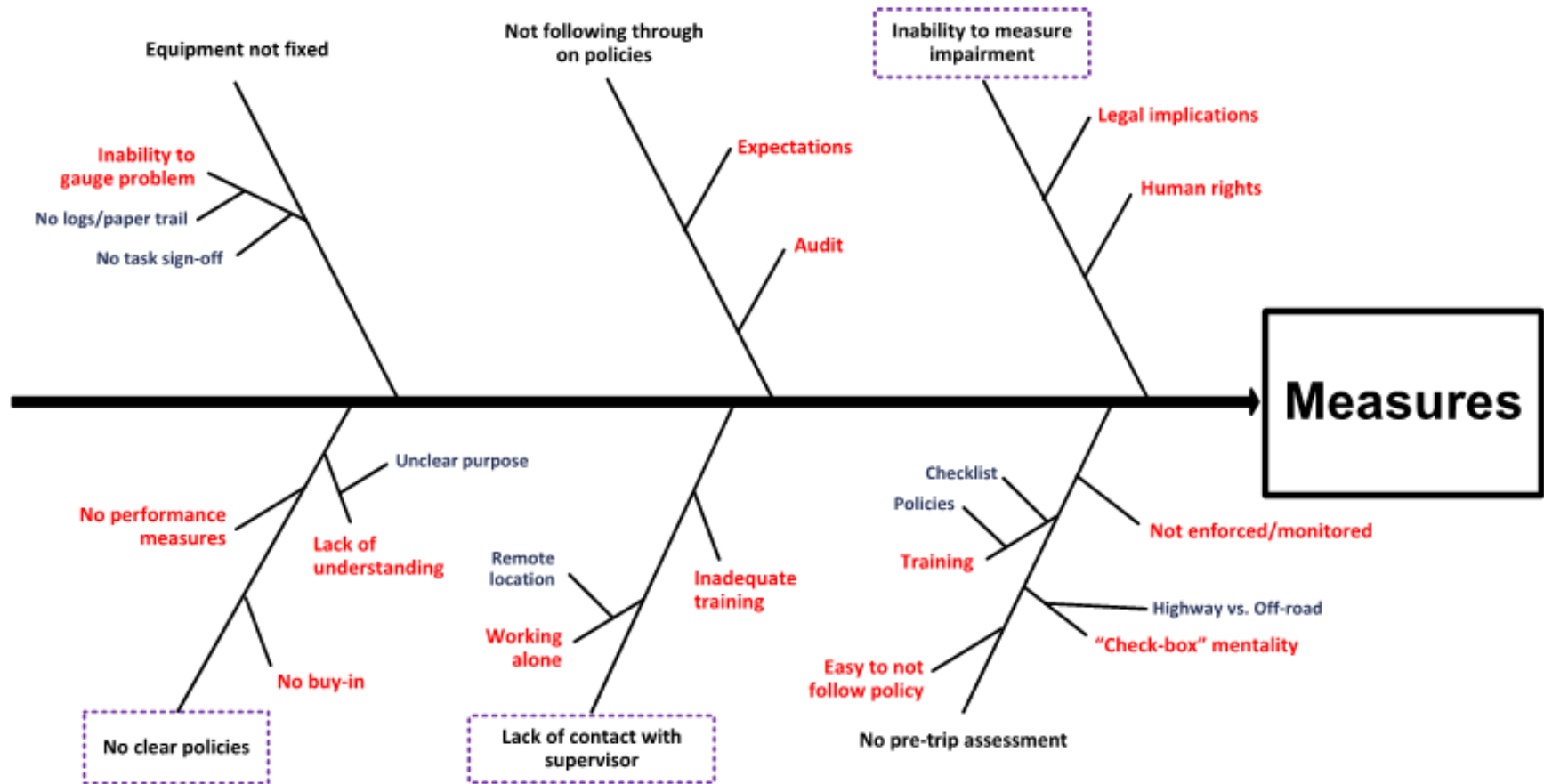
Root cause Analysis: Distracted Driving – Culture



Root cause Analysis: Distracted Driving – People



Root cause Analysis: Distracted Driving – Measures



12. Appendix A: Risk Assessment Methods/Standards

Appendix A: Risk Assessment Methods/Standards*

Ministry of Labour

1. Bayesian Analysis
2. Bow-tie analysis
3. Brainstorming (e.g. what-if)
4. Business impact analysis
5. Cause and effect analysis
6. Checklists
7. Computer Hazard and Operability Studies (CHAZOP)
8. Consequence Analysis (or Cause-Consequence Analysis)
9. Likelihood/Consequence matrix
10. Construction Hazard Assessment and Implication Review (CHAIR)
11. Decision tree
12. Delphi technique
13. Energy Barrier Analysis (or Energy Trace Barrier Analysis)
14. Environmental risk assessment
15. Event tree analysis
16. Failure Mode and Effect Analysis (FMEA)
17. Failure mode, effect and criticality analysis
18. Fault Tree Analysis
19. Fishbone (Ishikawa) Analysis
20. Hazard analysis and critical control points
21. Hazard and Operability studies (HAZOP)
22. Human Error Analysis (HEA)
23. Human reliability analysis
24. Job Safety Analysis (JSA)
25. Level of Protection Analysis (LOPA)
26. Markov analysis
27. Monte Carlo Analysis
28. Preliminary Hazard Analysis (PHA)
29. Reliability centered maintenance
30. Scenario analysis
31. Sneak circuit analysis
32. Structured/semi-structured interviews
33. SWIFT (i.e. structured what-if)
34. Systemic Cause Analysis Technique (SCAT)
35. Workplace Risk Assessment and Control (WRAC)

Risk Management Standards:

1. Risk Management Principles and Guidelines (ISO 31000:2018)
2. Risk Assessment Techniques (ISO/IEC 31010:2009)
3. OH&S Hazard Identification and Elimination and Risk Assessment and Control (CSA Z1002)
4. Process Safety Management (CSA Z767-17)
5. Enterprise Risk Management (COSO 2004)
6. Global Minerals Industry Risk Management (GMIRM)
7. International Council on Mining & Metals (ICMM)



* Not an exhaustive list

13. Appendix B: Workshop Contacts

For additional information or questions, please contact:

Sujoy Dey Ph.D. CRM
Corporate Risk Officer
Ministry of Labour
sujoy.dey@ontario.ca

Tom Welton CRSP
Director, General Prevention Services
Workplace Safety North
tomwelton@workplacesafetynorth.ca

14. Appendix C: Poster: Top 10 health and safety risks in Ontario logging operations

<https://www.workplacesafetynorth.ca/news/news-post/distracted-driving-top-health-and-safety-risk-logging-operations>



TOP 10 HEALTH AND SAFETY RISKS IN LOGGING OPERATIONS

As identified by workers, supervisors, and employers in the Ontario logging industry through a Ministry of Labour-facilitated risk assessment workshop in partnership with Workplace Safety North



1. Mobile equipment: Distracted driving.



2. Substance use: Under the influence of alcohol, prescription or other drugs.



3. Struck by: Danger zone infractions.



4. Machine lock out, guarding: Not properly locking out, improper equipment isolation.



5. Workers taking shortcuts: Gaps in training, coaching, supervision.



6. Working alone: In remote locations.



7. Regulation: Working directly on public access roads.



8. Fatigue: Fatigue-induced incidents.



9. Lifting equipment: Lifting logs or trees.



10. Maintenance: Mechanics standing on equipment or cylinders to perform maintenance.

The internal responsibility system (IRS) is a system, within a workplace, where everyone shares responsibility for occupational health and safety that is appropriate to their role and function within the workplace. All workplace parties — including employers, managers, supervisors, and workers — need to do their part to raise awareness of risks, and follow and promote safety procedures to help make workplaces safer.

For more information, please contact your WSN Health and Safety Specialist or visit workplacesafetynorth.ca



705 474 7233
1 888 730 7821 (Toll free Ontario)
workplacesafetynorth.ca



16. Appendix D: Poster: Top 10 causes of distracted driving in Ontario logging operations
<https://www.workplacesafetynorth.ca/news/news-post/industry-experts-analyze-causes-distracted-driving-job>

Top 10 causes of distracted driving in Ontario logging operations

Devices take attention away from the task of driving

As identified by workers, supervisors, and employers in the Ontario logging industry through Ministry of Labour-facilitated risk assessment and root-cause analysis workshops in partnership with Workplace Safety North.

 <p>1. Electronic devices - phones, FM or two-way radios</p>	 <p>6. Inability to measure impairment - e.g. drug tests</p>
 <p>2. Fatigue - long work hours</p>	 <p>7. Multi-tasking in the cab - using two-way radio, calling in mileage</p>
 <p>3. Not appreciating distracting factors - become dulled to over time, poor road conditions</p>	 <p>8. No clear policies - e.g. communication and reinforcement</p>
 <p>4. Lack of contact with supervisor - isolated, independent work environment</p>	 <p>9. Inexperienced commercial workers - contract or new drivers, new to bush roads</p>
 <p>5. Substance use - alcohol, drugs</p>	 <p>10. Not following rules willingly - speeding, load management</p>

For a detailed list of critical controls you can put in place, read the technical paper: Root cause analysis report of distracted driving in Ontario logging operations.

For more information, please contact your WSN Health and Safety Specialist or visit workplacesafetynorth.ca



1-888-730-7821 Toll-free Ontario
705-474-7233
workplacesafetynorth.ca
    

