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Guide to doing a Learning Review

This guide aims to help forestry businesses improve the way they review incidents. It describes a new approach called Learning Reviews.

The Learning Review approach was developed by the US Forest Service. It is being applied in New Zealand in an initiative involving FISC, WorkSafe and Scion.

What's a Learning Review and how is it different from a traditional investigation?

Learning Reviews differ from traditional investigations in their purpose, the way they're conducted and the focus of the recommendations.

The purpose of a Learning Review is to learn and improve. They're conducted in a way that is designed to uncover how the incident happened, including things that might not be revealed by a traditional investigation. The recommendations are focused on improving the whole 'system' (the way work is done in forestry) rather than on individuals.

Why do they help?

Learning Reviews recognise two important things – that we can't escape human error (even the most competent operator makes mistakes) and that errors are a product of the 'system' rather than just workers making mistakes. Learning Reviews uncover how the system might have contributed to errors, and more importantly, how the system can be improved to reduce the impact of those errors. This is similar to the thinking behind seat belts – where vehicle engineers accept people are always going to crash so they install seat belts to protect drivers.

How does it work?

Learning Reviews are done in three steps:

- **Step 1** – Collecting information
- **Step 2** – Analysing and 'sense-making'
- **Step 3** – Reporting and sharing

This guide walks you through each step, showing how you can take a Learning Review approach with your reviews.

Step 1
Collecting information

Getting people to tell their stories

Information collection begins with a conversation to establish what the operation involves, how the work is done, and what happened on the day of the incident. It is about getting people to tell their stories – their descriptions, not their explanations.

Information collection should be done with as little background knowledge of the incident as possible to avoid information being collected as evidence to support theories about what happened.

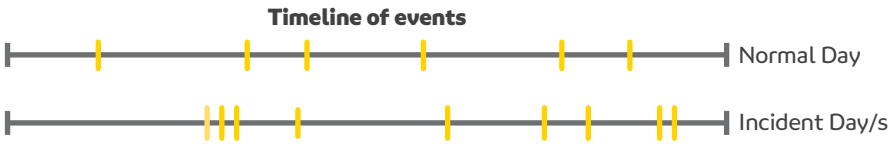
WHO?	*Who do you talk to?*	▸ Operational people involved in the incident, regardless of whether they were directly involved or if they witnessed the event unfolding. ▸ Talking with supervisors/managers can help to get a clearer picture of differences between how they thought the work was being done, and how it was actually being done.
	Who should do the interviews?	▸ The review team should consist of one or two people who are not experts in the task and come from outside the crew, such as an administrator, operations/forest manager or member of another crew. ▸ The reviewers should be regarded as genuine, and be able to record information quickly and accurately.
WHAT?		▸ The goal is to collect as much information as possible. ▸ Try to establish what the 'normal' operational process looked like without referring to the incident. Introduce the incident at the end, when the interviewee feels comfortable and has more of an understanding of the Learning Review process. ▸ When talking about the incident, encourage people to tell you what happened from their perspective, and to include all the detail they can. Start with simple questions and avoid assumptions. Ask about the days before the incident to understand the pressures and influences on the incident day. ▸ Build an understanding of the history of those involved in the incident. Major personal and professional events that may have influenced the participant are an important part of their stories. Influencing factors can go back weeks, or even further. ▸ Don't persuade, defend or interrupt. Be curious and non-judgemental. Your job is to listen.
WHERE?		▸ Ideally meet the crew outdoors on their current forestry site. Being in a similar environment can help people remember and helps the reviewer understand things that are hard to describe with words alone. Operations can also continue, important for encouraging cooperation with the review.
HOW?		▸ Reviewers should speak to participants individually and without supervisors present. If relevant, conduct a separate interview with the supervisor. ▸ Catch people on breaks. ▸ Listen and write down the details people remember. Understanding what conditions they noticed will help you reconstruct the focus of their attention at the time. ▸ During this phase, it is important to not problem solve, generalise or draw conclusions
TIMEFRAME		▸ The process can take from 2 hours to 2 days. But there is no time limit ▸ Get participants' phone numbers in case you need to clarify anything, and give them a contact point for you, in case they remember more details they think are important.

For examples of questions you can use to help you collect information see Appendix 1.

Building the story

The next step is to create a detailed story that captures everyone's perspectives.
Avoid trying to resolve differing accounts into a single story.
Provide the draft story to people involved in the incident to ensure it reflects their recollection.
Supplement the story with an accurate description of the incident site. Diagrams, photographs and maps can all be useful.

What to do with the information you've collected

DIVIDE THE INFO	Divide the information you've gathered into two groups: ▸ Objective information that is unbiased and observable facts. ▸ Subjective information that can't be verified, such as opinions and judgements.
IDENTIFY KEY ACTIONS	▸ Identify key decisions/actions. ▸ Avoid descriptions like 'the worker failed to follow tool control protocols'. Instead, focus on actions as they appeared to the people in the situation (e.g. the worker returned the closed toolbox, complying with the tool control procedure, but was unaware the tool was still in the machine). ▸ Don't get bogged down trying to decide if an action was a deliberate decision. Simply list them.
IDENTIFY KEY INFLUENCES	▸ Identify key factors that may have influenced people. Understanding the interactions between these factors is critical to the next phase, so the more detail the greater the possibility of understanding the event. ▸ For examples of questions to ask to help understand conditions and pressures see Appendix 2.
CREATE AN INFORMATION MAP	▸ Create an **Information Map** to build a basic image of the information. ▸ Information can be arranged around individuals, actions, events or timelines. For example, you can arrange coloured Post-it notes on a timeline, using different coloured Post-its for different people. You can also divide the information into subjective and objective data. In this way, interactions, interconnections, decisions/actions and contradictions can be depicted like a map. ▸ Another approach is to create a timeline of events on a normal day, and below that create a timeline for the days leading up to the incident day.  ▸ You can show the information map and pictures/drawings to the focus group in the next stage to help them understand the event and conditions that supported decisions and actions. See an example of an information map in Appendix 3.
WRITE UP THE STORY	▸ Write the story of the incident and the days before using the information collection map. ▸ Use objective information to create the timeline. ▸ Display subjective information on the side of the page. It's crucial to the story and enables readers to walk in the shoes of the key players. ▸ The story should be written from the point of view of those involved, not from an outsiders' view. It should show how the participants' decisions made sense to them based on information they had at the time. ▸ It is inevitable that people will have different perspectives and memories of what happened and why. Don't try to change their perceptions. Rather, capture these differences as they could help explain someone's state of mind and how that affected their decisions. It could also reflect issues with the 'system' that will be looked at in the next phase.

Step 2
'Sense-making' and focus groups

'Sense-making' is about understanding why people did what they did at the time.

- It removes the distorting effects of hindsight – which can make it easy to say what people should have done during an event.
- Understanding why people did what they did helps us come up with more useful recommendations for improvements.
- 'Sense-making' is done using focus groups of highly experienced workers.

Focus groups – ask the experts

Focus groups should be made up of highly experienced people in the same roles as those involved in the incident. These 'experts in their field' talk about what they usually do in similar scenarios to the incident, offering insights into how they decrease exposure to the risks. We can use their knowledge to create recommendations that work. People involved in the incident should not be in the focus groups.

Focus groups can involve:

- **A whole crew:** The advantage of talking to a whole crew is that often they will have worked in several roles and have a deeper understanding of the work. This is less resource-intensive than bringing together people from different crews.
- **Task specific crew:** Alternatively, visit different crews and talk to individuals who do the same job. Or bring together three or four workers from different crews, which means these experts can share their experiences and can lead to spontaneous trouble-shooting.
- **Subject matter experts:** You could also speak to professional or academic specialists to get a more complete picture of what happened and to help create innovative, practical solutions.

Ideally, focus groups should be conducted onsite. Phone calls can be used to contact experts that can't attend, or are only required to provide specialised input. Offsite focus groups can create a more focussed discussion as there are fewer distractions.

Facilitation

WHO?	- Ideally, focus groups should have two facilitators, one to ask questions and one to take notes. But one person with a recorder can also work. - The facilitators should have little knowledge of the task/operation and should be considered genuine. - To ensure the facilitators are bringing 'fresh eyes' to the review, ideally they should not be health and safety professionals. However, health and safety staff should be consulted as subject matter experts.
HOW?	- Explain what you know about the event, then open up the discussion for others to comment. - It's important that the facilitator remains objective, quiet and listens. They should not share opinions. If the facilitator is opinionated and judgemental, the conversation will close down.
PROTECTIONS	- Confidentiality is important to collect honest views and experiences. If the facilitator hears about unsafe practices they need to remain quiet and objective. Uncovering things like this is the purpose of the review. It provides insights into how work is done and enables us to improve an area of the system we might not have known was vulnerable.

For tips on running a focus group see Appendix 4.

Zooming in and zooming out

Zooming in: If someone says something is 'common knowledge' see if that's what the group thinks. Ask them why they think something was obvious or not.
Zooming out: Ask people to step back from the day-to-day and think about when work is handed over from one person/ team to another, and the potential for misunderstanding is high. Do this by asking questions like: How much of this would be new information? How many of you would be aware of all the moving pieces here?

Step 3
Reporting and learning

Reporting

Create a report exploring the key issues which emerged during the review.
The report should be less about error control strategies, and more about managing the system and unravelling goal conflicts in the system – to create an environment where workers can be successful.
It should describe weakenesses in the system that require intervention by management.

Participant follow up

Follow up with interviewees and focus group members to thank them for their involvement and demonstrate the implementation of any recommendations. Seeing their ideas and commitment lead to improvements is critical for the success of future learning reviews.

Appendix 1

Examples of questions to ask to help you collect information:

AN **OBSERVATION** IS MADE	*"Things seemed a little off."*	Ask about the **cues** they picked up	▸ What specifically made you think that things seemed off? ▸ What were you experiencing at the time?
AN **ASSESSMENT** OR JUDGEMENT IS MADE	*"It was broken."*	Ask about **how** they arrived at that	▸ How could you tell? ▸ What tipped you off?
A **CHOICE** OR DECISION IS MADE	*"So I decided to call the mechanic."*	Ask about any **options** they considered	▸ What bought you to that decision? ▸ Have you ever done this in the past?
"I **KNEW**..." IS STATED	*"I knew I had to fix it before going home."*	Ask them **how** they knew it	▸ How did you know? ▸ Was this something you had been told, or had happened in the past?

A **STATE OF MIND** IS MENTIONED	*"It was really frustrating."*	Ask them about other **external factors** present at the time	▸ What else was going on to make you frustrated? ▸ When did you first notice feeling frustrated?
A MENTAL MODEL FOR **NORMAL OPERATIONS** IS EXPLAINED	*"Usually when I press this button, the machine turns on."*	Ask them to tell you about **normal work**	▸ Do you always turn the machine on that way? ▸ What usually happens next or right before?
AN **ACTION** IS EXPLAINED	*"I turned the machine off while we worked on it."*	Ask them about **alternatives**	▸ Were there other courses of action available to you at the time?
ASKING FOR **HELP** IS MENTIONED	*"After 20 minutes, I called my supervisor."*	Ask them about the point at which they decided to **ask for help**	▸ Was there a particular reason you called your supervisor at that moment? ▸ How did you know that you had to call the supervisor?

Appendix 2

Examples of questions to ask to help you understand conditions and pressure:

- What was happening? Were the actions/decisions part of 'every-day-work' (accepted practice or culture)?
- If possible identify the criteria people used to prioritise work.
- What were the workers trying to achieve and why?
- What knowledge did people have and how did they apply it?
- What were people looking at, listening to, feeling, and thinking as the event unfolded? Where was their attention focused and why?
- How were they dealing with risk and hazards?
- What was rewarded, punished, and measured on the site? How did these influence the actions and assessments of those involved?
- What were the previous hours/days/weeks like for the people involved?
- What physical and environmental conditions influenced the event?

Appendix 3

Example of an information map:

Appendix 4

Tips on running a focus group:

SET EXPECTATIONS	▸ Counter the urge to find a single explanation for the incident. Begin the focus group by setting the expectation for complexity. ▸ Assure members of confidentiality and establish a safe environment to share and discuss sensitive issues. ▸ Set the goals of the review and rules for group – like prohibiting language associated with blame.
PRESENT THE STORY	▸ Present the story you prepared in Step 1 and invite people to write down ideas for improvement that come up during the timeline reconstruction, so they can bring them up later. Also invite everyone to think about the lessons from the event.
DISCUSS KEY INFLUENCES	▸ Get the group to discuss the key influences on conditions that you identified in Step 1. Identify the main factors that influenced what happened, and use these as starting points for your focus group discussions. Typically, you would expect to have three or four factors to begin with.
DYNAMIC INQUIRY	▸ Start the dynamic inquiry stage by asking people if they've faced similar situations. Encourage them to describe their experiences. What did they do? Why do they think this happens? What would they recommend? Can a development in technology fix this? ▸ When you begin discussing the lessons, encourage everyone to speak up and to not censor themselves. This should be a brainstorming session. ▸ Step in when discussion focuses on people. Ask for technical- or gear-related solutions. ▸ To avoid the discuss turning towards blame, steer clear of asking people why something happened and instead as how. Do not ask if they thought what someone did was right.