

Workshop exercise

Measuring learning

Introduction

Measuring learning is a workshop exercise designed to be carried out with a group of 6-12 people. It will take approximately 2 hours to complete.

The workshop is comprised of this leaflet and the video called *Learning indicators*, found on the Hearts and Minds website:

<https://heartsandminds.energyinst.org/toolkit/measuring-learning>

About *Measuring learning*

Learning from incidents (LFI) is a key part of how organisations improve safety and business performance. However, how do you know if your organisation is learning?

Measuring learning is a workshop-based approach to help the organisation discover what the indicators of learning are, what evidence is being gathered for those indicators, what that evidence can tell us about how the organisation is learning, and whether that evidence can be improved.



Video content

The video has been designed to help you facilitate the workshop. It consists of two parts. Pause the video when prompted and carry out the workshop exercises within this leaflet with your group.

In part 1, the group will learn about 'hard' and 'soft' learning indicators – these are the things that tells us whether learning has happened, or can happen. The group will then be asked to identify examples of each type of indicator that could be measured in the organisation (exercises 1 and 2).

In part 2, the group will be asked to select a small number of learning indicators, and then to explore what evidence is available in the organisation to measure these. What does this evidence tell us? And how is that evidence being used?

Key lessons

- Understand the difference between 'hard' and 'soft' indicators of learning.
- Understand the different types of evidence that can be gathered for each learning indicator, and what that evidence tells us about how well the organisation is learning.

What do you need?

To carry out this workshop exercise, you will need:

- A skilled facilitator.
- A copy of the *Learning indicators* video, and a screen to display it on.
- A group of workshop participants.
- A comfortable location to hold the workshop for up to 2 hours.
- Copies of the worksheets in this leaflet, pens and sticky notes.

Want more on LFI?

Explore these other LFI resources from the Energy Institute:

- *Hearts and Minds: Learning from incidents* (<https://heartsandminds.energyinst.org/toolkit/learning-from-incident>)
- Reflective learning videos (<http://heartsandminds.energyinst.org/toolkit/reflective-lfi>)
- *Learning from incidents, accidents and events* (<https://publishing.energyinst.org/topics/human-and-organisational-factors/learning-from-incident-accidents-and-events>)
- Toolbox incident database (<https://toolbox.energyinst.org/>)



Exercise 1: Hard learning indicators (10 minutes)

As you just heard in the video, hard learning indicators are examples of what should change after an incident. As a group, think about the following two questions:

1. What changes would you expect an organisation to make following an incident investigation? (One example might be a change to a procedure)
2. After receiving an incident alert, what changes would you expect from (or to) individuals? (For example, a change in their knowledge about a hazard, or a change in how they do things)

Discuss the answers to these two questions in your group. Write down any answers to either question on a sticky note. Each sticky note should contain just one answer.

Exercise 2a: Soft learning indicators (20 minutes)

Soft learning indicators are what is needed to make learning more likely to happen. They are not direct evidence of learning but show that your organisation has strong systems and has prepared people to learn.

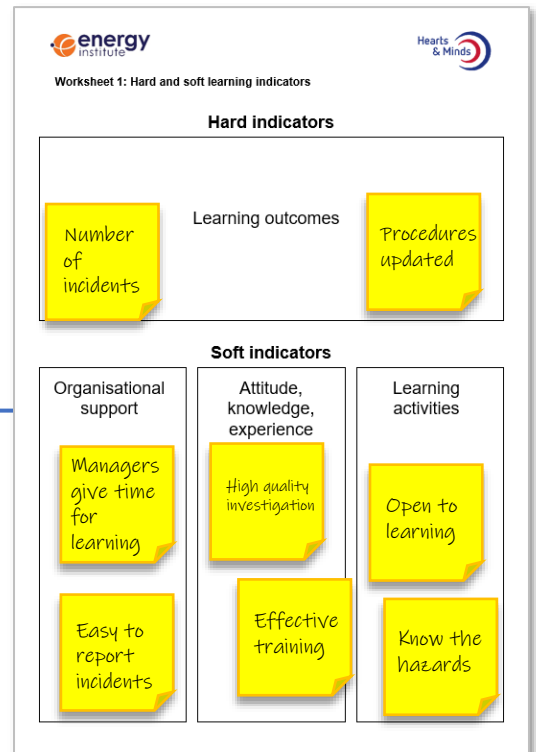
As a group, discuss the following questions:

- What **organisational support** is needed to learn from incidents? (Examples are managers giving time for reflection on incident alerts, and effective ways to report incidents)
- What kinds of **attitudes, knowledge, and experiences** do workers need to learn from or share incidents? (Examples are a positive attitude to safety, knowledge of hazards, and experience with tasks like those in an incident alert)
- What is needed for **learning activities** (like accident investigations, training, and toolbox talks) to be high quality and effective? (Examples include high-quality information and open discussion)

Write down any answers to these questions on a sticky note. Each sticky note should contain just one answer.

Using worksheet 1:

1. Place all the sticky notes from exercise 1 in the 'hard indicator' area of the worksheet.
2. Place each sticky note from exercise 2a in either the 'organisational support', 'learning activities', or 'attitude, knowledge, experience' boxes.



Example, for illustrative purposes only

Exercise 2b: Hard and soft learning indicator review (10 minutes)

A study conducted by university researchers identified different examples of soft and hard indicators. The results of this research can be seen in Worksheet 2.

These are not the 'right' answers but can be useful for extra ideas.

1. Take some time to read through these examples of the different hard and soft learning indicators.
2. Compare these examples to your group's worksheet and notice any differences.
3. Discuss with your group if you want to add or change anything on worksheet 1.

Exercise 2c: Prioritise (10 minutes)

The next set of exercises will look at some of these hard and soft learning indicators in more detail.

Discuss with your group which indicators are particularly important for learning from incidents.

Pick up to **three** to focus on in the remaining exercises.



Exercise 3a: Evidence for learning (20 minutes)

1. Select one of the learning indicators that you chose to focus on during the previous exercise. Write its name at the top of worksheet 3.
2. In your group, discuss what kinds of evidence could your organisation use to assess the learning indicator you have chosen.

Consider these questions to help your discussion:

- **Personal stories:** Who has experiences connected to this indicator? What verbal or written feedback can be collected from these people?
- **Numbers:** What numerical data is collected that could give some insight into this indicator?
- **Written documents:** What written records could give some insight into this indicator?

Write these on a sticky note (one piece of evidence per note) and place this in the 'evidence' box of worksheet 3.

3. Repeat this exercise for the two other learning indicators chosen in exercise 2c using new copies of worksheet 3.

Exercise 3b: Quality evidence for learning (20 minutes)

For each piece of evidence, as a group discuss how meaningful the evidence is.

- Does the evidence *really* tell us something useful? Does it tell us what we think it does?
- What are limitations of the evidence? For example, are response rates to questionnaires low or data poor quality?

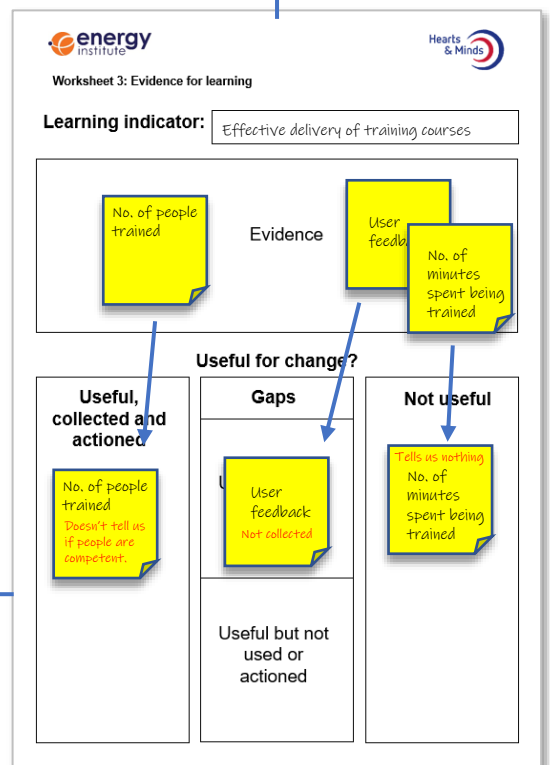
Write any limitations or criticisms of the evidence on the sticky note in a different colour.

Exercise 3c: Using evidence for change (20 minutes)

For each piece of evidence discuss as a group how useful the evidence is. In other words, could the organisation use the evidence to improve learning from incidents?

Place the sticky notes in the appropriate box:

- **Useful, collected and actioned** – this tells us something about whether the organisation is learning
- **Gaps** – the evidence could be useful, but the organisation does not have access to or collect this information, or doesn't do anything with it.
- **Not useful** – this does not tell us anything useful about whether the organisation is learning.



Example, for illustrative purposes only

Exercise 4: Priorities

It is likely that your group has identified several gaps – e.g. where evidence can be improved, where you have little or limited evidence, or evidence that is collected but not being used in a way that would improve learning from incidents.

Make sure the gaps are written clearly on the sticky note (one gap per sticky note).

Using worksheet 4, consider how much effort it would take to address these gaps and what impact it would have. Place each sticky note on the graph of worksheet 4 (e.g. high impact, low effort).

Follow-up

Before ending the workshop, discuss:

- What have you learned today?
- What do you want to happen as a result of the workshop?
- What might you do differently as a result of this workshop?
- When are you next going to meet?

Link to learning from incidents processes

This is the LFI process model (from *Hearts and Minds: Learning from incidents*). This is the typical process that organisations follow when learning from incidents. If you are using *Hearts and Minds: Learning from incidents*, you may find it helpful to align the learning indicators uncovered in *Measuring learning* to different parts of the model.

Whilst there is not a 1:1 relationship to the model, typically, hard indicators are outcomes found at the beginning of the process (e.g. incidents have or have not happened) or at the end (changes to behaviours, processes, systems etc.).

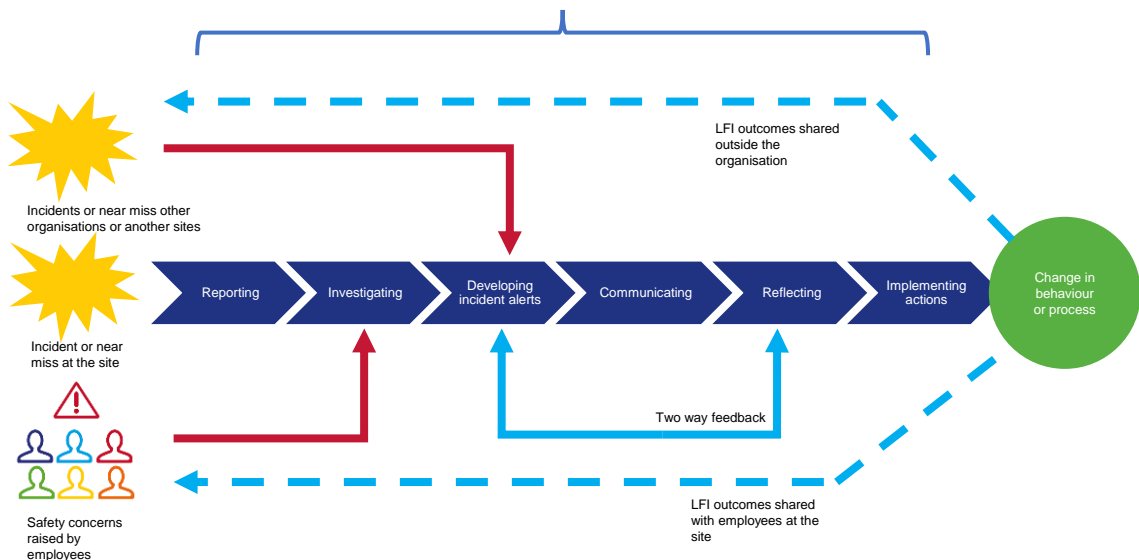
Soft indicators tell us about the effectiveness of our LFI processes (like investigation, communication, learning activities, etc.). For each step in the LFI process there will be aspects of organisational support, learning activities, and attitudes, knowledge and experiences that help or hinder learning.

LFI process model

Hard indicators

Soft indicators

Hard indicators



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Worksheet 1: Hard and soft learning indicators

Hard indicators

Learning outcomes

Soft indicators

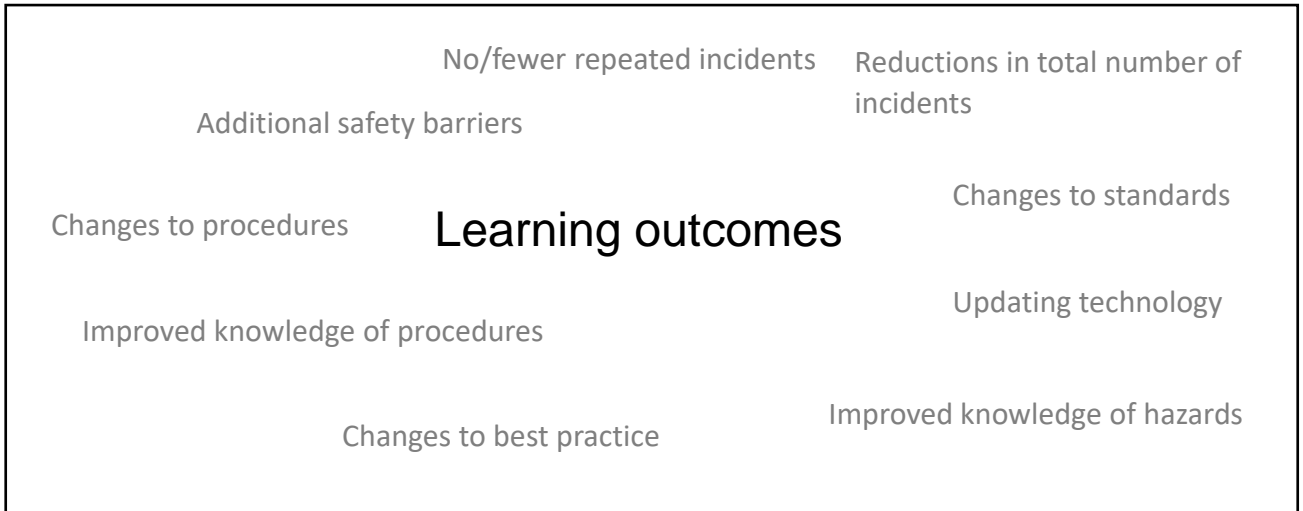
Organisational
support

Attitude,
knowledge,
experience

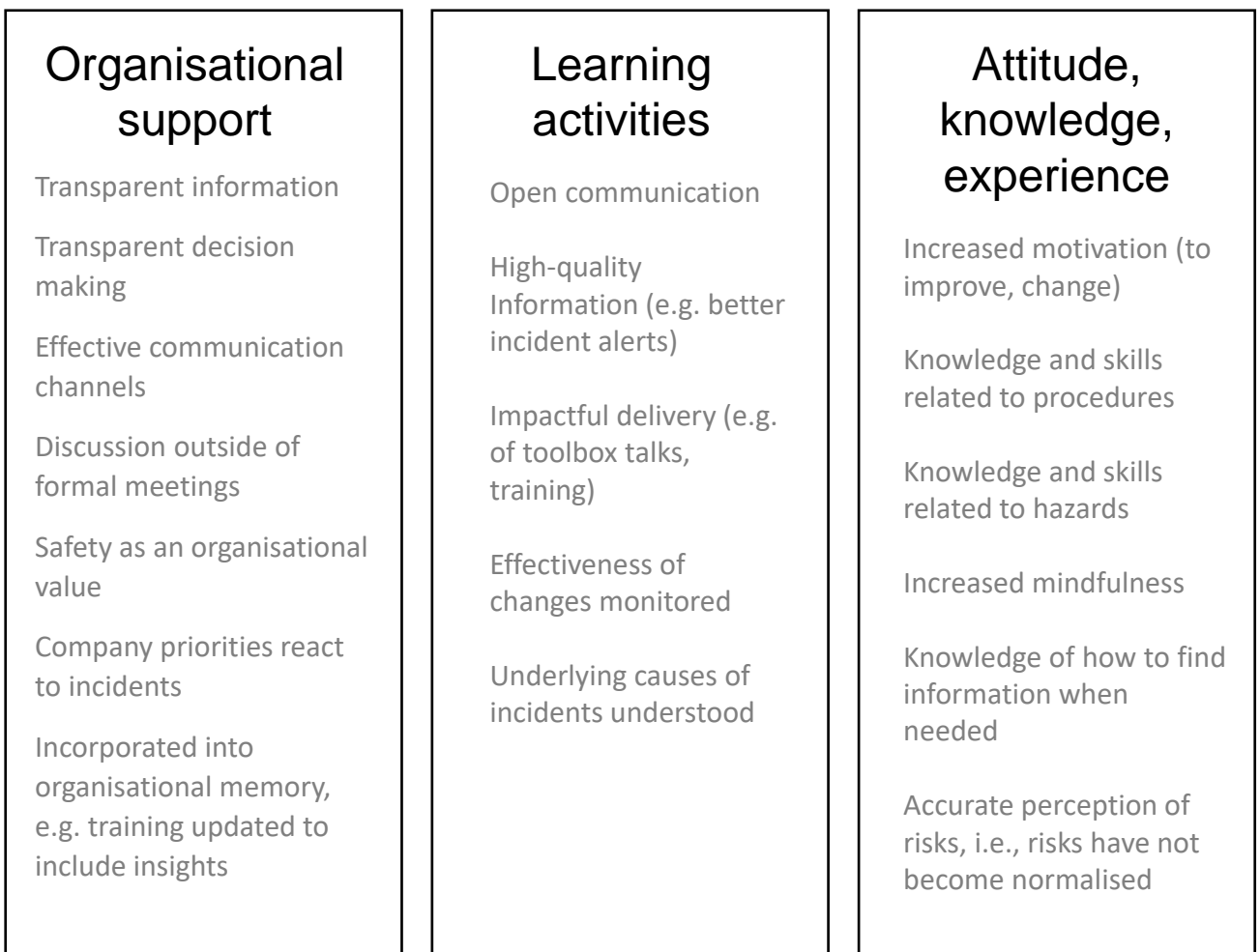
Learning
activities

Worksheet 2: Example hard and soft learning indicators

Hard indicators



Soft indicators



Worksheet 3: Evidence for learning**Learning indicator:**

Evidence

Useful for change?

Useful, collected and actioned	Gaps	Not useful
	Useful but not collected	
	Useful but not used or actioned	

Worksheet 3: Evidence for learning**Learning indicator:**

Evidence

Useful for change?

Useful, collected and actioned	Gaps	Not useful
	Useful but not collected	
	Useful but not used or actioned	

Worksheet 3: Evidence for learning**Learning indicator:**

Evidence

Useful for change?

Useful, collected and actioned	Gaps	Not useful
	Useful but not collected	
	Useful but not used or actioned	

Worksheet 4: Gap analysis

Impact

Low

High

Low

Low importance
Low effort

High importance
Low effort

Effort

High

Low importance
High effort

High importance
High effort