

CENTER FOR OFFSHORE SAFETY PUBLICATION
COS-3-11

GUIDANCE FOR DEVELOPING A LEARNING FROM NORMAL WORK PROGRAM

FIRST EDITION | SEPTEMBER 2025



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1. EXECUTIVE SUMMARY

WHAT IS LEARNING FROM NORMAL WORK?

Learning From Normal Work (LFNW) allows organizations to learn and improve without waiting for incidents. “Normal work” represents the everyday tasks that workers get done successfully and without incident, despite the constraints, challenges, and restrictions they often face. Learning From Normal Work is a safety framework that aids in understanding the complex interactions of workers and operational risk before they lead to incidents.

WHY DO WE NEED LEARNING FROM NORMAL WORK?

Historically, improvements in safety have been based on learning lessons reactively after accidents, incidents, and analysis of what went wrong. The more we improve, the less accidents we have; the less accidents, the less we have to keep learning and improving. LFNW helps solve this dilemma by providing an opportunity to learn proactively without waiting for an accident or a near-miss to happen.

WHO IS INVOLVED IN LEARNING FROM NORMAL WORK?

For a successful implementation of LFNW, an organizational effort is required and involves:

- **Leaders:** Leadership support is key to promoting activities and tasks designed to learn from normal work and critical to the success of establishing a cultural mindset in implementing LFNW tools.
- **Front-line workers:** The people doing the work; workers continuously adapt to the challenges and are exposed to the greatest risk.
- **Health and safety professionals:** They champion and educate the organization in LFNW and are the catalysts for change.

WHAT TOOLS ARE USED FOR LEARNING FROM NORMAL WORK?

Several LFNW methods are available and can be used, in addition to a simple workforce engagement; in this document, we will refer to the following:

- **Learning Teams:** Focus on identifying challenges, constraints, and error traps that make workers’ jobs more difficult.
- **Finding the Next Incident:** Focus on identifying the activity with the worst potential outcome that can lead to fatalities or permanent disabilities.
- **Walk Through Talk Through:** Focus on analyzing a certain task to understand its steps, identify the likely error traps, and how to improve it.

WHAT DEFINES SUCCESS?

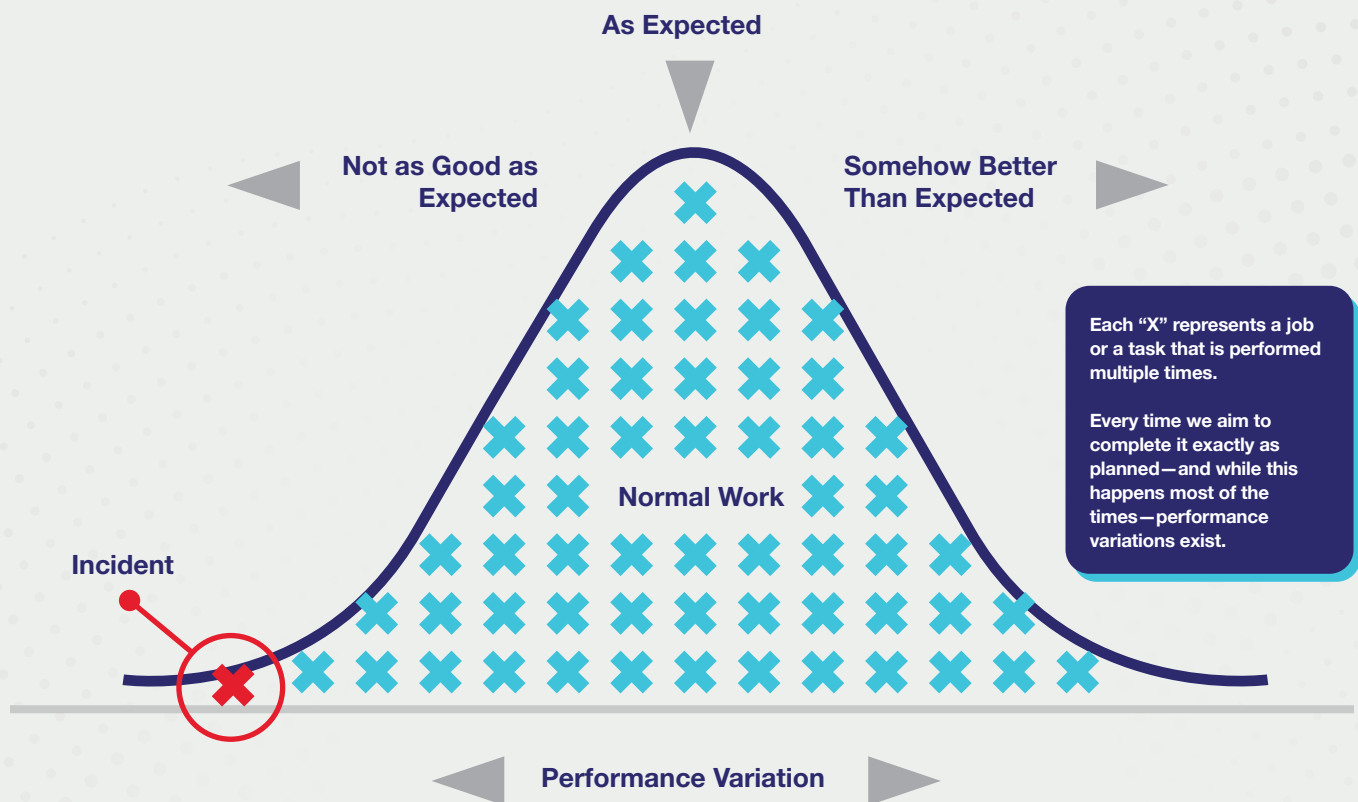
Instead of linking LFNW efforts solely to lagging indicators, success should be associated with the learnings captured through improvement opportunities. Each identified improvement opportunity is a clearer measure of success that enhances working conditions. The focus should shift from merely lagging KPIs to aspects such as identified error traps, provided resources, and removed constraints.

2. HOW NORMAL IS NORMAL WORK?

The traditional view is that safety is the absence of incidents, and that to learn and improve, incidents needed to be eliminated by investigating and generating corrective actions that will prevent future incidents. Worksites with low incident rates were considered “safe.”

This approach has been effective for a number of years, and incident rates have dramatically decreased. But the problem with this approach is that the data becomes smaller and smaller and not very predictive. If we are only learning from incidents, as our incident rates decline, so do our opportunities to learn.

However, our workforce performs a large number of tasks each day, and defining work as either a success or a failure can be an oversimplification of what actually occurs. Each day, our workforce uses the policies, procedures, tools, and equipment that the company provides to complete the task. As they perform the task, they must adapt to accommodate changes in the work environment, or shortfalls in the written plans or the tools and equipment provided. They may need to fill in any gaps in the procedures in order to accomplish the task. These adjustments enable the work to be successful.



Normal work occurs when a task is completed without incident, although often slightly in variation from how it was ideally planned and expected. That variation depends on the adaptation required to overcome challenges and restrictions faced in the everyday work, and that can be used to understand how normal work was successful.

3. HOW TO IMPLEMENT LEARNING FROM NORMAL WORK

The completion of activities and tasks in a safe and environmentally sound manner is built on a foundation of lessons learned from past work and the input from resources involved in the design, development, management, and review of the plan, do, check, act stages of a typical operational feedback loop.

Establishing a strong LFNW foundation requires input from all parties involved in the process across multiple functional groups, with each group and person having a role for successful learning from normal work.

3.1 CHAMPION (HEALTH AND SAFETY PROFESSIONAL) ROLE

To successfully integrate LFNW into an existing HSE management system, it is crucial to secure the commitment of senior leaders by educating them on the key LFNW principles outlined earlier. Expect initial resistance but embrace an open dialogue, helping leaders move beyond the idea that all is good when no incidents occur.

Champions are expected to:

- conduct a review of most significant incidents, and show how the underlying conditions leading to those incidents were in place well before the incident happens;
- facilitate leadership engagement sessions focused on understanding the challenges and constraints that make the job difficult during normal work;
- identify a senior leader who can sponsor LFNW rollout by stewarding change-management plans, and ensure they are in place and executed;
- create a change-management plan that includes:
 - o an assessment of where the organizational understanding of normal work and incident causality sits; this should include a psychological safety climate assessment;
 - o a plan to build LFNW knowledge that differentiates between HSE professionals (who need to facilitate the broader effort), leaders (who need to embrace proactive learning), and front-line workers (who must be open to share what makes their job difficult or dangerous);
 - o a review of the current processes that embed and verify learnings to ensure that the management system expects the organization to improve based on both incidents and normal work; this should also consider how learning outcomes and corrective actions are discussed and shared to ensure forward-looking accountability, traceability, and allocation of required resources;
 - o the possibility of establishing a dedicated steering team to drive the change-management plan (ideally chaired by the aforementioned senior leader).

3.2 LEADER'S ROLE

Leaders are critical to the success of implementing a LFNW mindset. Leaders should take the following actions to promote LFNW and demonstrate their buy-in and commitment:

- Establish a psychologically safe environment.
- Express the importance of LFNW and communicate this to the organization.
- Provide time and resources for conducting LFNW sessions and analysis, and share results.
- Ensure that LFNW participants are those closest to the work activity being discussed.
- Welcome LFNW lessons and promptly review recommendations.

3.3 FRONT-LINE WORKERS' ROLE

- Contribute to the LFNW initiative by showing the complexity of the work and how work is done.
 - o Discuss the conditions that influence how work is done.
 - o Discuss the deviations from work as planned (drift from plan).
 - o Identify error traps and latent conditions, and evaluate safeguards.
 - o Identify efficiency bottlenecks.
 - o Brainstorm solutions.

LFNW may be applied during all stages of a project and work cycle (design, development, implementation, completion, and follow-up). It may be leveraged during a design-and-development phase to include input from those who will be doing the installation and maintenance work. It may be applied when work is being done as workers adapt to changing conditions or after work is done to share acquired knowledge or skills through experience, with the objective of driving continuous improvement through conversation.

4. WHAT ARE THE LFNW TOOLS THAT CAN BE USED?

4.1 LEARNING TEAMS

A learning team is a facilitated meeting among a group of employees to discuss the challenges, limitations, nonconformances, and tradeoffs they face at work, which can increase the risk of error.

The purpose is to identify what the organization can learn and where defenses can be built to strengthen the system. Learning teams are used in any situation where we can learn, including incidents, successes, repeat findings, etc. When workers share their views, they often find that they have different perspectives individually, but when they build off each other's viewpoints, they have a better understanding of what situations could lead to an incident.

A learning team requires a trained facilitator, front-line employees as one group (usually between three and six), and time to conduct two separated sessions—one dedicated to learning only and the following one dedicated to solutions—lasting between two and four hours, depending on the complexity of the activity.

As an outcome, learning team sessions will indicate error traps, constraints, and possible correction actions.

4.2 FINDING THE NEXT INCIDENT

Finding the next incident (FtNI) is a LFNW tool that harnesses the power of collective knowledge and experience, providing leaders with the opportunity to learn about high-consequence risk activities from a front-line perspective.

The approach is simple as it relies solely on the employees' expertise and awareness that "things can go wrong." Employees envision and describe the details of a potential serious incident in their respective areas of operation. Deferring to their judgment, the facilitator ensures that employees are sorted into different groups, agrees on the timeline for the activity, and asks them to provide answers to the following questions:

1. If a fatal incident or a serious injury is to happen in your area of operation today, what would it look like and what would be the most likely scenario for it to happen?
2. What is preventing this incident from happening now?
3. When the incident does happen (not if, but when), how can its consequences be managed or minimized?

A FtNI session requires a facilitator, front-line employees divided into teams (each team is usually between two and six members), and time that might vary based on the complexity and size of operation and availability of personnel. Usually, teams are able to report back within a couple of days.

As an outcome, a FtNI session will produce an incident-like scenario that provides the same learning opportunities of an actual incident or near miss.

4.3 WALK THROUGH TALK THROUGH (WTTT):

WTTT is a simplified tool to proactively analyze the reliability of human actions, i.e., where and how mistakes are more likely. This method originated in the nuclear industry when the principles of equipment reliability analysis were applied to human actions.

In the equipment reliability analysis, a piece of equipment would be broken down into components and each component would be analyzed separately to understand how it can fail and what increases chances of failure. In the human reliability analysis, a task is broken down into steps, and each step is analyzed separately to understand the potential consequence is if a person makes a mistake, and what increases the chance of a mistake (error traps).

The use of WTTT is not limited to front-line activities and can be applied to any task that relies on a person executing a sequence of steps, e.g., writing a financial report, conducting an audit, or following a security protocol. It can be conducted as an individual activity with a front-line employee and usually require 30–60 minutes to be completed, depending on the complexity of the selected activity.

4.4 WORKFORCE ENGAGEMENT

Workforce engagement refers to direct conversation with front-line employees to identify challenges and improvement opportunities. Workforce engagement depends on asking open-ended questions in order to provide insights about how real work is getting done.

4.5 COMPARISON BETWEEN TOOLS

	WORKFORCE ENGAGEMENT	LEARNING TEAMS	WTTT	FINDING THE NEXT INCIDENT
TIME REQUIRED	30 minutes	Two to four hours	30–60 minutes	30–60 minutes
WHO FACILITATES	Leader	Trained facilitator	Leader/HSE	Leader/HSE
NATURE OF OUTPUT	Conversation record with challenges and opportunities	Learning team report with error traps, constraints, and action items	WTTT report with error traps and corrective actions	FtNI report with potential incident and how to prevent it
TRAINING REQUIREMENT	None	Facilitators receive formal training	Overview of the process (15–30 minutes)	Overview of the process (15–30 minutes)

5. APPENDIX

5.1 ACRONYMS

LFNW: Learning from Normal Work

FtNI: Finding the Next Incident

WTTT: Walk Through Talk Through

WAI (Work as Imagined): When performing work, we often start with a plan. Work plans are important as they help us anticipate needs and ensure that we have adequate capacity to do the work. Plans, procedures, processes, or permits are often linear and proceed through a series of steps to an outcome. We refer to our plans as “work as imagined.”

WAD (Work as Done): As soon as we start working, we start dealing with changing circumstances, surprises, and other constraints that prevent smooth accomplishment of the task. This is called “work as done” — it is what people actually do to get the job done, in the real world and under different constraints.

5.2 LEARNING TEAMS

5.2.1 SCOPE

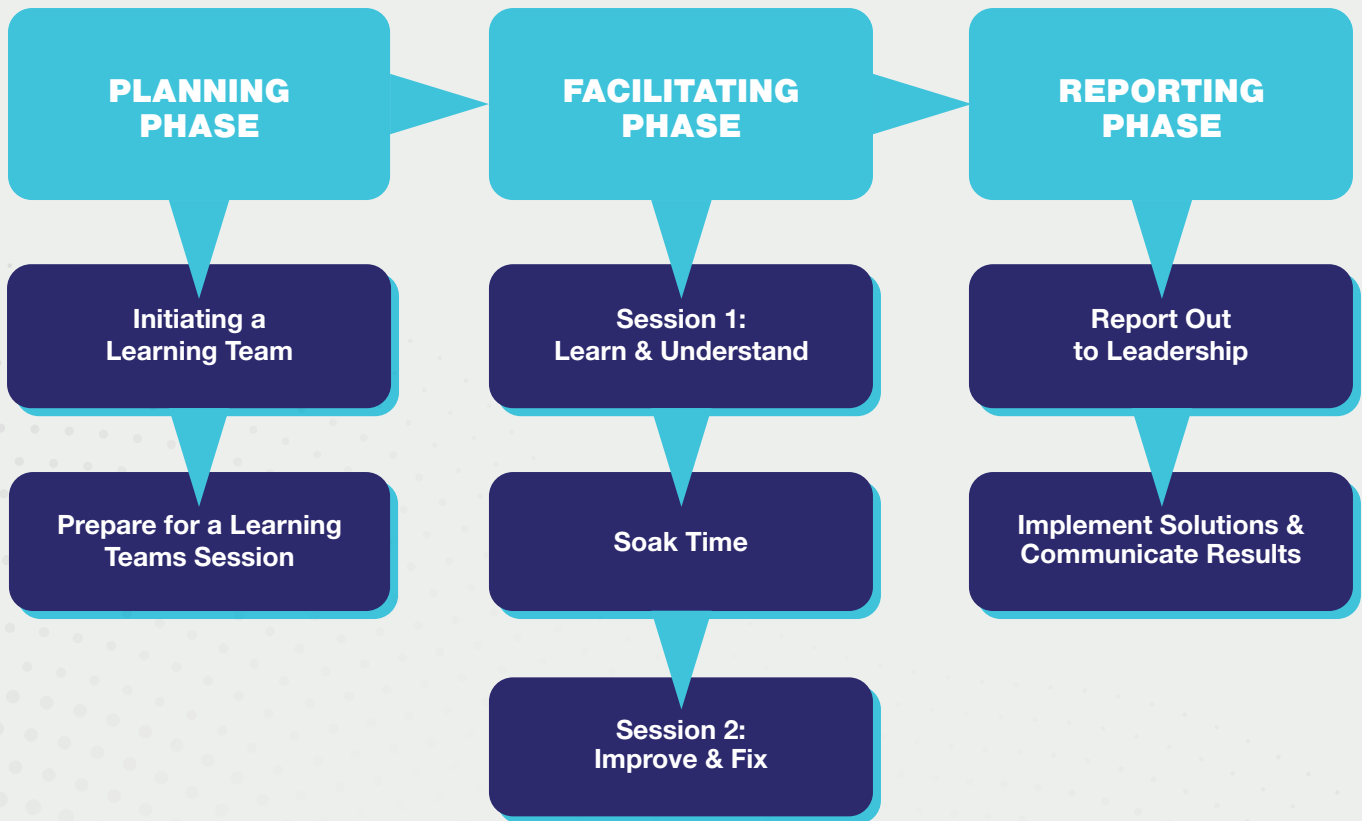
Learning teams can be used after an incident or after successful work. They can be applied to safety, reliability, business processes, and other system-related issues.

It is important to explore normal and successful work and engage in proactive learning. This allows us to evaluate our safeguards and examine whether they are aligned with how work is done.

When learning teams are used to learn from events in a reactive manner, this allows us to understand the context of the event and identify broken or missing safeguards. Learning teams lead to pinpointed improvements and solutions that are developed by those who do the work.

The success of a learning team depends on the organization’s cultural maturity; if site leadership believes that punishment is the best way to manage performance, workers are unlikely to open up and discuss nonconformances. Learning teams require planning, leaders’ ownership, commitment to following through with results, and transparent communication with those contributing.

5.2.2 PROCESS



1. Planning phase: The planning phase occurs prior to the actual session. It includes identifying the key stakeholders, such the learning team owner (who is owning the activity, operation, facility, etc.); identifying the learning team facilitator (who is trained and will facilitate the sessions); identifying the scope or the activity that will be analyzed by the learning team; and identifying learning team members (front-line employees who will be present and provide their insights). The last step in the planning phase is to schedule the session; two separate appointments need to be scheduled: a learning meeting and a solutions meeting.

2. Facilitating phase: This is the stage where the facilitator actively conducts the sessions. It consists of two parts.

The first session is about learning and understanding the challenges, constraints, and error traps associated with the activity from an employee's perspective.

The second session is about improvements and solutions. It is highly recommended to schedule some time between both sessions (called "soak time") to allow processing of the ideas associated with the first session before going into the second session.

In both sessions, it is highly suggested to keep the same participants. Participants needs to be front-line employees who actually conduct the activity subject to the analysis. After the second session, corrective actions are assigned.

3. Reporting phase: This is the phase where reporting is completed. This includes communication of findings with team owner, follow-up on actions, implementation, and any additional recordkeeping requirements.

5.2.3 ROLES AND RESPONSIBILITIES

Team owner/sponsor: This is typically a senior leader who has overall accountability over the equipment, process, or activity that is being analyzed. The team owner is responsible for:

- providing logistical support;
- identifying potential learning team members;
- providing support to ensure that people are available to participate;
- defining the purpose of the learning teams;
- providing required resources for corrective actions.

Facilitator: The facilitator is responsible for:

- facilitating the session;
- developing the report and summary;
- field visits, if required;
- developing action items;
- submitting documentation.

Participant: The participant is responsible for:

- being present, open, and transparent;
- providing suggestions and solutions to improve working conditions.

5.2.4 EXAMPLES

DESCRIPTION	PICTURE	SOLUTION
Use of hydro vise is challenging while connecting small tools. No proper lifting tools. No proper lifting tooling to easily connect the shorter tools.		Alternative way of connecting the short tools instead of hydro vise by using sliding trolley workbench.
Design of torque machine allows user to shut down the tool while pressure is trapped in the system.		Buzzer Alarm was added to the torque machine to automatically remind users when pressure is not released from pistons.

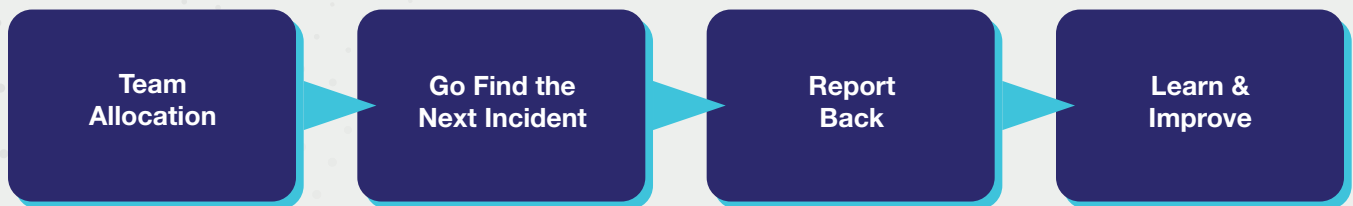
5.3 FINDING THE NEXT INCIDENT

5.3.1 SCOPE

“Finding the next incident” is aimed at identifying major risks that can lead to fatalities or serious injuries. It is not meant to identify minor risks such as slips and trips.

5.3.2 PROCESS

FtNI is best delivered in teams as a group activity. Teams can be made up of between two and six people. A standard FtNI cycle can be summarized as follows:



Each participant will be asked to answer the following question: If a fatality or serious injury were to occur in your facility/operation, what would it look like, and what would be the most likely scenario?

Each participant will respond independently, will write a short summary on paper, and then will wait until all participants are finished.

When all participants have completed their scenario, the leader will read aloud the scenarios and facilitate the team to decide which scenario is the most likely to occur.

When the team has agreed on the FtNI scenario, it will be tasked to answer the following questions:

1. What is preventing this high-potential incident from happening today?
2. In the event that the incident does occur, what barriers do we currently have in place to minimize its impact?
3. What else could we do to prevent or mitigate the event?

The timeline for completing the activity will vary depending on the size of operation and availability of personnel. This can be completed within 30–60 minutes.

Teams can complete this as a classroom activity or by visiting the worksite and then reporting back.

5.3.3 ROLES AND RESPONSIBILITIES

The facilitator will be responsible for:

- having the required number of team members;
- explaining the process;
- helping the team to decide which scenario is the most likely to occur (while keeping in mind the other scenarios for a subsequent FtNI);
- agreeing on a timeline for reporting back on questions 1, 2, and 3;
- facilitating the report-back session using the required template;
- following up with corrective actions;
- recognizing the team for their contribution;
- recordkeeping for the completed sessions of FtNI

5.3.4 EXAMPLES

DESCRIPTION	PICTURE	SOLUTION
During a forklift operation, the tool basket dropped from the forklift, bounced off truck and fell on employee crushing him.		Redesign tool basket to include forklift sockets for better control while lifting.
Employee was working from a 3-step platform on a Sand injection machine when she overreached from the platform causing the weight to move to the front wheels which toppled the platform with the employee on it. The employee's right leg was broken and sustained head injury.		Install individual filling system on each machine that eliminate the need to manually go up the platform.

5.4 WALK THROUGH TALK THROUGH (WTTT)

5.4.1 SCOPE

The purpose of the WTTT tool is to provide guidance on how to avoid a gap between how work is imagined and how work is done. It is crucial to understand which tasks or task steps are critical and under which conditions they can go wrong. The WTTT is a conversation with a person experienced in performing the task or a critical step within the task as part of an organization's continuous improvement; this is different from a JSA (Job Safety Analysis), which is performed as part of the pre-job assessment to identify hazards and control measures.

5.4.2 PROCESS



1. Decide on an activity to be analyzed using WTTT: This needs to be an activity or task that is done with human interaction; it should not be overcomplicated, nor should it be too simple or brief that it would not allow meaningful insights. The front-line employee who conducted the activity needs to be available to explain the process and walk through it with the facilitator.
2. Break the activity into steps: The activity needs to be broken down into steps, with each step analyzed to identify potential consequences and error traps.
3. Identify potential consequence with each step: The facilitator identifies the potential consequence if the employee makes a mistake or something goes wrong during the step. The consequence needs to be identified from the user perspective.
4. Identify error traps with each step: Identify conditions that make errors or mistakes more likely, what makes the step more difficult, and what a new employee could find confusing about this step, from the perspective of the person conducting the step.
5. Identify improvement opportunities: Identify what can be done at each step to make errors or mistake less likely to happen, from the user or the front-line employee's perspective.

5.4.3 ROLES AND RESPONSIBILITIES

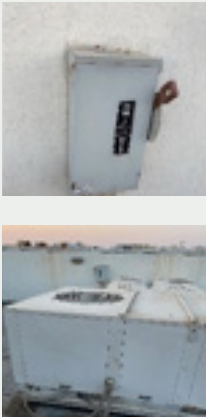
Any team member can conduct and lead the WTTT, but it must be completed in collaboration with the person(s) who usually performs the task. Avoid conducting WTTT on your own, or with somebody who is familiar with the job but is not responsible for the job (such as a supervisor).

WTTT “facilitator”: The WTTT protocol does not require any advanced training or experience with the task being analyzed, but the WTTT facilitator leading the exercise should understand basic human performance principles and concepts such as error traps and performance-influencing factors” (PIFs). The focus of the facilitator will be to scope (bound) the task for analysis, identify the operator(s), and use open inquiry techniques to capture what could go wrong, error traps, and insights on improvements.

Operator/front-line worker(s): Critical to an effective WTTT exercise is the operator or front-line worker(s) who is most familiar with the task that is being analyzed. These individuals represent how the work actually gets done and will be able to identify (with questioning by the facilitator) what makes errors more likely or workarounds/ adaptations that have been devised over time that could become best practice.

Sponsor/operation authority: The sponsor of a leader/owner supports the exercise and is authorized to make changes/improvements that result. Additionally, the sponsor will provide the time (and resources, if required) for those involved to complete the exercise.

5.4.4 EXAMPLES

DESCRIPTION	PICTURE	SOLUTION
During AC system repair, there is not clear identification of which switch is used to turn which AC unit. Procedure does not indicate which tools are needed to open the unit. Procedure just says “Clean” the unit without clear steps or instruction on how to do so.		Update the standard to have a built-in circuit breaker in the location outside of the unit. Update the procedures to indicate and provide more details on how to do the task and tool required. Provide “how-to” video on how to do the job.

5.5 WORKFORCE ENGAGEMENT

5.5.1 SCOPE

Workforce engagement is a tool intended to capture insights, challenges, and ideas directly from the workforce (front-line) via face-to-face conversation between them and a leader. It can include one or more leaders.

5.5.2 PROCESS



A workforce engagement conversation is a conversation about work; it can be any conversation that can happen anywhere. What makes it unique is the amount of information that is sometimes omitted from normal conversation but that would make the task safer. This information may not be about safety in particular—it might be about the order in which work takes place or a method or tool that would make the task easier or quicker, but on the basis that if we can make tasks easier or more straightforward, we are increasing the likelihood to make them successful and eventually safer. While workforce engagement is usually conducted by people leaders, the same approach can be use in a peer-to-peer environment; however, that requires support and follow-up by leaders to make sure the insights from the conversation are captured and addressed.

5.5.3 ROLES AND RESPONSIBILITIES

The leader:

- is a great listener who communicates well and who seeks to understand and not to tell;
- changes the front-line experience from “inspection in nature” to “inquiring in nature”;
- asks open-ended questions;
- is respectful;
- takes notes and follows up on additional asks or corrective actions.

5.5.4 EXAMPLES

No template is needed; conversation can be reported using any existing internal company methods of reporting.

Examples of good questions to ask include:

- What tools would make your job easier?
- What changes have occurred here recently that you thought were really helpful and we should have more of?
- What mistakes are new employees likely to make that could result in an incident?
- What solutions have you come up with that have worked well?
- What are the unwritten rules on this asset/in this team?
- What work conditions do you have to tolerate around here?

5.6 REFERENCES AND ADDITIONAL RESOURCES

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