

Workflow: Problem Solving

Toolkit 12.1

Managing Problem Situations

target audience

Leadership team, supervisors, and contractors.

what it is

When something goes wrong in any situation, the initial reaction is two-fold:

- Immediately normalise the situation, which means bringing the process/operation back to fully functional whilst considering the potential safety and operational impacts.
- Finding the true reason, or the “root cause”, that lead to the incident, and finding a solution that would eliminate recurrence or provide warning signals to allow staff to be prepared, i.e., soften the impact.

The challenge to the above statement is to detect a potential problem early, avoiding escalation and potential harm. A problem can be defined as something that is not normal or “the way it should be” and needs to be solved or avoided. Effective problem solving is a process starting with the ability to recognise that something is not normal. In operations unforeseen and unexpected challenges will occur. World class companies have developed the ability to reduce the frequency and the impact of these unforeseen challenges, but no company or operation, however well-managed, can avoid them entirely. These world class companies have developed systems and skills that can detect problems early, allowing them to react quickly and develop suitable responses that will reduce the probability of recurrence.

Abnormal situations can be described as variances from a standard, and examples in the packhouse environment could be:

- Any safety incident or action that can potentially be harmful.
- Products not meeting required quality specifications (product non-conformance), e.g., size, shape, or sugar content.
- Poor in sample testing and control measures.
- Failures in chemical concentrations or applications.
- Equipment breakdown.

Abnormal situation management is the work procedure to deal with these variances in an organized, standardized manner so that the appropriate corrective actions can be applied quickly and effectively. The objective of this management process is to get the operation back to a standard condition as fast as possible and eliminate the reason for the variance that caused the abnormal situation.

World class companies make extensive use of standard work (Refer to [Toolkit 3.6 – Standard Work](#)), and consequently, understand when equipment or process conditions are abnormal.

why it is important

Companies exist primarily to be profitable and to grow. Any incident that will disrupt the smooth operation of activities could potentially impact the delivery process to a customer. Disruption of the delivery process at any stage during the supply chain can impact the timely availability and quality of the product, resulting in customer dissatisfaction and even the cancellation of orders (Refer to [Toolkit 2.1 – Value Chain Alignment](#)). In today's competitive environment, it only takes one or two incidents of dissatisfaction for even a loyal customer to change supply or move away from an established partnership.

Systems that enable the early detection of abnormal situations will not only reduce the overall impact on value chain effectiveness, but also allow us the opportunity to understand the underlying reasons or root causes of the deviation from a standard. Understanding these root causes will direct companies to find permanent solutions and avoid something similar happening in the future.

Detecting abnormal situations and effective problem-solving also allows companies to become proactive in avoiding similar situations occurring along the value chain through a process of shared learning.

success factors

What are the success factors for abnormal situation management?

- **People and product safety** – Start with a clear understanding and awareness of people and product safety standards and conditions. These should be defined in standard work and product safety procedures. Refer to [Toolkit 7.1 – Embedding Safety Culture and Practice](#).
- **Develop standard work procedures** – In order to clearly understand when a situation becomes abnormal, the operator or worker needs clearly defined and documented standard operating procedures and standard operating conditions to provide a baseline from which to measure the degree of variance from standard. The tools described in [Toolkit 3.6 – Standard Work](#) (i.e., SOPs, SOC, WINs) should be designed to provide this information and become an integral part of the abnormal situation management procedure.
- **Define a standard product** – Standard product is a term which refers to finished, saleable product that meets customer quality specifications, and is produced from a standard production process. The standard operating procedures need to include definitions and information for all three of these components of standard product, but especially the standard production process which defines how people should perform tasks, and how the equipment or process should be properly operated.
- **Develop abnormal situation categories and severity ratings:**
 - Health and Safety – Always escalate to management.
 - Customer Complaint – Always escalate.

- Product quality – Situational/ systemic with escalation (dependent upon impact, e.g., exceeding phytosanitary risk thresholds always demands escalation).
 - Production process – Situational with escalation (dependent upon impact).
 - People discipline – Disciplinary code addressed at the correct organisational level.
- **Develop triggers** – Triggers are designed to manage and reduce the frequency of formal, non-conformance investigations. A trigger is an indicator (event, threshold) that acts as a red flag which tells you to react immediately, escalate, and investigate formally. Certain categories, as defined above, require immediate escalation and investigation. Operational non-conformances might occur frequently, e.g., not meeting a daily/hourly packing target, but the impact might be containable, and it might not be practical or necessary to do formal problem-solving or an investigation. However, we do want to consider the “serious” ones (e.g., carton making delays, serious equipment failure, very low packing rate, very poor palletising practices, frequently failed final inspections etc.) and develop a set of triggers to identify/highlight the ones we want to investigate. As time goes on and solutions are found, frequency and impact will reduce, which will allow triggers to be lowered.
- **Formalize the response plan** – The abnormal situation management procedure should include guidance on how to respond and who to involve, in the effort to effectively deal with the variance or problem. The abnormality category, timing, and severity of the problem will determine what to do and who to involve, which is why it is important for each business to develop their own response plan.
- **Implement a corrective action process** – The corrective action process is a documented investigation process that follows these steps:
- Contain the effect of the abnormality, e.g., replace poor product or repair equipment.
 - Clearly define the problem. Describe the problem by identifying what is wrong and detail the problem in quantifiable terms.
 - Allocate individual responsibilities. Who should be exploring corrective action? As a minimum, this should be dealt with at the lowest possible organisational level and include workers or operators that witnessed the variance or problem.
 - Collect and analyse information/data on the variance or problem.
 - Determine the root cause of the variance.
 - Develop corrective actions to solve the root cause.
 - Implement the corrective actions.
 - Verify that the variance is eliminated.
 - Update the standards (standard work, product, raw material, SOPs) if necessary.
 - Provide necessary training for the new standard work.
- **Recordkeeping** - Keep a record of the solution for future reference and learning.

execution steps

1. Develop a working definition of “abnormal situations” in your operation.

2. Document (or review) a response plan for abnormal situations based on a category and the severity.
3. Develop a corrective action process, including investigation and review steps and associated documentation.
4. Train employees in basic problem-solving techniques, introducing different techniques for different levels of complexity, and confirm individual problem-solving responsibilities.
5. Establish a database of abnormal situations and solutions at different categories and severity levels for future reference and skills development.

assessment questions

Please Note: There is no minimum / maximum number of questions you can add.

1.	Have you defined abnormal situation categories and severity ratings?
2.	Can managers and supervisors distinguish between normal and abnormal situations?
3.	Have clear responsibilities been defined to deal with abnormal situations re categories and severity ratings?
4.	Do you have triggers defined to assist with identification in operations?
5.	Are escalation processes well embedded?
6.	Do you have clearly defined problem-solving responsibilities and processes at different organisational levels for abnormal situations?
7.	Have your corrective action process been implemented?
8.	Do you embed new procedures through training or one-point lessons to reduce the recurrence of problems?

resources

1. [*Corrective Action Explained \[ISO 9001 Procedure\]*](#) by Richard Keen (updated 19 October 2020)