

Whitepaper
**Human Factors in
Emergency Situations:**
The role of training in
emergency situation
response





An emergency situation can come in **many forms**

In the increasingly complex landscape of safety, the influence of human factors in emergency situations remains an undeniably critical aspect to address. Organisational reliability and process safety are fundamentally interconnected with an individual's aptitude for effective emergency response. Emergency situations, often characterised by confusion, chaos, and potential harm, are a testament to the importance of well-trained personnel. Training equips individuals and teams with the requisite skills to mitigate negative consequences and promote safety. Here we delve into the pivotal role that training plays in emergency situations, focusing on aspects such as mitigating consequences, varied training styles, the importance of asking the right questions, and the necessity of regular training. We hope to shed light on the significant strides we can achieve through comprehensive training.

Emergency Response

An emergency situation can come in many forms. It is usually an urgent, unexpected, and dangerous situation that poses an immediate risk to health, life, plant, equipment or environment and requires immediate action. That immediate action is what is commonly known as an emergency response or an emergency response plan.

An emergency response plan defines the roles, responsibilities and procedures that need to be actioned during an emergency. It should describe, in detail, steps that the organisation will take during a critical event, as well as focus on internal and external communication processes.

Having an emergency response plan is never enough. Some organisations will look to address gaps in their emergency response plan after an incident. A proactive approach is really important and has numerous benefits to your assets, people and production.



A good emergency plan is **essential** as it brings to light **certain inefficiencies**

Assessing Risk

Being proactive with the emergency response plan demonstrates a commitment to safety – the safety of the employees, surrounding communities and the environment. A consistent, company-wide emergency response system can deliver site-specific details and allows employees and responders to conceptualise their roles and responsibilities across an organisation, creating a common understanding of intended actions. The conditions of the site may have an impact on safety or effective response. A proactive risk assessment process can be used to identify, alter and eliminate conditions that pose a risk to employees, the environment, infrastructures, and surrounding communities.

A good emergency plan is also essential as it brings to light certain inefficiencies, such as lack of resources, e.g. trained personnel, work equipment and other supplies. If an emergency such as a fire occurs, and there are not enough fire extinguishers, it is almost impossible to put out the fire. An emergency plan helps to establish what is needed in case there is a crisis, what is available, and what is not.

Responding quickly is very important and a few minutes of panic can make a very big difference. There is no more time for planning, preventing or focusing on changing the situation once an emergency unfolds. The focus should be on mitigating and minimising the consequences. The speed and capability of a company's initial response can make a massive difference in overall impact.





Emergency procedures, tools or signs are everywhere we look


Emergency Procedures: The Trained vs The Untrained


Emergency procedures, tools or signs are everywhere we look. Not everyone sees them, or perhaps pays attention to them, but they are there. There are many emergency events that can take place in organisations that an emergency response plan should look to cover, the most common of which is fire, where people need to learn and understand how to respond, particularly when in a new or unknown environment. But when was the last time you spotted an assembly point outside of your local shopping centre? Or found the nearest fire extinguisher when eating out in a restaurant? Or even located the nearest fire exit when staying in a hotel on your family holiday?


If there was a fire in a hotel you are staying in, would you know the escape route, the nearest fire exit and the assembly point outside? If there was an emergency on a plane, would you know what to do first, where is your life vest or when to blow it up?


Different people have different learning styles, but the crucial element of every emergency response is regular, consistent and repeated training in various forms.

Different learning styles

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Visual learners are better able to retain information when it's presented to them in a graphic depiction, such as charts, diagrams, symbols, and other pictorial help. A pictorial method can be particularly helpful in multicultural environments where language barriers might exist.
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Sometimes referred to as "aural" learners, **auditory learners** prefer listening to information that is presented to them vocally. These learners work well in group settings where vocal collaboration is present, they will benefit from verbal walkthroughs and instructions that are communicated verbally.
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Focusing on the written word, **reading and writing learners** succeed with written information on manuals, training, white papers, handovers and other text-heavy resources. These learners are note-takers and perform strongly when they can reference written text.
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Taking a physically active role, **kinesthetic learners** are hands-on and thrive when engaging all of their senses during drills, experiments and by taking part in simulations.



Training ensures that personnel are able to perform the procedures **under pressure**, and everyone is prepared to act **calmly** and **confidently** if an emergency arises

The Need for Regular Training

Training for how to respond to emergency situations should never be a one-time event but a regular practice. Training ensures that personnel are able to perform the procedures under pressure, and everyone is prepared to act calmly and confidently if an emergency arises. Beyond that, regular training raises awareness of what the key staff may face and gives them confidence in the organisation and in their ability to carry out the procedure. By providing the training regularly and consistently, people develop competencies and skillsets so the roles can be fulfilled. Regular training not only reinforces knowledge, keeps skills and procedures fresh, but also helps to identify any areas that might need further attention.

Asking questions is also a powerful tool in any training programme. It not only allows the trainer to gauge the understanding of the trainee but also encourages active engagement, deepens the understanding, reinforces knowledge and makes the training more effective. It encourages critical thinking and enhances memory recall. Questions also provide trainers with valuable feedback, revealing areas of confusion or misunderstanding that may require further explanation or practice. In the context of emergency training, this process is crucial for ensuring that procedures are understood and can be executed correctly when time is of the essence.

The Essence of Emergency Response: Mitigating Consequences

When we talk about emergency response, we are essentially discussing a reaction to an unplanned event. The primary aim of such a response is not to change the situation that has already unfolded, but rather to work within the framework of the crisis to control and minimise damage. It involves swift actions like immediate evacuation in the event of a fire or executing rescue procedures during natural disasters. Ensuring the safety of individuals and minimising property damage become the primary goals. This concept ties closely with the principles of **LOPA – Layers of Protection Analysis**, where each layer is designed to provide a barrier against escalating risk and severity. Appropriate training prepares individuals to understand and implement these layers of protection swiftly and effectively in the face of a crisis. In the context of **LOPA**, regular training enables individuals to keep up with changes and improvements in the layers of protection, thereby enhancing their ability to mitigate risk effectively.



Conclusion



In conclusion, the importance of training in emergency situations cannot be overstated. It empowers individuals with the knowledge and skills to act decisively, efficiently, and safely, to mitigate the impact of unplanned events. By using varied training styles, asking the right questions, and encouraging regular training, we can ensure that individuals are well-prepared to act swiftly and decisively when emergencies occur. Implementing an approach like **LOPA (Layers of Protection Analysis)** can further augment this effectiveness, providing a systematic, risk-based assessment of safety measures. In the unpredictable realm of emergencies, being prepared is the best strategy, and training provides that much-needed safety assurance.

DEKRA Organisational & Process Safety Contact

DEKRA Organisational and Process Safety are a behavioral change and process safety consultancy company. Working in collaboration with our clients, our approach is to assess the process safety and influence the safety culture with the aim of making a difference.

In terms of behavioral change, we deliver the skills, methods, and motivation to change leadership attitudes, behaviors, and decision-making among employees. Supporting our clients in creating a culture of care and measurable sustainable improvement of safety outcomes is our goal.

The breadth and depth of expertise in process safety makes us globally recognised specialists and trusted advisors. We help our clients understand and evaluate their risks, and we work together to develop pragmatic solutions. Our value-adding and practical approach integrate specialist process safety management, engineering, and testing. We seek to educate and grow client competence in order to provide sustainable performance improvement. Partnering with our clients, we combine technical expertise with a passion for life preservation, harm reduction and asset protection.

We are a service unit of DEKRA SE, a global leader in safety since 1925 with over 48,000 employees in 60 countries and five continents. As a part of the world's leading expert organisation DEKRA, we are the global partner for a safe world. We have offices throughout North America, Europe, and Asia.

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