

Maintaining Risk Awareness



Here are two simple techniques designed to help people maintain risk awareness in dynamic operating environments – RULE OF THREE and PEAR. Used in combination, these techniques enable the identification of emerging risks immediately before and during the execution phase of an activity. They complement deliberate risk management activities and directly support decisions relating to the adequacy of risk control measures. The use of the RULE OF THREE and PEAR ensures that the management of risk is not confined to the planning phase of a mission or activity. It enhances effective risk management in all activities and at all times.

The RULE OF THREE provides a simple way of applying a level of immediate risk management. The basic premise is the traffic-light system. You must always stop if you have a RED, but too many AMBER lights may be just as risky. Occurrences all too often happen because of a combination of relatively minor events and situations.

RULE OF THREE

Do I understand the risks? ...

GREEN

PROCEED

Condition is okay and well within limits or assumptions

AMBER

COMMUNICATE AND CONSIDER
3 x Ambers = Red = STOP!

While within limits the condition or circumstances is nearing the boundary of being acceptable

RED

STOP!

Condition or circumstance is out of limits or unacceptable

PEAR directly supports the application of the RULE OF THREE by helping to identify potential concerns, hazards and risks. There are only four words to remember.

P stands for PEOPLE (the humans in the system) and relates to the suitability (physical, cognitive and social) of the selected personnel for a particular task. Suitability not only covers knowledge and skills, but also human factors considerations such as fatigue, stress and motivations.

E stands for the ENVIRONMENT in which the work is done, not just the physical environment (that is: lighting, temperature, noise levels and time of day) but also the organisation itself (quality of supervision, amount of supervision and pressures to complete task/activity).

A represents the ACTIONS people perform. Actions identify the requirements of the task to help to identify any specific areas that might increase the risk of error, such as ambiguous information, or complex tasks that require specialist knowledge and skills.

R is for the RESOURCES necessary to perform the work. They can be defined as anything that is required to complete the tasks successfully (examples include personnel, procedures, tools, available time and personal protective equipment).

What are your ambers and reds?... think PEAR



PEOPLE
communication, experience, competency, fatigue, supervision ...



ENVIRONMENT
distractions, pressure, location, leadership, hazards ...



ACTIONS
documentation, briefing, application of knowledge, preparation, inspection ...

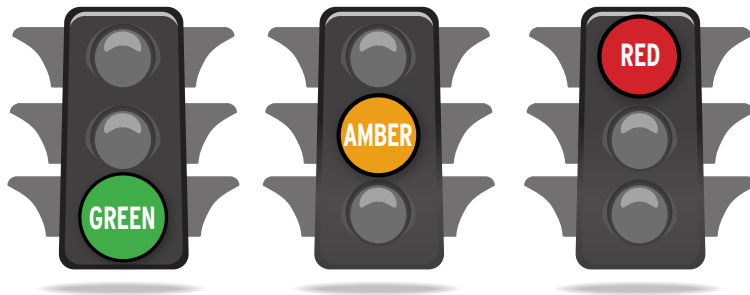


RESOURCES
publications, number of personnel, spares & support equipment, PPE, time ...

Using the RULE OF THREE and PEAR

Effective implementation requires everyone to :

- Use PEAR to identify conditions or circumstances that may become a concern to you and others.
- Speak up if you identify any AMBER or RED conditions or circumstances.
- Take time to think about the issues and discuss them with your team/supervisor.



AMBER = COMMUNICATE AND CONSIDER

- Where the condition or circumstance, while within limits, is nearing the boundary of being acceptable
- Ensure you understand the issues and, if required, seek additional information
- Discuss the issue with others in your team, or your immediate supervisor
- Consider what can be done to eliminate or minimise an AMBER into a GREEN
- Continue if you are satisfied that nothing further can be done but maintain vigilance in this area
- Ensure all solutions are appropriate and authorised for use
- Add up all the remaining issues classified as AMBER to see if you can proceed with the task/activity
- Remember three or more AMBERs equal a RED.

RED = STOP!

- Where a condition or circumstance is out of limits or unacceptable
- Always STOP if you have a RED
- If task/activity is underway, current actions are to be immediately halted and/or the situation stabilised to a safe position in order to evaluate the concern
- Discuss the issue with others in your team, or your immediate supervisor
- Identify what you can and cannot do to eliminate or minimise the concern
- Do not proceed until the RED is eliminated and returns to GREEN (or possibly minimised to AMBER)
- Ensure all solutions are appropriate and authorised for use
- In the event the condition(s) or circumstance(s) cannot be changed, address issue(s) through command chain
- Remember to address any remaining AMBERs.

A RED does not necessarily mean you cannot do the activity – it means stop and reassess the situation and evaluate your options.

ALWAYS APPLY THE PRINCIPLES OF RISK MANAGEMENT

- Apply risk management principles to all AMBER and RED:
 - ✓ try to eliminate all risks
 - ✓ if the risk can't be eliminated, then minimise by applying all reasonable treatments/controls
 - ✓ ensure all treatments/controls are appropriate and authorised for use
 - ✓ ensure all risk-based decisions are made at the appropriate level.

Where and when to apply

Using RULE OF THREE in combination with PEAR allows for a relatively simple methodology for identifying and responding to changes that can occur in the operating environment. The techniques are suitable for incorporation into daily activities, including:

- **Preparation** for a task or activity
- **Brief** of the task or activity to team members
- **Execution** phase of the task or activity
- **Debrief** of the task or activity with team members, supervisor and/or manager

It is essential that the outcomes of the RULE OF THREE are reviewed following the completion of an activity. Conducting a review is essential to identify what worked, what did not work, and to capture/document any lessons learned. Where this process identifies potential limitations/weaknesses, these are to be fed back into the formal deliberate risk management process making it more robust for future operations.

What now?

Discuss with your team how you are going to use the RULE OF THREE and PEAR techniques. When working in a team environment, it is important for members to have a clear and common understanding of how the techniques will be used and, in particular, what will constitute an AMBER or RED. Adopt terms like “counting your AMBERS”, “managing into the GREEN” or “close to RED”.

Knock-it-off & time-out

Integral to the effective use of risk awareness techniques like RULE OF THREE and PEAR are the concepts of Knock-it-off and Time-out. These concepts are essential to ensuring everyone has a voice if they see an unsafe situation developing. Verbalising either of these terms sends a message to those involved in a specific action to stop, take a moment to reset and re-evaluate the current situation. Everyone (regardless of rank or position) is empowered to use these terms without any fear of repercussion. When either term is used, all current actions are to be halted immediately, the situation is to be stabilised to a safe position and the concern evaluated.

References

Civil Aviation Safety Authority 2013, Safety Behaviours: Human Factors for Engineers Resource Kit.
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PEAR ELEMENTS



DOING	THINKING	INTERACTING
Physical limitations	Knowledge	Team Structure
Sensory limitations	Experience	Role definition
Health	Attitude	Leadership
Training	Motivation	Followership
Competent	Confidence	Supervision skills/needs
Authorised	Workload	Interpersonal conflicts
Briefed	Fatigue	Communication
Fatigue	Stress	Mentoring



PHYSICAL	ORGANISATIONAL
Weather	Management style
Location (inside/outside)	Leadership
Facilities/Workspace	Staffing levels
Lighting	Size/complexity
Noise	Priorities
Distractions	Pressures
Housekeeping	Morale
Hazards	Norms
Shift (day/night/late)	FEG/wing/unit culture



ACTIONS		
Information requirements	Application of knowledge	Supervision requirements
Preparation	Application of skill	Inspection requirements
Briefing/de-briefing	Communication requirements	Documentation requirements
Steps/sequence of task	Task management	Certification requirements



RESOURCES		
Time	Tech Manual	Heating/Cooling
Other personnel	Procedures	Facilities
Training	Data	Fixtures
Consumables	Paperwork/signoffs	Signage
Spares	Tools	Quality Systems
PPE	Test Equipment	GSE
Computers/software	Lighting	Work stands