**RRM training syllabus Chapter 4 THREAT AND ERROR MANAGEMENT**

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| **Subject** | **Element** | **Objective** | **Trainer/trainee activity and key notes** | **Time** | **Tools / media** |
| **Threat and Error Management** |  |  | **Introduction**   * **Ask** * How many errors do you make each shift? * How many errors are made during a shift? * How many accidents occur each shift? * **Explain** TEM by suing the scuba dive example:   Before you dive you check….air supply. Because the air bottle guy could have made a mistake. But you can also make a mistake.   * **Ask**: why do you not end up without air?   + Because of the buddy check. However, he could also make a mistake. * **Ask**: why do you not drown without air under water?   + You have trained with your buddy for a situation like that.   Goal of story: we try very hard to prevent mistakes. However, we will not always be successful. The next step is managing the consequences if a mistake is made. | **10** |  |
|  | **Introduction CASE** |  | * **Introduce** the topic with the following questions: * **Show** the towing case (study the case thoroughly beforehand). This case can be linked to the threat and error identification and management as discussed below. | **20** |  |
| **Threat identification** | * Knowledge on how to identify threats * Knowledge on different attitudes towards threats * Correctly identifies threats | * **Ask** what threats are.   Threats are defined as events or errors that occur beyond the influence of ramp personnel, increase operational complexity, and which must be managed to maintain the margins of safety.   * **Emphasise** that it is assumed that threats cannot directly be controlled by ramp personnel, like adverse weather conditions, so the focus is not on *avoiding* threats, but on *managing* them. * **Ask** what expected and unexpected threats are: * Expected threats (e.g. time pressure, adverse weather conditions, staff/equipment shortage, aircraft handling at adjacent stand, etc.), and * Unexpected threats (e.g. equipment failure, fuel/dangerous goods spill, emergencies, etc.) * **Ask** what internal, external and environmental threats are: * Internal threats (e.g. equipment, procedures, fellow workers, etc.); * External threats (e.g. handling area layout, airport layout/equipment, adjacent handling areas, etc.); * Environmental threats (e.g. weather conditions, fumes, etc.) * **Ask** if they ever experienced threats and how they deal with that? * **Ask** if they experienced a threat which the other person did not recognize as a threat and how come people can think different towards threats? * **Ask** if ignoring speed limits on roads is considered by the group as a threat of being CATCHED by Police, or threat of bodily harm followed by a potential accident? How to change attitudes towards rules: “I want” instead of “I must”? | **15** | **Write** the catchwords on a flip |
| **ERROR** | * Knowledge on how to manage threats * Correctly manages threats | * **Explain** that whether overt or latent, expected or unexpected, threats may be managed in four basic steps: * Identify the threat (e.g. weather forecast, planning, equipment status); * Assess the risk (severity, probability and exposure); * Prepare (e.g. notify team members, request wing walkers, lock loose equipment); * Monitor the threat (recognise distractions, interruptions and preoccupation). * **Ask** who the first person responsible in threat management is, and how this person is responsible: * Employ necessary resources * Good supervisors * By preparing the teams (defining team roles and communication rules) * **Ask** what the most essential in adequate thread and error management is: * Team members who take responsibility to perform countermeasures individually * **Emphasize** that during the actual aircraft turnaround, existing threats have to be monitored for possible deterioration, and vigilance has to be kept to identify new threats. Countermeasures to employ during the turnaround are e.g.: scanning what is going on around you and cross-checking other ramp workers (execution countermeasures). | **15** |  |
|  | **Error management** | * Knowledge on error types and consequences (what can go wrong?) * Identifies errors * Reports errors without losing face | * **Emphasize** that errors are human * **Emphasize** that all people make errors, also ramp personnel during the aircraft turnaround process.   Try to put yourselves in the other persons’ place, maybe that helps understanding the error; it was night, visibility was bad, you were tired, you were working with new people/tools/procedures, there was stress because of a delay, etc…. | **5** |  |
| * **Emphasize** that all people make errors, also ramp personnel during the A/C turnaround process, but what matters are the responses to errors made: * Ignored; * Exacerbated; or * Trapped. * **Explain** that to prevent incidents and accidents it is of vital importance to trap errors made during the aircraft turnaround.   + This includes reporting of errors and unsafe situations!   + This requires team situation awareness and an active attitude from team members to trap and correct errors – not only their own, but also errors made by fellow workers.   + This, in turn, requires a speak-up atmosphere within the team. | **10** |  |
|  | * **Read** the slide ‘I could have saved a life that day’   Explain ‘future regret’ as a risk management tool: I am planning to do, or not do something now that involves some risk. Is this plan worth the risk? Ask yourself: if the plan goes wrong, how would it look on CNN tomorrow? If the answer is: “very bad”, it probably is not such a good plan. | **3** |  |
|  | **5** |  |
| * Knowledge on how errors can be managed to reduce risks (how do you handle it?) * Correctly manages errors * Learns from errors | * **Emphasise** that when a combination of miss/unmanaged threats and errors lead to an undesired state, emergency action have to be taken to avoid an incident or accident. | **2** |  |
|  |  |  |  | **Total time**  **85** |  |