Developing the EASA Part 145 SMS Training Program – Practical Considerations

Creating a robust Safety Management System (SMS) training program is critical for any maintenance organization aiming to enhance safety and human factors awareness. As per AMC4 145.A.30(e) Personnel requirements and GM1 145.A.30(e), the program must ensure that all personnel involved in maintenance are well-versed in safety management principles and human factors.

An effective SMS training program requires careful planning, resource allocation, and continuous improvement. By addressing the challenges and adopting best practices, maintenance organizations can foster a strong safety culture and enhance the overall effectiveness of their safety management systems.

The goal is to ensure all personnel are competent, informed, and committed to maintaining the highest safety standards, here we explore the practical considerations, challenges, and best practices in developing and implementing an effective SMS training program.

Challenges in Developing an SMS Training Program

- **Diverse Training Needs**: Different roles within the organization require tailored training. For instance, line managers, certifying staff, technical support personnel, and ground equipment operators have varied responsibilities and thus, diverse training needs.

- **Resource Allocation**: Allocating sufficient resources, including time, budget, and qualified trainers, can be challenging. Smaller organizations may struggle more with these constraints.

- **Integration with Existing Training**: Ensuring that the SMS training is effectively integrated with other training programs (such as health and safety, supervisory skills) without redundancy is a complex task.

- **Keeping Training Relevant**: The training program must be regularly updated to reflect the latest industry standards, regulations, and internal feedback. This requires continuous monitoring and revision of the training syllabus.

- **Cultural Differences**: Addressing cultural differences within the workforce, especially in multinational organizations, can impact the effectiveness of training on communication, teamwork, and safety behavior.

Best Practices for Developing an SMS Training Program

- **Conducting a Training Needs Assessment**: Start by assessing the specific training needs of different personnel categories. This involves evaluating current competencies and identifying gaps in safety and human factors knowledge.

- **Customized Training Modules**: Develop customized training modules for various roles. For example, planners may need more in-depth training on scheduling and planning, while mechanics may focus more on error management and procedural compliance.

- **Blended Learning Approach**: Utilize a combination of online training, classroom sessions, and practical workshops. This blended approach can cater to different learning styles and make the training more engaging.

- **Qualified Trainers**: Employ trainers who are not only experts in SMS and human factors but also skilled in adult education techniques. This ensures the training is both informative and impactful.

- **Regular Recurrent Training**: Implement a structured recurrent training program to keep staff updated on SMS principles and to gather feedback on safety and human factors issues. Ensure this training is of appropriate duration and frequency.

- **Feedback Mechanisms**: Establish robust mechanisms for collecting and acting on feedback from training participants. This helps in continuously improving the training program based on real-world insights and experiences.

- **Use of Practical Examples**: Incorporate practical illustrations, case studies, and incident reports in the training to make it more relatable and impactful. Real-world examples help in understanding the practical applications of SMS principles.

- **Formal Reporting and Documentation**: Ensure that all training procedures are well-documented in the Maintenance Organisation Exposition (MOE). This includes specifying the training syllabus, delivery methods, and evaluation procedures.

Conclusion

The role of qualified trainers, regular recurrent training, and robust feedback mechanisms cannot be overstated, as they are crucial for maintaining relevance and continuously improving the training program. Additionally, the inclusion of practical examples and formal documentation ensures that the training is both impactful and compliant with regulatory requirements.

The success of an SMS training program lies in its ability to foster a strong safety culture within the organization. By prioritizing safety and human factors education, maintenance organizations can enhance their overall safety management systems, leading to safer operational environments and improved safety performance.

EASA 145 HF & SMS Regulatory Requirements

AMC4 145.A.30(e) Personnel requirements

ED Decision 2022/011/R

SAFETY TRAINING (INCLUDING HUMAN FACTORS)

(a) With respect to the understanding of the application of safety management principles (including human factors), all maintenance organisation personnel should be assessed for the need to receive initial safety training.

Personnel involved in the delivery of the basic maintenance service of the organisation should receive both initial and recurrent safety training, appropriate for their responsibilities. This should include at least the following staff members:

− Nominated persons, line managers, supervisors;

− Certifying staff, support staff and mechanics;

− Technical support personnel such as planners, engineers, technical record staff;

− Persons involved in compliance monitoring and/or safety management-related processes and tasks, including the application of human factors principles, internal investigations and safety training;

− Specialised services staff;

− Stores department staff, purchasing department staff;

− Ground equipment operators.

The generic term 'line managers' refers to departmental heads or persons responsible for operational departments or functional units that are directly involved in the delivery of the basic maintenance services of the organisation.

(b) Initial safety training should cover all the topics of the training syllabus specified in GM1 145.A.30(e) either as a dedicated course or else integrated within other training. The syllabus may be adjusted to reflect the particular nature of the organisation. The syllabus may also be adjusted to suit the particular nature of work for each function within the organisation. For example:

− small organisations not working in shifts may cover in less depth subjects related to teamwork and communication;

− planners may cover in more depth the scheduling and planning objectives of the syllabus, and in less depth the objective of developing skills for shift working.

All personnel identified in accordance with point (a) of this AMC, including personnel being recruited from any other organisation should receive initial safety training compliant with the organisation's training standards prior to commencing the actual job function, unless their competency assessment justifies that there is no need for such training. New, directly employed personnel working under direct supervision may receive training within 6 months after joining the maintenance organisation.

(c) The purpose of recurrent safety training is primarily to ensure that staff remain current in terms of SMS principles and human factors and also to collect feedback on safety and human factors issues. Consideration should be given to involving compliance monitoring staff and the key safety management personnel in this training to provide a consistent presence and facilitate feedback. There should be a procedure to ensure that feedback is formally reported by the trainers through the internal safety reporting scheme to initiate action where necessary.

Recurrent safety training should be delivered either as a dedicated course or integrated within other training. It should be of an appropriate duration in each 2-year period in relation to the relevant compliance monitoring audit findings and other internal/external sources of information available to the organisation on safety and human factors maintenance issues.

(d) Safety training may be conducted by the maintenance organisation itself, independent trainers, or any training organisations acceptable to the competent authority.

(e) The safety training procedures should be specified in the MOE.

GM1 145.A.30(e) Personnel requirements

ED Decision 2022/011/R

TRAINING SYLLABUS FOR INITIAL SAFETY TRAINING (INCLUDING HUMAN FACTORS)

The training syllabus below identifies the topics and subtopics to be addressed during the safety training.

The maintenance organisation may combine, divide, or change the order of any of the subjects in the syllabus to suit its own needs, as long as all the subjects are covered to a level of detail appropriate to the organisation and its personnel, including the varying level of seniority of that personnel.

Some of the topics may be covered in separate training courses (e.g. health and safety, management, supervisory skills, etc.) in which case duplication of training is not necessary.

Where possible, practical illustrations and examples should be used, especially accident and incident reports.

Topics should be related to existing legislation, where relevant. Topics should be related to existing guidance/advisory material, where relevant (e.g. ICAO HF Digests and Training Manual).

Topics should be related to the maintenance activities of the organisation to the greatest extent possible; too much unrelated theory should be avoided.

1. General/Introduction to safety management and human factors

1.1. Need to address safety management and human factors

1.2. Statistics

1.3. Incidents

1a. Safety risk management

1a.1. Hazard identification

1a.2. Safety risk assessment

1a.3. Risk mitigation and management

1a.4. Effectiveness of safety risk management

2. Safety Culture/Organisational factors

2.1 Justness/trust

2.2 Commitment to safety

2.3 Adaptability

2.4 Awareness

2.5 Behaviour

2.6 Information

3. Human Error

3.1. Error models and theories

3.2. Types of errors in maintenance tasks

3.3. Violations

10.4. Action to address problems

10.5. Feedback and safety promotion

Next Steps

Sofema Aviation Services (www.sassofia.com) and Sofema Online (www.sofemaonline.com) provides Training for Trainers to support organisations wishing to develop EASA compliant internal Part 145 Initial and Recurrent Training. Please see the websites or email team@sassofia.com