

Potential Risk Consideration Elements for EASA Part 145 Safety Management System

Sofema Aviation Services (SAS) www.sassofia.com identifies key elements suitable for consideration when building an EASA Part 145 Risk Register.

Management Considerations

- Limited or lack of management commitment
- Management do not demonstrate support for the activity
- Lack of or incomplete description of roles, accountabilities and responsibilities
- Limited or lack of resource availability or planning, including staffing
- Lack of or ineffective policies
- Incorrect or incomplete procedures including instructions
- Lack of or poor management and labor relationships
- Lack of or ineffective organizational structure
- Poor organizational safety culture
- Lack of or ineffective safety management processes (including risk management, safety assurance, auditing, training and resource allocation)
- Lack or ineffective audit procedures
- Lack of or limited resource allocation
- Incorrect or incomplete or lack of training and knowledge transfer. (Note: Training should reflect the needs of the organization.(Accidents have shown that inadequate training is a hazard and may even lead to accidents.)
- Unofficial organizational structures Note: These structures may be of a benefit but also may lead to a hazard.
- Growth, strikes, recession or organizational financial distress Mergers or acquisition
- Changes, upgrades or new tools, equipment, processes or facilities
- Incorrect or ineffective shift/crew member change over procedures
- Changes or turnover in management or employees
- Informal processes (Standard Operating Procedures)
- Lack of or poor or inappropriate materials/equipment acquisition decisions
- Lack of, poor staffing recruitment/assignment (Note: Staff should be hired or assigned according to organizational needs but also according to their skills,
- Qualifications and abilities. An employee with the wrong skill set can be a hazard. This includes management.

Related to Documentation Process and Procedures

- Incorrect, poor or lack of internal and external communication including language barriers
- Lack of, incorrect or incomplete manuals, or operating procedures (including maintenance)
- Lack of, incorrect or incomplete employee duty descriptions
- Lack of, incorrect, incomplete or complicated document update processes
- Lack of, incorrect or incomplete reports and records

- Lack of, incorrect or incomplete control of necessary documents for personnel (licenses, ratings, and certificates)

Related to Human Circumstances

- Heart attack, Stroke, Kidney stone, Seizure
- Nausea, Diarrhea, Carbon monoxide, Medication, Fatigue
- Influenza, Upper Respiratory Tract Infection (TI), Urinary TI
- Color vision, Visual field limitations, Mobility limitations, Colostomy bag, Hearing loss
- Fatigue (lack of sleep), Alcohol and substance abuse, Medications, Complacency
- Financial, Birth of child, Divorce, Bereavement, Challenging timelines, Inadequate resources
- Inflight turbulence cabin crew injury, injury caused to personnel during ground aircraft operations or luggage handling
- Jet lag, Paint shop, Solvents, Chemical/Biological exposures, Noise, Vibrations, Distractions
- Human factors related to design, manufacturing, maintenance and operations.
- Over saturation of digital information

Related to Maintenance

- Lack of or poor airworthiness verification
- Lack of or poor verification of equipment and instruments necessary to a particular flight or operation
- Poor fueling processes
- Lack of or poor aircraft dispatch or release
- Lack of or poor maintenance release
- Lack of, or poor communication (ATC, ramp, maintenance, flight Ops, cabin, dispatch, etc)
- Language barriers (Multiple languages)
- Poor HVAC (heating, ventilation, and air conditioning)
- Noisy work environment
- Lack of, or poor Lighting
- Poor facilities (inadequate space, equipment or infrastructure)
- Lack of, or poor maintenance release
- Lack of, or poor maintenance programs (Including imprecise maintenance data or transcription errors when creating job-cards)
- SUPS (Suspected Unapproved Parts)
- Maintenance movement of aircraft/run-ups
- Lack of, or poor communication
- Language barriers in maintenance teams (Multiple languages)
- Poor control of outsourced maintenance (any maintenance completed outside the maintenance facility or organization including third party maintenance)
- Lack of or, inappropriate specialized processes (including NDT, plating, welding, composite repairs etc...)
- Lack of or, improper Airworthiness Directive Control

- Ineffective or lack of procedures to ensure materials, parts, or assemblies are worked or fabricated through a series of precisely controlled steps, and that undergo heat-treating, brazing, welding, and processing of composite materials). physical, chemical, or metallurgical
- Lack of or, inadequate reliability program
- Lack of, or poor tool accountability (Including traceability or registration)
- Lack of or unsafe or unreliable equipment, tools, and safety equipment;
- Inappropriate layout of controls or displays
- Mis-calibrated tools
- Inappropriate or incorrect use of tools for the task
- Lack of, or inadequate instructions for equipment, tools, and safety equipment
- Complex design (Difficult fault isolation, multiple similar connections, etc)
- Inaccessible component/area
- Aircraft configuration variability (Similar parts on different models)

Next Steps

Sofema Aviation Services (www.sassofia.com) and Sofema Online (www.sofemaonline.com) provide training & consultancy related to EASA SMS Compliance – please email team@sassofia.com for further information.