Root Cause Analysis for Safety Occurrences

24 training hours | 6 modules | approx. 3 days | Live online or on-site, in English or Chinese

Systematic root cause analysis: from 5 Whys to fishbone to HFACS - finding systemic causes, not just blame.

Instructor: HAN Aviation Safety Consulting

Module 1: Investigation Fundamentals & Process (4 hours)

- Organizing an investigation: process, roles, and evidence handling
- Securing the scene and preserving perishable evidence
- Interview techniques for witnesses and involved personnel

Module 2: The 5 Whys Technique (4 hours)

- Applying the 5 Whys to aviation safety occurrences
- Avoiding common pitfalls: stopping too early, blame-oriented questioning
- Case exercises: ground damage, runway incursions

Module 3: Fishbone Diagrams (Ishikawa) (4 hours)

- Constructing cause-and-effect diagrams for complex events
- Categories: man, machine, method, material, measurement, environment
- Group workshop: building fishbones from real occurrence reports

Module 4: HFACS -- Human Factors Analysis (4 hours)

- The Human Factors Analysis and Classification System framework
- Unsafe acts, preconditions, unsafe supervision, organizational influences
- Applying HFACS to aviation maintenance and operations events

Module 5: From Causes to Corrective Actions (4 hours)

- Distinguishing root causes from contributing factors
- Developing SMART corrective actions that address systemic causes
- Verifying effectiveness: closing the loop

Module 6: Case Exercises & Assessment (4 hours)

- Full-scale root cause analysis exercise on a realistic scenario
- Peer review of analysis outputs
- Q&A and knowledge assessment

Contact