Developing Competent Authority Inspector MSAT Competence

Sofema Aviation Services (SAS) Considers Practical Solutions to Grow EASA Competent Authority (CA) Oversight Competence.

Introduction

Competent Authority (CA) inspectors sit between EASA regulations and individual approved organisations. As well as having the own regulatory obligations they act as the interface between regulatory requirements and real-world operational performance.

The ability of inspectors to accurately assess, interpret, and guide organisations on Management System (MS) effectiveness depends directly on their competence.
In the EASA MSAT framework, competence is not simply regulatory knowledge, it encompasses technical expertise, assessment skills, behavioural competence, and performance orientation.

Core Competence Objectives

To ensure inspectors can evaluate an MS beyond "tick-box" compliance, competence development should address:

Regulatory & Technical Knowledge

- In-depth understanding of:
  - EASA domain rules (Part-145, Part-CAMO, Part-21, Air Ops, ATC, Aerodromes, etc.).
  - ICAO Annex 19 and the 12 SMS elements.
  - Regulation (EU) 376/2014 on occurrence reporting and just culture.
- Continuous familiarization with AMC/GM updates and European Plan for Aviation Safety (EPAS) priorities.

Performance-Based Oversight Skills

- Ability to assess Present, Suitable, Operating, Effective (PSOE) maturity levels in context.
- Risk-based prioritisation—linking oversight focus to hazard/risk profiles and safety performance.
- Understanding of suitability and scalability to adapt evaluation to organisation size and complexity.

Ability to Assess PSOE Maturity Levels in Context

Practical Solutions:

Structured PSOE Calibration Workshops

- Conduct regular group reviews of anonymised MSAT case studies.
- Compare individual inspector scoring against a reference "gold standard" assessment.
- Discuss discrepancies to harmonise interpretation of the PSOE scale.

On-Site Shadowing & Cross-Pollination

- Pair less experienced inspectors with senior evaluators during initial certification or complex oversight.
- After the visit, debrief by reviewing how each element was rated and why.

Evidence Triangulation Checklists

- Develop a quick-reference tool showing what objective evidence looks like for each maturity stage (e.g., "Present" evidence = documented procedure exists; "Operating" evidence = sampled records show ongoing implementation; "Effective" evidence = measurable improvement trend linked to safety objectives).
- Include practical "false positive" traps to avoid (e.g., "impressive manual" with no real operational uptake).

Sector-Specific Examples

- Maintain a repository of PSOE assessment examples from different aviation domains (Part 145, Part 21, Air Ops, Ground Handling) to interpret and make judgement calls.

Risk-Based Prioritisation — Linking Oversight Focus to Hazard/Risk Profiles & Safety Performance

Practical Solutions:

Risk Profiling Templates

- Integrate MSAT scoring with operator-specific hazard registers, occurrence reports, and trend data.
- Use a colour-coded risk heat map to quickly visualise priority oversight areas.

Safety Data Fusion Training (Mentoring)

- Train inspectors to combine multiple data sources:
  - Occurrence reporting trends (ECCAIRS, internal reports)
  - Reliability & maintenance programme data
  - Previous oversight findings
- Teach how to spot correlations (e.g., high deferred defect rate linked to weak continuing airworthiness processes).

Scenario-Based Oversight Planning

- Create annual planning exercises where inspectors must design an oversight schedule based on simulated operator performance data.

- Require justification for why certain areas get more focus hours or deeper sampling.

Dynamic Oversight Adjustment

- Implement mid-year "risk recalibration" sessions to adjust planned oversight focus if new hazards emerge (e.g., new fleet type, change of accountable manager, emerging technical defect trend).

Understanding of Suitability & Scalability — Adapting Evaluation to Organisation Size & Complexity

Practical Solutions:

Scalability Decision Matrix

- Develop a reference chart linking:
  - Organisation size & complexity (staff numbers, fleet mix, operational scope)
  - Required depth of evidence sampling for each MSAT element
- Example: A 5-person maintenance shop vs. a 500-person MRO require different sampling depths for the same compliance element.

Organisation Profiles Database

- Maintain up-to-date profiles for each approved organisation, summarizing:
  - Size & scope
  - Risk history
  - SMS maturity
- Use this to pre-define "baseline" oversight scope before site visits.

Oversight Scaling Workshops

- Use role-play where inspectors must justify either expanding or reducing evaluation depth based on real organisational data.
- Discuss risks of "over-inspection" (resource drain) vs. "under-inspection" (missed systemic issues).

Proportional Evidence Gathering

- Train inspectors on targeted evidence collection methods:
  - For small entities: focus on key processes and cross-check all relevant records.
  - For large entities: apply sampling techniques and statistical confidence levels to ensure representative coverage.

Analytical and Data Competence

- Interpreting safety performance indicators (SPIs) and safety performance targets (SPTs).
- Using occurrence and safety trend data to inform oversight.
- Applying root cause analysis (RCA) in safety investigations.

Behavioural and Soft Skills

- Interviewing and elicitation techniques that foster openness.
- Active listening and analytical questioning.
- Influencing skills to guide safety improvement without regulatory overreach.
- Promoting trust and a positive safety culture in oversight interactions.

Sector-Specific Operational Insight

- Practical understanding of operational environments (maintenance, flight ops, ATC, design, etc.).
- Awareness of technological, procedural, and human factors challenges in each domain.

Competence Management Framework

A structured Inspector Competence Management System may be implemented, containing:

Competence Standards

- Develop an Inspector Competence Framework aligned with ICAO Doc 9734 and EASA Management System oversight guidance.

  Note - ICAO Doc 9734 - Safety Oversight Manual - Part A - The Establishment and Management of a State Safety Oversight System

- Define competence profiles per inspector role (generalist, domain-specific, senior performance assessor).

Competence Assessment

- **Initial competence verification** Baseline acceptance either at recruitment or as a benchmark (technical and behavioural).
- **Annual performance reviews** against defined standards.
- **360° feedback** from peers, supervisors, and audited organisations (in a controlled, constructive format).

Development Pathways

- **Initial Training**:
    - MSAT methodology and application.
    - Risk-based and performance-based oversight principles.
    - Interviewing techniques and positive safety culture promotion.
- **Advanced/Continuous Training**:
    - Scenario-based workshops.
    - Joint inspections with experienced assessors.
    - Domain-specific refresher courses.
    - Data analytics and safety performance monitoring skills.
- **Cross-Domain Exposure**:
    - Rotational assignments to broaden perspective.
    - Participation in multi-disciplinary audits for integrated management system assessments.

Knowledge Sharing

- Internal knowledge base with:
    - Best practice guides.
    - Lessons learned from complex oversight cases.
    - Case studies of effective MS implementation.
- Quarterly inspector forums or peer-learning sessions.

Growing Effectiveness Through Continuous Improvement - Improving inspector effectiveness requires systematic reinforcement:

Mentoring and Coaching

- Pair less experienced inspectors with seasoned mentors.
- Use “shadow and reverse shadow” methods for on-site evaluations.

Calibration Exercises

- Joint evaluations of the same organisation by multiple inspectors to ensure consistency.
- Cross-review of MSAT maturity ratings to avoid interpretation drift.

Performance Feedback Loop

- Post-assessment debriefs to identify strengths and gaps in inspection conduct.
- Integrating oversight outcomes into training priorities.

International Benchmarking

- Exchange programmes with other competent authorities.
- Participation in EASA Standardisation Meetings and ICAO/SM ICG initiatives.

Key Success Factors

- **Leadership Commitment** – Senior CA management must prioritise inspector competence as a strategic asset.
- **Adequate Resources** – Budget for continuous training, travel for on-site evaluations, and data tools.
- **Cultural Alignment** – Inspectors should be champions of performance-based oversight and positive safety culture.
- **Adaptive Training** – Shift training focus as new risks, technologies, and regulatory requirements emerge.

Next Steps

Sofema Aviation Services (SAS) provides the following training as Classroom or Webinar - Using The EASA Management System Assessment Tool (EASA MSAT) – 2 Days

https://sassofia.com/course/using-the-easa-management-system-assessment-tool-easa-msat-2-days/