

# GUIDANCE MATERIAL:

## SAM CONTENT

### 1 INTRODUCTION

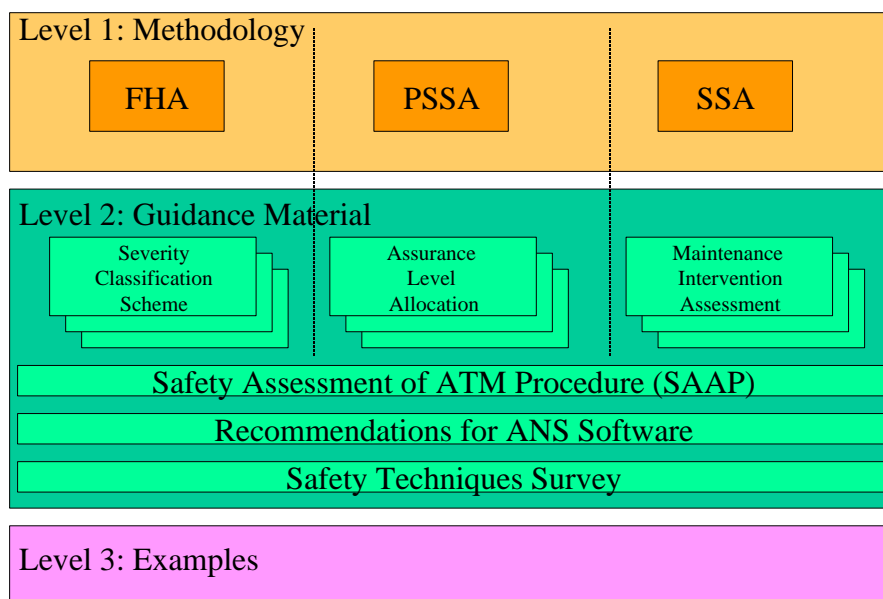
This guidance material provides the up-to-date list of the 3 levels of material part of the SAM.

The ANS SAM is made of three levels of material:

- Level 1: The methodology following logically the steps:
  - FHA (Functional Hazard Assessment) (SAF.ET1.ST03.1000-MAN-01);

- PSSA (Preliminary System Safety Assessment) (SAF.ET1.ST03.1000-MAN-02);
- SSA (System Safety Assessment) (SAF.ET1.ST03.1000-MAN-03).
- Level 2: Guidance Material (GM) which are:
  - Providing further detailed information on the use of various techniques to achieve some parts of FHA or PSSA or SSA (then these GM are attached as annex to the chapter they refer to);
  - Addressing specific system element throughout all the methodology steps such as ATM procedure or Software (then these GM are in PART IV such as “Safety Assessment of ATM Procedure” (SAAP) or “Recommendations for ANS SW”).
- Level 3: Examples of application of various techniques to real safety assessment (then these examples are attached as appendix to the SAM Step they refer to).

## SAM



The complete list of SAM material, including Level 1 (Methodology), Level 2 (Guidance Material) and Level 3 (Examples) documents, is provided in SAM-Intro Annex A.

## 2 SAM MATERIAL LIST

SAM V2.1 includes the following list of documents:

The documents being underlined have been modified or added since previous version V2.0.

- **Level 1: SAM Methodology**
  - Part I – FHA: FHA methodology: V2.0
    - Introduction: V2.1;
    - Chapter 1: Initiation;
    - Chapter 2: Planning;
    - Chapter 3: Safety Objectives Specification;
    - Chapter 4: FHA Evaluation;
    - Chapter 5: Completion;
  - Part II – PSSA: PSSA methodology: V2.0
    - Introduction: V2.1;
    - Chapter 1: Initiation;
    - Chapter 2: Planning;
    - Chapter 3: Safety Requirements Specification;
    - Chapter 4: PSSA Evaluation;
    - Chapter 5: Completion;
  - Part III – SSA: SSA methodology: V2.0
    - Introduction: V2.1;
    - Chapter 1: Initiation;
    - Chapter 2: Planning;
    - Chapter 3: Safety Assurance and Evidence Collection;
    - Chapter 4: SSA Evaluation;
    - Chapter 5: Completion;
- **Level 2: Guidance Material (GM)**
  - GM for SAM:
    - A: SAM content (Level 1, 2 & 3 material); V2.1
    - B: ESARR4 requirements compliance matrix; V2.0
    - C: SAM awareness document (concepts and principles); V1.0 (Not Available)
    - D: SAMTF (Safety Assessment Methodology Task Force) Members: V2.1
  - GM for FHA sub-steps:
    - GM for FHA - Chapter 1:
      - A: OED (Operational Environment Definition); V2.0
    - GM for FHA - Chapter 2:
      - A: Planning FHA activities; V2.0
    - GM for FHA - Chapter 3:

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- A. Planning and conducting FHA session; V2.0
  - B. Identification of failure modes, external events and hazards; V2.1 (Only B2)
  - C. Identification of Hazards effects; V2.0
  - D. Severity Classification Scheme; V2.0
  - E. Risk Classification Scheme; V2.1
  - F. Safety Objective Classification Scheme; V2.0
  - G. Methods for setting Safety Objectives; V2.0
  - H. Results records; V2.0
  - I. Barrier Analysis; V2.0
  - J. TLS (Target Level of Safety) apportionment method. V2.0
  - GM for FHA - Chapter 4:
    - A-B-C: FHA Evaluation Activities; V2.1
  - GM for Chapter 5:
    - A: FHA Report; V2.1
  - GM for PSSA sub-steps:
    - GM for PSSA – Chapter 1
      - A: Operational Environment Definition (OED); V2.0
    - GM for PSSA – Chapter 2;
      - A: Planning PSSA activities; V2.0
    - GM for PSSA – Chapter 3; V2.0
      - A: Safety Requirement and Assurance Level Allocation (SWAL, PAL, ..); V2.1
      - B: Automation; V2.0
      - C: Sensitivity Analysis; V2.1
    - GM for PSSA - Chapter 4:
      - A-B-C: PSSA Evaluation Activities; V2.1
    - GM for PSSA – Chapter 5
      - A: PSSA Report; V2.1
  - GM for SSA sub-steps:
    - GM for SSA – Chapter 1; V1.0
    - GM for SSA – Chapter 2; V1.0
    - GM for SSA – Chapter 3:
      - A. SSA generic activities (testing, inspection, analysis, demonstration, ..); V1.0
      - B. SSA Activities along the lifecycle; V1.0
      - C. Maintenance intervention risk assessment; V1.1
    - GM for SSA - Chapter 4:
      - A-B-C: SSA Evaluation Activities; V1.2

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- GM for SSA – Chapter 5:
    - A: SSA Report; V1.0
  - GM for SAM:
    - Part IV Annex A: Acronyms; V2.0
    - Part IV Annex B: Glossary; V2.0
    - Part IV Annex C: Initial Safety Plan; V2.0
    - Part IV Annex D: Safety Techniques Survey; V1.0
    - Part IV Annex E: ANS Software Lifecycle; V3.0
    - Part IV Annex F: Recommendations for ANS SW; V1.0
    - Part IV Annex G: Safety Assessment of ATM Procedures (SAAP); V0.10 (Proposed Issue)
    - Part IV Annex H: “what is a change”;V2.3 (Proposed Issue)
    - Part IV Annex I: Safety Case Development manual; V2.1
    - Part IV Annex J: HAZOP & TRACER; V1.0
    - Part IV Annex K: Fault Tree Analysis;V1.0
  - **Level 3:** Appendixes : Examples of application of methodology sub-steps and their Guidance Material:
    - FHA Appendixes:
      - A: FHA – Chapter 3 examples (Hazard assessment of OLDI, CPDLC, AGATE/A-ASMGCS); V2.0
      - B: TLS (Target Level of Safety) Apportionment method examples – En-Route airspace; V2.0
      - C: Safety Objective Classification Scheme (SOCS) examples; V2.0
      - D: ATCC Building FHA; V2.0.
      - E: Safety Targets for NAV application; V0.5 (Draft)
    - Part IV Appendixes:
      - A: Examples of “What is a change” processes; V1.0
        - A1: AVINOR 410 process (previously Part IV Annex H1);
        - A2: AVINOR 411 process (previously Part IV Annex H2);
        - A3: Czech ANS process (previously Part IV Annex H3);
        - A4: Swedish ANS process (previously Part IV Annex H4);
        - A5: French ANSP process (Word Document);
        - A6: French ANSP process (PowerPoint Document);
      - B: Terminal Airspace Design guidelines (V2.0)

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