

Safety toolbox

Context

The FAB CE airspace Alliance was created in 2008 to cover seven European countries and their ANSP providers (fab-ce.eu). The ANSPs have designed a safety management system (SMS) based on the applicable SES regulation, describing the structure, responsibilities and procedures. The FAB CE Safety management manual (SMM) describes the SMS in detail, and the safety toolbox provides an operational and live view of the system.

Description

The FAB CE Safety toolbox is a collection of the harmonised FAB CE safety activities and the best practices used by FAB CE ANSPs. The safety activities are further elaborated in detail by SMM. The best practices are collected and processed by dedicated working groups established by the SAF SubC. The best practices become candidates for regular activity based on their maturity and level of harmonisation within the FAB CE.

Purpose

The document strives to support and promote safety awareness in the FAB CE by providing single source and free access information.

Intended viewers

The SAF SubC has developed this document for all the FAB CE regulatory, strategic and operational bodies and individuals. External viewers will benefit from the document by quickly familiarising the FAB CE Safety management system.

Use

It is an informative and living document updated as frequently as practicable. Always use the referenced documents in case FAB CE safety processes are applied. Access to the information covered by Toolbox, including the provision of additional information, could be requested from the SAF Sub-Committee via national representatives to the committee.

Contact

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Safety management system

Safety Policy

- Management commitment & responsibility
- Safety Accountabilities
- Appointment of key safety personnel
- SMS documentation

Safety Risk management

- Safety activities

Safety Assurance

- Safety performance monitoring & measurement
- Management of change
- Continuous improvement of the SMS

Safety Promotion

- Training, education and standards
- Safety Communication

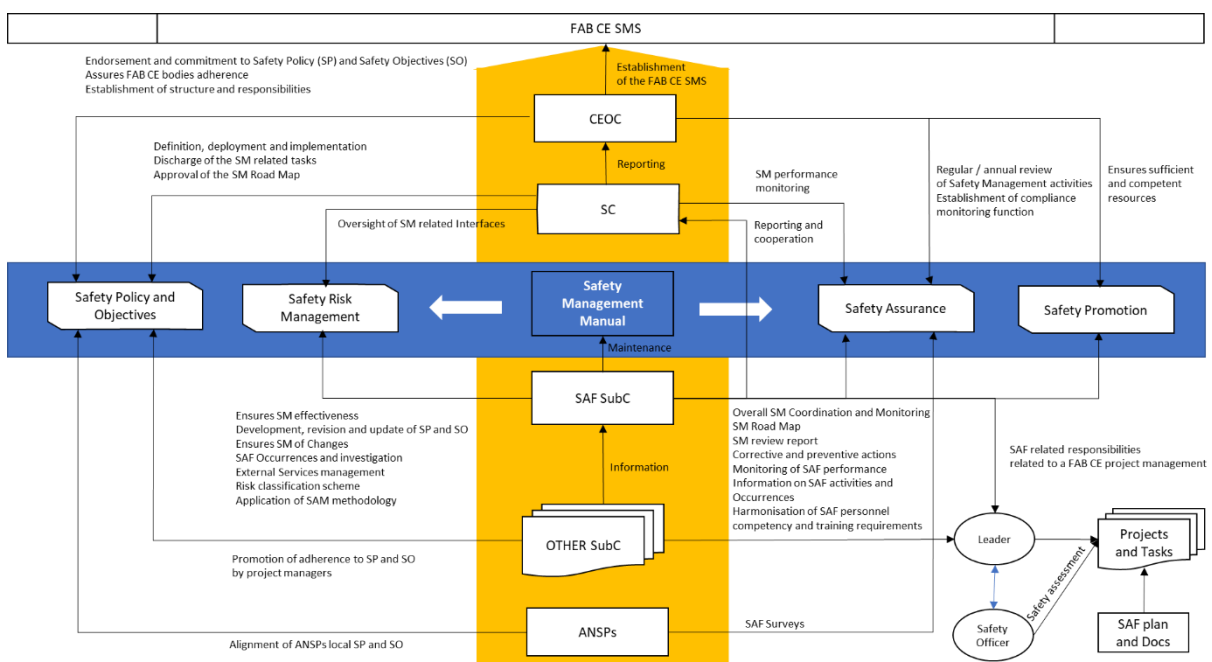


Figure 1 - FAB CE Safety management system

External services

Type

FAB CE Safety activity

Objective

The activity strives to establish a harmonised local assessment process of the external (contracted) services and information exchange across the FAB CE to support safety information sharing and the effective procurement process.

Main objectives include:

- Reduction of the risk associated with external services.
- Reduction of the effort by joint and harmonised activities as far as appropriate.
- Development and maintenance of appropriate tools.

References

- FAB CE Safety management manual, chapter 5.
- [R1] Regulation (EU) No 2017/373

Description

The activity controls only the safety information exchange while the local ANSPs perform the safety assessment according to regulatory requirements. The Safety Sub-Committee (SAF SubC) establishes the process in line with the FAB CE Safety policy and relevant regulatory requirements, maintains an updated checklist for use by ANSPs in a local procurement process, promotes using the checklist, provides for the FAB CE external service providers database and facilitates safety-related information exchange between individual ANSPs and between other FAB CE bodies.

An ANSP may use the database and the harmonised checklist during the service procurement phase and/ or the safety oversight to comply with the regulatory safety requirements. Safety documentation or the results of the safety oversight are not exchanged through the process but remain in possession of the local ANSP.

Process

External services	
Input	ANSPs' data and updates
Output	External services database
Owner	SAF SubC
Support	SharePoint Templates
Methodology	Data collection Data sharing
Criteria	Data is up-to-date Database is accessible to designated personnel Database is used

Flow

- SAF SubC updates information in the external services database annually and ad-hoc upon information received from its members and results from the safety monitoring activities
- SAF SubC develops and maintains a harmonised checklist that FAB CE ANSP can use in the process of external services' procurement
- During safety assessment of any project, FAB CE ANSP may ask information from the external services database for further decisions related to operational risks
- The ANSP shares the agreed scope of safety related information with FAB CE members via the SAF SubC and the database.

Safety risk assessment

Type

FAB CE Safety activity

Objective

The activity ensures that all 'FAB CE-related changes' are notified, planned and managed under applicable regulatory requirements and standards.

Reference

- FAB CE Safety management manual, chapter 8.
- [R1] Regulation (EU) No 2017/373

Description

FAB CE has harmonised definition of the 'FAB CE-related change' within its Member States. Additionally, all changes planned and managed within a FAB CE are considered standard "multi-actor changes of the functional system" as defined by [R1]. The activity strives to ensure coordination and information exchange and does not replace safety management responsibilities defined by the FAB CE ANSPs.

All FAB CE projects are managed under the responsibility of a relevant sub-committee (SubC) following the nature of a project (usually Operational, Technical or Human resources Sub-committee). A safety plan is developed for each project, and a Safety officer is assigned. The safety plan identifies project elements that shall be subject to safety assessment. The SubC managing the project coordinates with the SAF SubC and develops a safety assessment report which can take two forms depending on the scope and scale of the project:

- **FAB CE-level Safety assessment** – for smaller, one-off projects. Relevant ANSP directly communicates the report to the competent authority.
- **FAB CE-level Generic Safety assessment** – for large-scale and conceptual changes. All ANSPs prepare local assessments that derive from the FAB CE generic assessment.

The designated safety officer monitors all defined safety criteria and objectives according to the safety plan.

Process

Safety risk assessment	
Input	Project description, safety requirements, safety and technical standards.
Output	FAB CE-level Safety Assessment FAB CE-level Generic Safety Assessment
Owner	Safety officer
Support	SAF SubC – safety experts
Methodology	Specific techniques to perform the assessment are agreed case by case. As a basis, the SAM
Criteria	Agreed methodology and safety plan are followed

Flow

- FAB CE-related project has been established and assigned to a FAB CE group (SubC)
- A safety officer is assigned
- The safety officer prepares a safety plan and identifies the scope and applicability of the safety risk assessment
- The safety officer requests support from the SAF SubC as necessary
- Safety officer develops Safety assessment report (full or generic)
- The SAF SubC reviews the Safety assessment report
- The Safety assessment report is submitted to ANSP for further proceedings (see the Description section)

Safety monitoring

Type

FAB CE Safety activity

Objective

Support the monitoring of FAB CE safety performance and safety aspects of FAB CE projects and facilitate safety risk management, safety assurance and safety promotion within FAB CE to:

- avoid degradation of safety levels,
- support safety performance targets' achievement.

Reference

- FAB CE Safety management manual, chapter 10.

Description

The Safety Sub-Committee (SAF SubC) monitors the FAB CE SMS performance and reports to the FAB CE Steering Committee (FSC). The main areas for monitoring include the safety of operations and the safety of projects. The SAF SubC does not replace responsibilities established by local ANSP, but it strives to ensure coordination and information exchange. Operational safety monitoring uses regulatory and other agreed performance indicators and methodologies, including safety targets, if defined. Safety of project monitoring is ensured via cooperation with projects' designated safety officers (SO).

The SAF SubC has established the Safety performance monitoring working group (SMON WG) that performs the safety monitoring activities and ad-hoc monitoring tasks in line with the FAB CE SMS manual and direct tasks. The monitoring activities planning is supported by the FAB CE Safety Roadmap (RM), and Safety plans developed within FAB CE projects.

The two regular deliverables developed within the safety monitoring process include:

- **FAB CE Safety management review**
- **FAB CE Safety performance report**

Process

Safety management review	
Input	Results of safety monitoring activities
Output	Safety management review
Owner	SAF SubC
Support	SMON WG, SOF, PSO
Methodology	Template, meetings and common review
Criteria	RM deadlines are met, the template is used, filled in and submitted to FSC

Safety performance report	
Input	ANSP data, occurrences, targets
Output	Safety performance report
Owner	SAF SubC
Support	SMON WG
Methodology	Meetings Data evaluation as defined by regulation, aviation standards or as agreed in case of custom indicators.
Criteria	Verified input data Results are agreed on within WG

Flow

- Process governance and quality control setting
- Identification of performance indicators for the report
- Agreement on the methodologies for computation and presentation
- Agreement on the data collection process
- Data aggregation and verification
- Data analysis
- Report preparation
- Approval, release and publication

Safety surveys and audits

Type

FAB CE Safety activity

Objective

Cost-effective identification and analysis of areas for safety improvement in selected topics and domains related to the FAB CE ANSPs' service provision, including support to safety planning and monitoring.

Reference

- FAB CE Safety management manual, chapter 9.

Description

The Safety Sub-Committee (SAF SubC) monitors the FAB CE SMS performance and reports to the FAB CE Steering Committee (FSC). The SAF SubC regularly discusses safety-related topics from changes in relevant regulatory requirements and ATM/ANS provisions, including operational, technical and local aspects and projects proposed by its members. Topics identified as important for any ANSP or beneficial to maintain the achieved or planned safety levels or not fully covered by existing standards are proposed for further examination.

The SAF SubC has established the Safety surveys working group (SS WG) to provide a flexible and cost-effective solution to the FAB CE ad-hoc needs for external safety review and analysis. The WG performs the safety surveys or audits by personnel trained in auditing while utilising appropriate subject-matter experts in line with the FAB CE SMS manual. In the case of audits or in-depth surveys, the process requires agreement between SAF SubC and volunteering ANSP that the activity is to be focused on.

The final report is distributed to the participating organisation, and if agreed, the results are used for further activities performed by SAF SubC to maintain and improve the FAB CE safety performance.

Process

Safety surveys and audits	
Input	Identified safety-related topic
Output	Report
Owner	SAF SubC
Support	Safety Surveys WG
Methodology	Survey, auditing methods, templates, meetings and expert analysis
Criteria	Safety plan deadlines are met, the templates are used, the final report is accepted by the participating ANSP, the report is submitted to SAF SubC

Flow

- Proposal for a safety-related topic
- Identification of participating ANSP
- Problem analysis, resources assignment, methodology agreement, planning
- Notification and agreement with the ANSP
- Safety survey plan coordinated with the ANSP
- Data collection and documentation analysis – desktop analysis
- Survey/ audit execution on-line or on site
- Data analysis in the context of standards and best practices
- Reporting to SAF SubC
- Safety survey final report – distribution to ANSP
- Processing the results
- FAB level recommendations
- Follow-up activities at ANSP, including planning and monitoring (on request)

Abbreviations

ANSP	Air navigation service provider
ANS	Air navigation service
ATM	Air traffic management
FAB CE	Functional airspace block central Europe
FSC	FAB CE Steering committee
PSO	FAB CE Programme support office
SAF SubC	Safety sub-committee
SM	Safety management
SMON WG	Safety monitoring working group
SMS	Safety management system
SO	Safety objective
SOF	Safety officer
SP	Safety policy
SS WG	Safety surveys working group
WG	Working group

References

- [R1] Commission Implementing Regulation (EU) No 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011