NEFAB Project

Feasibility Study

Initiative 13

Safety Management Systems

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1. EXECUTIVE SUMMARY

This initiative working paper describes both required actions and possible opportunities in relation to the harmonisation and possible future integration of Safety Management Systems within NEFAB.

The rationale behind the SMS harmonisation and integration initiative is that harmonisation or integration of SMS is a necessary enabler for other change processes related to the declaration, design and implementation of NEFAB. In addition it is considered that a future integration of SMS across the ANSP organisations within NEFAB can deliver safety benefits and improved cost efficiency.

The purpose of the initiative is to describe what actions are considered mandatory prior to the declaration of NEFAB and at the time that NEFAB moves into operation. In addition the initiative is developed to describe potential areas for alignment or integration of SMS.

The initiative is built around three logical development steps for SMS in NEFAB:

- Actions needed prior to declaration of NEFAB;
- Actions that should be implemented before NEFAB is operational towards the end of 2012;
- Actions that are recommended to implement as a part of a NEFAB Development Plan leading towards the conceptual target of having common Safety Management processes and a common SMS software platform for NEFAB in 2014.

A further development of SMS within NEFAB is highly dependant on how the NEFAB business is developed through the NEFAB development plan. Changes in SMS harmonisation and integration processes may therefore be required as a consequence of changes in institutional or organisational changes.

2. DESCRIPTION OF THE INITIATIVE

This initiative contains activities related to SMS that are:

- Required to complete in terms of harmonising or integrating the Safety Management Systems of the NEFAB member ANSPs ahead of declaration or operation, or;
- Beneficial to complete in order to achieve quantitative and/or qualitative benefits within the NEFAB area.

The benefits could both be financial or related to improved safety levels. At this stage the benefits are described in qualitative terms.

2.1 Scope

The operation and possible harmonisation or integration of the SMS among the NEFAB member ANSPs are discussed in this initiative.

To describe the NEFAB SMS, central elements of SMS have been evaluated and considered for future harmonisation and possible integration. Through this approach, the NEFAB SMS initiative is able to describe evolutionary steps pointing towards a single NEFAB SMS at a later stage.

The elements that have been considered are:

- Safety policy
- Governance
- Safety organisation and responsibilities
- Safety objective
- Functional safety objective
- Safety targets
- Safety competence
- Risk management
- Reporting of occurrences
- Investigation of occurrences
- Data exchange

- Safety assessment
- External suppliers (from a safety perspective)
- SMS documentation
- Safety monitoring
- Safety surveys
- Records
- Lesson dissemination
- Safety promotion
- Safety culture

The work on the initiative is based on an assumption that NEFAB in 2014 is a formalised cooperation involving states, NSAs and ANSPs; consisting of a number of individual ANS organisations. The cooperation involves common objectives and performance targets for the entire FAB.

2.2 Out of Scope

Other parts of business management systems, such as quality management, environmental management, customer relations management or security management that could constitute a total ANS Management System, of which SMS would be an integral part, are not discussed in this initiative. Further possibilities for harmonisation or integration of business management systems among NEFAB member ANSPs are considered out of scope. However in order to achieve the full benefits of harmonisation of SMS related processes from the Quality Management Systems and change in organisational structures can be necessary.

When the term “competency” is discussed in this initiative, it is limited to “safety competency”. Competency in relation to licensing requirements, operational proficiency requirements and other job- or task-related competency requirements are considered out of scope.

3. RATIONALE AND PURPOSE OF THE INITIATIVE

In accordance with SES and the performance regulation, performance targets will be established at FAB level.

The rationale behind this initiative is based on three core issues related to Safety Management Systems in NEFAB:

- The need to harmonise SMS and subsequent actions that are required before NEFAB moves into operation;
- The need to integrate SMS to meet safety performance requirements at FAB level in accordance with performance regulation;
- The need to continue integration of SMS in line with future development of NEFAB based on recommendations related to the evolution of the cooperation or changes in organisational structures.

In addition, there is an opportunity to harmonise and integrate SMS beyond the formal needs in order to deliver safety and/or financial benefits.

The purpose of this initiative is therefore to identify activities related to SMS, considered necessary for the declaration of the FAB, and to investigate the possibilities related to harmonisation or integration of SMS in order to achieve benefits.

A set of minimum SMS harmonisation requirements has been identified for the pre-declaration phase, and the initial operational phase of NEFAB. In addition the initiative contains proposals for integration for a 2014 perspective.

The harmonisation and integration of SMS within NEFAB is a necessary enabler for supporting the implementation of the FAB.

4. DESCRIPTION OF CURRENT STATE

4.1 National Safety Management Systems – Overview

This section describes the main characteristics of the safety management systems across the NEFAB member ANSPs in general. The differences between the national safety management systems are briefly discussed in the sections below:

4.1.1 Avinor – Norway

Avinor has an integrated management system that covers safety, quality, security and environment. The scope of the management system is both ANS and Airports. The ANS SMS follows CANSO and Eurocontrol SMS best practices, e.g. Eurocontrol SAM methodology, ESARR 2 reporting etc.

4.1.2 EANS – Estonia

EANS has an integrated management system that covers safety, quality and security. The scope of the management system is for ANS (airports are separate enterprises). SMS follows CANSO and Eurocontrol SMS best practices, e.g. ESARR 2 reporting etc.

4.1.3 Finavia – Finland

Finavia has a comprehensive SMS covering ANS services as well as the Airport operations at all organisational levels. The main documentation is presented in the company SMS handbook and its eight appendices. Finavia SMS is in close relation to the quality management system that in turn is a solid integrated part of the Management System. Safety and quality issues are handled at all organisational levels using joint SMS/QMS forums.

4.1.4 LGS – Latvia

LGS has established the management systems that cover safety, quality and security. Safety and quality are managed through cooperation approach, sharing common processes like joint auditing. All management systems cover ANSP aspects of LGS. Improvement is done through ICAO, CANSO and EUROCONTROL guidance material and best practices.

4.2 SMS Processes

Risk assessment methodology and risk classification criteria for the project:

There are differences between the methodologies applied by the different ANSPs. A “common” risk assessment process and risk classification criteria in line with the

Common Requirements need to be agreed for the NEFAB project, as well as the future operations.

Incident reporting and investigation:

For the feasibility study this is not considered to be relevant, and has not been explored further than establishing that there are differences between the different ANSPs. Alignment actions are considered later in this document. A harmonisation in this area is considered to be a necessary enabler for high performance within incident reporting and investigation.

Lesson dissemination:

For the feasibility study this is not considered to be relevant, and has not been explored further than establishing that there are differences between the different ANSPs. Alignment actions are considered later in this document. A harmonisation in this area is considered to be a significant enabler for high performance within lesson dissemination and hence supporting a learning culture as part of a safety culture.

Safety competency:

For the feasibility study this is not considered to be relevant. Before NEFAB is going into operation, a commonly agreed level of safety competence among different categories of staff needs to be established within NEFAB and a common Risk Classification Scheme should be established by all ANSPs involved.

Safety assurance and safety improvements:

For the feasibility study this is not considered to be relevant, and has not been explored further than establishing that there are differences between the different ANSPs. Alignment actions are considered later in this document and these are considered as particularly important to ensure compliance with safety performance targets.

Qualitative and quantitative safety indicators:

For the feasibility study this is not considered to be relevant, and has not been explored further than establishing that there are differences between the different ATNSPs. The work on qualitative and quantitative safety indicators has developed considerably through the European Safety Programme for ATM (ESP).

4.3 Safety Organisations and Resources

The NEFAB ANSPs have established similar safety organisations. There are smaller differences related to how different tasks are organised within the safety organisations and how resources are allocated to different types of safety related activities.

The number of resources utilised within each organisation differs according to the size of the organisations, tasks allocated to the different safety departments and

whether some safety management functions are handled by other parts of a combined ANS and airport organisation.

The estimated number of Full Time Equivalents (FTEs) for each of the ANSPs safety functions is presented in the table below:

ANSP	FTEs	Remarks
Avinor	24	Corporate staff, division safety department, technical safety department, investigators and staff with safety functions at units.
EANS	4	Operational and technical safety staff, investigators and auditors.
Finavia	12	Operational and technical safety staff, investigators, auditors and staff with safety functions at units.
LGS	5	Operational and technical safety staff, investigators and auditors.

5. ONGOING DEVELOPMENT

During the process towards declaration and the initial operational phase of NEFAB, different developments are going on within the NEFAB area and within different ANSP organisations that need to be considered in the work with safety management alignment, and possible integration in NEFAB. These ongoing developments are briefly described below:

5.1 Organisational Changes

Organisational changes are in progress or being planned across the NEFAB ANSPs.

Within the Avinor group a work on the possible reorganisation of the ANS will take place throughout 2011. Two solutions for the ANS division shall be further investigated, leading to a final recommendation being forwarded to the Avinor Board of Directors in June 2011. The two solutions being considered are to continue with the ANS as a more independent division within the Avinor group, alternatively to establish the ANS as a limited company organised as a subsidiary to Avinor A/S.

EANS is in the middle of the takeover of the provision of air navigation services at regional aerodromes. Framework agreement on the takeover process between Estonian ANS and Tallinn Airport (which also operates regional airports at Tartu, Kuressaare, Kärdla and Pärnu regional airports) was signed on 15 September, 2009. It is expected that the process will be finalized by the end of 2010.

All these organisational changes will result in changes and adjustments of safety management systems, which also need to be considered when developing the alignment and potential integration of SMS within NEFAB.

6. FUTURE SERVICE CONCEPT

The future "service concept", hereafter described as the NEFAB SMS, is divided into 3 logical development steps. These steps are:

- Pre-declaration, where actions are included in the decision making process for the ANSP´s and the NSAs;
- NEFAB operations in 2012 where actions are required as a part of a NEFAB design and implementation project before NEFAB is operational;
- NEFAB operations in 2014 with common SMS processes implemented within NEFAB, serving individual ANSP organisations.

This differs somewhat from other initiatives in the NEFAB Project. The reason for this deviation is the fact that some actions are identified as "pre-declaration activities" and will be needed already in 2011.

Some actions are also considered beneficial to conduct in the period before NEFAB goes into operations. These actions will belong in a coming design and implementation project, but the actions are included in this document to describe them in a total context.

The conceptual target for 2014 is supposed to describe further development stages of NEFAB SMS. The scenario for 2014 is based on the following assumption:

> *In 2014 NEFAB is a formalised cooperation involving States, NSAs and ANSPs, consisting of a number of individual ANS organisations served by common SMS processes.*

It is worth noting that a further development beyond 2014 will be highly dependant on other organisational measures related to integration of the existing ANSP organisations. When such opportunities are explored and specific recommendations are made, a more complete picture of the further development of SMS beyond 2014 can be made.

In relation to these development steps, NEFAB SMS can be described as follows:

6.1 Pre-declaration

In the pre-declaration phase common safety policy and safety objectives must be developed for NEFAB and the governance principles for safety issues must be defined and agreed among involved states, NSAs and ANSPs. The development includes a harmonised risk classification scheme for NEFAB. For the safety assessment of the NEFAB project, a common methodology needs to be agreed. It is recommended to develop a safety development plan for NEFAB that can be brought forward to the design and implementation phase and further on to NEFAB operations after 2012.

6.2 NEFAB in Operation – 2012

When NEFAB moves into operation in 2012, safety will still be managed at ANSP level. A formal safety group should be established to coordinate common safety issues. The chairperson of this group is recommended to be a member of the NEFAB Management Board.

A commonly agreed level of safety competency among different categories of staff should be established within NEFAB and a common Risk Classification Scheme should be established by all ANSPs involved.

An agreed reporting process should be defined to ensure that it is possible to establish safety monitoring functions at NEFAB level for the monitoring of regional safety performance. This agreed reporting process must also meet the requirements of the NSAs.

Occurrences should be classified according to the same methodology across the entire FAB and the same causal factor scheme should be applied. Safety data should be exchanged within NEFAB, at least at KPI level. An agreed methodology on assessment of changes should also be established.

Requirements that are put on external suppliers to the NEFAB ANSPs need to be aligned. This is considered a vital fundament for the establishment of cross border sectors and service provision.

The safety documentation for NEFAB from the initial date of operation should be complete. In addition an agreed process for the update of safety cases should be established. It is recommended to establish a common safety performance monitoring function with agreed terms of reference. The NAT Control and Monitoring Agency (NAT CMA) could be a model for such a monitoring function. In addition a process to align safety targets for NEFAB should be commenced.

A plan for NEFAB safety survey activities beyond 2012 should be developed and a pool of NEFAB surveyors should be established to do surveys that are related to NEFAB.

A process with associated procedures for safety records to support the monitoring function should be agreed, both in terms of language and content. A systematic process for lesson dissemination across NEFAB ANSPs should also be established associated with a product or tool that could be used for this purpose. An agreed way of collecting and promoting best safety practices should be established.

Safety culture targets should be defined and a safety culture survey for the entire NEFAB should be conducted to establish a baseline, provided sufficient external support can be made available for this purpose.

6.3 NEFAB 2014 Scenario

A management review process will ensure the review of the established NEFAB safety policy in this scenario. Common regional SMS processes are developed by a formalised SMS group. The safety performance review function will propose performance targets, monitor performance and report to the NEFAB Management Board.

Risk management processes are aligned across NEFAB. Processes related to investigation of occurrences are aligned and common investigation of occurrences is formalised within NEFAB. A common safety information database is operational and safety assessment processes are aligned with a common hazard identification form.

External suppliers are subject to a common framework applicable for all NEFAB member ANSPs. The process for keeping unit safety cases and system safety cases updated throughout the lifecycle of systems are aligned across the FAB.

Through the common safety database, a NEFAB-wide trend analysis will be available. Safety surveys rely on common data and an established pool of surveyors enable joint surveys to be carried out. Safety records within NEFAB are aligned in terms of language and content.

Lesson dissemination is taking place across organisations and national borders and a management review process for safety promotion is established in NEFAB. Safety culture surveys are conducted across the entire FAB to enable a further development of a functional regional safety culture.

A common software tool for occurrence reporting and investigation is established in NEFAB. A FAB-wide pool of investigators is available and safety data is collected and updated through a software tool for the entire FAB. This common software will also support the update of safety records.

7. DESCRIPTION OF EXPECTED BENEFITS

The expected benefits related to the NEFAB 2014 scenario are related to cost efficiency and safety. The benefits at this stage are described in qualitative terms.

7.1 Safety

The 2014 scenario involves integration of safety management processes. The scenario also involves increased data exchange, monitoring and the establishment of formalised cooperation between the NEFAB ANSPs. This is considered to deliver safety improvements to NEFAB and contribute to the development of a functional regional safety culture. The commonly agreed safety competency requirements across NEFAB combined with a regional pool of investigators and surveyors will contribute to information exchange and lesson dissemination across a large geographical area with diversified traffic and differing day to day requirements. This will increase the total amount of safety data made available to safety experts, managers and staff and enable experience and best practice from a wide range of operational units to be shared and discussed compared to a situation where this is limited to individual ANSP organisations. The increased availability of quality assured safety related data will also constitute a better fundament, compared with today, and increase relevance for trend analysis and the identification of actions and changes, potentially enabling earlier detection of situations, where the operations move towards unacceptable risk levels.

In terms of safety, a common software platform has the potential to deliver benefits by means of easily accessible data for safety experts, management and staff. A common software and safety data repository should enable a transparent exchange and use of safety related data and common analysis when relevant. This should also enhance lesson dissemination and safety monitoring within NEFAB. The risk associated with the transition to a new system should nevertheless be considered. When introducing new tools and procedures within the SMS, the transition has the potential to reduce reporting of occurrences and slow down processes which in term can have a negative impact on safety.

7.2 Cost Efficiency

The harmonisation and integration actions described for 2014 are considered to be realistic in terms of implementing the changes within that timeframe. The scenario involves degrees of alignment of processes and involves creation of a common safety function within the NEFAB SMS. This harmonisation and integration is expected to deliver improved cost efficiency. The implementation costs related to the harmonisation and integration is difficult to assess at this early stage and should be considered further.

In terms of cost efficiency, the implementation of a single software platform should have the potential to reduce the operating cost of the entire system. A transition from a number of individual systems to one regional system is considered to be complex

and time consuming. It also involves activities like specification, procurement and implementation actions that will result in transition costs, which should be considered to determine the pay-back time for such investments. Maybe the most significant contribution to cost efficient safety improvement will be the NEFAB common analysis on a set of quality assured data coordinated with the NEFAB adjacent FABs. Such an analysis will be accurate and most likely mitigate the risks. The implementation of changes and programs will be facilitated by the already established cooperation.

8. IMPLEMENTATION COSTS FOR BENEFIT REALISATION

SMS process	Description of action and remarks	Estimated annual operating cost (EUR)	Investment costs or one-off cost (EUR)	Timeline
1. Safety organisation and responsibilities	1.1 Establish formal NEFAB SMS Group	61,451	None	Operations from September 2012
	1.2 Performance review function (monitoring) established	14,988	None	In operation from September 2012
	1.3 Formal SMS Group develops common SMS processes and performance review functions sets targets, monitors performance and reports to FAB management board	None	539,550	In operation from January 2014
2. Safety targets	2.1 Common high level safety targets are set for NEFAB. One of the targets should be a SMS maturity target defined for NEFAB.	None	13,932	Implemented September 2012
	2.2 Further developed safety targets	None	13,932	Implemented by end 2014
3. Safety competency	3.1 Agreement on common level of safety competency	None	32,175	Implemented September 2012
	3.2 Common level of safety competency implemented	None	29,975	Implemented by end 2014
4. Risk Management	4.1 RCS implemented by ANSPs	None	4,122	Implemented September 2012
	4.2 Risk management processes aligned.	None	42,341	Implemented by end 2014
5. Occurrence reporting	5.1 Agreed reporting process to ensure that the requirements from NSAs are met, but also to ensure common monitoring at NEFAB level (defining responsibility, where to report etc)	None	42,341	Implemented September 2012
	5.2 Common software tool for occurrence reporting and	None	Cost is not calculated –	Implemented by

	investigation		change of software would also occur in a “No-FAB scenario”.	the end of 2014

SMS process	Description of action and remarks	Estimated annual operating cost (EUR)	Investment costs or one-off cost (EUR)	Timeline
6. Occurrence investigation	6.1 Common classification of occurrences in line with KPIs. Same causal factors scheme is used across NEFAB.	None	61,416	Implemented September 2012
	6.2 Alignment of occurrences investigation process. Formalised joint investigations	71,622	42,341	Implemented by end 2014
	6.3 Joint investigator pool established.	None	13,932	Implemented by the end of 2014
7. Data exchange	7.1 Agreed safety data exchange arrangements (minimum at KPI level)	None	22,107	Implemented September 2012
	7.2 Common safety information database.	None	8,175	Implemented by end 2014
	7.3 Common software for safety data.	None	Covered by 5.2	Implemented by the end of 2014
8. Safety assessment	8.1 Agreement on methodology for assessment of changes that affects NEFAB. Establish an agreed understanding of the term "change".	None	None	Implemented September 2012
	8.2 Alignment of Safety Assessment processes. Establish a common Hazard Identification Form	None	13,932	Implemented by end 2014
	8.3 Establish a Common Hazard Log	None	13,932	Implemented by the end of 2014
9. External suppliers	9.1 Align requirements that are put on external suppliers before cross-border sectors are implemented. (Procedures and contracts)	None	13,932	Implemented September 2012
	9.2 Common framework for external suppliers to NEFAB member ANSPs.	None	13,932	Implemented by end 2014

SMS process	Description of action and remarks	Estimated annual operating cost (EUR)	Investment costs or one-off cost (EUR)	Timeline
10. SMS documentation	10.1 Completed required NEFAB safety documentation. A process for safety case updates is defined.	None	Already covered through NEFAB Feasibility study	Implemented September 2012
	10.2 Alignment of process for keeping documentation alive throughout the lifecycle of systems (unit safety case and system safety case) in terms of configuration management.	None	13,932	Implemented by end 2014
11. Safety monitoring	11.1 NEFAB Safety performance review function is established, KPIs are established and areas for monitoring agreed.	Covered by 1.2	Covered by 1.2	Implemented September 2012
	11.2 Common trend analysis within NEFAB (relies on data exchange)	None	11,413	Implemented by end 2014
12. Safety surveys	12.1 Establish a plan for survey as part of SSA activities beyond 2012 for the NEFAB project, including methodology. Establish a pool of surveyors to carry out surveys on NEFAB project.	None	18,054	Implemented September 2012
	12.2 Align survey process across NEFAB, establish a common pool of surveyors and carry out formalised joint surveys.	27,678	42,341	Implemented by end 2014
13. Safety records	13.1 Define content and language requirements for safety records sufficient to support the NEFAB safety review function.	None	13,932	Implemented September 2012
	13.2 Safety records aligned in terms of content and language.	None	None	Implemented by end 2014
	13.3 Common software for safety data collection, maintenance and use established.	None	Covered by 5.2	Implemented by the end of 2014

SMS process	Description of action and remarks	Estimated annual operating cost (EUR)	Investment costs or one-off cost (EUR)	Timeline
14. Lesson dissemination	14.1 Establish systematic process and product for lesson dissemination across NEFAB.	None	13,932	Implemented September 2012
	14.2 Cross-border activities for lesson dissemination.	None	13,932	Implemented by end 2014
15. Safety promotion	15.1 Establish methods for collection and promotion of best practices in NEFAB.	None	None	Implemented September 2012
	15.2 Establish a management review process for NEFAB.	None	13,932	Implemented by end 2014
16. Safety culture	16.1 Outline Safety Culture review process for NEFAB. Define a safety culture target. Conduct a safety culture survey across NEFAB as baseline if Eurocontrol support is available.	None	13,932	Implemented September 2012
TOTAL		175,738	4,301,767	

9. HIGH LEVEL TIME LINE FOR REALISATION

	Pre-declaration (start date April 2010 – end date December 2010)	**NEFAB Operations in 2012** (Start date January 2011 and completion date September 2012)	**NEFAB 2014 scenario** (Start date January 2011 and completion date end 2014)
Safety policy	Required at NEFAB level for declaration		Review by "management review process" (promotion)
Governance	Safety governance principles established at NEFAB level prior to declaration		
Safety organisation and responsibilities		Managed at ANSP level, but a formal safety management group coordinates common safety issues. Chairperson of the safety group is represented in the FAB management board. Performance review function established (monitoring).	Formal SMS group develops common SMS processes (for alignment). A Performance review function setting targets, monitoring performance and reporting to the FAB management board.
Safety objectives	Safety objectives for NEFAB derived before declaration. Related to safety policy		
Functional safety objectives	Required for declaration		
Safety targets		Common high level safety targets are set for NEFAB. One of the targets should be a SMS maturity target defined for NEFAB.	Further developed safety targets.
Safety competency		Common level of safety competency agreed at NEFAB level.	Common level of safety competency implemented
Risk management	Common Risk Classification Scheme developed for NEFAB	RCS implemented by ANSPs	Risk management processes aligned.
Occurrence reporting		Agreed reporting process to ensure that the requirements from NSAs are met, but also to ensure common monitoring at NEFAB level (defining responsibility, where to report etc)	Common software tool for occurrence reporting and investigation

	Pre-declaration (start date April 2010 – end date December 2010)	**NEFAB Operations in 2012** (Start date January 2011 and completion date September 2012)	**NEFAB 2014 scenario** (Start date January 2011 and completion date end 2014)
Occurrence investigation		Common classification of occurrences in line with KPIs. Same causal factors scheme is used across NEFAB.	Alignment of occurrences investigation process. Formalised joint investigations. Joint investigator pool established.
Data exchange		Agreed safety data exchange arrangements (minimum at KPI level)	Common software for safety data.
Safety assessment	Agree on methodology for safety assessment of the NEFAB project when it moves into design and implementation	Agreement on methodology for assessment of changes that affects NEFAB. Establish an agreed understanding of the term "change".	Alignment of Safety Assessment processes. Establish a common Hazard Identification Form Establish a Common Hazard Log
External suppliers		Align requirements that are put on external suppliers before cross border sectors are implemented. (Procedures and contracts)	Common framework for external suppliers to NEFAB member ANSPs.
SMS documentation		Completed required NEFAB safety documentation. A process for safety case updates is defined.	Alignment of process for keeping documentation alive throughout the lifecycle of systems (unit safety case and system safety case) in terms of configuration management.
Safety monitoring		NEFAB Safety performance review function is established, KPIs are established and areas for monitoring agreed.	Common trend analysis within NEFAB (relies on data exchange)
Safety surveys		Establish a plan for survey as part of SSA activities beyond 2012 for the NEFAB project, including methodology. Establish a pool of surveyors to carry out surveys on	Align survey process across NEFAB, establish a common pool of surveyors and carry out formalised joint surveys.

		NEFAB project.	

	Pre-declaration (start date April 2010 – end date December 2010)	**NEFAB Operations in 2012** (Start date January 2011 and completion date September 2012)	**NEFAB 2014 scenario** (Start date January 2011 and completion date end 2014)
Safety records		Define content and language requirements for safety records sufficient to support the NEFAB safety review function.	Safety records aligned in terms of content and language. Common software for safety data collection, maintenance and use established.
Lesson dissemination		Establish systematic process and product for lesson dissemination across NEFAB.	Cross border activities for lesson dissemination.
Safety promotion		Establish methods for collection and promotion of best practices in NEFAB.	Establish a management review process for NEFAB.
Safety culture	Outline a safety culture development process for NEFAB	Outline Safety Culture review process for NEFAB. Define a safety culture target. Conduct a safety culture survey across NEFAB as baseline if Eurocontrol support is available.	

10. IMPLEMENTATION RISKS

Description of risk	Probability	Impact severity	Possible mitigations
National regulatory framework unclear or changing	H	H	Pro-active dialogue with NSAs through the NSA group and continuous information exchange to ensure feedback from NSAs.
Resource constraints in terms of staff, funding or competency by the NSA	M	H	Pro-active dialogue and continuous update of plans related to the changes of the SMS
Resource constraints in terms of staff, funding or competency by the ANSP	M	M	Careful planning in advance of activities and realistic working schedules. Shared work among NEFAB ANSPs and active dialogue with other project tracks in the NEFAB project.
Time constraints	M	M	Careful planning in advance of activities and realistic working schedules. Shared work among NEFAB ANSPs and active dialogue with other project tracks in the NEFAB project.
Activities are not sufficiently prioritised with a work overload of the implementation project as a consequence	L	M	Realistic timeframe for implementation activities related to SMS, careful planning and follow-up of activities.
Lack of commitment among NEFAB ANSPs	M	H	Implementation plans must be presented in a timely manner to the NEFAB governing bodies for decision.
Disagreement on actual solutions among NEFAB ANSPs	M	H	Timely presentation of implementation plans to the NEFAB governing bodies and anchoring of decisions within the individual ANSP organisations.
Local organisational constraints in terms of different organisations or existing SMS	M	H	Timely presentation of implementation plans to the NEFAB governing bodies and anchoring of decisions within the individual ANSP organisations. Use mapping results from the feasibility study in the early phases of the design and implementation phase to identify potential constraints.
National law constraints	L	M	Bring in legal expertise in the early stage of the design and implementation phase to identify any possible national law constraints early.
Change of regulatory framework at European level	L	L	Proactive dialogue and consultation related to safety issues at European level.
Lack of “buy-in” among operational staff	M	H	Timely communication of planned SMS changes to all staff and active work on safety culture evolution on a FAB level.

11. SUMMARY OF NET BENEFITS

The work on the harmonisation and alignment of Safety Management Systems across NEFAB is based on the assumption that the FAB is operated by 4 individual ANSPs. The net financial benefits of the harmonisation and integration are therefore considered to be limited. It is concluded that a reduction in the total number of FTEs of approximately 10% could be possible if SMSs are integrated and a common software tool is implemented. This benefit corresponds to approximately 4,5 FTEs.