

FAB Central Europe (FAB CE)

**Safety Working Group
(SAF_WG)**

Overview of activities

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Presentation at the ES2-WS2011-2 Workshop, Sarajevo 18-May-2011

Note:

All the slides that follow are tailored for the presentation purposes only and are not intended to replace or supersede any official document

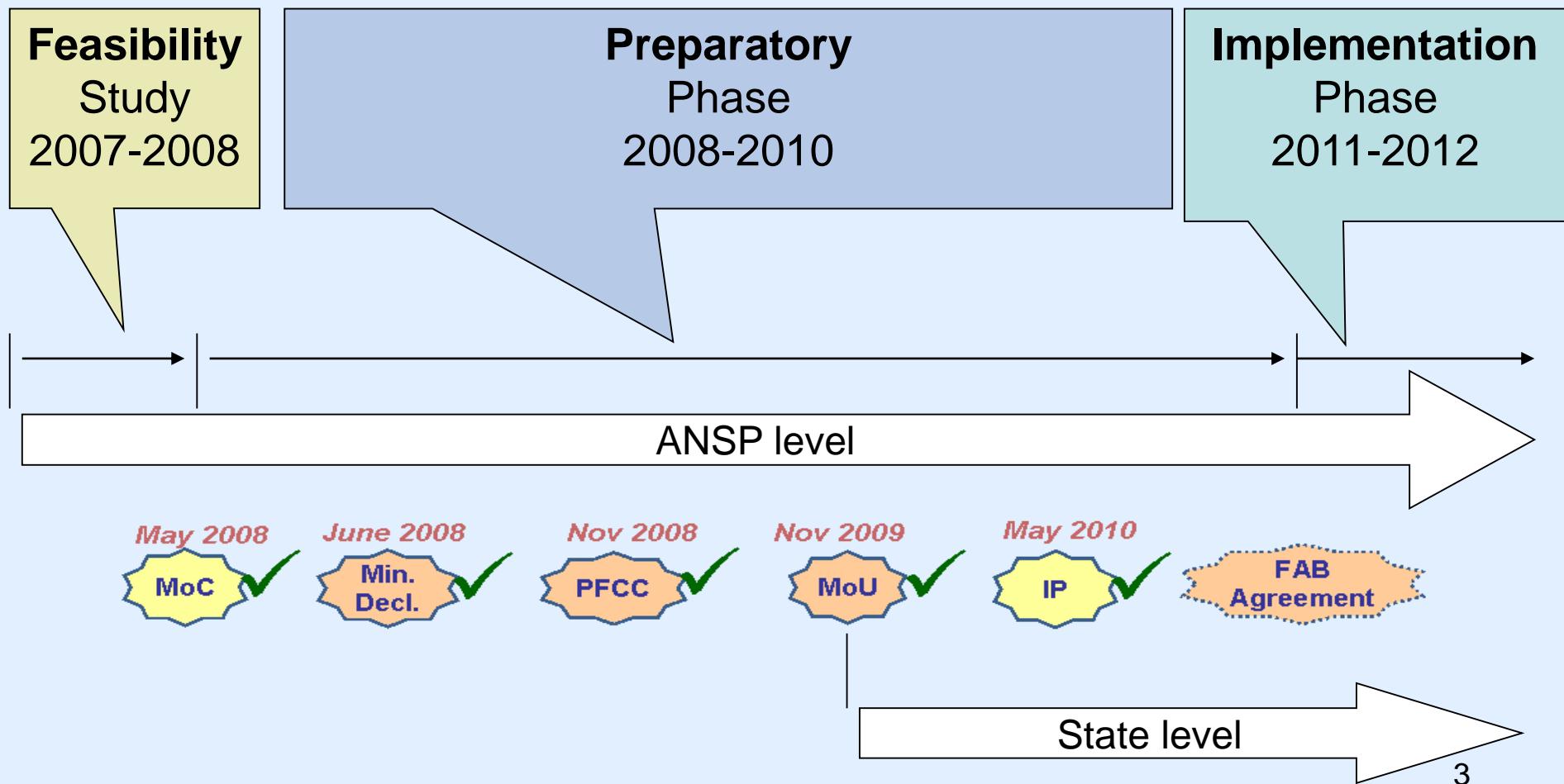
FAB CE Overview



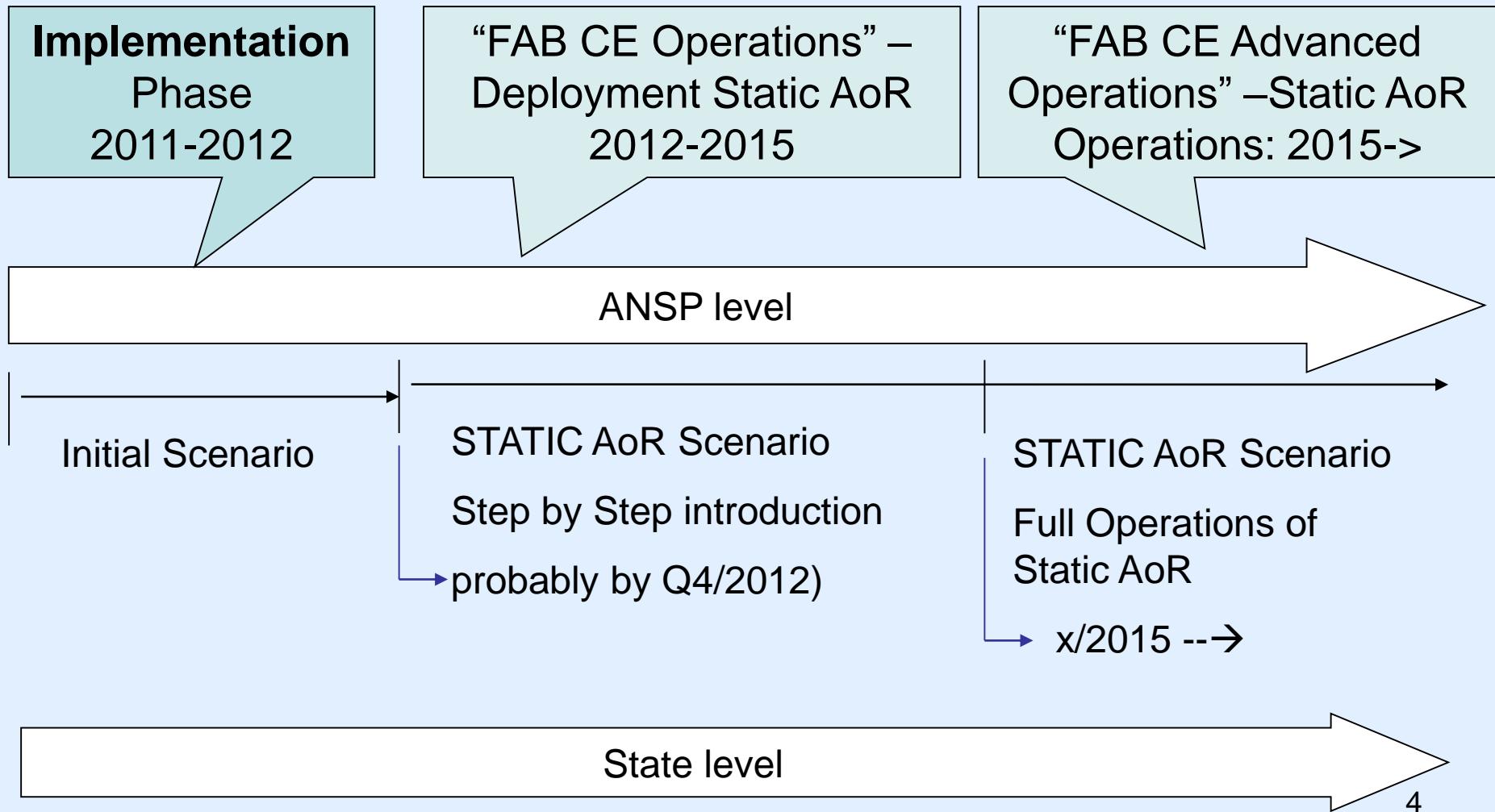
More at:

http://www.eurocontrol.int/fab_ce/public/subsite_homepage/homepage.html

FAB CE Project Phases



FAB CE Project Phases



1st phase : Feasibility Study

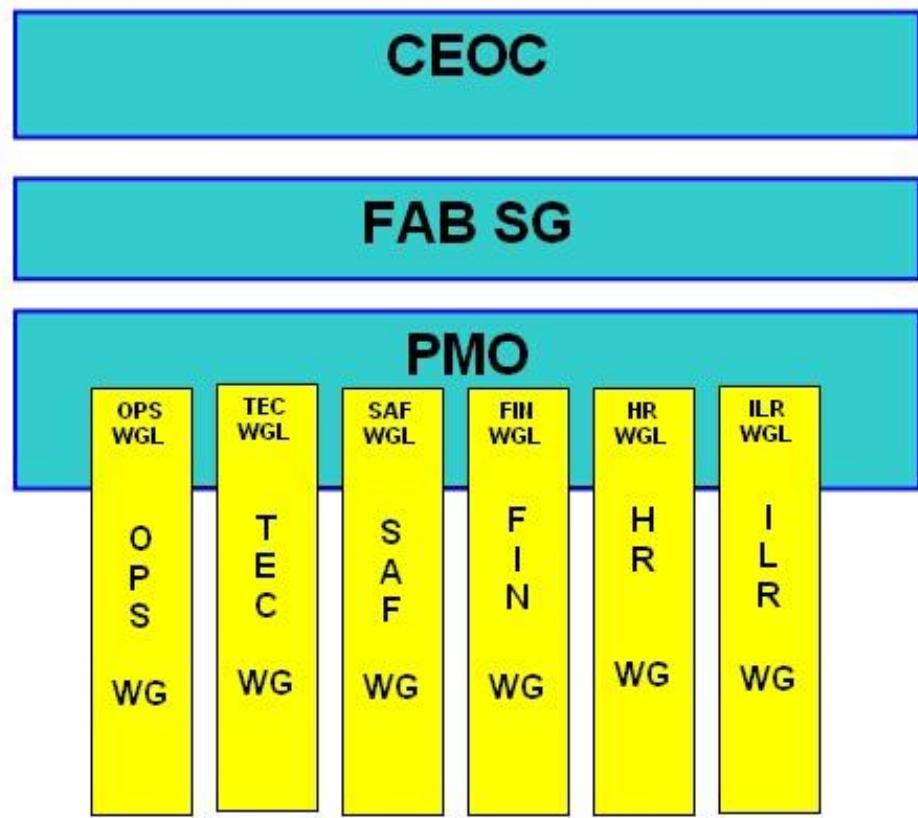
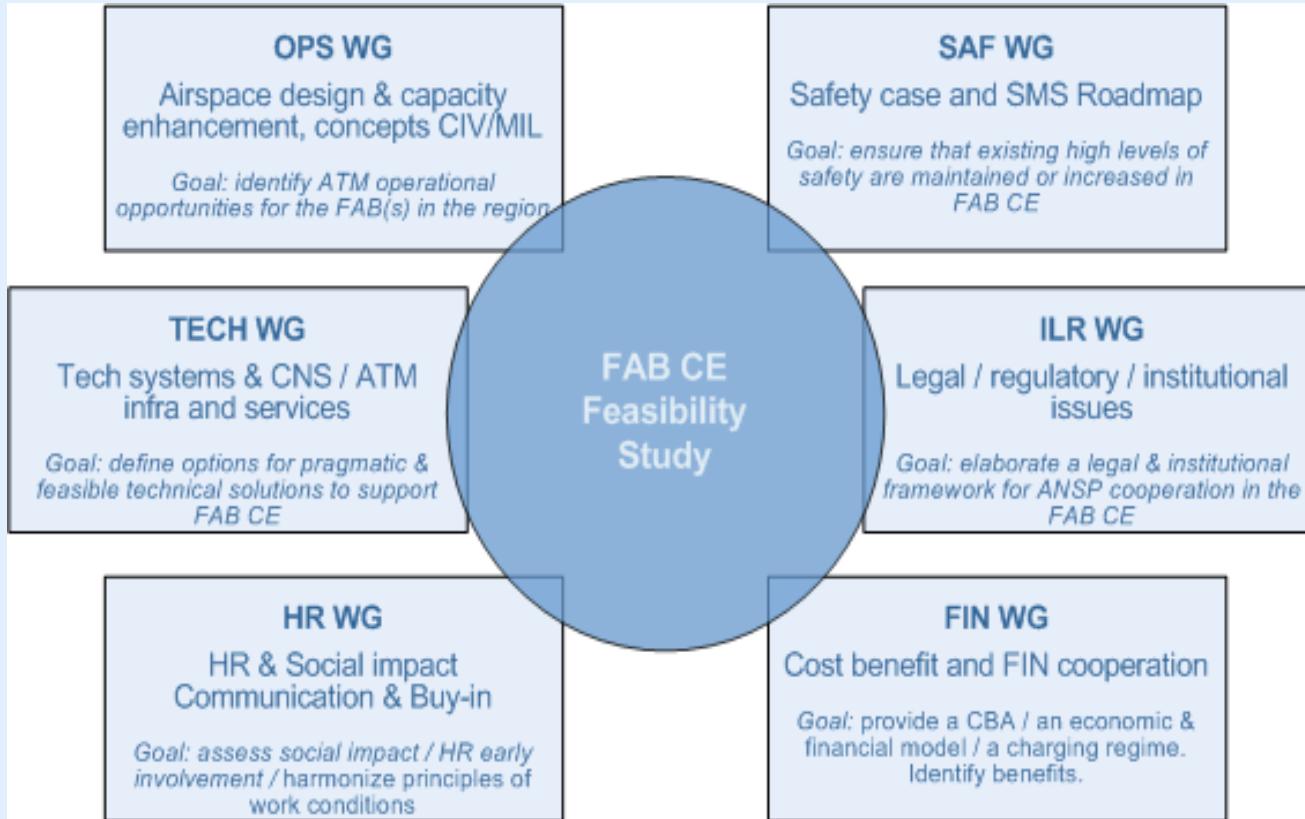


Figure 1 – Project Levels

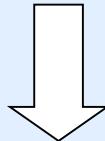
- Kick-off meeting: Apr 2007
- Completed: Q2/2008
- Deliverables:
 - Master Plan,
 - Operational Concept Doc
 - Cost Benefit Analysis
 - SAF.A.
 - Etc
- ANSP pillar only, completed by signing MOC.

Feasibility Study: Scope



Feasibility Study: Deliverables/Content (SAF)

FABCE Safety Management Roadmap



Harmonisations in SMS (17 fields) – different level

Common activities on SMS (S. Plan)

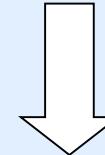
SMS cost of ANSP

Reg & Oversight

Performance Indicators

1 FAB= same level of safety

FABCE Feasibility Study Safety Case



Safety Assessment (taking into account the stage of the project)

-hazards, risks, effects, mitigations...

- discover the risks enough early and start to act on-time to implement mitigation measures

Feasibility Study: Roadmap

FABCE Safety Management Roadmap

Delivered: Early 2008

Note: Target situation 2015

Note: Feasibility Study not so many facts known, just assumptions about the speed of the harmonisation of 7 SMSs

Feasibility Study: Assessments

FABCE Feasibility Study Safety Case

Delivered: Early 2008 (Q4/2007 workshop, Q1/2008 approval of document)

Note 1: Target situation 2015 (start of operational change in 2012)

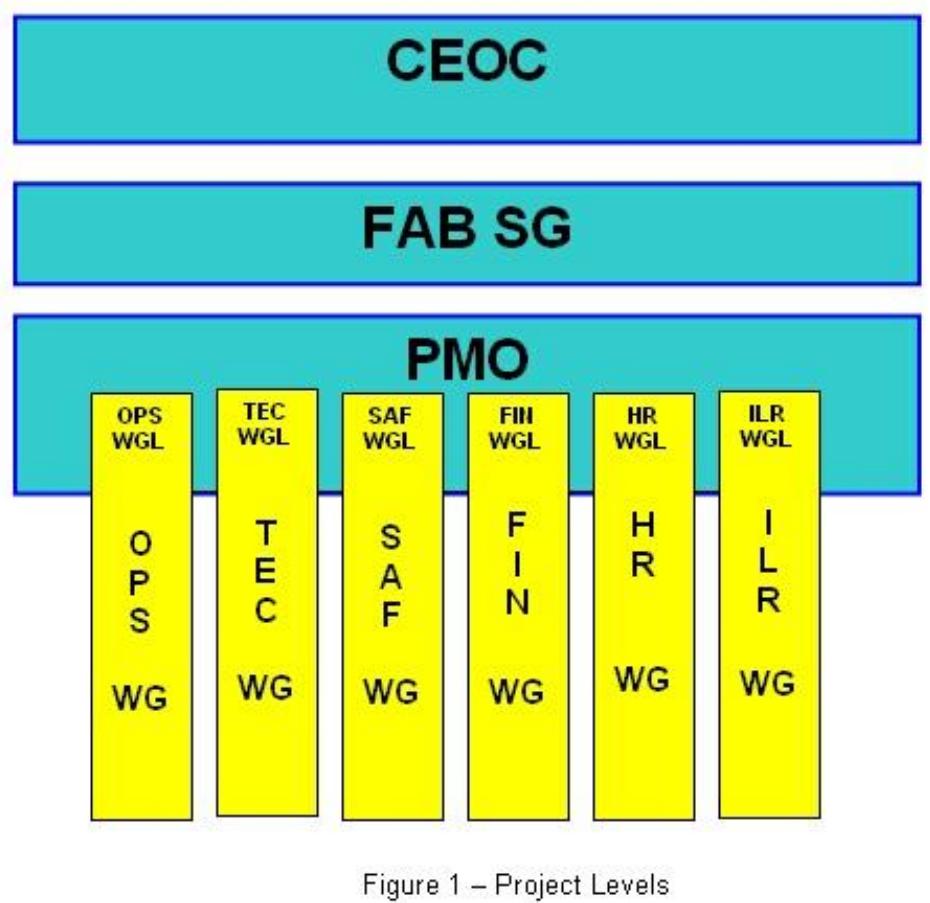
Note 2: OPS concept – just high level elements. Change identification – high level / intentions, not defined in details

Note 3: FS - not so many facts known, just assumptions about the speed of the harmonisation of 7 SMSs

SAF Workshop took place in Q4/2007 for the need of FS:

High level safety considerations (8 years before target situation, 5 y before start of operational change)

2nd phase - Preparatory Phase -



- again the same structure
- started as the ANSP pillar only until **MoU** signed (Nov 2009) when the States came in
- started: mid 2008
- completed by end 2010

Preparatory Phase – ANSP pillar of FABCE

Set of deliverables completed, and approved mostly in early 2010. Main planning deliverables:

- **ISIS - Implementation Schedule for the Initial Scenario:** covering the short-term period before deeper implementation.
- **IP - Implementation Plan for Static AoR** – the main one (for the Static Scenario implementation, covering period 2010-2015).

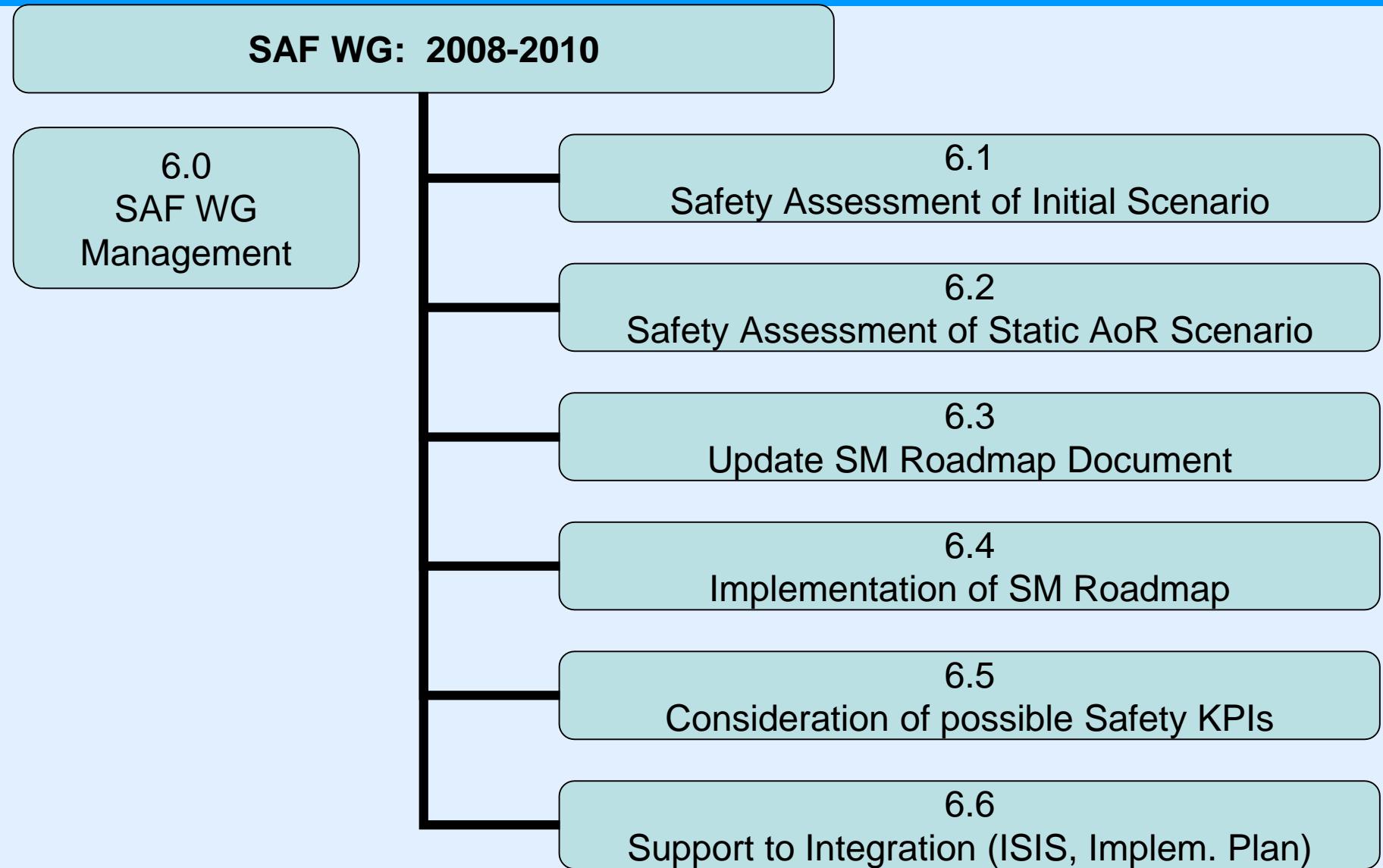
Note: Initial Scenario: up to Q4/2012,

Static AOR Scenario: Deployment 2012-2015, operations 2015->

Preparatory Phase: SAF WG

- The work started Aug 2008.
- SAF WG - composed of 7 ANSP representatives (mostly safety managers)
- Additional SAF expertise occasionally was taken
- Eurocontrol Focal Point: supporting the WG (exchanged Q4/2009)
- Good cooperation within SAFWG
- Additional harmonisation/cooperation: safety managers are part of the Eurocontrol Safety Team and meet each other at regular ST meetings

Preparatory Phase - SAFWG: WBS



Preparatory Phase: SAF WG - Main deliverables

- **The Safety assessment of the Static AoR**
- **SMS Roadmap update**
- *Plus+:*
a number of “side-documents” including Safety Plans for IS and for Static AoR, a lot of working tables, 17 meeting minutes, WGL reports, Safety Assessment Guidance, Saf. Policy, SAF KPI considerations, TOR of the Safety sub-Committee, WBS for SAFWG, contribution to a large number of project level documents etc)
- Both main documents produced in Q4/2009 (with some minor editing corrections before approval in Q2/2010)

NOTE:

Still very early before target situation 2015

(start of Static deployment in 2012, planned to be completed in 2015).

Preparatory Phase: SAF WG SM Roadmap

Concept of the safety management within the FAB

Current situation and planning - 7 SMSs with very high level harmonisation (each ANSP with its SMS)

Some issues open, e.g.

- the way of supervision (very important that NSAs have very harmonised way of the safety oversight),
- the acceptance of FAB level changes, incl. FAB Safety Case
- etc

Based on:

ESARR 3 requirements (aligned with CR2096), on deep experience sharing, learning from each other, decreasing the differences in SMS operation, etc.

More info on SAF WG SM Roadmap - 1

- The ROADMAP is a tool for harmonisation and operation at ANSP level
 - Certified ANSPs
 - All have operating SMS
 - SMS practices are compliant but different
 - FABCE SMS's Modus of operandi: mutual recognition and harmonisation (as far as reasonably practicable)

More info on SAF WG SM Roadmap - 2

The ROADMAP is a living document

- **1st edition** issued on 26/02/2008 (**Feasibility Study**)
 - High level overview of FAB level SMS operation
- **2nd edition** due in 04/05/2010 (**Preparatory Phase**)
 - High level overview of FAB level SMS operation – **Update**
- **3rd edition** is under development (**Implementation Phase**)
 - Challenges (tactical/strategic):
 - Shall we extend the roadmap to all SMS aspects? (role of: authorities, military interfaces, etc.)
 - How detailed a roadmap shall be?
 - Evolving Regulations: implementation of safety KPIs
 - The evolution of FABCE

More info on SAF WG SM Roadmap – 3 (version 05/2010)

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10 pgs:

See the next slide for example

More info on SAF WG SM Roadmap - 4

Required actions by ESARR 3 or IP	Interim Harmonisation Goal	Harmonisation Approach	Minimum Effort to Harmonise	Early Benefits	Starting point	Minimum Time Frame weeks	Implementation Comments	End of action PLAN NED or REQUIRED by IP	Possible earliest end of action	FINISHED	STATUS BALANCE TO PLANNED	REMAINING TIME to DEADLINE (DY)
SMS Documentation	High level documentation is translated to a common language. Common definitions are agreed	See SMS Structure	Translation effort	Prerequisite for SMS structure discussions	01 March 2009	26	Only to make sharing of documentation easier - as required. Note there are language limitations	31 December 2011	30 August 2009		in progress	715
Lesson Dissemination	Sharing of "significant lessons".	Lesson dissemination should be done in a way that it can be used by others (de-identified and in English).	Political decision + 1 week expert level	Wider lesson dissemination. Pro-active approach.	01 January 2011	14	3 months after political decision	31 December 2014	09 April 2011		in progress	1811

..etc, 31 activity areas, with the gant-chart at the latest page of the SM Roadmap document

WP5: Safety Key Performance Indicators (1) –

WP5 in Preparatory Phase:

Analysis of possible Safety KPI leading to generic KPI policy and principles (Extract):

- Safety KPIs shall be in line with international definitions (extra effort on KPI minimised)
- Confidential exchange of Safety KPI data only between SMS functions and only for safety improvement purpose
- Provision of Safety KPI externally of SMS function only aggregated and de-identified
- Safety KPI shall not be used for benchmark purposes
- Strategy to introduce automated safety monitoring tools
- Agreement on RAT usage

Safety Key Performance Indicators (2)

FAB CE Performance Review Process, Safety KPIs:

- Fully in line with EU-Reg 691 and Metrics developed by E3 (Effectiveness of SMS, RAT application, Just Culture)
- On hold until EC decision is taken
- Mechanism to collect, process, aggregate and exchange related Safety KPI data still to be developed

Preparatory Phase: SAF WG

Safety Assessment of Static AoR Scenario

- Detailed Safety Assessment Guidance produced at 43 pages, plus further reference for details to the Eurocontrol Safety Assessment Methodology
- 4-dys - Workshop took place in Budapest **11/2009**
- Operational concept (high level) was available, with a lot of undefined elements.
- Time - 6 y in advance, 3y before start of transition.

Preparatory Phase: SAF WG

Safety Assessment of Static AoR

The concept of the assessment:

- Assess the safety, based on the information **available** at the certain time.
- Exact **hazards** not possible to be identified at that time. SAFWG decided to call the potential hazards as “**safety issues**”.
- Identify “safety issues” **as early as possible** and propose the mitigation measures so they could be implemented enough early: That’s why SAFWG forced not to wait elaborated OPS concept and all other deliverables by other FAB CE WGs.
- This is not the Safety Case !!
This is “**Initial Safety Assessment Report for Static AoR**”.
- Assessments have to be continued.

Preparatory Phase:

SAF WG Safety Assessment of Static AoR

The report:

- All the records which has to be used in the next phase of the assessment - available in 4 annexes of the report.
 - OPS improvemets
 - OPS enablers
 - HRM/HF
 - TECH
 - (table form)

Preparatory Phase:

SAF WG Safety Assessment of Static AoR

Severity:

- The severity has been intentionally left blank
- It will be dedicated later during the safety assessment within the projects of the “Implementation Phase 2011-2012)
- Severity table: SAM guidance material to be used (severity indicators)

More info on SAF Assessments – (Prep. ph.)

(May-2010):
snapshot

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More info on SAF Assessments – (Prep. ph.)

(May-2010): snapshot from one of the annexes

Change ID	Change due to FAB CE	SAF issues proposed by OPS team before WS	Workshop Safety issues	Mitigation proposed by OPS team before WS	WS Mitigation	WS remarks (output of discussion)
4.1.i	Build interface between ATM systems and NIMS to access network demand and airspace data.	The interface with NIMS does not provide to correct data the FAB operations plan does respond to the real need.	<p>... continued from the page above:</p> <p>HUM</p> <ul style="list-style-type: none"> - ensure enough number of experts to conduct appropriate Saf assessments (4.1.a); - 1.9 trained and competent staff are needed (use tools for assessing the impact of airspace changes and capacity (4.1. a, and 4.1. h); - ensure competency of those using (NEVAC etc) or working in assessment of impacts (4.1.h). 	ATFM measures reducing demand defined	No	<p>... continued from the page above:</p> <p>Sector Configuration Plan should be done twice a year, although planned annually</p> <p>HF should be taken into account</p> <p>Recommended Sector configuration should be analysed and defined.</p> <p>If some ANSP do not produce a plan at national level then all FAB CE plan is at risk.</p> <p>If the organisational structure is not implemented there is a major risk that these plans cannot be developed and implemented.</p> <p>Regarding up to dated enroute capacity - Who is doing at sector group level (multi-ANSP)?</p> <ul style="list-style-type: none"> - sector configuration plans should be done twice a year instead of annually, - if we will not have all data needed it should have impact on timeframe of whole FAB CE implementation process, we will be late, - ANSPs should provide regular data to STAFOR
4.1.k	Provide Sector Configuration Plan for Sector Group and compare it with airspace structure and ATSU AoR	No		No		

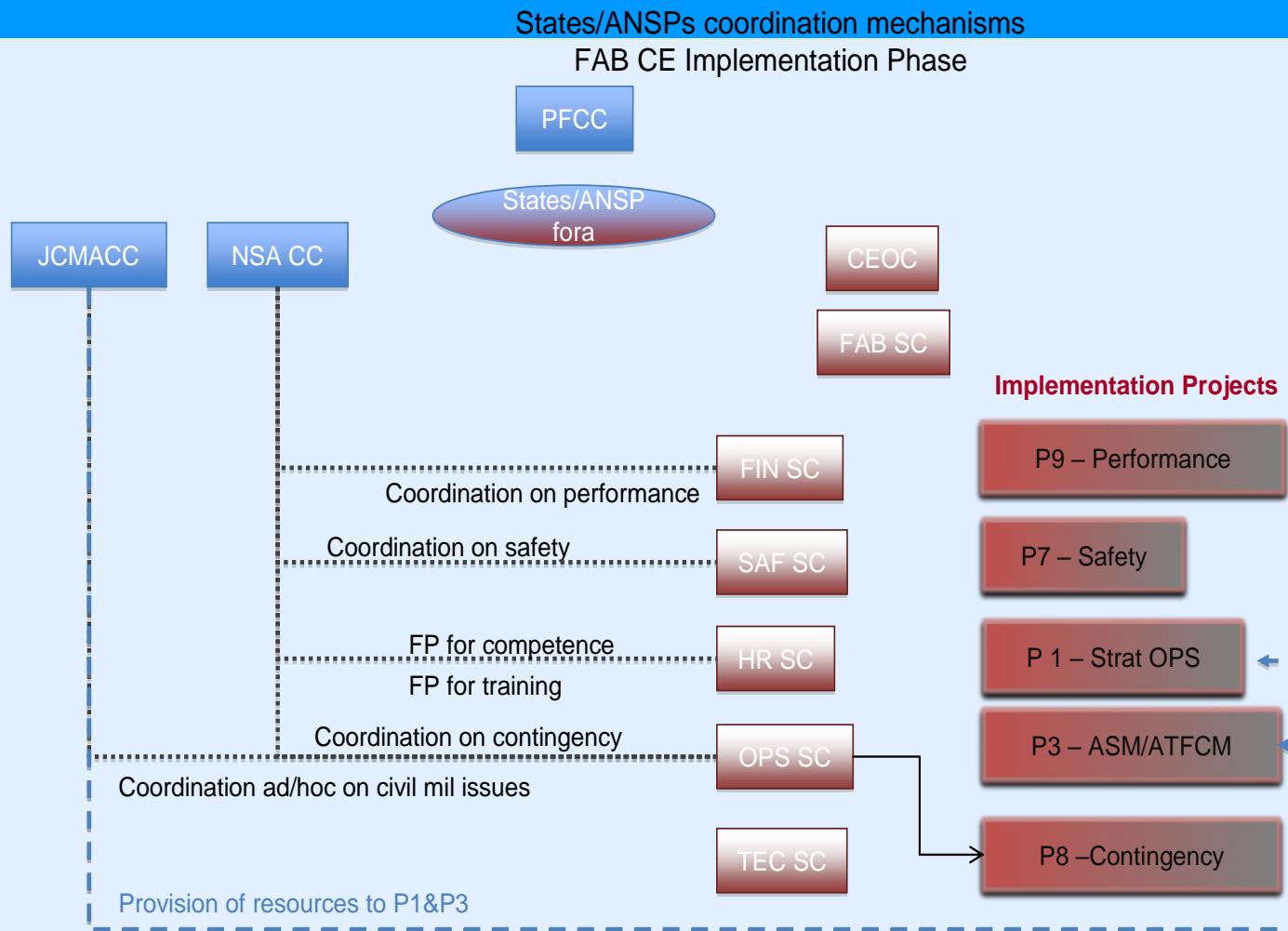
.... passed....

...actual/ to be done

FAB Agreement

- FAB Agreement signed on 05-May-2011
- ANSP cooperation Agreement signed on 05-May-2011
- NSA cooperation Agreement in negotiation process

Structure principle after the signature of FAB Agreement (target structure)



→ → Coordination between States groups and projects/ provision of resources to transversal projects

..... Coordination between States groups and Sub Committees, managing their activities/horizontal projects

* Coordination on charging and other necessary issues will be handled by ad hoc structures established by PFCC

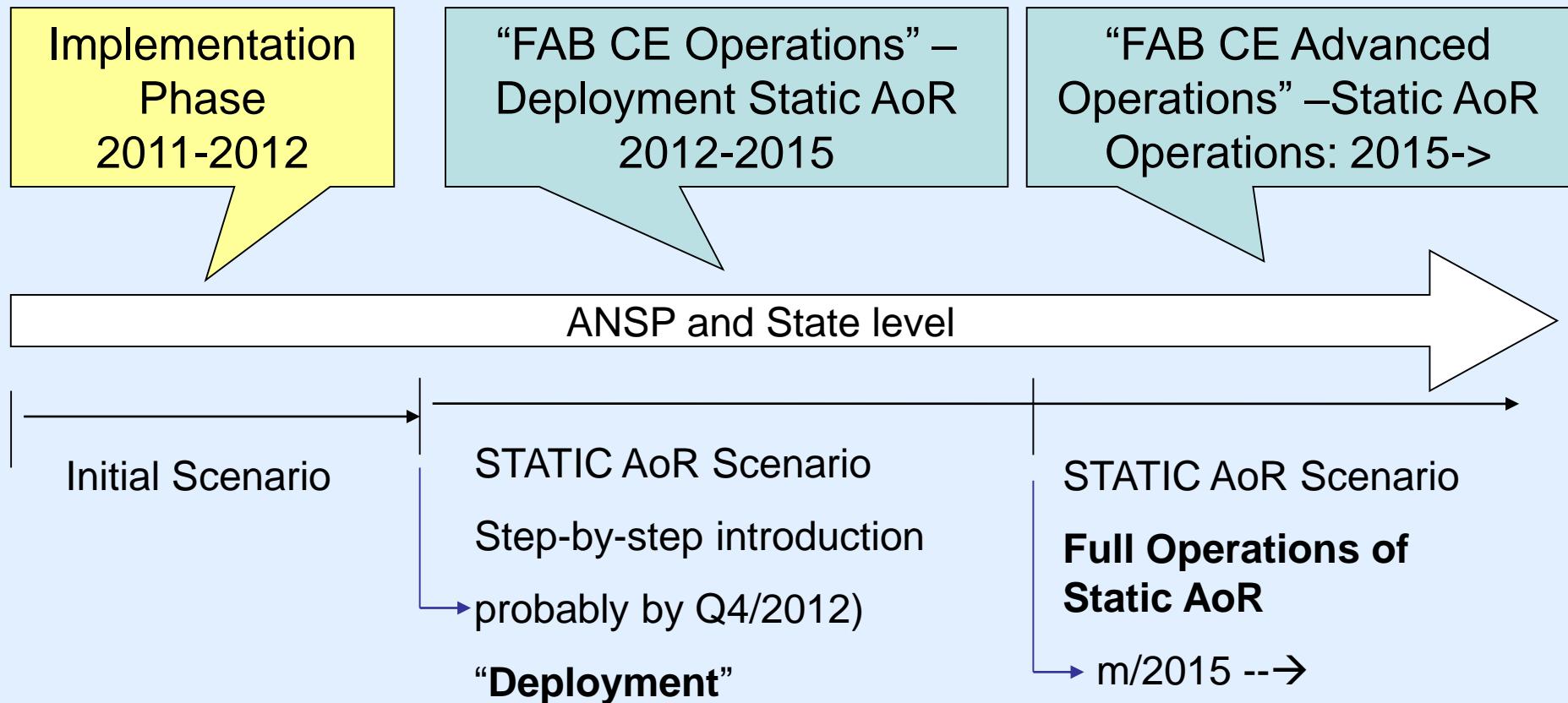
Implementation Phase (2011-2012)

- ANSP pillar (ANSPs)
- State pillar (NSA, States, Military...)
- ANSP pillar: The programme consisting of 13 projects (the number to be confirmed)
- Project 7: Safety
- Subcommittees (including the Safety Subcommittee) are recognised in the FAB structure, regardless of the phase (beyond 2012).
So during Implementation Phase there are both “project 7” as well as “SAF subComm”.
Subcommittees are going to be established during 2011.

Just started

Implementation
Phase
Programme Mnt
Plan

Implementation Phase (2011-2012): *Reminder*



Regulation 176/2011 –(SAF: Annex, Part II)

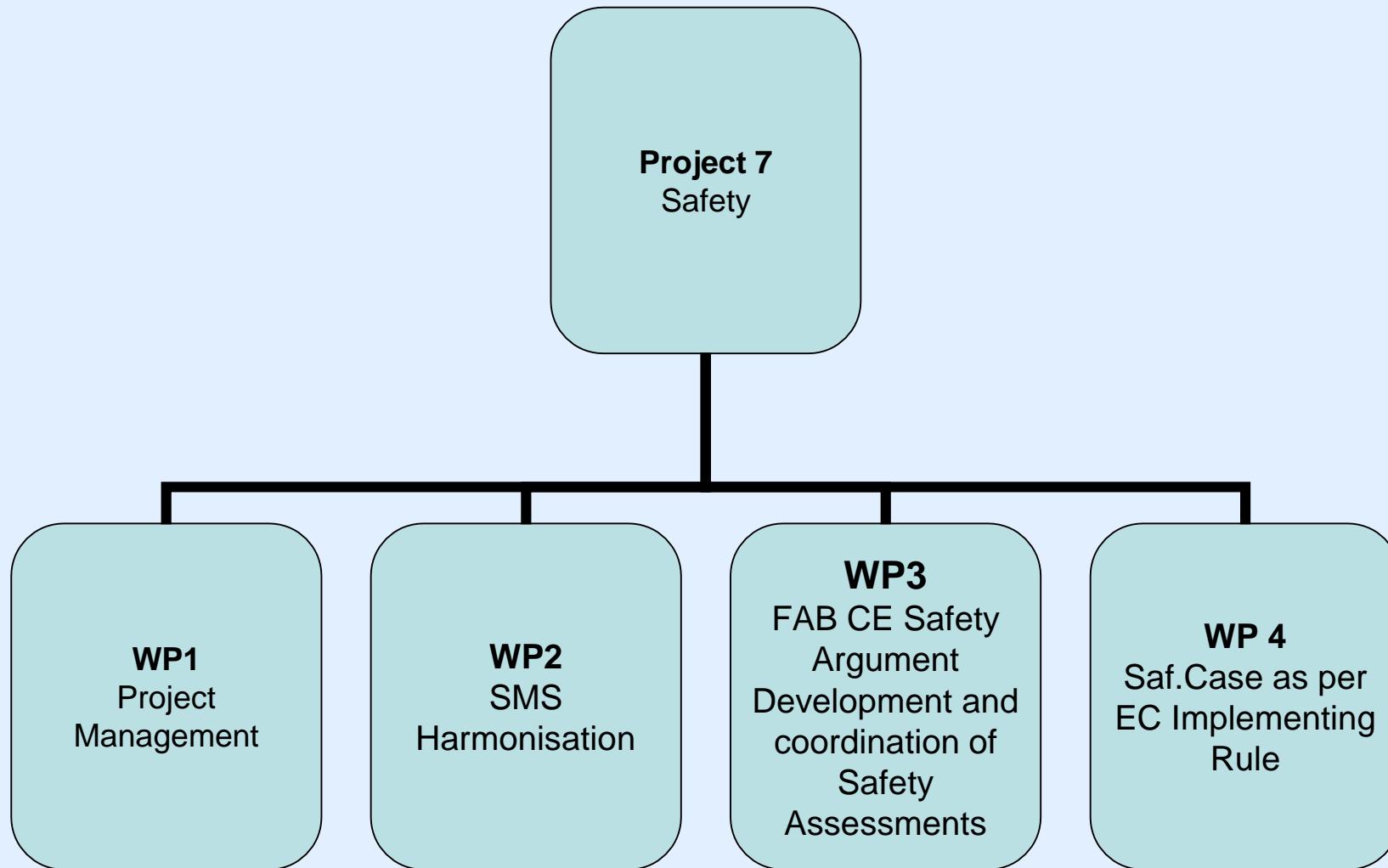
With regard to the Functional airspace block safety case

- (a) The common safety policy or plans to establish a common safety policy;
- (b) A description of the arrangements dealing with accident and incident investigation and plans on how to address safety data collection, analysis and exchange;
- (c) A description of the safety management system in place or planned to avoid degradation in safety performance within the functional airspace block;
- (d) A description of the arrangements clearly identifying and allocating the responsibilities and interfaces with relation to the setting of safety targets, safety oversight and the accompanying enforcement measures in regard to the provision of air navigation services within the functional airspace block;
- (e) Documentation and/or statements that the safety assessment including hazard identification, risk assessment and mitigation has been conducted before introducing operational changes resulting from the establishment or modification of the functional airspace block.

- *Note: Safety Case which is mentioned in the FAB IR 176/2011 is not the same as the term Safety Case as known in the SMS terminology*
- Concept of safety management in the FAB: it's described in the SMS Roadmap.

Implementation Phase (2011-2012): SAF/P7

PMP



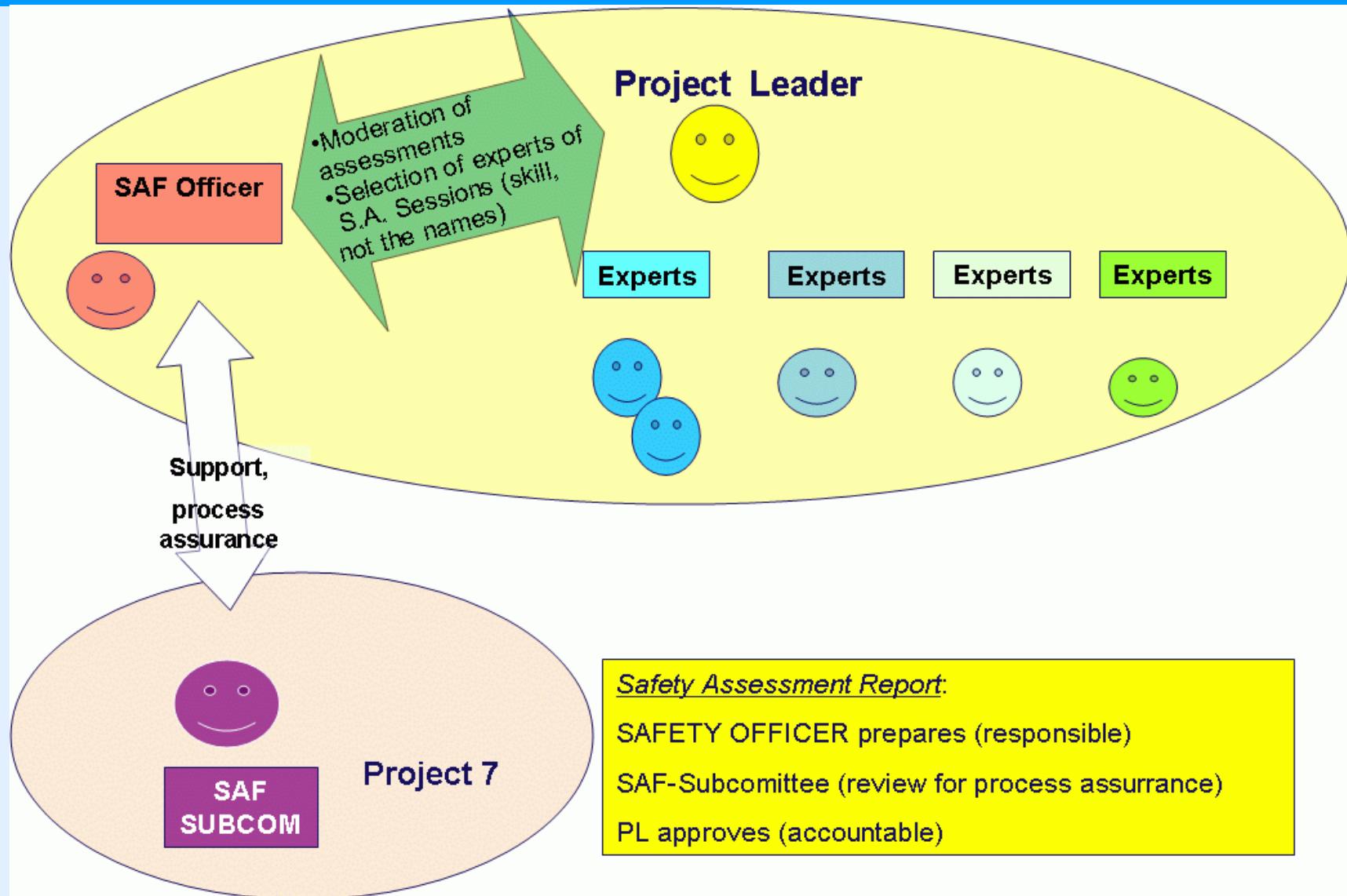
Implementation Phase: Safety Assessments

Project Management Plan (agreed, but it is a living document)

2011-2012:

- 13 projects of Implementation Phase -> “13” safety assessments
- some projects might be merged for the assessments
- some projects will not need to have the assessment sessions (just short documented records “no assessment needed”)
- Project 7: provides the methodology and guidances for projects, supports S.A. Activities (+ SM Roadmap implementation)
- Each project would have dedicated “safety officer”, supported by 1 member of Project 7. Uses the OPS/TEC/HUM experts from project for the assessment.
- Eurocontrol SAM to be applied

Concept of coordination: Project X vs Project 7



Implementation Phase: Safety Assessments

- Project assessment reports -> submit to Project 7 for V&V and for the consolidation
- Project 7 will raise special workshops if certain project would have the interfaces and if they need combined assessments
- SAF case: Project 7, supported by safety experts from projects
- ***Target date for safety case: July 2012 (linked/pending on projects)***

Safety in Implementation Phase - overview

Project 1: Safety Assessment

Project 2: Safety Assessment

Project 3: Safety Assessment

...

Project 13: Safety Assessment



Safety Argument for
FABCE Programme



FABCE Safety Case



Safety Assessment Methodology

Under the scope of particular project:

- **What are the changes if you compare target situation 2015 and the situation before Dec 2012 ?**
- **What can go wrong due to this change?**
- **What could be the severity (1 - the highest, 5 - the lowest)**
- **What is the likelihood of bad effect?**
- **Existing/planned mitigation measures?**
- **Is the risk acceptable?**

NSACG <-> SAFWG

- Safety Oversight – details about the oversight are still open issue
- Direct communication started between P7 and NSACG (although formal line is CEOC <-> NSACG)
- How to align national level oversight versus FAB level oversight?
- etc

Thank you for the attention !

Dragan Bilać
FAB CE SAF WG Leader / P7 leader