



Ministerie van Verkeer en Waterstaat

Safety scanning

Where does it fit

The development of the Safety Scanning Tool is a cooperation of

UniKs: O. Straeter

Eurocontrol: H. Korteweg

NLR: M.H.C. Everdij

CAA-NL: J.W. Nollet

17 november 2010



Content

- What is Safety scanning
- Safety Fundamentals
- When and where to use
 - Fundamental Safety Areas of Interest
 - Safety scanning process
- What's in the package
- A glance of the revised tool: SST2.0
- Demo
- Working with the tool
- Some impressions from the field



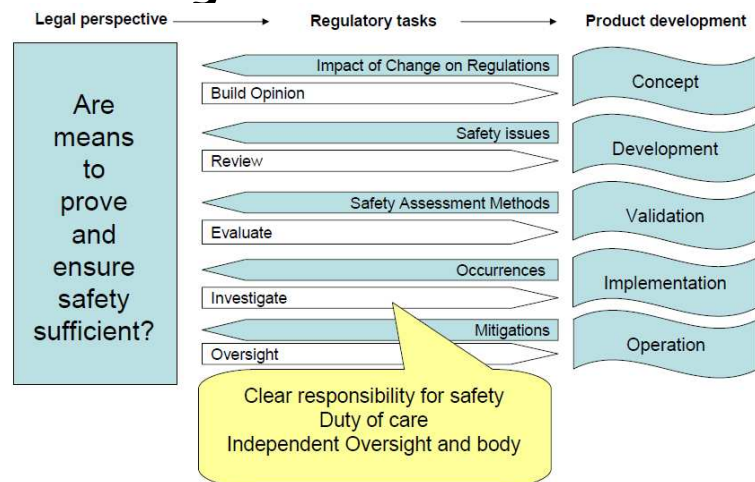
What is Safety scanning

- A comprehensive method to be used by one or more NSAs
 - for effective **safety** and risk management **planning**
 - and **review** of (major) **changes**
- On the basis of the **Safety Fundamentals** (areas of safety interest)
- In a **multi-actor** setting
- **Pro-active** not re-active (from V1 – E-OCVM]
- **Total System Safety Approach**
- To **decrease costs** and **improve output**
 - Decrease “the hidden factory”
 - Early identification of “loose ends”
 - Optimise HR-planning of NSA

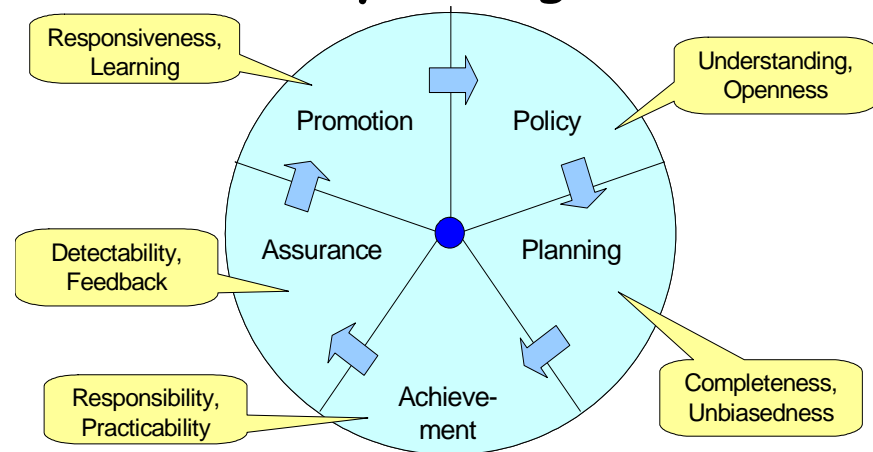


Safety Fundamentals

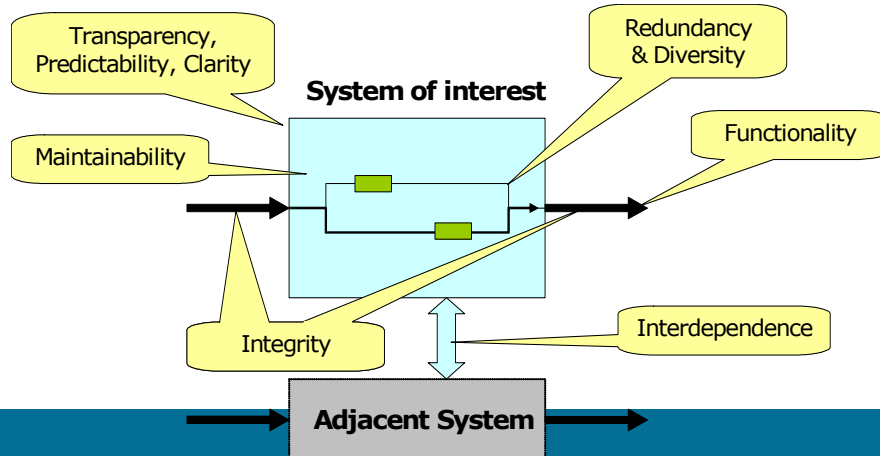
Regulations / Standards



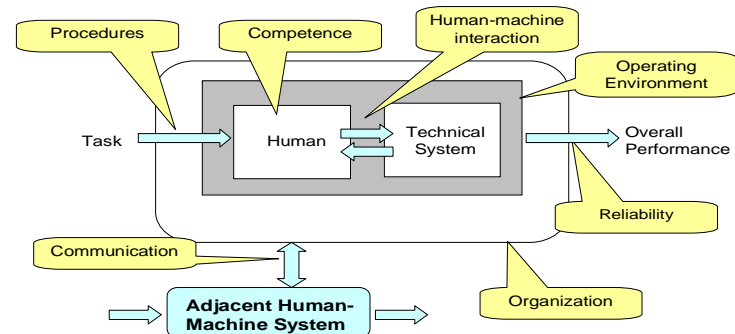
Safety Management



Safety Architecture



Operational Safety

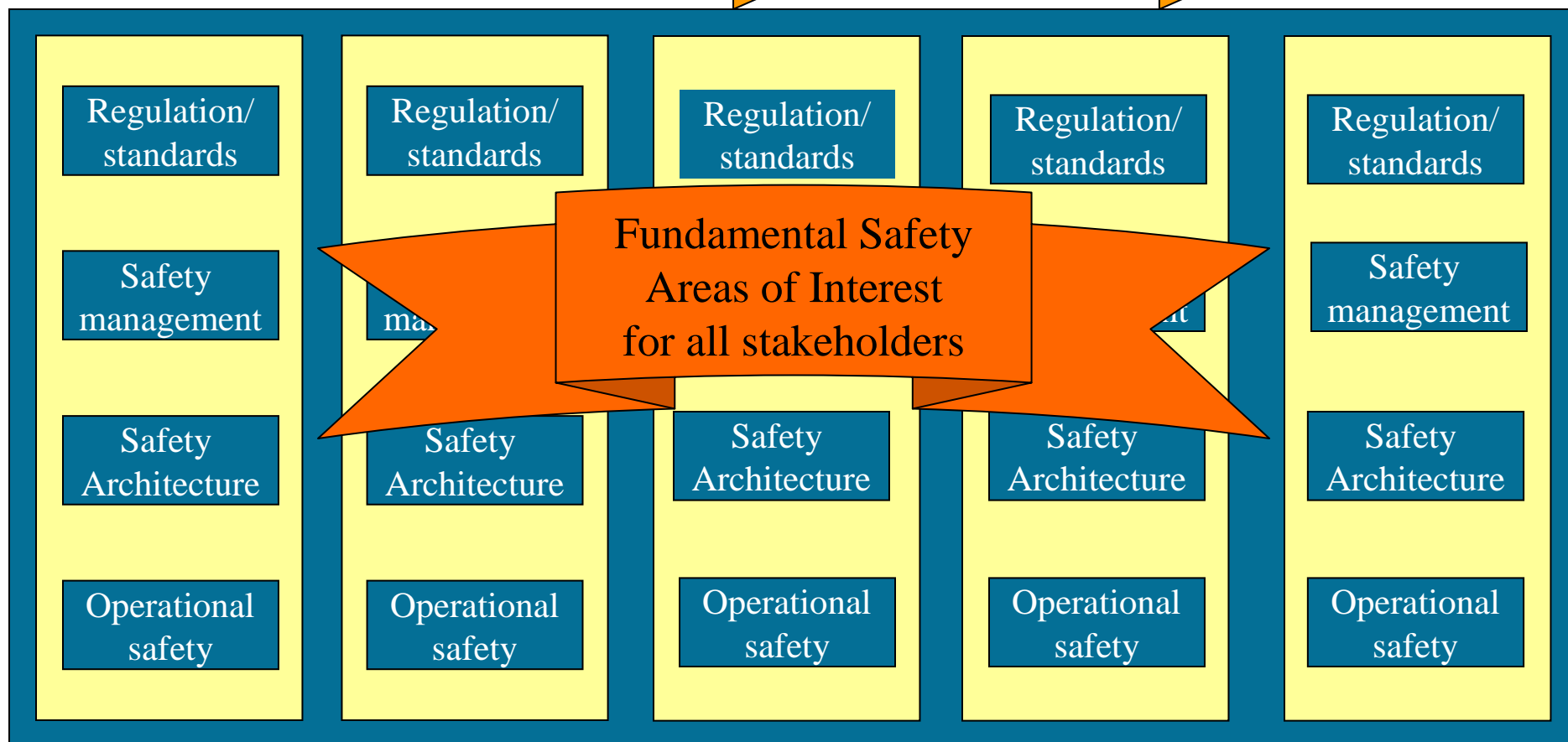




definition development validation deployment monitoring

E-OCVM V1 – V2 – V3

E-OCVM V4 – V5





definition development validation deployment monitoring

E-OCVM V1 – V2 – V3

E-OCVM V4 – V5

Current logical focus
Methodology Development
(requirement based)

Safety
Architecture

Safety
Architecture

Operational
safety

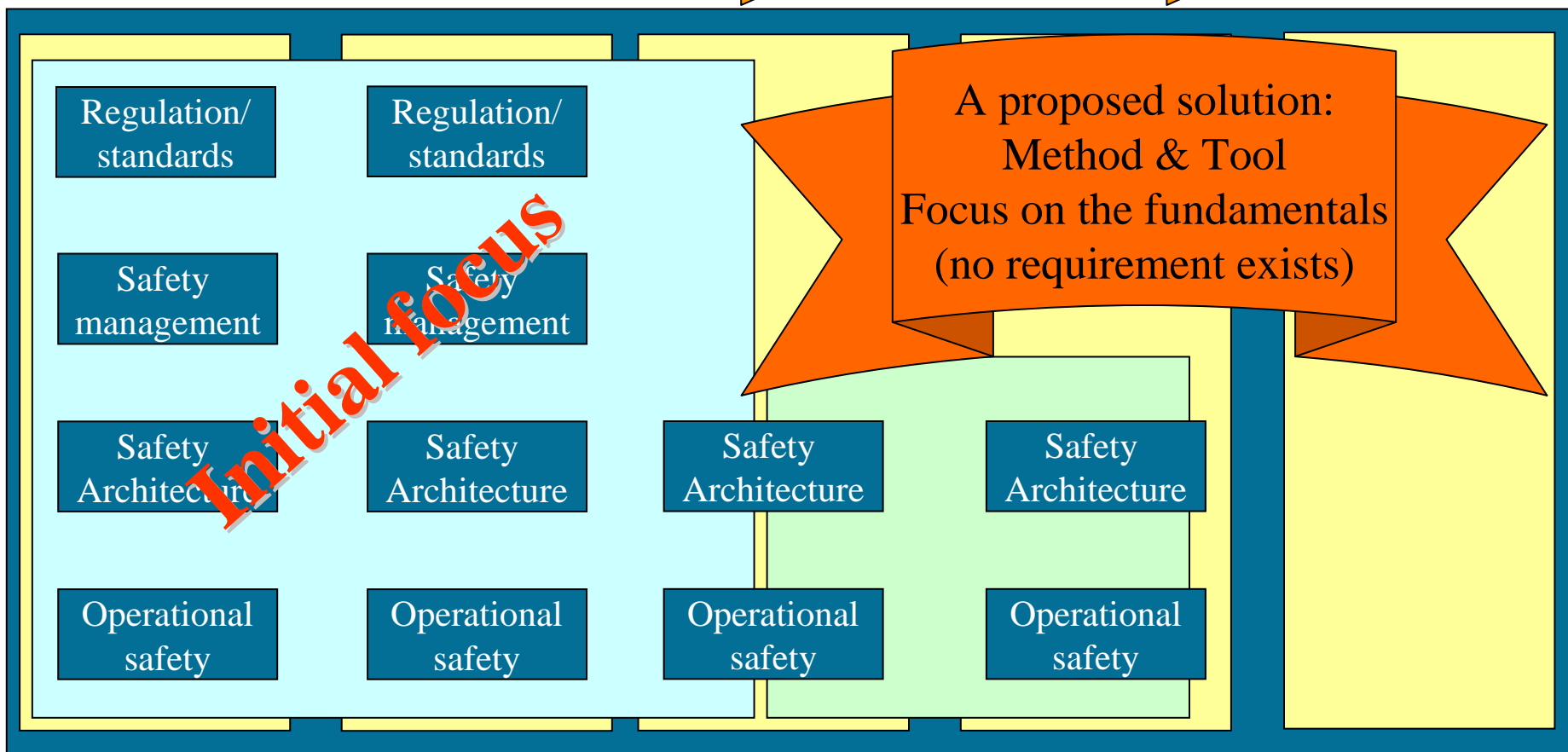
Operational
safety



definition development validation deployment monitoring

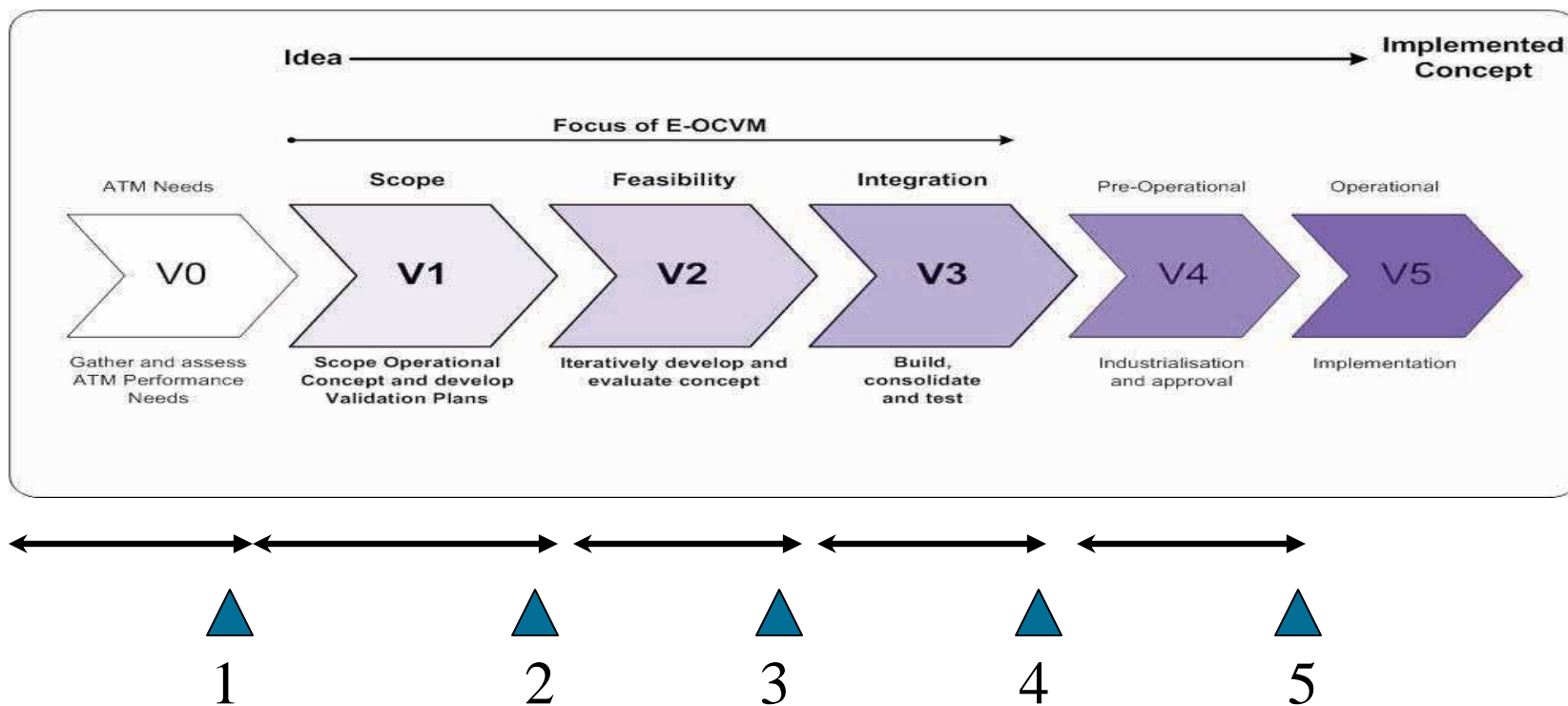
E-OCVM V1 – V2 – V3

E-OCVM V4 – V5



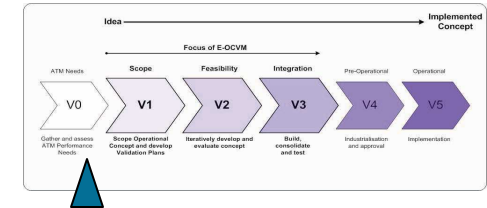


Safety scanning process (1)





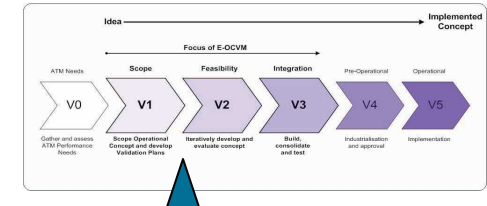
Safety scanning process (2)



- The Change Agenda (**milestone 1**)
 - Overall [3-5 years] plan of relevant changes [**“the change register”**] for safety at national, FAB or multi-national level
 - Under the responsibility/coordination of the government [L1 policy body: Air Traffic Commission] inter alia High Level [FAB] Policy Body
 - Per change:
 - Provide good description (Developer/ANSP)
 - List relevant stakeholders affected by the change
 - Define scope of the change
 - Define joint goals / non joint goals
 - Assign responsible party/parties to address the safety consideration
 - Agreement of the position of the NSA (monitoring/advice)



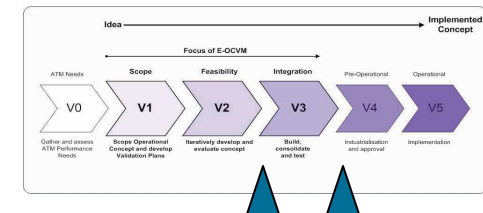
Safety scanning process (3)



- A high level Safety scan (**milestone 2**)
 - Pre-scan done by moderators, program manager and some key persons
 - Full Safety scanning session [E-OCVM V0-V1{needs and scope}] with relevant stakeholders coordinated by responsible party
 - Define safety considerations based on Safety Fundamentals:
 - Regulatory Benchmark (existing or new)
 - how to meet SMS requirements
 - Operational safety
 - and [some] safety architecture aspects
 - Address the safety considerations to the actor responsible to solve the issue
 - Develop a Safety Register



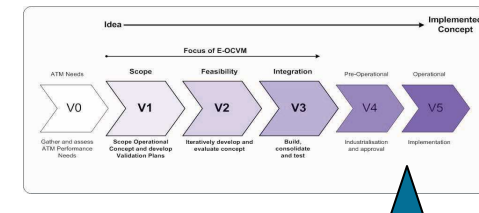
Safety scanning process (4)



- A detailed Safety scan coordinated by ANSP (**milestone 3 & 4**)
 - Safety scan [E-OCVM V2 {feasibility}]
 - New or refined safety considerations in line with development
 - More insight in operational safety
 - Resolution/tracking of assigned safety considerations
 - Update Safety Register
 - Safety scan [E-OCVM V2 → V3 {integration}]
 - New or refined safety considerations in line with development
 - more insight in safety architecture
 - Resolution/tracking of assigned safety considerations
 - Safety scan [E-OCVM V3 → V4 {pre operational}]
 - New or refined safety considerations in line with development
 - More insight in the overall/integrated picture
 - Resolution/tracking of assigned safety considerations



Safety scanning process (5)



- Acceptance of notified change by NSA (**milestone 5**)
 - Safety scan coordinated / done by competent authority [E-OCVM V4 → V5 {operational}]
 - Tool can assist by acceptance change [EC 1315]
 - [Follow up] scan on the basis of the previous scan results
 - Done by single audit team or in collaboration with other authorities [airworthiness, operations or military oversight]
 - Confirmation of resolution of assigned safety considerations
 - *The 4*2 vehicle for paved roads*
 - Idea is that SST can help by building the 'Oversight Argument'
 - To be elaborated in an advanced version SST3.0
 - *The 4*4 vehicle for rough terrain*



What's in the package

- A comprehensive method for Safety scanning changes in a multi-actor setting
 - A tool (questionnaire on the basis of the Safety Fundamentals)
- Guidance for use
 - Guidance for moderators
 - Guidance for safety analysts

Guidance for Regulatory Tasks

 - Proof of consistency with EC requirements and principles
- A method for reviewing a safety method for a specific change
 - A tool (questionnaire on the basis of the SAFMAC quality indicators)

Demo



- Some results from the Safety scanning session of the Conops of an Airspace Flow and Management Unit [advanced Flexible Use of Airspace]



Working with the Safety Scanning Tool

- In MoT the Netherlands, use of SST will be incorporated in procedures of program management
- In FABEC, principles of Safety Fundamentals and multi-actor are [to be] incorporated in the common safety approach
 - TF early safety impact assessment [NSAC & SConSAF]
- Safety Fundamentals are being included in the CFMU SMS Safety Management of Changes approach
 - Eurocontrol/CND & NWM has already produced three Safety scans
- NLR [SJU-associate] and UniKs promote SST and bring it to the 'market'
 - Brochure available
 - Website: demo version available
 - Assistance c.q. moderating a Safety scanning session
- Use of SST has been recommended
 - CAATS II
 - RESET WP6
 - SENSE



Some impressions from the field

- Safety Screening of High Level ConOps AFMU [2007]
 - NLR: “Participants were enthusiastic and considered it a valuable tool to get an overview of the main safety issues”
- EGNOS trial [2009 with old tool]
 - Fun!, very useful, good starting point, Tool brings parties together and allows exchange of opinions, helps to generate a global view
- FABEC AMRUFRA: coordinated safety case in a multi-actor setting [2009]
 - FABEC: “multi-actor setting coordinated the individual safety assessment processes in an effective and efficient way”
- Safety scanning of ConOps Dutch AFMU [2010]
 - Even the identification of the documents is done in a multi- actor manner
- Safety scanning of PBN-Roadmap 2010-2020 the Netherlands [2010]
 - Program manager: Also good to do a follow up scan in a later stage
- Pan-European project CCAMS [2010]: 40 safety considerations
 - Some would not be found with the traditional fault-tree analyses



Follow up

- End 2010: offer a SRC-document to SRC for endorsement
- February 2011: acceptance method by SRC
- March 2011: launching SST in a joined workshop with EASA/SATF
- March 2011: publish "Future Work"
 - WP6: process description in a multi-actor environment
 - WP8: additional guidance for program managers & oversight officials [notification] moderating and interpreting the results of a Safety scanning session
 - WP11: Literature study Human Automation Interaction
 - Proposal for additional Safety Fundamentals in the HF domain
 - Proposal / specification for a advanced version SST3.0
- Near future: SST accepted as AMC by EASA?



Demo



- Some results from the Safety scanning session of the Conops of an Airspace Flow and Management Unit [advanced Flexible Use of Airspace]



AFMU Safety Scan

- Airspace Flow Management Unit
- Safety scan conducted on 12 April 2010 in Amsterdam
- Participants:
 - Military regulator
 - Civil policy maker
 - Civil regulator
 - AFMU ConOps Developer
 - Civil ANSP
 - Military ANSP
 - AFMU staff
 - Moderators



Microsoft Excel - Scanning Tool - Fundamentals v0.9.92.xls

File Edit View Insert Format Tools Data Window NLR Help

Type a question for help

K47 A C

Safety Scanning Tool

Safety Fundamentals

The Safety Scanning Tool supports regulatory tasks such as oversight or approval processes.
It utilizes a set of safety fundamentals as anchored in European law and demonstrates existing safety regulatory requirements as well as best practices in safety assessment.

The Tool ideally is used iteratively in the course of a life-cycle of a product.
In initial phases it coordinates understanding of licensees and regulators on safety needs.
In later phases it supports regulators in developing acceptance criteria for safety evidences provided by a licensee.

Please click anywhere on this text for help and instructions on the use of the tool.

About Start

Start Questions Answers Results Regulation Mapping Fundamental Mapping Regulations Fundamental

Ready

Question Navigator

- ☐ User Details
- ☒ General
- ☒ Regulation framework
- ☐ Safety management
- ☒ Operational safety
- ☐ Safety architecture
- ☐ Regulation-Checklist
- ☐ Finish

User Details

[Home](#)[Help](#)

Name

J.W. Smeltink, B. Klein Obbink, M.H.C. Everdij

Email Address

smeltink@nlr-atsi.nlr

Title of the Subject addressed*

AFMU

Subject description

In June 1994, the European Civil Aviation Conference (ECAC) Ministers of Transport agreed to adopt for Europe the concept of Flexible Use of Airspace (FUA). The FUA concept has adopted the principle that airspace should no longer be designated as either purely civil or military airspace, but rather be considered as one continuum and allocated on a day-to-day basis according to user requirements. Within this FUA concept, the daily allocation of the required airspace is decided by a joint civil/military Airspace Flow Management Unit (AFMU), resulting from a collaborative Airspace Management/Air Traffic Flow Management/Air Traffic Control (ASM/ATFM/ATC) process.

Mid 2005, the Netherlands Air Traffic Committee (Luchtverkeerscommissie, LVC in Dutch) established a Task Force which was tasked to write an operational concept document for such an AFMU (Gibbs and de Jonge, 2005).

Key documents available to the Subject

Francken, C.H. (2007). Establishing an Airspace and Flow Management Unit (AFMU) in the Netherlands, Deliverable AFMU D 4.1: High Level Roadmap 2007 - 2012 for the integration of ASM and ATFCM. FATMC report FATMC-2007-DGTL- 001, Edition 3.0, dated 11 December 2007

Francken, C.H. (2008a). Establishing an Airspace and Flow Management Unit (AFMU) in the Netherlands, Deliverable AFMU 2008-002: CONOPS 2009. FATMC report FATMC-2008-DGLM-002, Edition 1.0, dated 30 August 2008.

Francken, C.H. (2008b). Establishing an Airspace and Flow Management Unit (AFMU) in the Netherlands, Deliverable AFMU 2008-003: Implementation plan 2009. FATMC report FATMC-2008-DGLM-003, Edition 1.0 dated 31 October 2008.

*All of the following questions need to be answered in respect to the Subject stated.

Progress through questions

[Back](#)[Finish](#)[Next](#)

Question Navigator

- ☐ User Details
- ☒ General
- ☒ Regulation framework
- ☐ Safety management
- ☒ Operational safety
- ☐ Safety architecture
- ☐ Existing regulations
- ☐ Finish

User Details

Name

J.W. Smeltink, B. Klein Obbink, M.H.C. Everdij

Home

Help

Safety Scanning Tool - Help and instructions

The main form is the questions form, which can be split into three areas shown here:

Question Navigator

- ☐ User Details
- ☐ General
 - ☐ Setting the context
- ☐ Regulation framework
 - ☒ Regulatory Principles
 - ☐ Structural Needs -
 - ☐ Structural Needs -
 - ☐ Implementation Needs
 - ☐ Needs for regulation
- ☒ Safety management
- ☒ Operational safety
- ☒ Safety architecture
- ☒ Existing regulations
- ☐ Finish

Safety Scanning Tool question page help

2) Is the institutional safety regulatory framework related to the Subject clear?*

Please enter your answer justification

Answer

- ☐ No
- ☐ Partially
- ☐ Yes

On the top, right hand side are 1 to 5 questions as above. Each question has three areas:

- The top left which contains the question itself. Additional explanation can be shown by clicking and holding the left mouse button down on the question text.
- The right which contains the answer choices.
- The bottom which allows you to enter a justification for the answer you have selected.

Note: some questions may be greyed out, this means that the answers you have chosen previously already cover the question, and so it does not need to be answered

On the left hand side is the Question Navigator. This allows you to see the structure of the questions and your position within them. In this example the current group of questions is 'Structural Needs' (red) and is highlighted grey.

The navigator also shows which question groups have been completed by tick boxes. In this example the 'Regulatory Principles' section has been completed (blue).

The '+' and '-' signs (green) allow you to open and close parts of the tree.

Finally you can also navigate to a specific group of questions by clicking on the group's name. Any answers you currently have will be saved to the spreadsheet before the next page is loaded.

At the top of the page is the progress panel:

The progress bar (blue) shows how far towards answering all the questions you are.

The 'Next' (green) and 'Back' (orange) buttons allow you to go to the next or previous group of questions respectively.

The 'Finish' button (black) calculates your preliminary results and shows you them.

Pressing any of these buttons copy your current answers to the "Answers" sheet.

The 'Add/Edit Notes' (pink) button opens a separate form where you can record additional comments.

Progress

Back

Finish

Next

Add/Edit Notes

Warning: You must save the tool when you close excel otherwise your answers may be lost!

Close

General Architecture

**Safety
Fundamentals
+
Basic Safety
Regulatory
Principles**

SAFETY PERFORMANCE

**Architecture +
Technology**

Operational

**Safety Management
+ Institutional**

Regulations and Framework

Question Navigator

- ☐ User Details
- ☐ General
 - ☐ Setting the context
- ☒ Regulation framework
 - ☒ Regulatory Principles
 - ☒ Structural Needs -
 - ☒ Structural Needs -
 - ☒ Implementation Needs
 - ☒ Needs for regulation
- ☒ Safety management
 - ☒ Safety policy
 - ☒ Safety planning
 - ☒ Planning of safety
 - ☒ Planning of safety
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- ☒ Operational safety
 - ☒ Procedures
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 - ☒ Competence
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 - ☒ Reliability
- ☒ Safety architecture
 - ☒ Transparency
 - ☒ Redundancy
 - ☒ Interdependence
 - ☒ Functionality
 - ☒ Integrity
 - ☒ Maintainability
- ☐ Regulation-Checklist
- ☐ Finish

AFMU: Setting the context

Save

Home

Help

Progress

Back

Finish

Next

Add/Edit Notes

1) What is the level of maturity of the Subject?*

Conops'en zijn deels klaar. Ontwikkelfase en begin van uitrolfase. Implementatieplannen zijn nog niet gereed. Beeld hoe AFMU moet functioneren is scherp. Development finished. Implementation pending.

1.1) Who is affected by the Subject and why? *

alle (zie lijstje)
luchtruimgebruiker (beter plannen eerder aanmelden)
Zie High-level Conops

1.2) Has the goal of the Subject been jointly set by the stakeholders? *

Ja, in werkgroep AFMU. Daarin zaten (bijna) alle betrokkenen. KNVvL niet. KLM vertegenwoordigde alle AO's. Doel: Efficiënter luchtruimgebruik. Bij gelijkblijvende absolute veiligheid.

1.3) How much would the implementation of the Subject change the functionality and the boundaries of the current situation? *

Verder vooruitkijken in planning. Centralisatie van de functionaliteiten. In de functionaliteiten zelf verandert niet zoveel.
Verandering tav veiligheid: verbetering door verder vooruit te plannen. Hoger efficiency bij

1.4) Are there any constraints for implementation of the Subject?*

Question Navigator

- ☐ User Details
- ☐ General
 - ☐ Setting the context
- ☒ Regulation framework
 - ☒ Regulatory Principles
 - ☒ Structural Needs -
 - ☒ Structural Needs -
 - ☒ Implementation Needs
 - ☒ Needs for regulation
- ☒ Safety management
 - ☒ Safety policy
 - ☒ Safety planning
 - ☒ Planning of safety
 - ☒ Planning of safety
 - ☒ Planning of safety
- ☒ Operational safety
 - ☒ Procedures
 - ☒ Operating environment
 - ☒ Competence
 - ☒ Human-machine interface
 - ☒ Organisation
 - ☒ Communication
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 - ☒ Transparency
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 - ☒ Interdependence
 - ☒ Functionality
 - ☒ Integrity
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AFMU: Setting the context

Save

Home

Help

Progress

Back

Finish

Next

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1.1) Who is affected by the Subject and why? *

The context of this question is that we need to try to understand the scope of the Subject and understand its boundaries. Hence this question asks if the Subject boundaries have been satisfactorily identified to ensure that the right stakeholders are involved.

This refers to both the time when the Subject is developed and when the Subject is implemented. The "why" can refer very broadly to e.g. the "effect on operations or maintenance" or "the need for certification" or "the need for managerial decisions" or "the need for institutional arrangements".

For the "who", make a selection from:

- | | |
|---|-----------------------------------|
| • Pilot | • Legislator |
| • Airline operator | • Regulator |
| • Air Traffic Controller | • Central flow management unit |
| • Air Traffic Service provider | • AIS/AIM operator |
| • Air Navigation Service Provider | • System engineers or maintainers |
| • Aerodrome or Airport Operator | • Others (who?) |
| • Performance reviewer (legislators/Regulators) | |

For the "why", provide document references.

Question Navigator

- ☐ User Details
- ☐ General
 - ☐ Setting the context
- ☒ Regulation framework
 - ☒ Regulatory Principles
 - ☒ Structural Needs -
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 - ☒ Safety policy
 - ☒ Safety planning
 - ☒ Planning of safety
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 - ☒ Communication
 - ☒ Reliability
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 - ☒ Integrity
 - ☒ Maintainability
- ☐ Regulation-Checklist
- ☐ Finish

Progress

Back

AFMU: Regulatory Principles

Save

Home

Help

Finish

Next

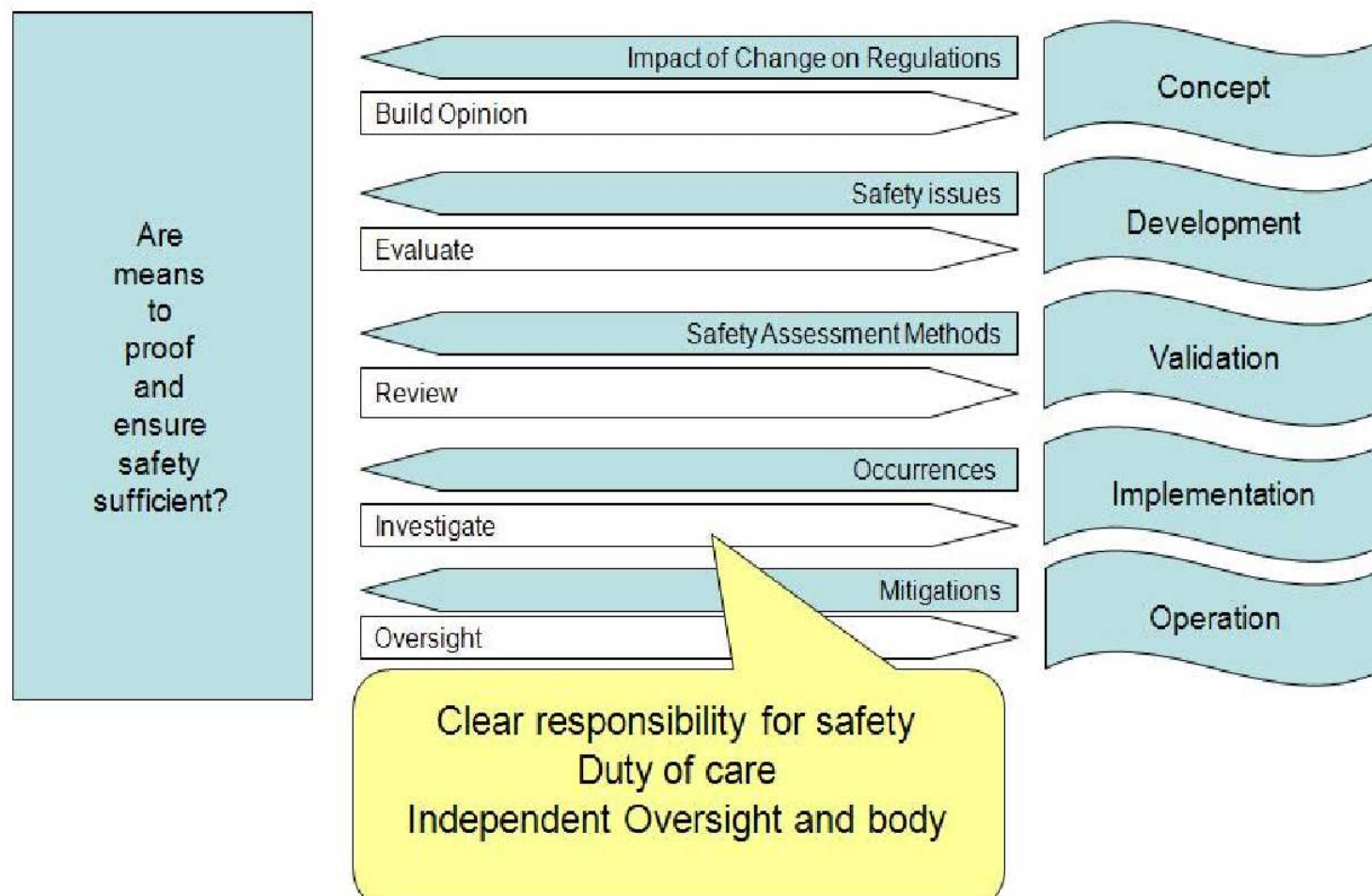
Add/Edit Notes

Basic principles of Regulation

Legal perspective

Regulatory tasks

Product development



Question Navigator

- ☐ User Details
- ☐ General
 - ☐ Setting the context
- ☒ Regulation framework
 - ☒ Regulatory Principle
 - ☒ Structural Needs -
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 - ☒ Interdependence
 - ☒ Functionality
 - ☒ Integrity
 - ☒ Maintainability
- ☐ Regulation-Checklist
- ☐ Finish

AFMU: Regulatory Principles

Save

Home

Help

Progress

Back

Finish

Next

Add/Edit Notes

2) Does the institutional safety regulatory framework relate to the Subject in a clear and unambiguous way?*

Answer

- ☒ No
- ☐ Partially
- ☐ Yes

Is het een ANSP of niet? Niet in 2096, maar wel in 1315. Is niet unambiguous. Moet worden uitgezocht wat de feitelijke situatie is. In NL-wet staat dat luchtruim "is" van ministers van V&W en Defensie. Alleen de primaire luchtruim toewijzing is vastgelegd.

2.1) Does the development or implementation of the Subject raise any issues with respect to the separation of regulation and service provision?

Answer

- ☒ No
- ☐ Possibly
- ☐ Yes

Blijft gescheiden.

2.2) Is it clear which safety regulatory oversight authorities are to be consulted, concerning the development and the implementation of the Subject?

Answer

- ☐ No
- ☐ Partially
- ☒ Yes

In NL is dat voor safety oversight IVW/NSA en MLA. Moeten beide worden geconsulteerd.

2.3) Is it clear which stakeholders should be consulted, if new regulatory rules for the Subject would be required?

Answer

- ☐ No
- ☐ Partially
- ☒ Yes

Stakeholders zijn bekend. Er zijn officiële consultatiemechanismen.



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- ☐ User Details
- ☐ General
 - ☐ Setting the context
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- ☒ Safety management
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 - ☒ Functionality
 - ☒ Integrity
 - ☒ Maintainability
- ☐ Regulation-Checklist
- ☐ Finish

Progress

Back

AFMU: Safety policy

Save

Home

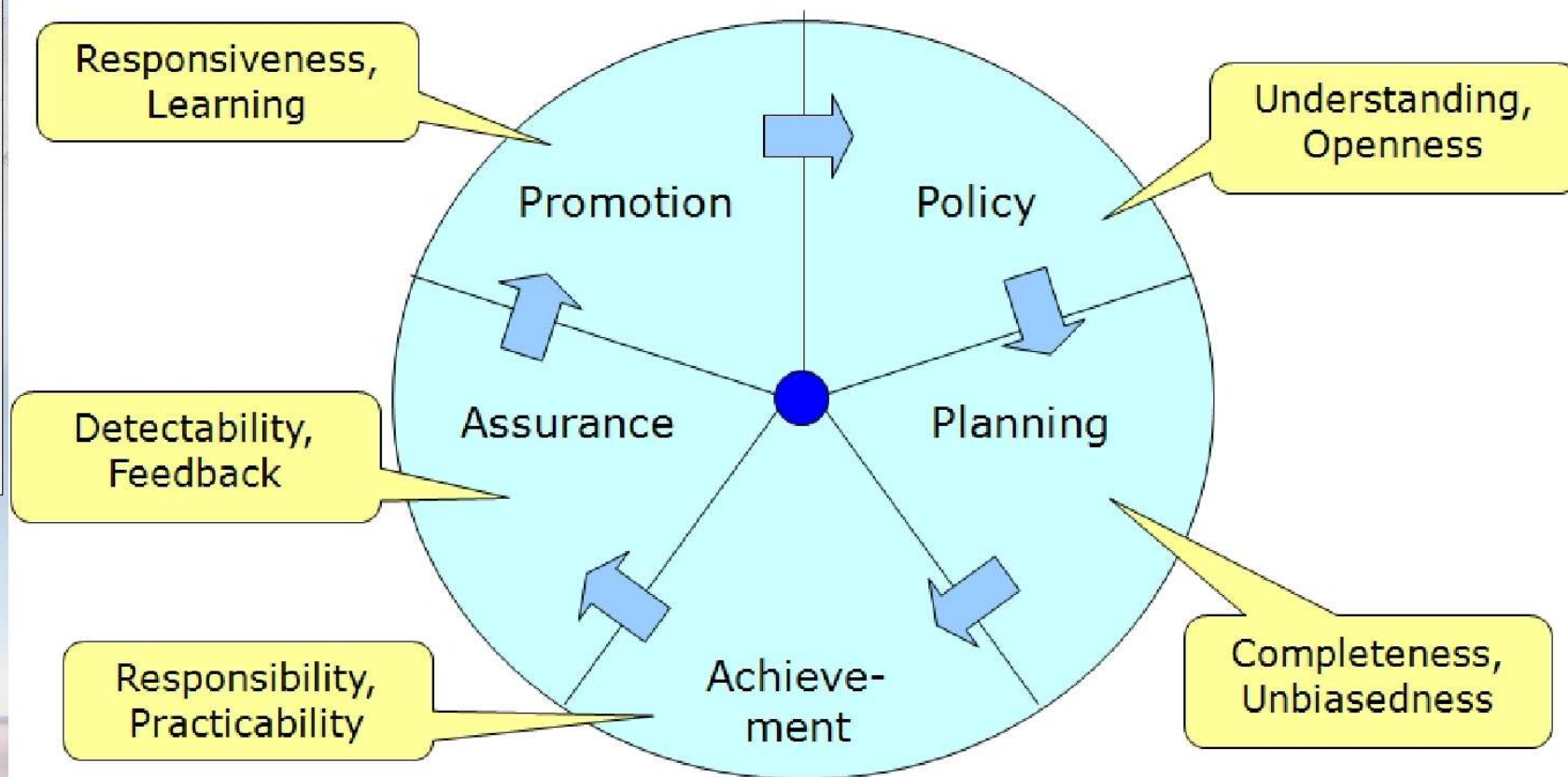
Help

Finish

Next

Add/Edit Notes

Fundamentals on Safety Management



Question Navigator

- ☐ User Details
- ☐ General
 - ☐ Setting the context
- ☒ Regulation framework
 - ☒ Regulatory Principles
 - ☒ Structural Needs -
 - ☒ Structural Needs -
 - ☒ Implementation Needs
 - ☒ Needs for regulation
- ☒ Safety management
 - ☒ Safety policy
 - ☒ Safety planning
 - ☒ Planning of safety
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- ☒ Safety architecture
 - ☒ Transparency
 - ☒ Redundancy
 - ☒ Interdependence
 - ☒ Functionality
 - ☒ Integrity
 - ☒ Maintainability
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- ☐ Finish

AFMU: Safety policy

Save

Home

Help

Progress

Back

Finish

Next

Add/Edit Notes

7) Does the implementation of the Subject possibly affect the Safety Policy?*

Answer

- ☐ No
- ☒ Possibly
- ☐ Yes

AFMU zal niet de Safety Policies van de verschillende organisaties veranderen. Niet duidelijk of er een aparte Safety Policy voor AFMU gemaakt moet worden. Er is geen policy voor de AFMU.

7.1) Is the approach to managing safety unambiguous and verified by the time the Subject will be implemented?

Answer

- ☒ No
- ☐ Partially
- ☐ Yes

Is nog onduidelijk.

7.2) Is the allocation of safety responsibility and the understanding of the safety roles clear to those responsible for the development or implementation of the Subject?

Answer

- ☐ No
- ☐ To some extent
- ☐ Yes

Nog niet duidelijk.

7.3) Is there understanding of and openness about trade-offs being made between safety and other operational objectives, i.e. cost, capacity, security and environmental sustainability?

Answer

- ☐ No
- ☐ Possibly
- ☐ Yes

7.4) In the situation when the Subject will be implemented: are practicable processes foreseen to minimise the contribution to the risk of an aircraft accident?

Answer

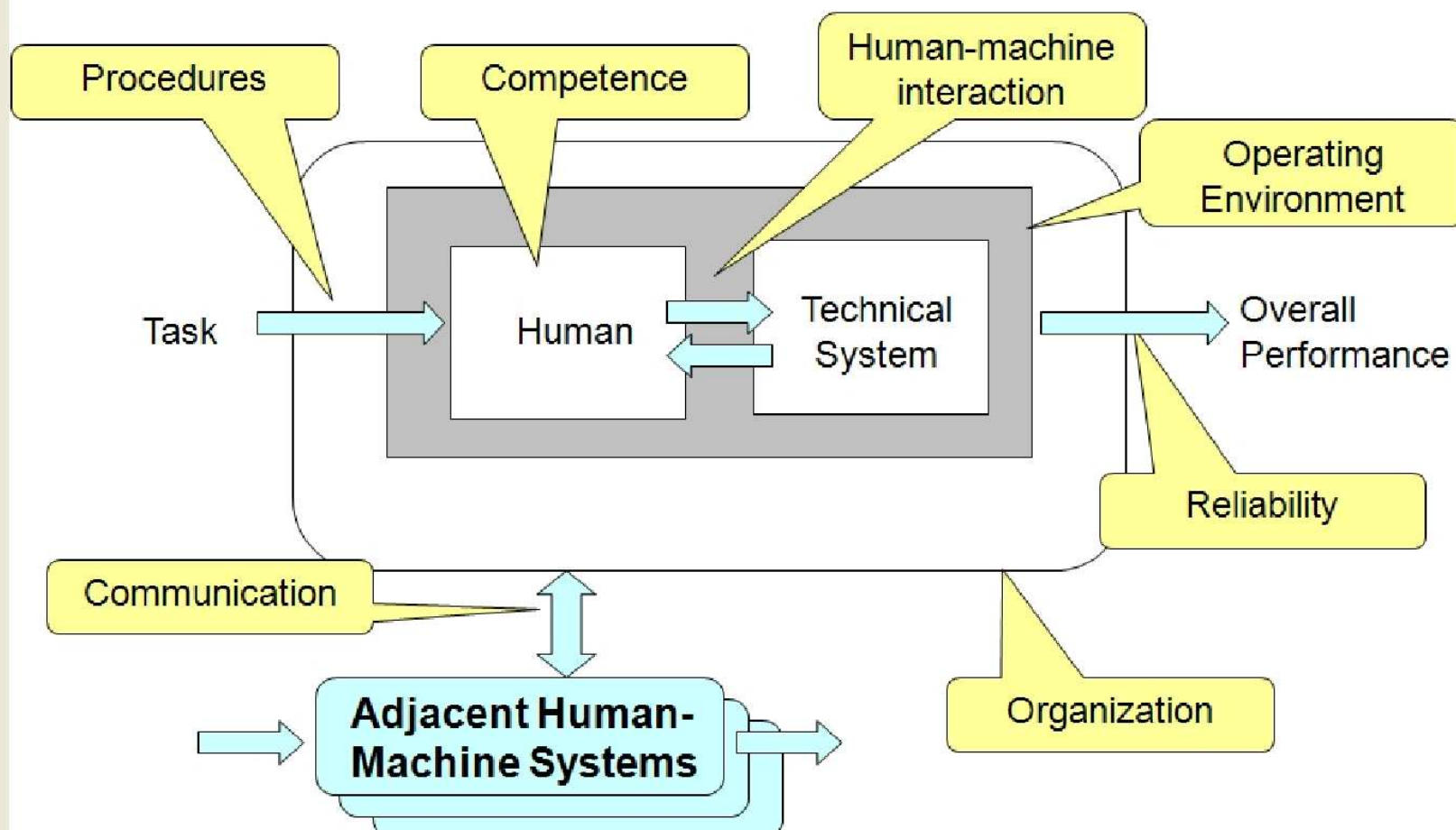
- ☐ No
- ☐ Possibly
- ☐ Yes



.....

- ☐ User Details
- ☐ General
 - ☐ Setting the context
- ☒ Regulation framework
 - ☒ Regulatory Principle
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 - ☒ Structural Needs -
 - ☒ Implementation Ne
 - ☒ Needs for regulatio
- ☒ Safety management
 - ☒ Safety policy
 - ☒ Safety planning
 - ☒ Planning of safety :
 - ☒ Planning of safety :
 - ☒ Planning of safety :
- ☒ Operational safety
 - ☒ Procedures
 - ☒ Operating environnr
 - ☒ Competence
 - ☒ Human-machine in
 - ☒ Organisation
 - ☒ Communication
 - ☒ Reliability
- ☒ Safety architecture
 - ☒ Transparency
 - ☒ Redundancy
 - ☒ Interdependence
 - ☒ Functionality
 - ☒ Integrity
 - ☒ Maintainability
- ☐ Regulation-Checklist
- ☐ Finish

Fundamentals on safety operations



Question Navigator

- ☐ User Details
- ☐ General
 - ☐ Setting the context
- ☒ Regulation framework
 - ☒ Regulatory Principles
 - ☒ Structural Needs -
 - ☒ Structural Needs -
 - ☒ Implementation Ne
 - ☒ Needs for regulatio
- ☒ Safety management
 - ☒ Safety policy
 - ☒ Safety planning
 - ☒ Planning of safety :
 - ☒ Planning of safety :
 - ☒ Planning of safety p
- ☒ Operational safety
 - ☒ Procedures
 - ☒ Operating environm
 - ☒ Competence
 - ☒ Human-machine in
 - ☒ Organisation
 - ☒ Communication
 - ☒ Reliability
- ☒ Safety architecture
 - ☒ Transparency
 - ☒ Redundancy
 - ☒ Interdependence
 - ☒ Functionality
 - ☒ Integrity
 - ☒ Maintainability
- ☐ Regulation-Checklist
- ☐ Finish

AFMU: Human-machine interaction

Save

Home

Help

Progress

Back

Finish

Next

Add/Edit Notes

15) Does the Subject have an effect on Human-Machine Interaction (HMI)?*

Answer

- ☒ No
- ☐ Possibly
- ☐ Yes

We kunnen van start gaan met bestaande systemen. Maar er komen nieuwe systemen.
B.v.: LARA (Europees uitgerold). Het is andersom: LARA komt er, en dat heeft een effect op AFMU.

15.1) Does the Subject involve changes in workstation ergonomics or working environment, (e.g., computer interfaces, radar screens, etc)?

Answer

- ☐ No
- ☐ Possibly
- ☐ Yes

Please enter your answer justification

Unlock

15.2) Is a possible increase of workload or task complexity resulting from the implementation of the Subject for all involved actors a consideration?

Answer

- ☐ No
- ☐ Possibly
- ☐ Yes

Please enter your answer justification

Unlock



.....

- ☐ User Details
- ☐ General
 - ☐ Setting the context
- ☒ Regulation framework
 - ☒ Regulatory Principle
 - ☒ Structural Needs -
 - ☒ Structural Needs -
 - ☒ Implementation Ne
 - ☒ Needs for regulatio
- ☒ Safety management
 - ☒ Safety policy
 - ☒ Safety planning
 - ☒ Planning of safety :
 - ☒ Planning of safety :
 - ☒ Planning of safety :
- ☒ Operational safety
 - ☒ Procedures
 - ☒ Operating environrr
 - ☒ Competence
 - ☒ Human-machine in
 - ☒ Organisation
 - ☒ Communication
 - ☒ Reliability
- ☒ Safety architecture
 - ☒ Transparency
 - ☒ Redundancy
 - ☒ Interdependence
 - ☒ Functionality
 - ☒ Integrity
 - ☒ Maintainability
- ☐ Regulation-Checklist
- ☐ Finish

Progress

Back

AFMU: Transparency

Save

Home

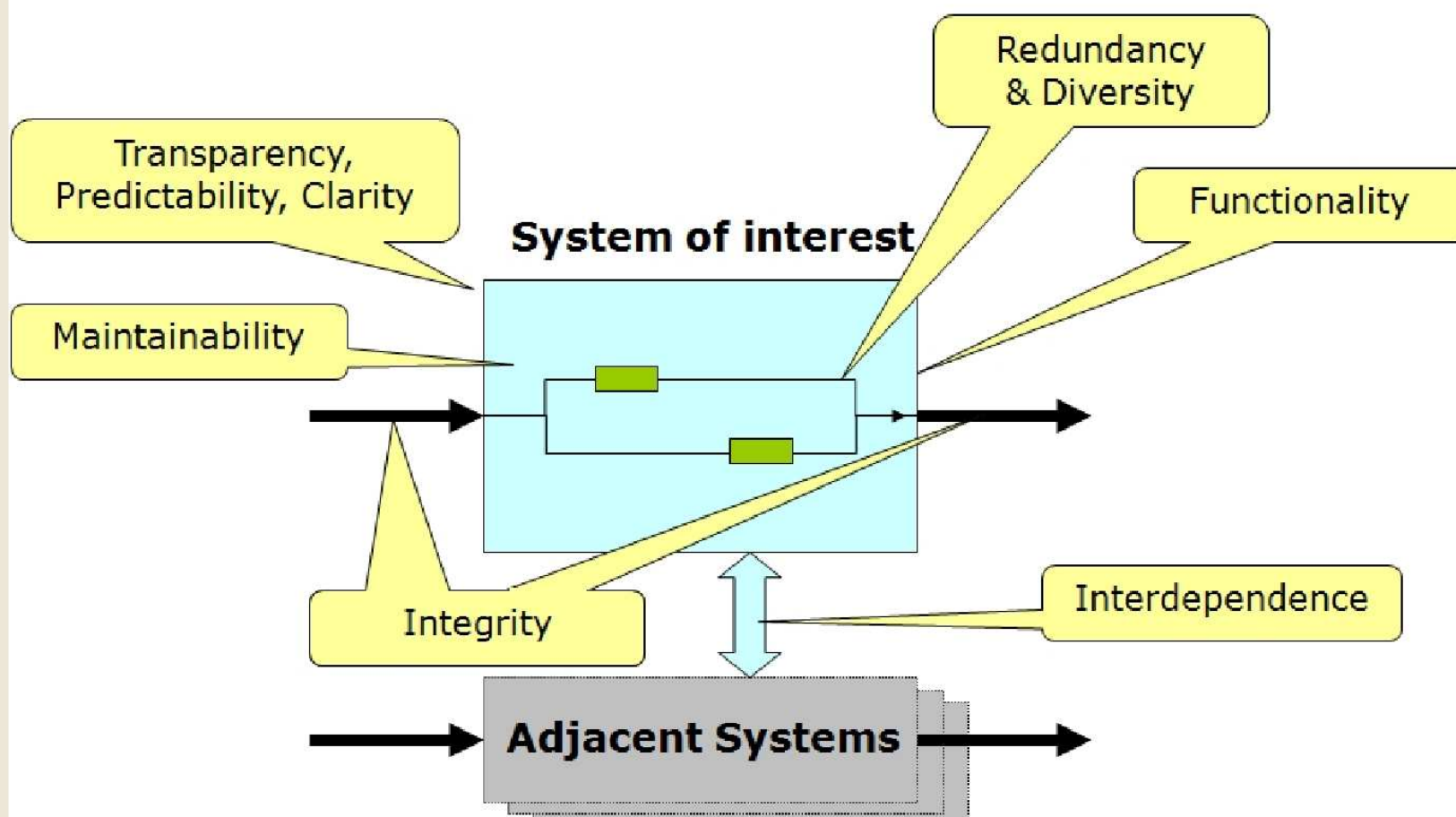
Help

Finish

Next

Add/Edit Notes

Fundamentals on Safety Architecture



Question Navigator

- ☐ User Details
- ☐ General
 - ☐ Setting the context
- ☒ Regulation framework
 - ☒ Regulatory Principle
 - ☒ Structural Needs -
 - ☒ Structural Needs -
 - ☒ Implementation Ne
 - ☒ Needs for regulatio
- ☒ Safety management
 - ☒ Safety policy
 - ☒ Safety planning
 - ☒ Planning of safety :
 - ☒ Planning of safety :
 - ☒ Planning of safety p
- ☒ Operational safety
 - ☒ Procedures
 - ☒ Operating environm
 - ☒ Competence
 - ☒ Human-machine in
 - ☒ Organisation
 - ☒ Communication
 - ☒ Reliability
- ☒ Safety architecture
 - ☒ Transparency
 - ☒ Redundancy
 - ☒ Interdependence
 - ☒ Functionality
 - ☒ Integrity
 - ☒ Maintainability
- ☐ Regulation-Checklist
- ☐ Finish

AFMU: Transparency

Save

Home

Help

Progress

Back

Finish

Next

Add/Edit Notes

19) Is the description of the Subject transparent, clear and complete?*

Answer

- ☐ No
- ☒ Partially
- ☐ Yes

CONOPS'en en implementatieplannen zijn gereed en geaccepteerd door de werkgroep. Basisdocumenten zijn klaar. Regulatory: Institutioneel en organisatorisch niet gereed. Level 1 body: gezamenlijke beleidseenheid (de twee ministers). Prioriteitsregels moeten

19.1) Is there already a clear proposal on how to design the Subject?

Answer

- ☐ No
- ☐ Partially
- ☐ Yes

Please enter your answer justification

19.2) Is the documentation of the Subject clearly understandable and traceable?

Answer

- ☐ No
- ☐ Partially
- ☐ Yes

Please enter your answer justification

19.3) Are there different opinions on how the Subject might work in detail?

Answer

- ☐ No
- ☐ Possibly
- ☐ Yes

Please enter your answer justification

19.4) Are there preconceptions or decisions that have already been taken, while alternatives have not been sufficiently thought through?

Answer

- ☐ No
- ☐ Some
- ☐ Yes

Please enter your answer justification



.....

Question Navigator

- ☐ User Details
- ☐ General
 - ☐ Setting the context
- ☒ Regulation framework
 - ☒ Regulatory Principle
 - ☒ Structural Needs -
 - ☒ Structural Needs -
 - ☒ Implementation Ne
 - ☒ Needs for regulatio
- ☒ Safety management
 - ☒ Safety policy
 - ☒ Safety planning
 - ☒ Planning of safety :
 - ☒ Planning of safety :
 - ☒ Planning of safety p
- ☒ Operational safety
 - ☒ Procedures
 - ☒ Operating environm
 - ☒ Competence
 - ☒ Human-machine in
 - ☒ Organisation
 - ☒ Communication
 - ☒ Reliability
- ☒ Safety architecture
 - ☒ Transparency
 - ☒ Redundancy
 - ☒ Interdependence
 - ☒ Functionality
 - ☒ Integrity
 - ☒ Maintainability
- ☐ Regulation-Checklist
- ☐ Finish

AFMU: Maintainability

Save

Home

Help

Progress

Back

Finish

Next

Add/Edit Notes

24) Will it be difficult to fix any errors occurring after the Subject is implemented?*

Answer

☒ No

Continue to the next set

☐ Possibly☐ Yes

Het is niet moeilijk. Review-proces zit in ontwerp. Idee van permanente verbetering. Level-1 body zorgt voor escape. Beslissing op hoger niveau misschien lastig, maar dat is geen onderdeel van AFMU.

24.1) Does the expected performance of the Subject (or parts of the Subject) rely on extensive maintenance activities?

Answer

☐ No☐ Partially☐ Yes

Please enter your answer justification

Unlock

24.2) Have maintenance requirements been defined and evaluated for potential error?

Answer

☐ No☐ Partially☐ Yes

Please enter your answer justification

Unlock

24.3) Can the Subject be maintained, including start-up and shut down, without affecting other air transport operational elements?

Answer

☐ No☐ Partially☐ Yes

Please enter your answer justification

Unlock

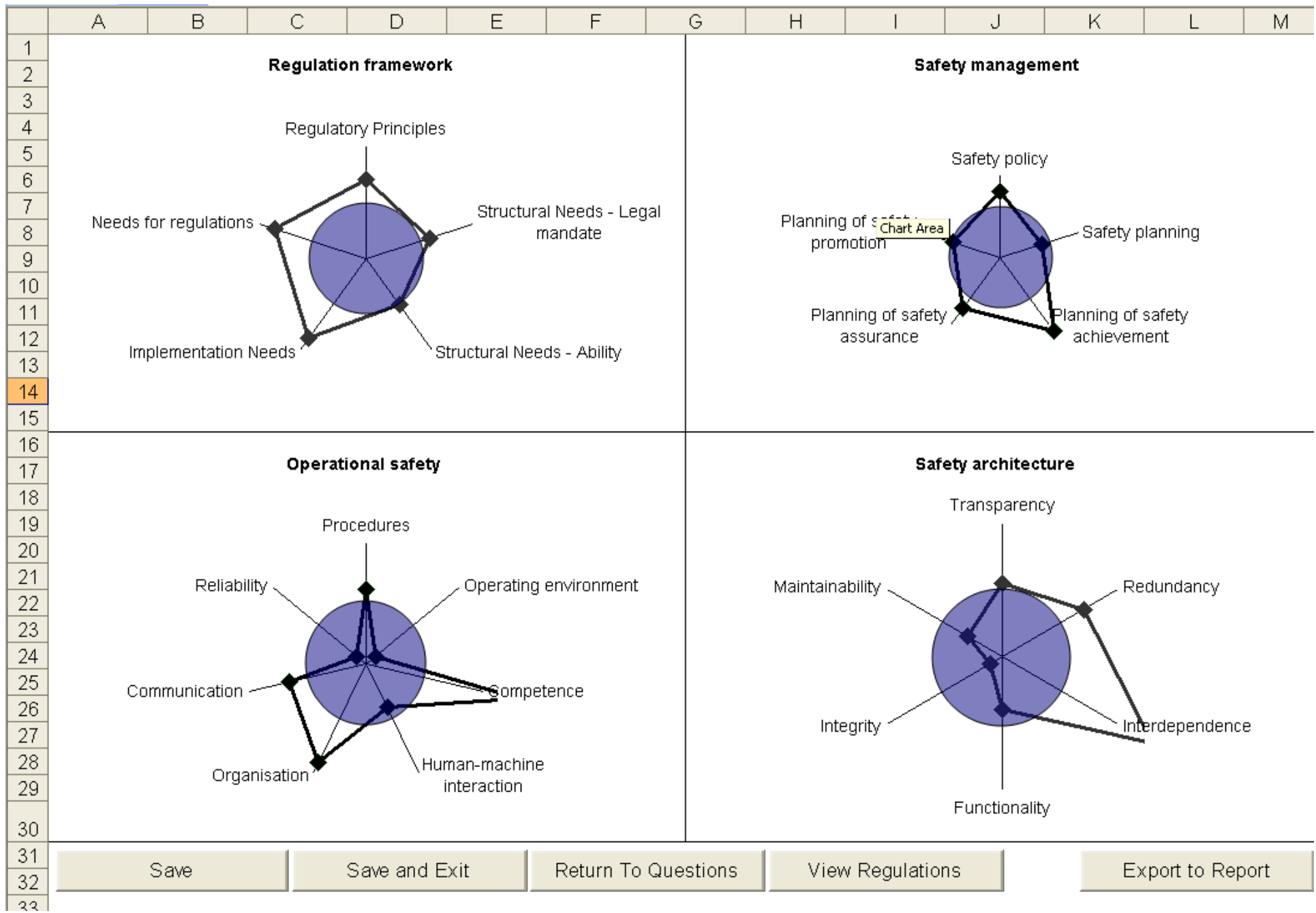
24.4) Is the time-needed to repair erroneous behaviour as part of on-line maintenance a consideration?

Answer

☐ No☐ Partially☐ Yes

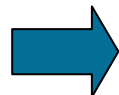
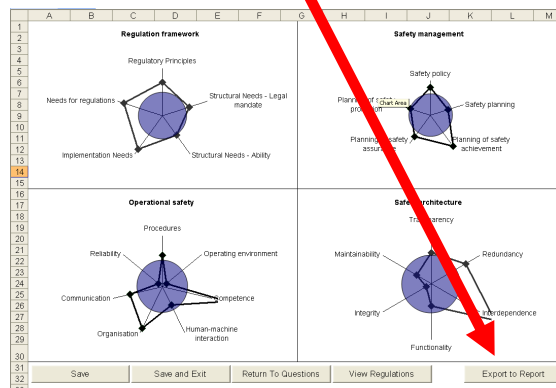
Please enter your answer justification

Unlock





Export to report



1.3 How much would the implementation of the Subject change the functionality and the boundaries of the current situation?
Verder vooruitkijken in planning. Criteriën voor de functionaliteiten. In de functionaliteiten zelf veranderen niet zo veel.
Verandering in veiligheid: verbetering door verder vooruit te kijken. Hoge efficiëntie bij peilgebied veiligheidsniveau. Door betere samenwerking.

1.4 Are there any constraints for implementation of the Subject?

Regulation framework
Regulatory Principles

Results

The following has been generated by the Safety Scanning Tool on 9-11-2010 at 17:31:09
The user is invited to add their own Safety scanning analysis and conclusions, and change the layout of the report to the desired format.

User details
Name: J.W. Smeltink, B. Klein Obbink, M.H.C. Everdij
Email address: smeltink@nl-avi.nl
Title of the Subject addressed: AFMU
Subject Description: In June 1994, the European Civil Aviation Conference (ECAC) Ministers of Transport agreed to adopt for Europe the concept of Flexible Use of Airspace (FUA). The FUA concept has adopted the principle that airspace should no longer be designated as either purely civil or military airspace, but rather be considered as one continuum and allocated on a day-to-day basis according to user requirements. Within that FUA concept, the daily allocation of the required airspace is decided by a user civil/military Airspace Flow Management Unit (AFMU), resulting from a collaborative Airspace Management/Air Traffic Flow Management/Air Traffic Control (ASM/ATFM/ATC) process.
Mid 2005, the Netherlands Air Traffic Committee (Luchtovereenkomsten, LVC in Dutch) established a Task Force which was tasked to write an operational concept document for such an AFMU (Gibbs and de Jonge, 2005).
Key documents available to the Subject: Frutkin, C.H. (2007). Establishing an Airspace and Flow Management Unit (AFMU) in the Netherlands, Deliverable AFMUC-2008-002. CONOPS 2008. FATMUC report FATMUC-2008-DGLM-002. Edition 1.0, dated 30 August 2008.
Frutkin, C.H. (2008a). Establishing an Airspace and Flow Management Unit (AFMU) in the Netherlands, Deliverable AFMUC-2008-002. CONOPS 2008. FATMUC report FATMUC-2008-DGLM-002. Edition 1.0, dated 30 August 2008.
Frutkin, C.H. (2008b). Establishing an Airspace and Flow Management Unit (AFMU) in the Netherlands, Deliverable AFMUC-2008-003. Implementation plan 2008. FATMUC report FATMUC-2008-DGLM-003. Edition 1.0, dated 31 October 2008.



CONTENTS

1	INTRODUCTION	7
1.1	Introduction	7
1.2	Goal of this study	7
1.3	Background	8
2	APPROACH	10
2.1	General	10

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AFMU SELF ASSESSMENT USING THE SAFETY SCANNING TOOL

J.W. Smeltink
M.H.C. Everdij

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NLR-CR-2010-204

AFMU SELF ASSESSMENT USING THE SAFETY SCANNING TOOL

J.W. Smeltink
M.H.C. Everdij
B. Klein Obbink



Main conclusions of AFMU Safety scan

- AFMU will create more interdependence due to the Collaborative Decision Making process. A more precise planning of the airspace users is required.
- Working procedures, staffing, required competence and training, and the planning rules are the major items that need more detailing. Specifics are required to know if AFMU can be implemented safely.
- It is not clear, at this point, how the AFMU will be organised: as a separate organisation or within specific organisation. As a consequence, it is not clear how the safety will be managed.

Regarding the use of the Safety Scanning Tool:

- The participants were very positive and they indicated that the tool can effectively assist in doing a self-evaluation of an operational concept at an early stage.
- Particularly the multi-actor setting of the session and the opportunity for a structured communication was considered of great value.