Maastricht Upper Area Control Centre

# PASSIONATE ABOUT PERFORMANCE

3rd EUROCONTROL Workshop                                    Bled, Slovenija

Herman BARET                          Head ATM-CNS Strategy & Development Division

# PLAN

**An experience from the field**

- **Who are we ?**

- **Who am I ?**

- **Evolution of Safety in MUAC across the years**

- **The Future**

- **Questions & Answers**

# WHO ARE WE?

- **An almost 40-year young ANSP (29 February 2012)**

- **A Certified and Designated ANSP since 8 November 2006**

- **An Operator for 4 States (BE NE LUX Northern Germany)**

- **A Multinational Cross-Border Centre - "*A FAB Avant la lettre*"**
  **- Now a *Member of the FAB Europe Central***

- **A very performant organisation serving 4 major Hubs**

- **A Pioneering Body with Advanced Ops Concepts & Systems & Highly motivated People -**
  **involved in SESAR (i4D; IOP; Complexity Management; Network: AFUA, dDCB, UPR)**

- **A system's Integrator**

- **An organization very much involved in Civ-Mil Cooperation**

# FACTS (1)



- **TRAFFIC:**
- **1.5+ million flights/Year**
- **Peak Day: 01 July 2011 → 5,163 flights**

- **OPS ROOM:**
- **60 ATCO CWPs**
- **5 SUP CWPs**
- **4 FDS CWPs**
- **3 FMP Positions**

- **STAFF:**
- **280 ATCO-s**
- **40 Trainees**
- **100 other OPS Staff**
- **150 ENG Staff**

- **670 FTE MUAC**

- **28 Nationalities**
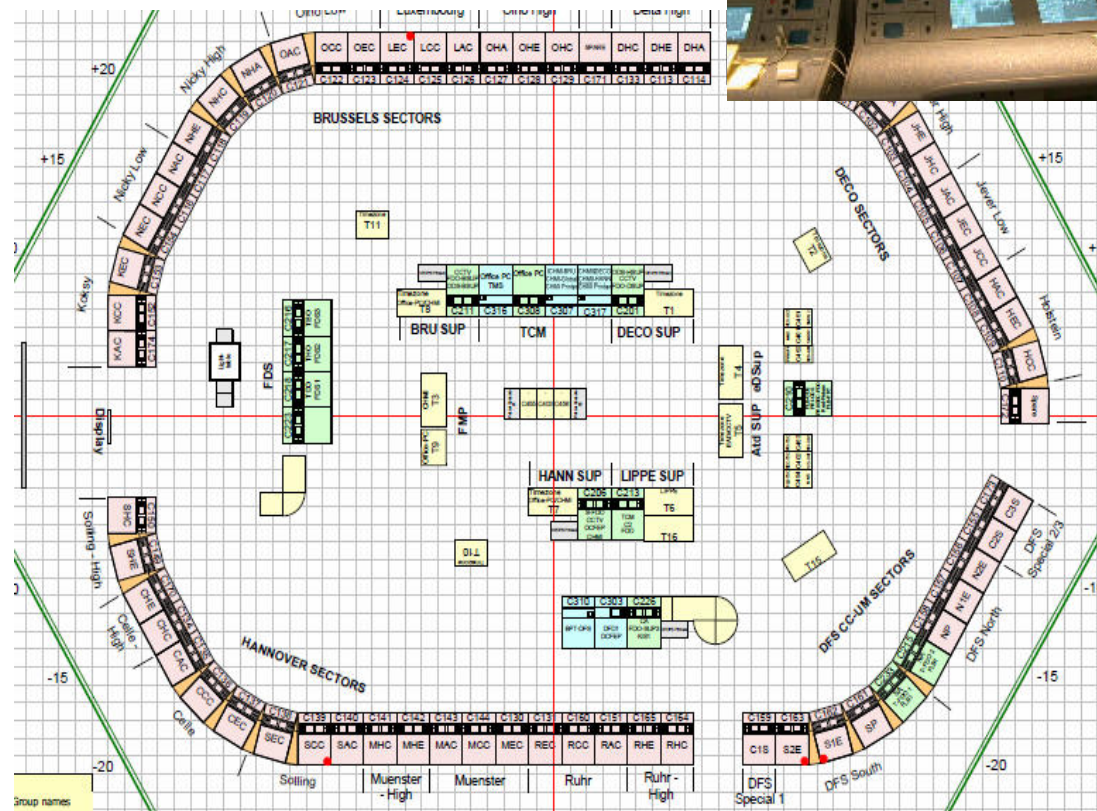
**UAC DFL 245**

**ATS GAT 4 States**
- **Belgium**
- **Netherlands**
- **Luxemburg**
- **NW Germany**
  - **HANN UIR**
  - **OAT**

**4 Sector Groups**
- **BRU      6 Sectors**
- **DECO   5 Sectors**
- **HANN   8(7) Sectors**
- **→ 19 Civil Sectors Max**
- **LIPPE   2 + 3 Sectors**
- **→ 4 Licenses**

**A 5th Sector Group in the make …**
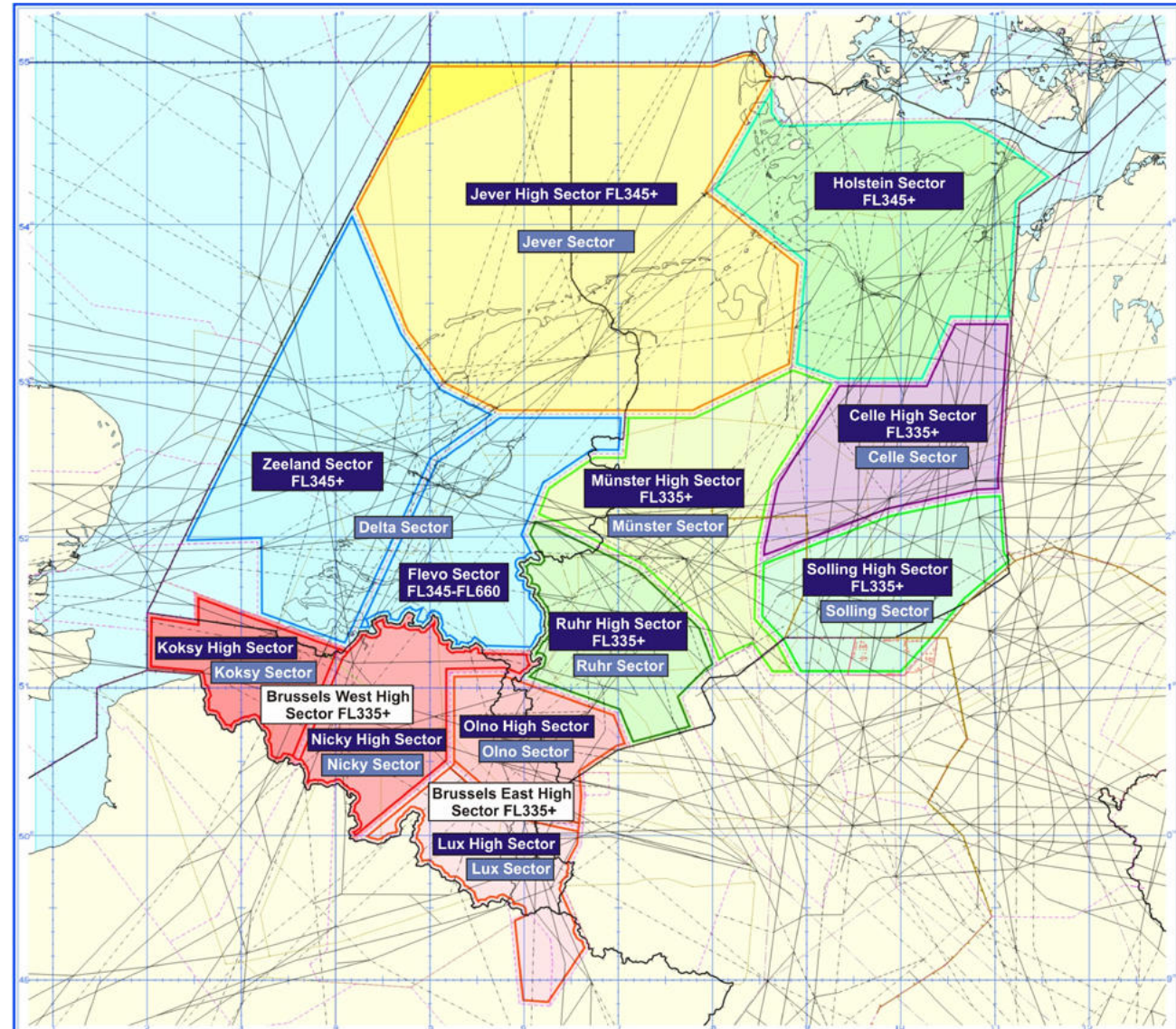
# ATCO/HOUR PRODUCTIVITY

*Source: ATM Cost-Effectiveness 2009 Benchmarking Report*
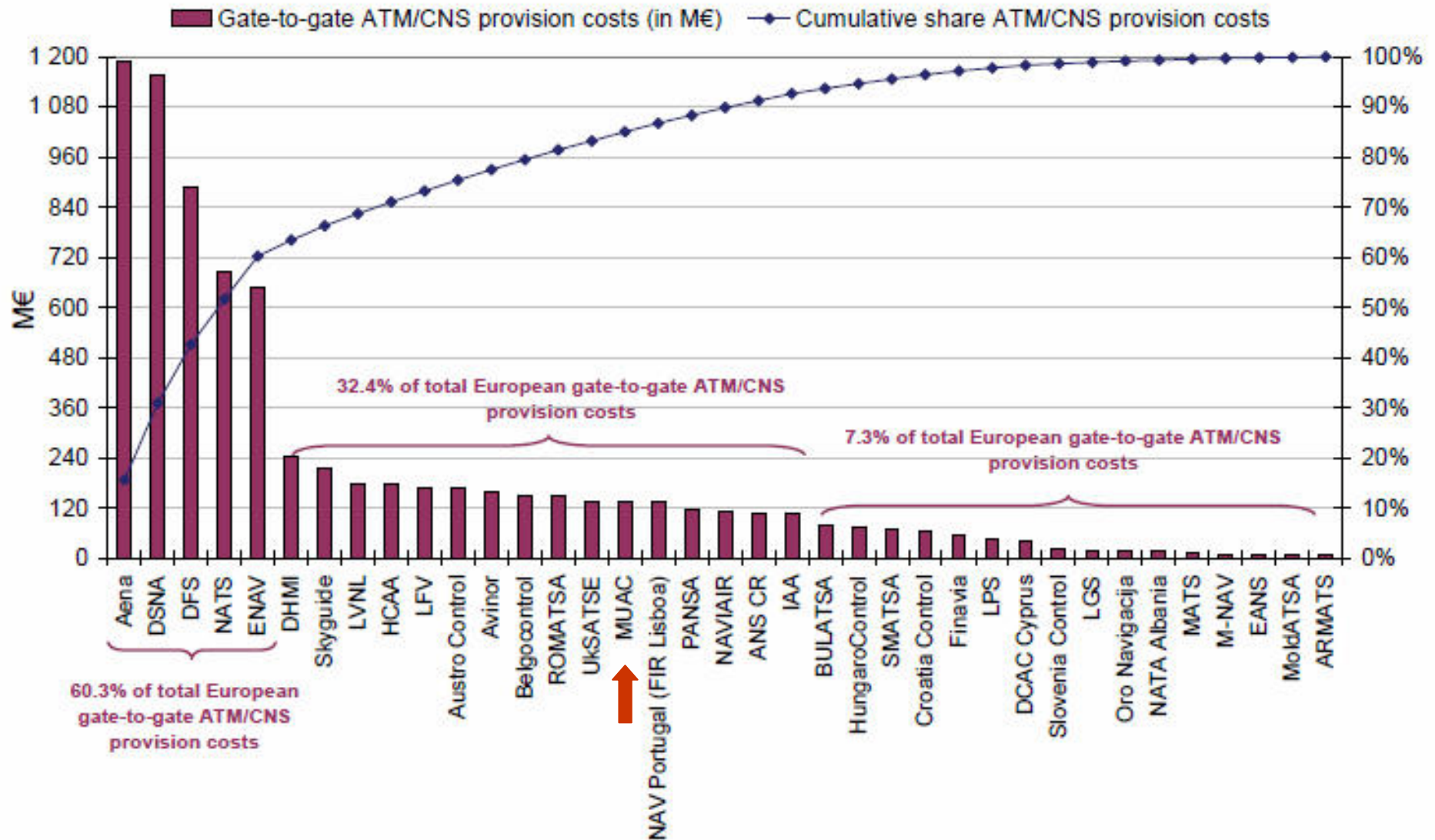*Performance Review Commission, June 2011*
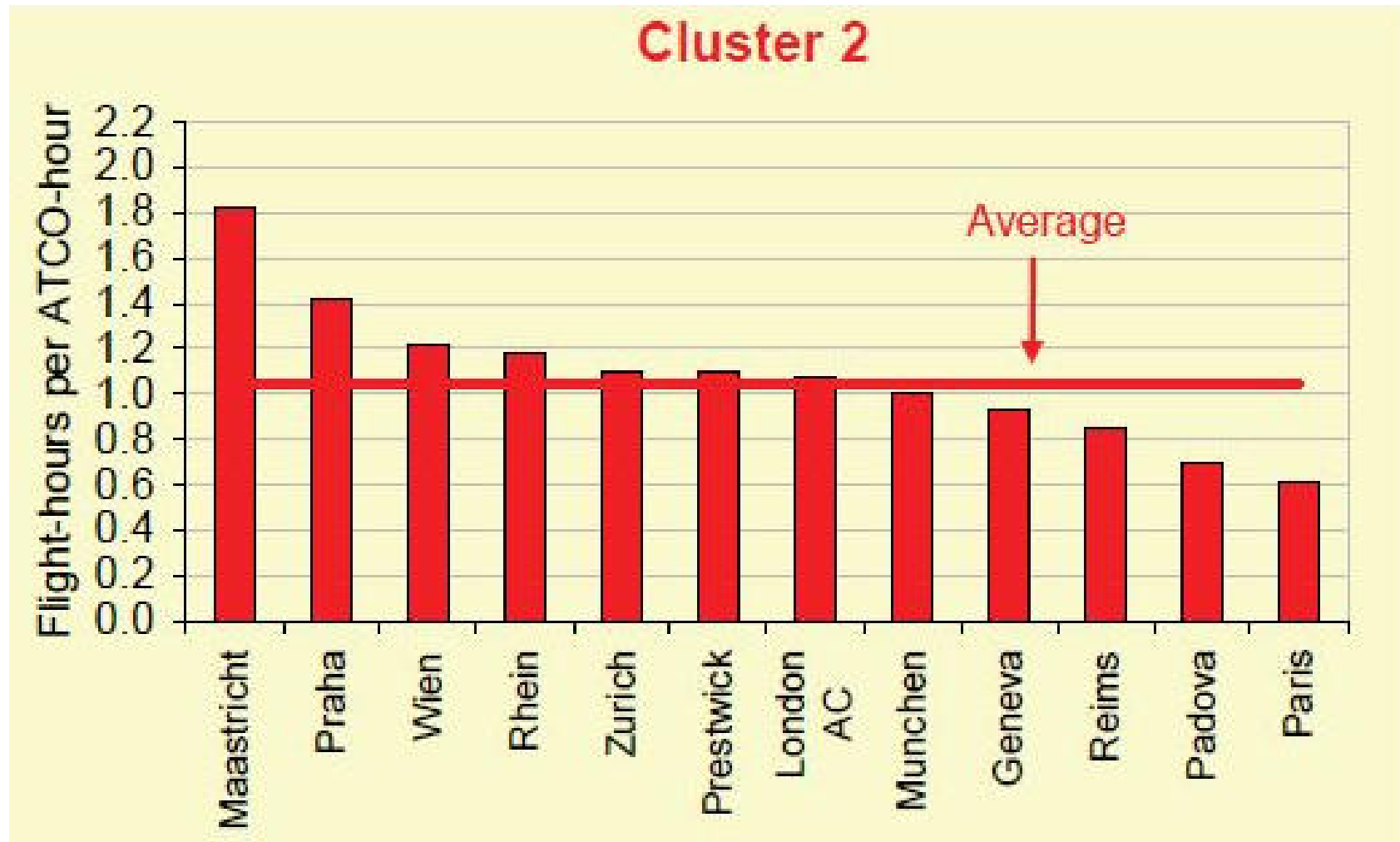
# ATM/CNS PROVISION COSTS – 2009

*Source: ATM Cost-Effectiveness 2009 Benchmarking Report*
*Performance Review Commission, June 2011*

# WHO AM I?

- **Anything but a Safety expert …**
  **but a (heavy) consumer of Safety resources**

- **An MS degree in Engineering**

- **A Strong believer in**
  - **Collaboration with the Ops Community**
  - **Win-Win collaboration with ATM Suppliers**

- **A long experience in Major Investment Projects**
  - **12 years in MUAC (ODS, N-FDPS, N-VCS, ATFCM/ASM, …)**

- **A Strong supporter of Safety in procurement activities …**
  - **as long as it is not about paperwork, dilution of responsibilities, excuse (mis)used to achieve other objectives…**

- **SAFETY is PARAMOUNT !**

- ***Our Mission Statement***
  *TO PROVIDE SAFE, IMPARTIAL, CUSTOMER ORIENTED,*
  *COST EFFECTIVE AIR TRAFFIC SERVICES IN THE FOUR*
  *STATES AIRSPACE.*

# MUAC ORGANISATION



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                    ┌──────────────────┐
                    │ Directorate MUAC │
                    │   K.H. Kloos     │
                    └──────────────────┘
                             │
          ┌──────────────────┴──────────────────┐
    ┌───────────┐                          ┌───────────┐
    │  Safety   │                          │  Office   │
    │Management │                          │of the Director│
    │K. Cartmale│                          │F. Könnemann│
    └───────────┘                          └───────────┘
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| Operations | Engineering | ATM-CNS Strategy and Development (ASD) | Strategic Development and Management (SDM) |
| --- | --- | --- | --- |
| H. Matthes | M. Vankeirsbilck | H. Baret | O. Reitsma |
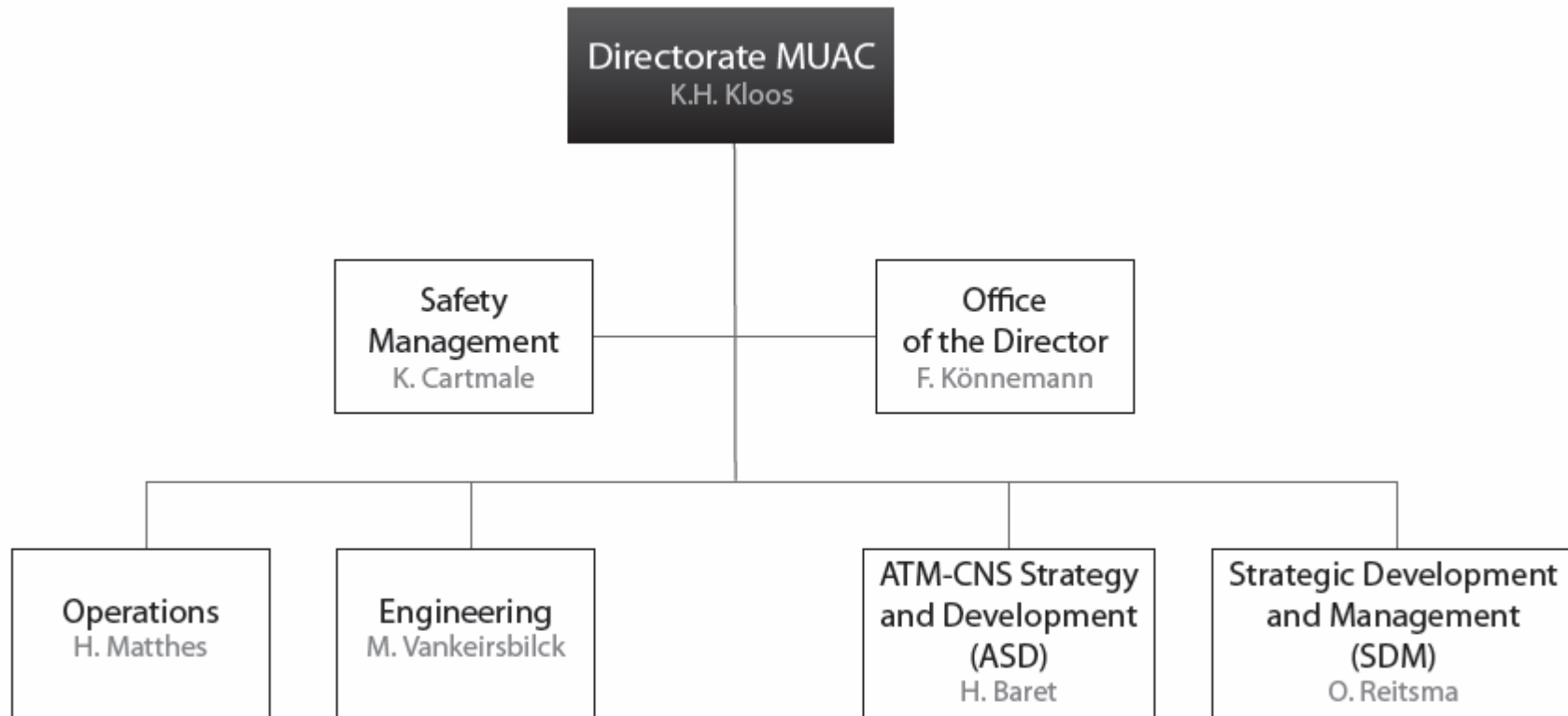
At least one or more Safety expert(s) per Division – different focus

# Evolution of Safety (Assurance) in MUAC across the years (1)

- RFS Safety Assessment: October-December 2001

- Recruitment of the MUAC Safety Manager: October 2001 (Processes, SMM –> endorses)

- First contact with a "real" Safety Case
  New Operational Display & input System (N-ODS) – with Thales ATM
  - 14 December 1993
    Contract Signature
  - 08 August 2001
    FHA work started
  - April-October 2002
    Software Safety Assessment (complementing a Thales FMEA)
    System Safety Assessment Report
    Safety Case
  - September-October 2002
    Safety Analysis and Review of the New-Ops Room transition documents
  - 02 November 2002
    Start of Operations

  We learned A LOT; Methods, Support from Contractors; Safety has a cost
  but of course started TOO LATE

- First released documents in the SMS:  July 2002

- The serious Stuff !
  New Flight Data Processing System (N-FDPS) – with Indra
  - 28 September & 7 December 2001
    Call-for-Tenders
  - 29 April 2003
    Contract : T&Cs; C-FTS; C-SOW (<<< Safety !!)
  - 12 December 2008
    Start of Operations
    (N-FDPS; Advanced HMI; 11 Projects Type 1 and Type 2)
  - Cfr Indra presentation

- *Today:*
  - *SMS constantly enhanced*
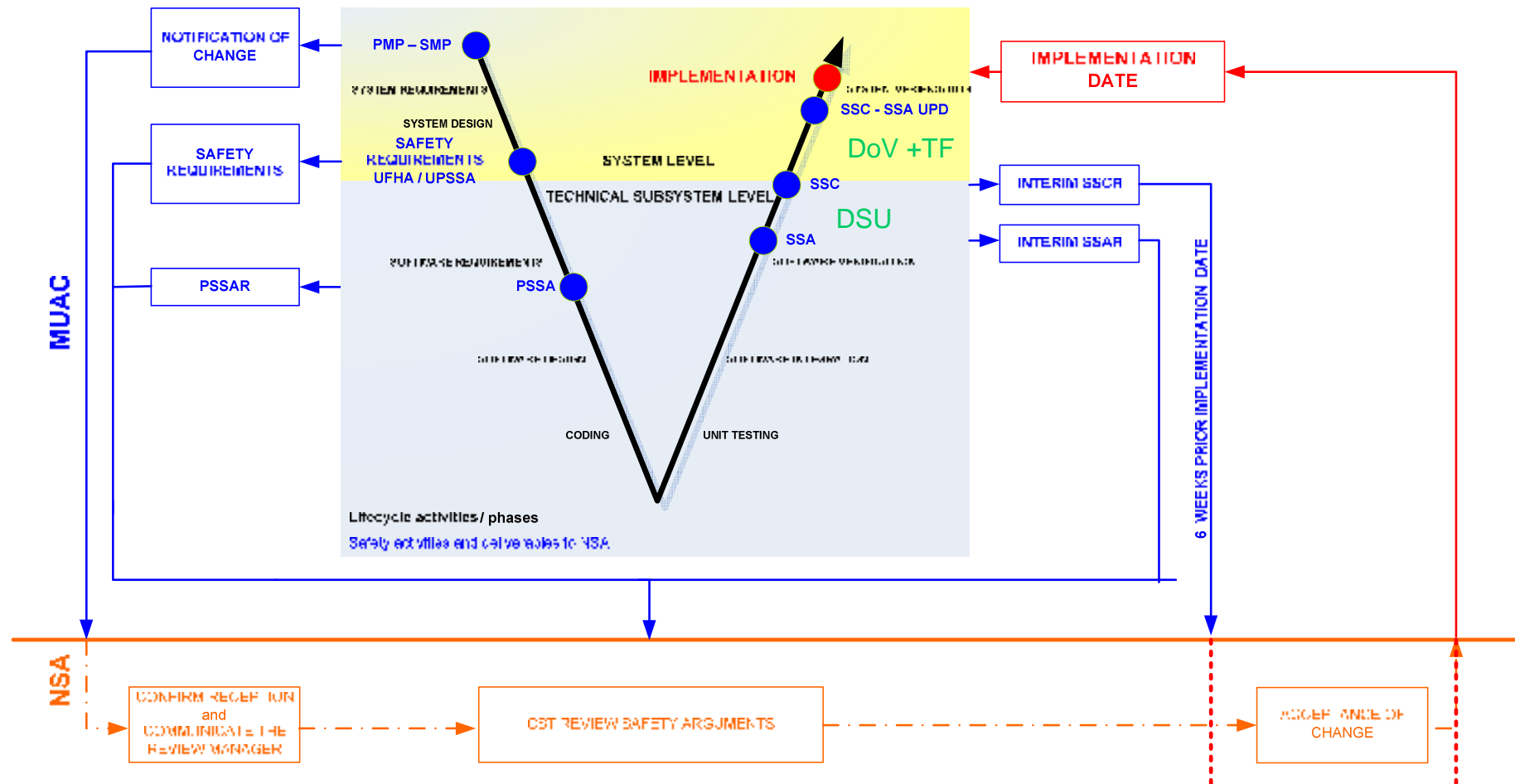  - *Safety in Investment Projects = Embedded from Call-for -Tenders*
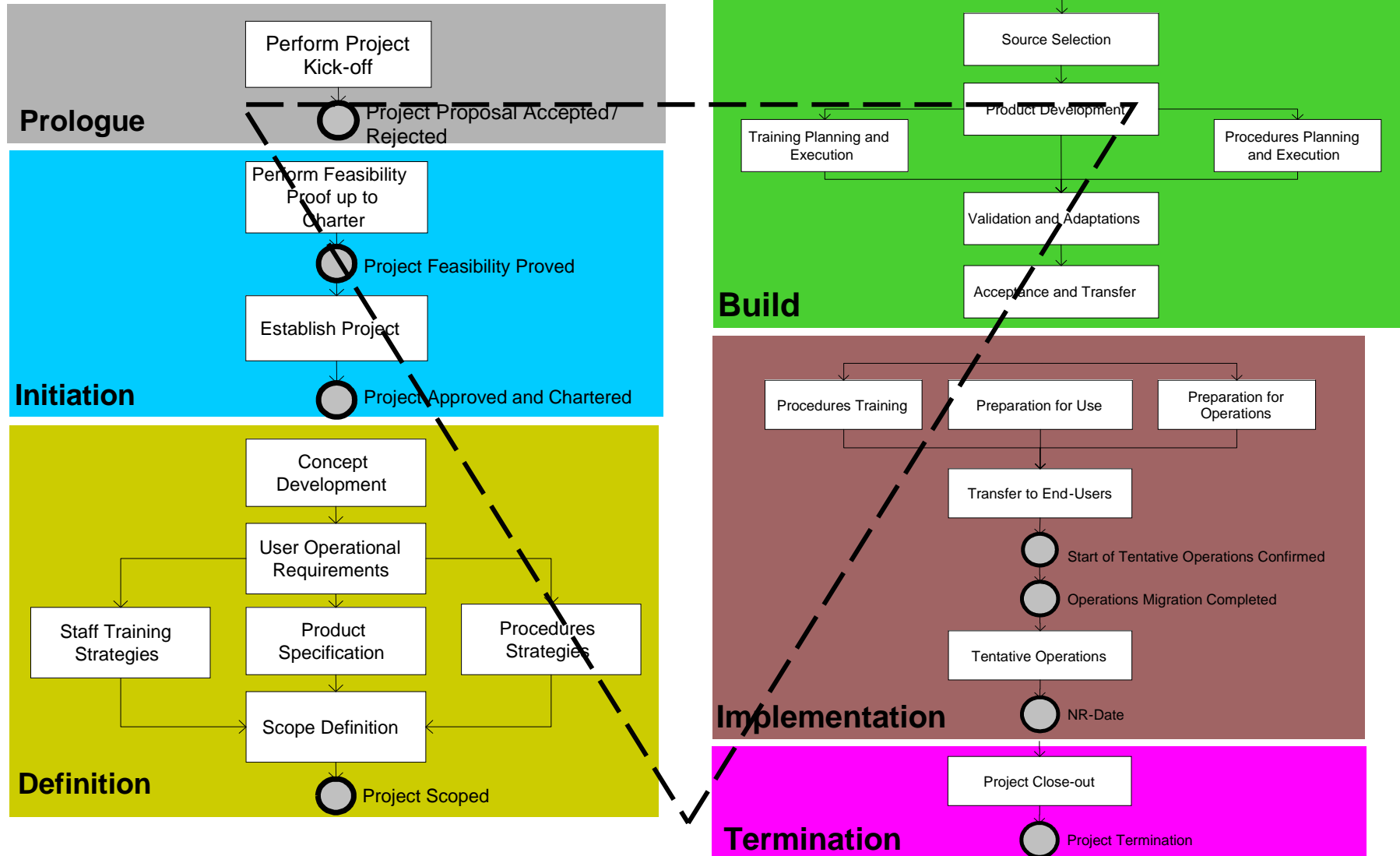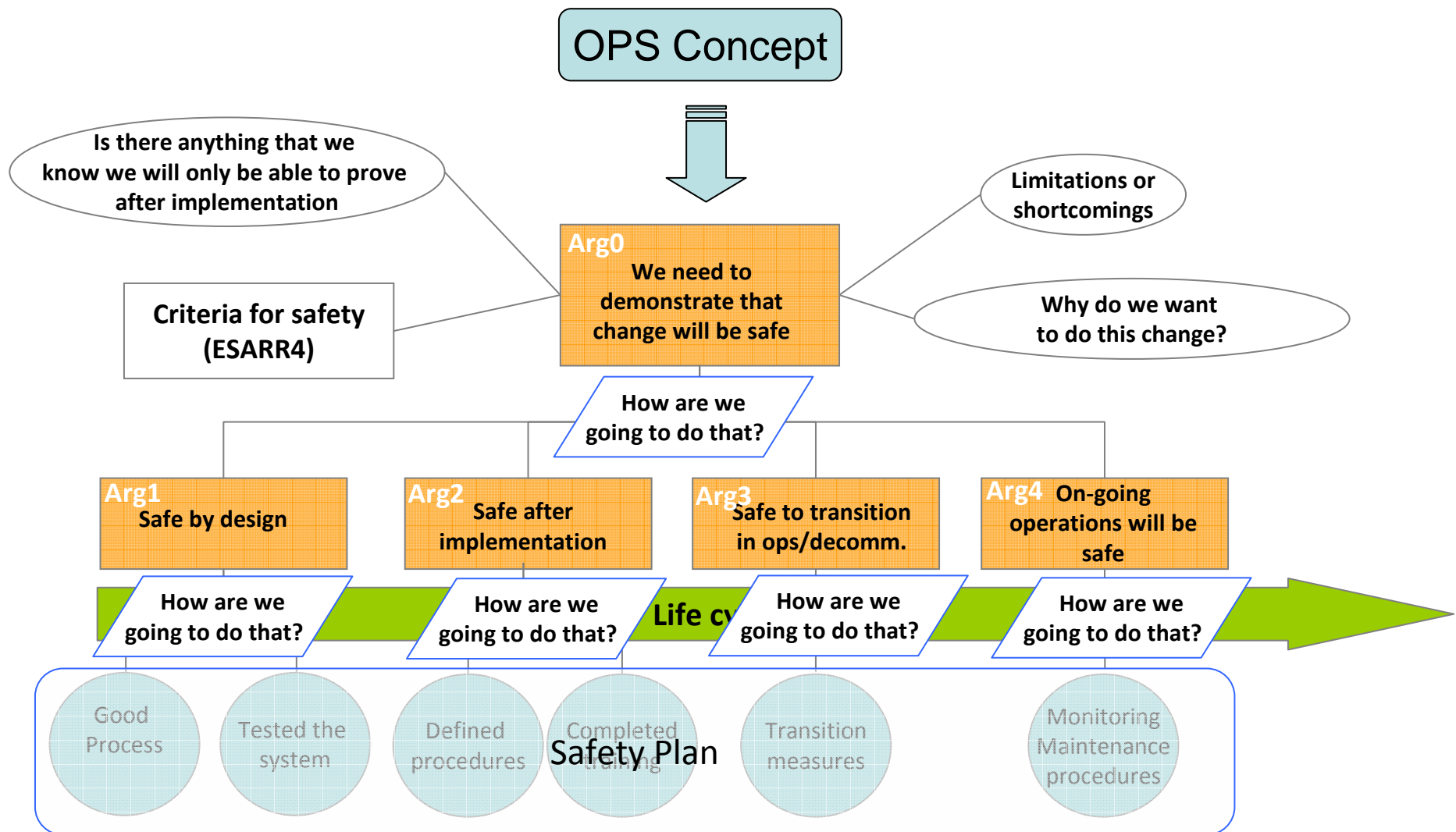
# Some MUAC Specificities

- MUAC is also a Directorate from the EUROCONTROL Agency
  - Separate the Oversight from Line Management
  - ASRO : Agency Safety Regulatory Oversight Unit - 01 June 2004 (reporting to the Director General)
  - Notification, Audits, etc

- A 4-States NSA
  - established under SES Regulation 549/2004 (Framework Regulation)
  - 1$^{st}$ interactions = SES Certification (2096/2005 Common Requirements) >> 8 Nov 2006.
  - 1$^{st}$ SSC to the 4S-NSA = B-VCS (Q2 2008); N-FDPS (Q3-2008)
  - Transition from ASRO to 4S-NSA – FULL 4+1 OVERSIGHT (+ IOP)
  - A Good preparation for FABEC !

**OPS Concept**

*Is there anything that we know we will only be able to prove after implementation*

*Limitations or shortcomings*

**Criteria for safety (ESARR4)**

*Why do we want to do this change?*

**Arg0**
**We need to demonstrate that change will be safe**

How are we going to do that?

**Arg1**
**Safe by design**

**Arg2**
**Safe after implementation**

**Arg3**
**Safe to transition in ops/decomm.**

**Arg4 On-going operations will be safe**

How are we going to do that?

How are we going to do that?

How are we going to do that?

How are we going to do that?

**Life cycle**

Good Process

Tested the system

Defined procedures

Completed training

**Safety Plan**

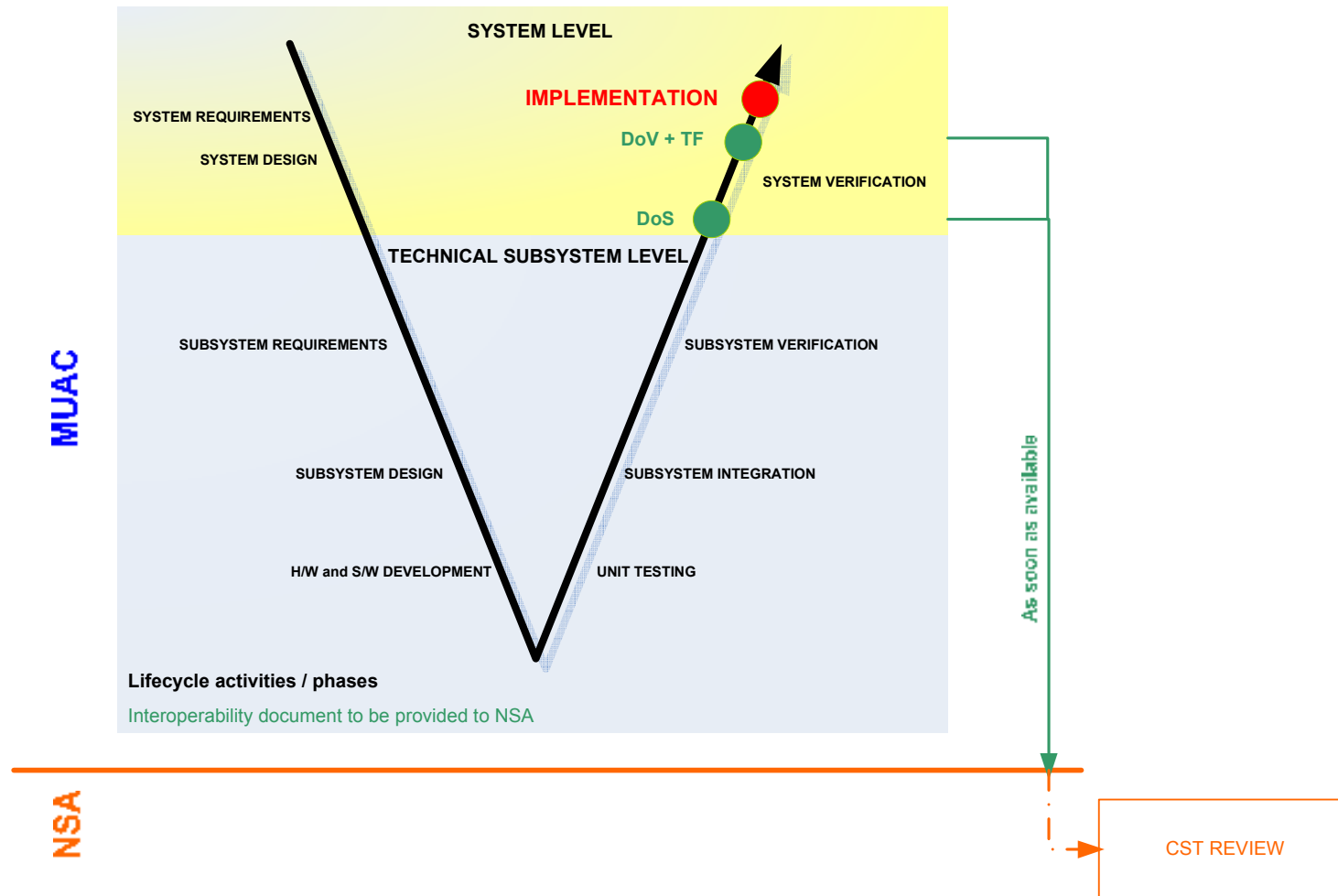Transition measures

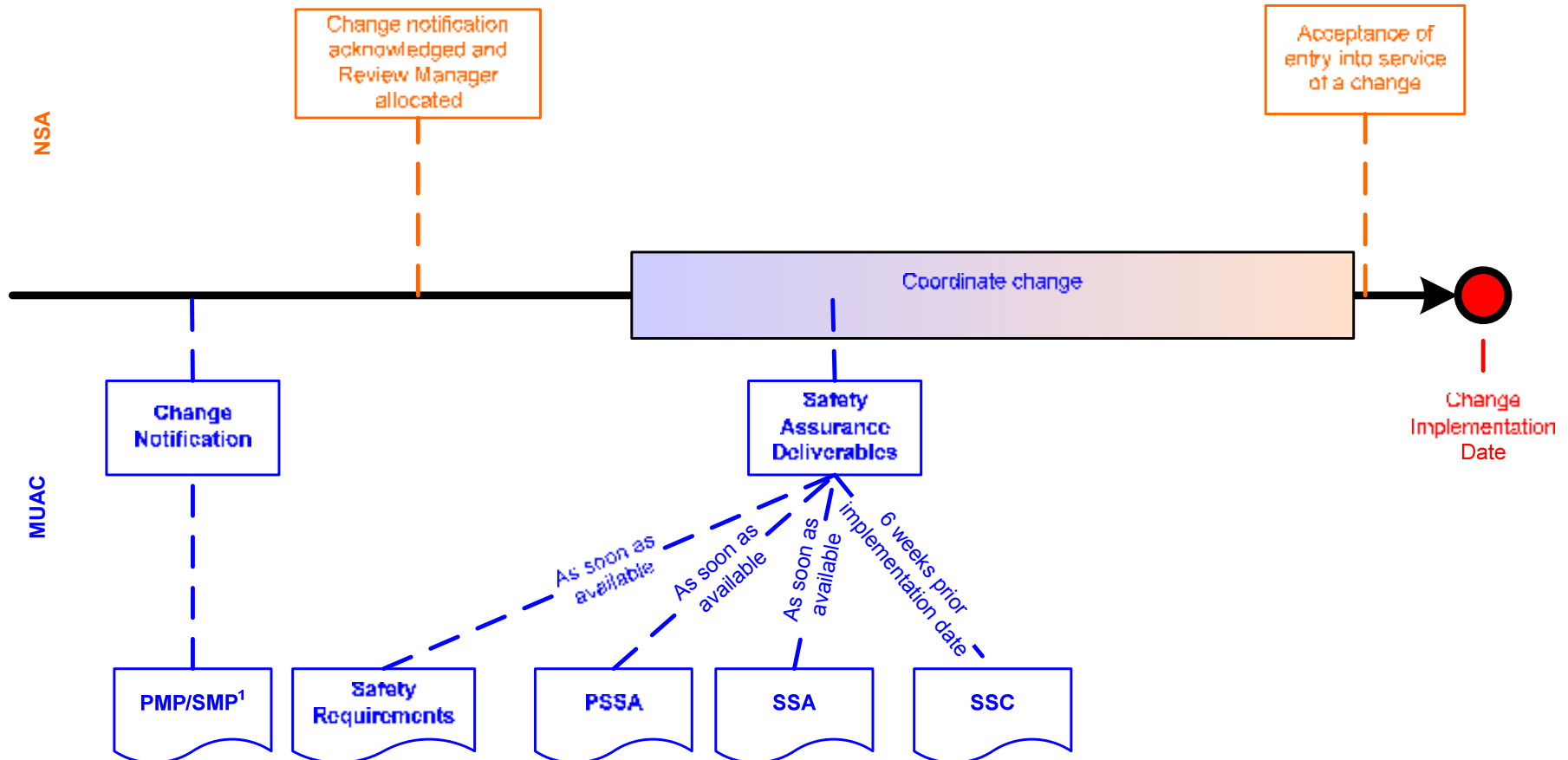Monitoring Maintenance procedures

# The Future

- Moving From a Bottom-up to a Top-Down approach
  - From Sub-systems SC to (MUAC) Unit Safety Case

- Moving From a MUAC to a FABEC approach
  - From a (MUAC) Unit Safety Case to a (FABEC) Safety Case

- Moving From a reactive to a pro-active method for KPAs

- More Regulations

- Adding HF, Security, Environment and Business Cases

# TIMELINE – TYPE A CHANGES

# QUESTIONS?



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