SMS Cost Model & link to Safety Maturity

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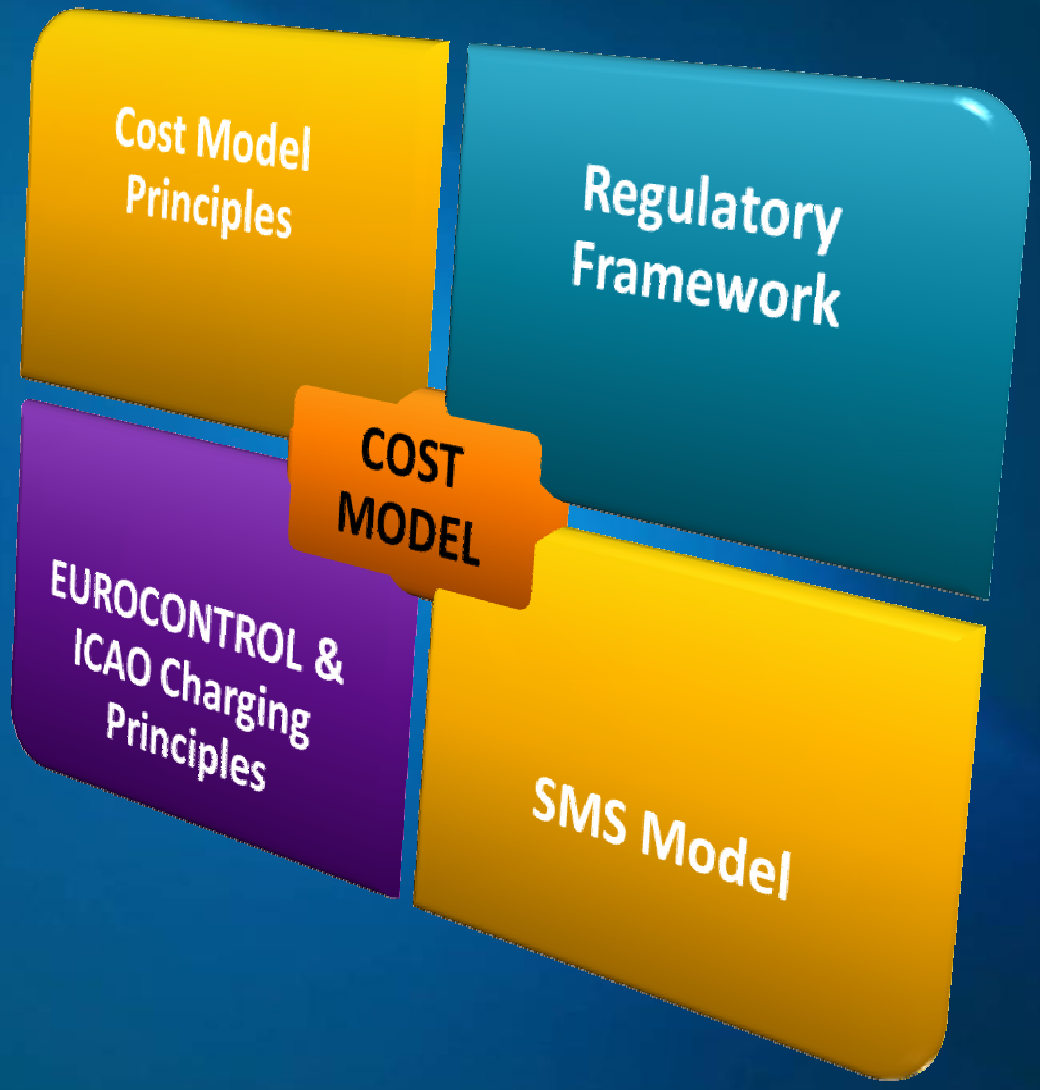
Brussels, 15-16 March, 2011

Approach

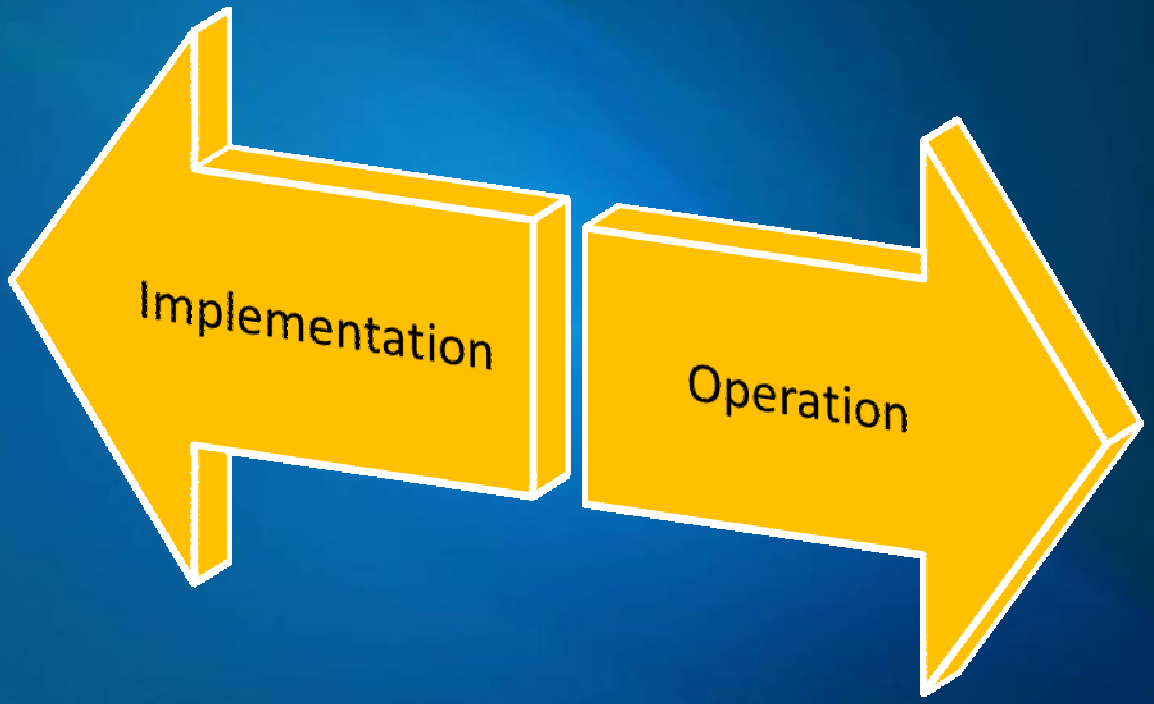

Cost Model Principles
Regulatory Framework
COST MODEL
EUROCONTROL & ICAO Charging Principles
SMS Model

Cost Model Principles

- Activity based model
- Two cost cards per procedure (I & O)
- Procedure broken down into four cost components
- Components decomposed by tasks (activities)
- Equipment cost calculated adhering to strict accounting principles

Cost Model Principles

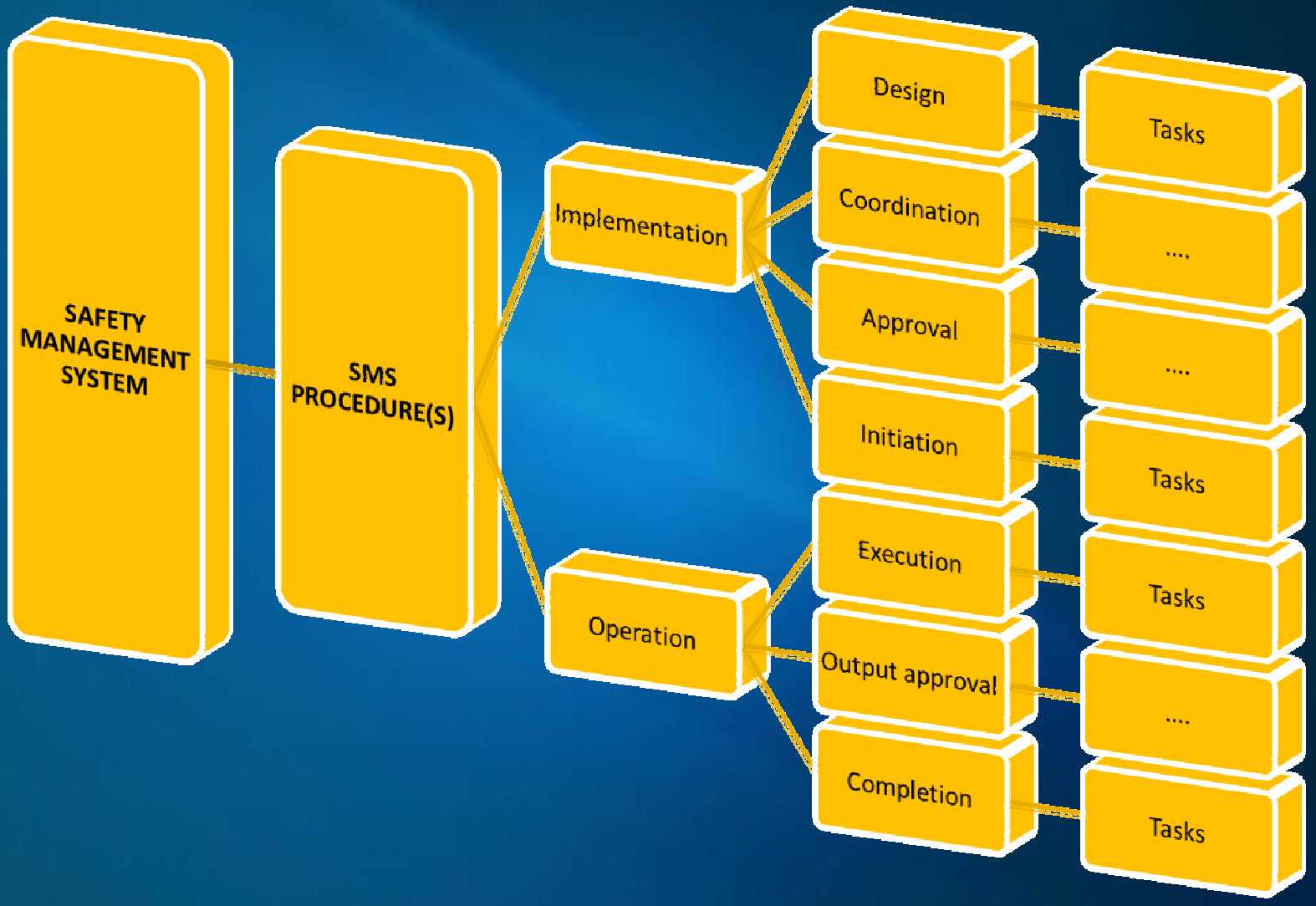
- Two cost cards per procedure:



Cost Model Principles

- Four cost components in each procedure:

Human Effort Principles



SMS Cost Model - Excel

- Spreadsheet version of SMS Cost Model

- Scope of SMS Model
- Scope of SMS Components

- 4 ANSPs & 1 Airline participated in validation
  - 1 Large ANSP
  - 2 Medium ANSPs
  - 1 Small ANSP

Validation Results - Excel

- ANSP Implementation cost % from the total cost base:
  - 1.7 %
  - 0.7 %
  - 0.8 %
  - X

  Average: 1.06 %
- ANSP Operation cost % from the total cost base:
  - 1.4 %
  - 0.8 %
  - 0.7 %
  - X

Average: 0.96 %

Validation Results - Excel

Implementation – Human effort % from total SMS cost

ANSP 1	ANSP 2	ANSP 3	ANSP 4
75 %	24 %	60 %	X

Operation – Human effort % from total SMS cost

ANSP 1	ANSP 2	ANSP 3	ANSP 4
84 %	78 %	63 %	X

Validation Results - Excel

Implementation – Training % from total SMS cost

ANSP 1	ANSP 2	ANSP 3	ANSP 4
22 %	52 %	34 %	X

Operation – Training % from total SMS cost

ANSP 1	ANSP 2	ANSP 3	ANSP 4
12 %	2 %	32 %	X

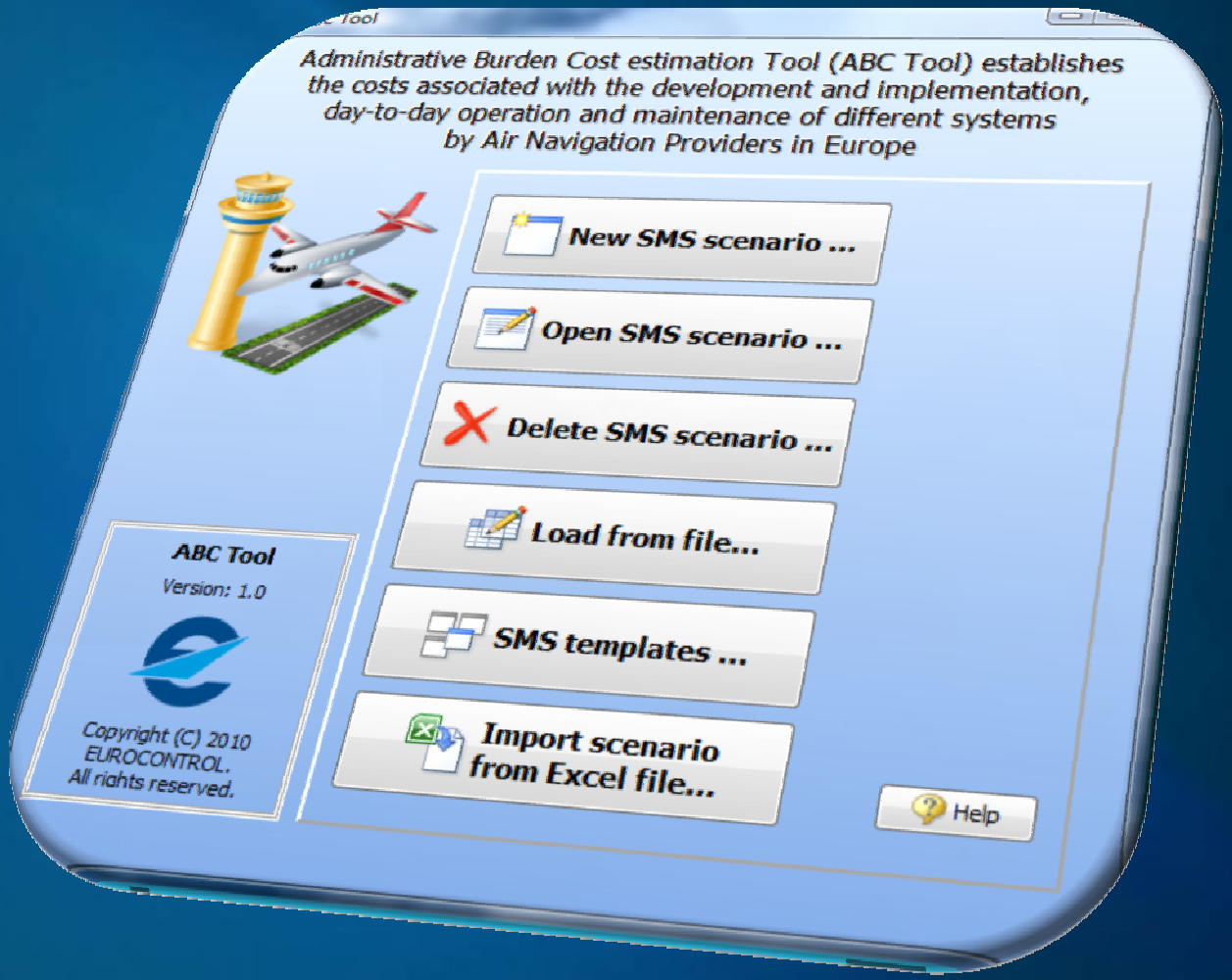
Validation Results - Excel

- The most expensive SMS procedures - Implementation:
  - ANSP 1:
    - SMS documentation;
    - Investigation of safety occurrences;
    - SMS organisational structure;
  - ANSP 2:
    - Management of Safety Related Changes;
    - SMS Development and Implementation Plan;
    - Investigation of Safety Occurrences;
  - ANSP 3:
    - Investigation of Safety Occurrences;
    - Competency Assurance;
    - SMS Documentation;

Validation Results - Excel

- The most expensive SMS procedures - operation:
  - ANSP 1:
    - Lessons dissemination and safety awareness;
    - Management of safety related changes;
    - Mandatory reporting system;
  - ANSP 2:
    - Competency Assurance;
    - Mandatory Reporting System;
    - Safety of External Services;
  - ANSP 3:
    - Competency Assurance;
    - Investigation of Safety Occurrences;
    - Safety Monitoring;

Demo - ABC Tool



Demo - ABC Tool

ABC Tool is available for download at:

http://extranet.eurocontrol.int/

One Sky Online

Safety Team

Folder ABC Tool

ABC Tool – Summary

- Templates
- New Scenario
- Open Scenario
- Delete Scenario
- Copy Scenario
- Import/Export Scenario
- Import Spreadsheet Cost Model
- Export Scenario to MS Excel
- Documents folder
- Help

ABC Tool – Training examples

- Five different options to create Scenario:
  - New Scenario
  - Generic Scenario
  - Copy Scenario
  - Load Scenario
  - Import from Excel Cost Model

Link to Safety Maturity

- Safety Maturity (3 options)
  - Safety Maturity Tasks
  - Safety Maturity Tasks – unique
  - Safety Maturity Tasks – unique – simplified
- Safety Maturity Templates loaded – ABC Tool
  - Level 3 → Level 4
  - Level 4 → Level 5

Link to Safety Maturity - Simulation

Direct – Hidden – Variable costs

- Direct costs
  - SAF effort
- Hidden costs
  - Communication to and familiarisation of staff
  - Involvement of other staff in SMS (OPS,ENG,ANC,MAN)
  - Venue costs
  - Investment costs (infrastructure, equipment, software, licenses)
  - Overhead costs
- Variable costs

Questions, you can answer!

- How much costs me each particular activity?
- What will be the cost of a new procedure?
- Optimise costs – do I have the right resources?
- Can I assess the feasibility to meet the safety targets?
- May I plan manpower for my SMS?
- Can I make a strategic planning?
- Can I make a plan for some years ahead?
- What will be the cost to move from one Safety Maturity level to the next one?

Thank you!

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