



SMS implementation issues related to Design and Production

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Presentation Outline

- **Introduction**
- **SMS and QMS**
- **SMS elements in current Part 21**
- **How to implement SMS in design and production?**
- **Discussion**



Introduction

- **Basic Regulation requires MS for design and production organisations**
- **Part 21 contains detailed requirements for such MS**
 - ★ **Design Organisation Approval: “design assurance system” \approx QMS + checking function**
 - Objective: ensure compliance of design with airworthiness code
 - ★ **Production Organisation Approval \approx QMS**
 - Objective: ensure conformity of product with approved design



Introduction (continued)

ICAO State letter of 7 December 2007

- **Proposed amendments to Annex 1, 6, 8, 11, 13 and 14**
- **Proposal for Annex 8:**
 - ★ **State safety programme**
 - ★ **SMS for design and production organisations**
- **Compatible with Basic Regulation**
- **Part 21 may need amendment**



SMS and QMS

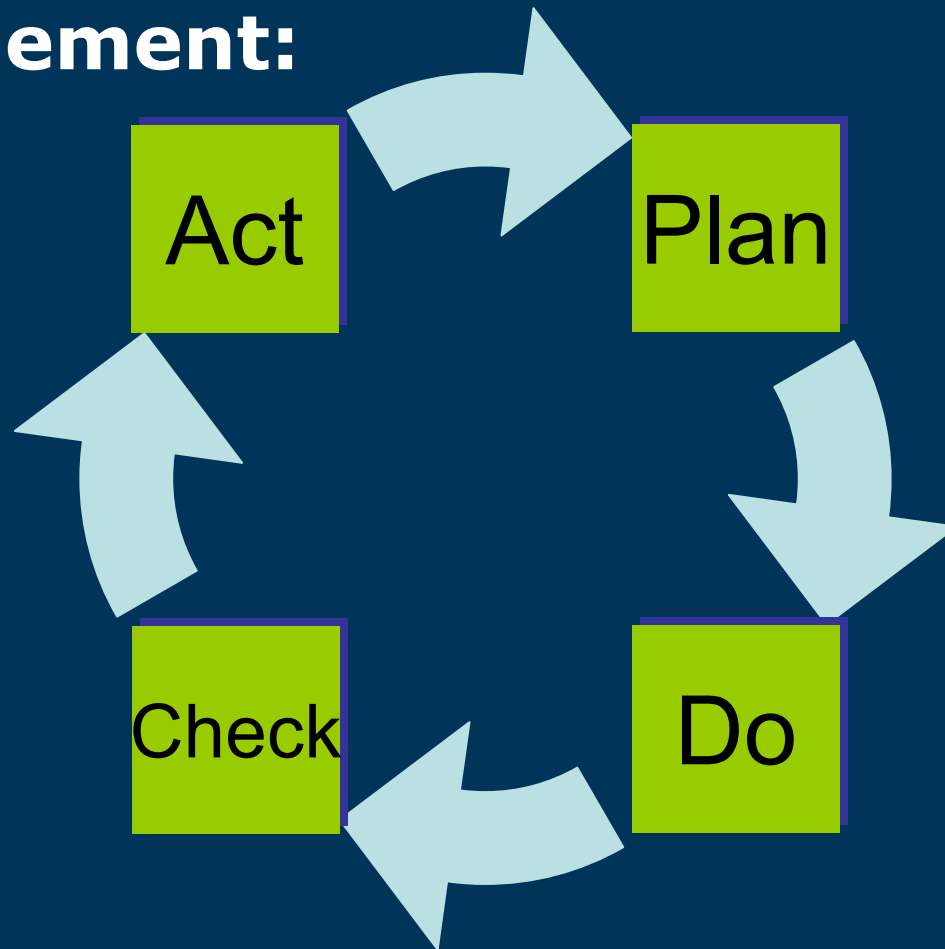
- **Quality = “the totality of features and characteristics of a product or service that bears on its ability to satisfy stated or implied needs”**
- **One of these “needs” can be safety**
- **Both SMS and QMS are management systems:**



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SMS and QMS

➤ Management:





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SMS and QMS

Conclusion:

- **SMS and QMS have many commonalities**
- **No need for dramatic changes**



SMS elements in Part 21

- Certain SMS elements are addressed by existing DOA and POA requirements (organisation level)
- Other SMS elements are in other rules/standards (product level) e.g.:
 - ✧ **21A.3 collection and investigation of data to support continuing airworthiness**
 - ✧ **CS 25.1309 system safety analysis**



SMS elements in Part 21

The main deltas:

Both DOA and POA:

- **Risk assessment and mitigation process at organisation level**
- **Management of change**
- **Safety promotion**

DOA* only:

- **Management commitment and responsibility**
- **Internal safety reporting scheme**

***at requirement level; some SMS elements are in GM**



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How to implement SMS in design and production

Various options:

- 1. Consider safety an attribute of quality/design and add missing elements**
- 2. Replace 'quality/design' by 'safety' and add missing elements**
- 3. Rewrite completely in line with ICAO SMS elements**
- 4. Rewrite in general terms: "management system"**
- 5.**

Note: applicability to small organisations to be defined in accordance with general Agency policies



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How to implement SMS in design and production

Agency preference is option 1 or 2, but:

- **Nothing is decided yet, and**
- **The floor is open**

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