



Advanced Aerospace Developments GmbH
Design Organisation EASA.21J.527

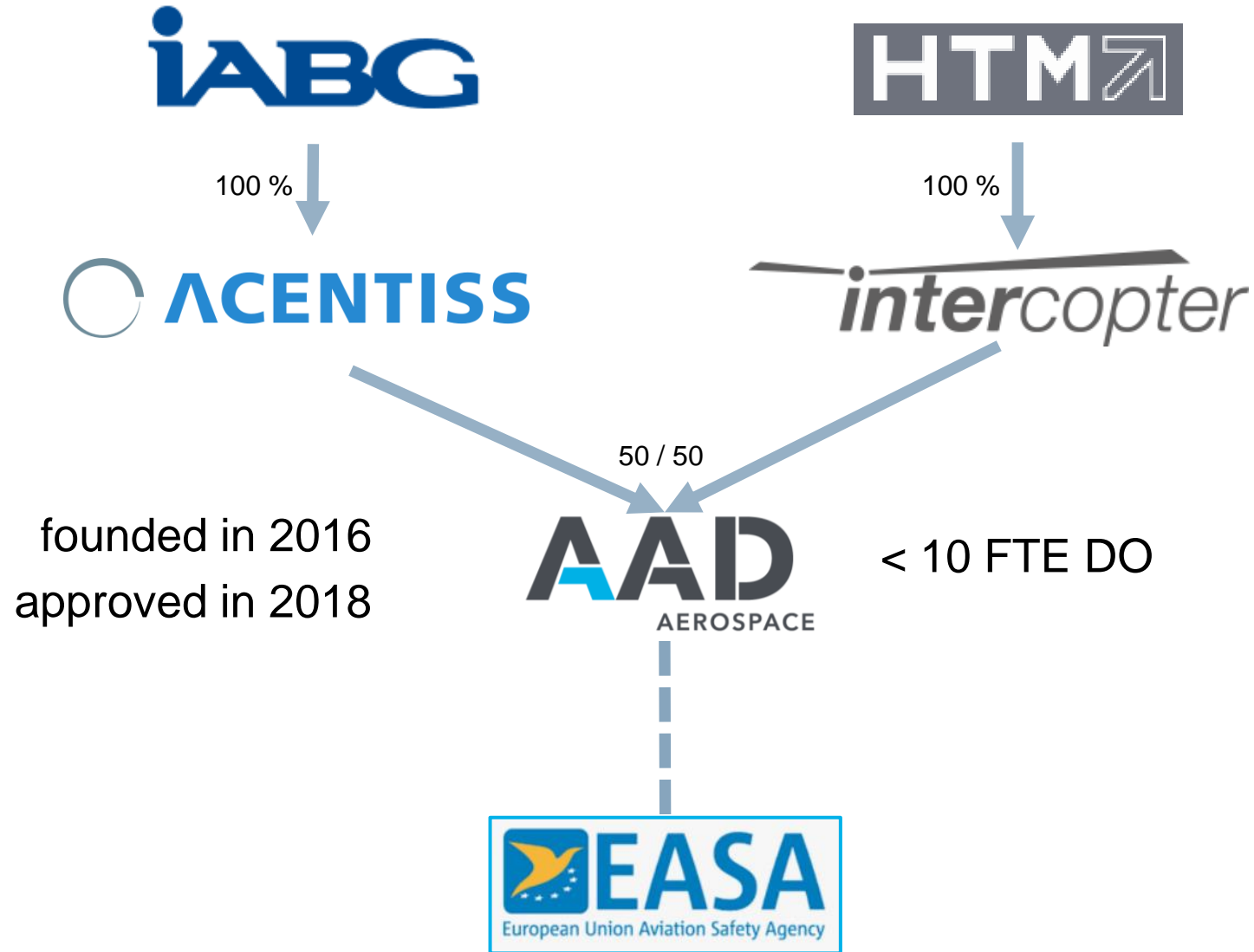
Implementation of a Safety Management System @ AAD

Cologne, 25. June 2024 – EASA (publish version)

Wolfgang Leistner – Head of Design Organisation

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AAD company structure – who we are



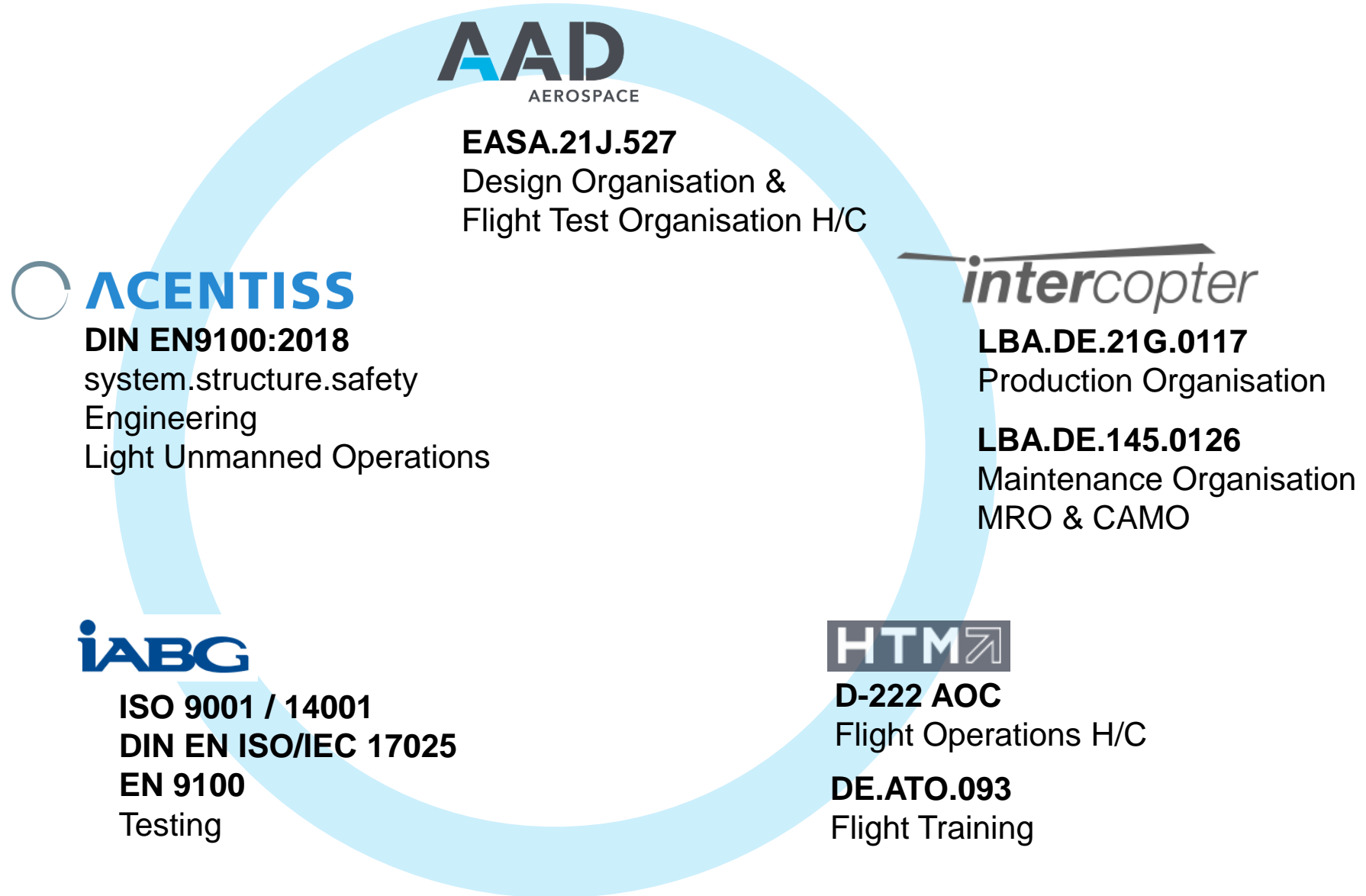
EASA.21J.527



 AAD is located in southern Germany @ Munich - technology park of Ottobrunn/Taufkirchen

address:

Willy-Messerschmittstraße 1
D- 82024 Taufkirchen
Germany



Scope 06-2024:

very light small CS-27 large CS-29 LSA / VLA normal CS-23 large CS-25

Flight Test Organisation

Type Certificate
(TC)

Supplemental Type
Certificate (STC)

Minor Change

Minor Repair

Major Repair

Major Change STC



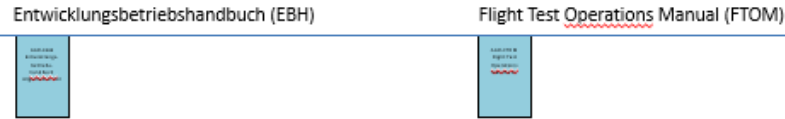
BK117 Argos II - Camera



EC135 Co-Pilot Map Case

Procedural overview of AAD's DOH

Handbooks: 2



Procedures: 30



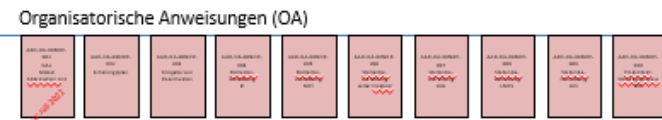
Forms: 50



Lists: 15



Org. Proced.: 10



Safety Management System

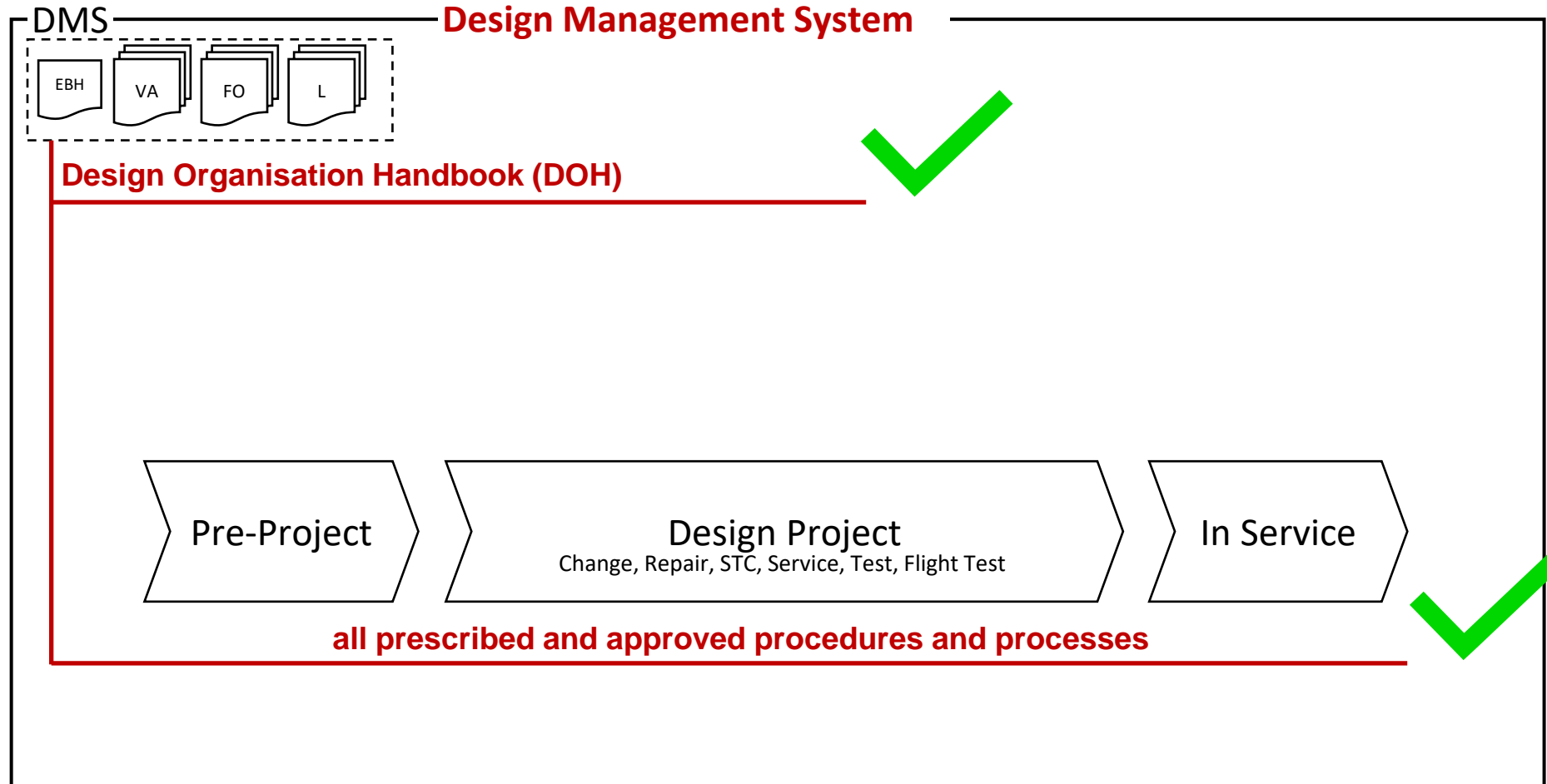
Basis:

AAD provides safety relevant services and design

The obligation to **achieve a maximum of safety** does exist



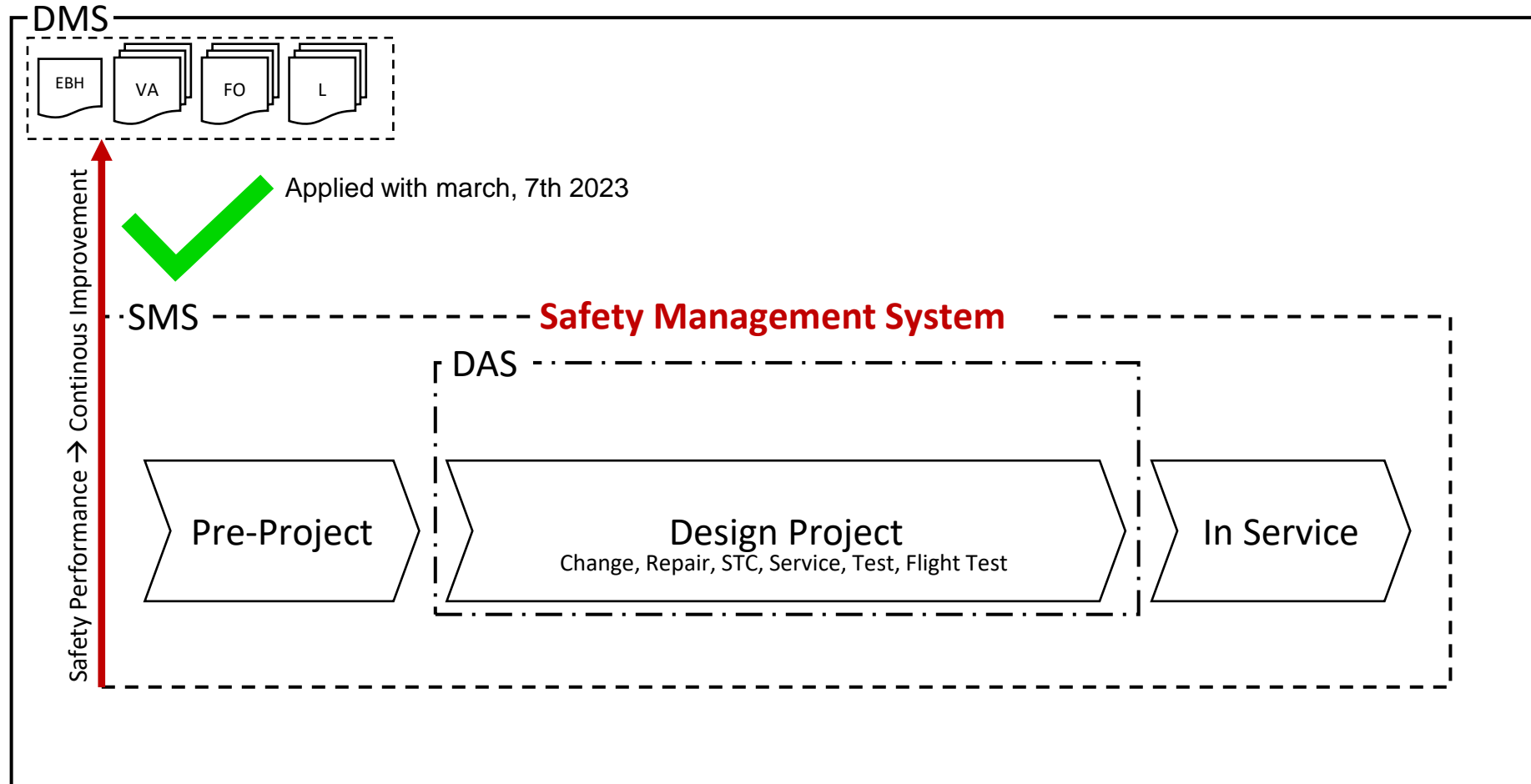
Management- and Assurance systems of AAD



DMS = Design Management System; DAS = Design Assurance System; SMS = Safety Management System

Safety Management System – make best use of existing processes

Management- and Assurance systems of AAD



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Safety Policy & Objectives

Safety Risk Management Process

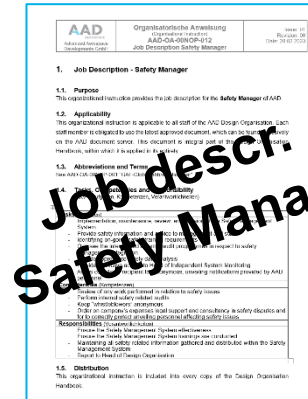
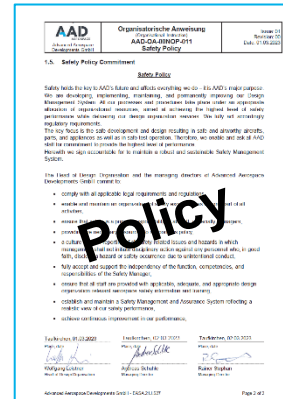
Safety Manager

Safety Promotion

Safety Assurance Process

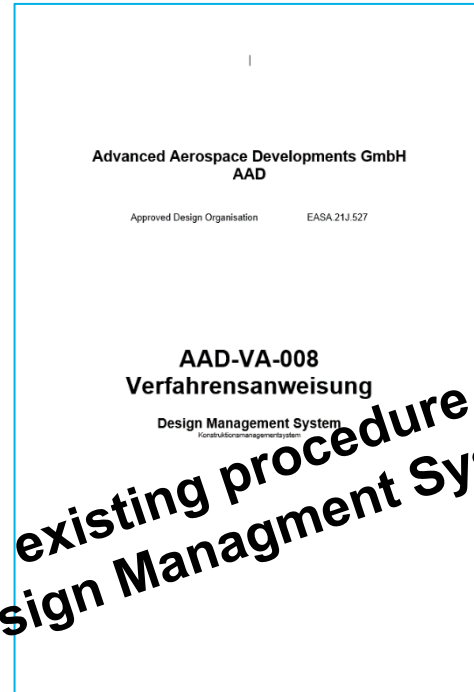
Elements of SMS – architecture → implemented elements

Safety Policy & Objectives



Safety Risk Management Process

Safety Promotion



Safety Assurance Process

Training plan

existing procedure
 Design Management System

**Safety Risk
Management
Process**

- ➡ **Typical risks of AAD as DO identified**
- ➡ **Enable DO to recognize upcoming or existing safety issues**
- ➡ **Gather, collect, and record safety data**
- ➡ **Analyse safety data/issues – Severity Evaluation**
- ➡ **Determination of Safety Risk Probability**
- ➡ **Rating of Safety Risk**
- ➡ **Determination of the Safety Risk Tolerability**
- ➡ **Initiate actions**

Safety Assurance Process



Tracking of the initiated actions



Assurance of action conclusion



3H-Board initiates and assures process improvement

Safety Promotion



Staff training



Safety Reporting

Elements of SMS – complete architecture

✓

Safety Policy & Objectives



✓

Safety Risk Management Process

Safety Issue → Staff → Safety Manager



LOP AAD									
Nr.	Datum	Ersteller	Typ	Relevantes Thema	Aktion	Klassifizierung	Ersteller	Stapf	
228	31.01.2023	WL	Aktion	FO-027	Classification muss gemäß Limitations zu Environment effect (fuel, noise, ...) abgelesen werden	C2			
229	31.01.2023	WL	Aktion	FO-027	stop immediately data transfer to abc	SAFETY			

Prob	Ergebn	Wsk
Extrem	Extrem	Extrem
Hoch	Hoch	Hoch
Mittel	Mittel	Mittel
Niedrig	Niedrig	Niedrig

probability

severity

Safety Risk	Severity									
	A	B	C	D	E	F	G	H	I	J
Probability	1A	1B	1C	1D	1E	2A	2B	2C	2D	2E
Frequency	3A	3B	3C	3D	3E	4A	4B	4C	4D	4E

safety risk

Safety Risk Index	Safety Risk Description	Recommended Action
3A, 3B, 3C, 2A	INTOLERABLE	Take immediate action to mitigate the risk or stop the activity. Perform safety risk mitigation to remove, reduce or prevent further exposure to the risk or stop the activity. Safety risk index is intolerable.
3D, 3E, 2B, 2C, 2D, 1A, 1B, 1C	TOLERABLE	Can be tolerated based on the safety risk mitigation. In this regard, management has to be involved to assess the risk.
2E, 1D, 1E	ACCEPTABLE	Acceptable as is. No further safety risk mitigation required.

tolerability

Safety Risk	Severity				
	A	B	C	D	E
probability	1A	1B	1C	1D	1E
Frequent - 3	3A	3B	3C	3D	3E
Remote - 2	2A	2B	2C	2D	2E
Improbable - 1	1A	1B	1C	1D	1E

safety issues per time

✓

Safety Promotion

training plan

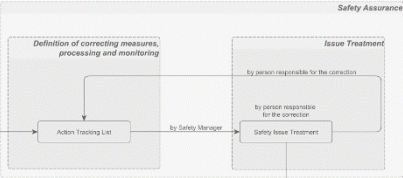


training course

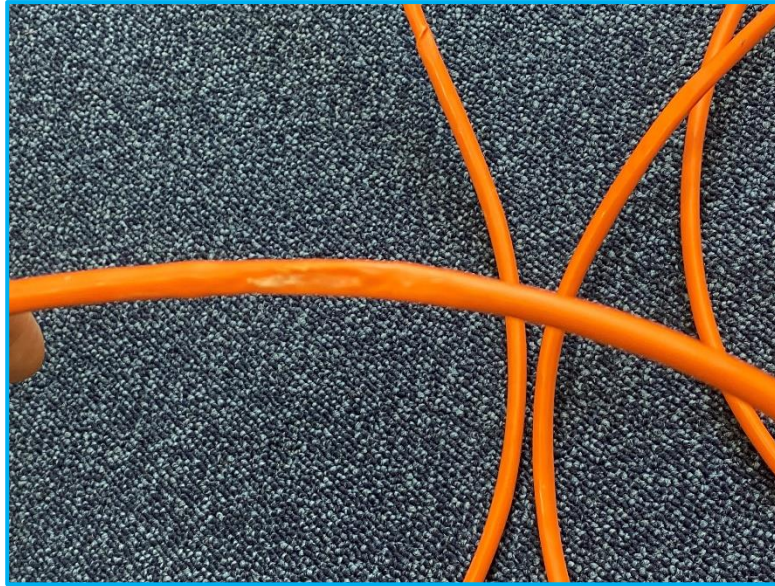
✓

Safety Assurance Process

Action-Tracking-Liste für interne und externe Audits									
Lauf-Nr.	Anlass	erfasst am	Initiator	Problem-eigner	Beschw.	Level	Feststellung	Verant-wortlich	zu erledigen bis
205	audit 1.2022	16.01.23	D. Böhmer	WL	VA-014-02-1	1	Problemlösung	WL	16.07.23



Safety Issue



Situation

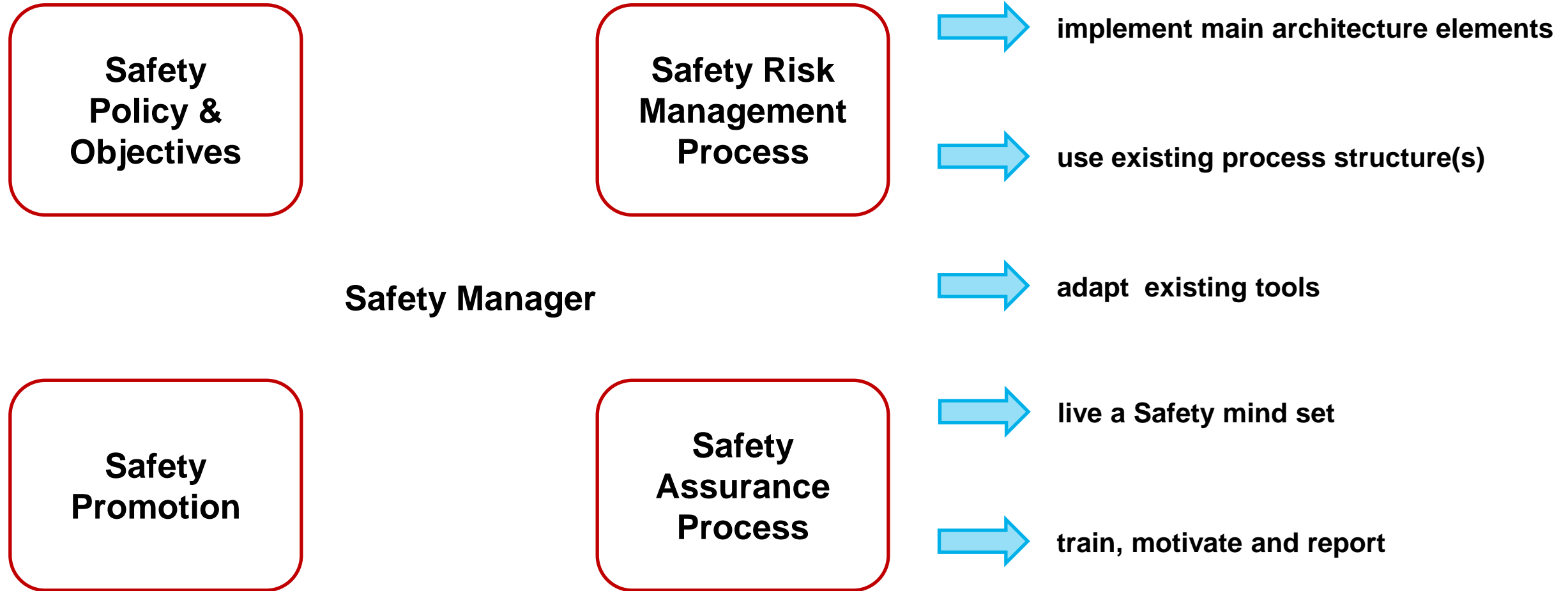
- damaged cable of FTI
- identified after flight campaign

SI - mindset:

The state of the equipment is not correct
Equipment was used for flight tests

→ **SI to be reported**





discussion

