



CONSULTING AND ENGINEERING

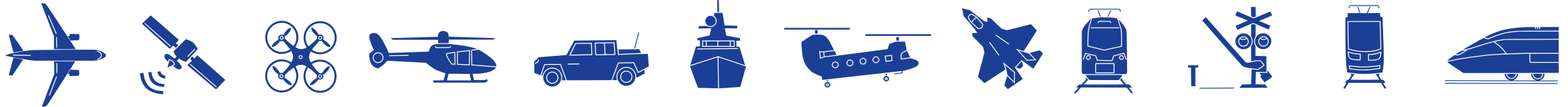
SMS at the rudder

ADSE Consulting and Engineering BV

November I 2023

Eelco Bakker

Issue 2023.08.17



www.adse.eu

- AS9100C
 - Focus on Quality of the product (for the **customer**)
 - Compliance is assessed during audits (“the quality of the product and process”)
 - Risks are assessed for not achieving the quality of the product

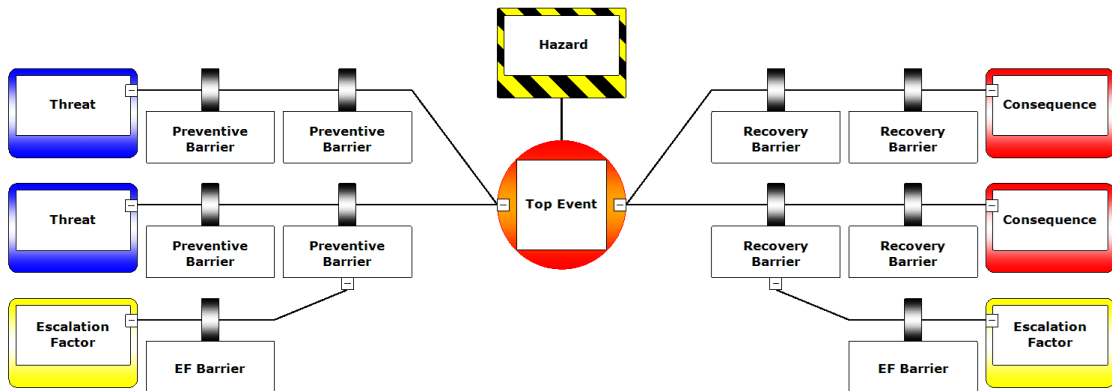
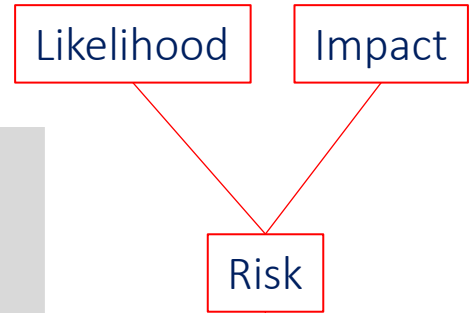
 - EASA QMS
 - Focus on Airworthiness of the product (for the **public**)
 - Compliance is assessed during audits (“the quality of the process”)

 - EASA SMS
 - Focus on Safety of the product (for the **public**)
 - Risks are assessed & monitored for not achieving the safety of the product
- Incl. human factors

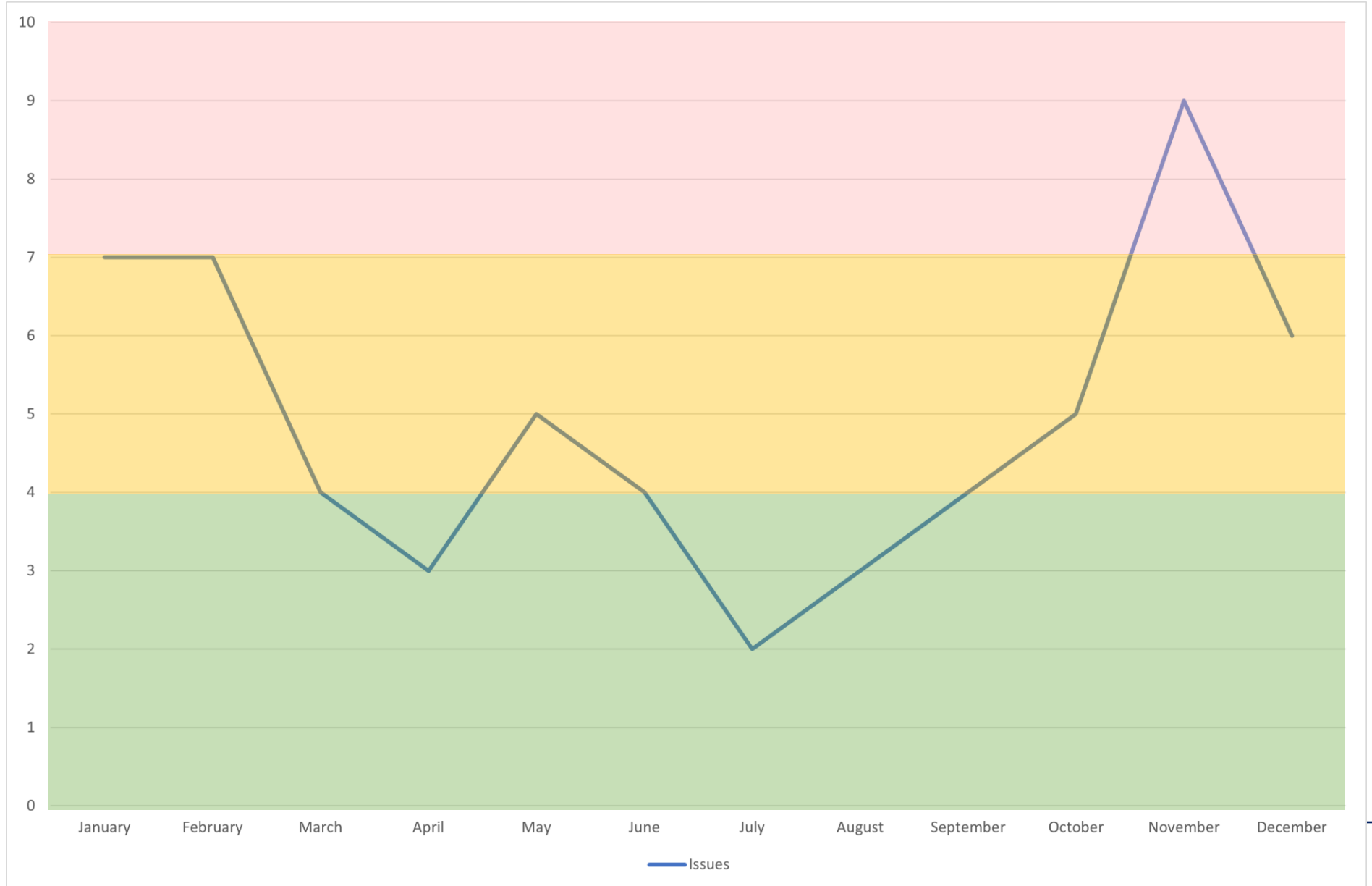
Quality: Determining gaps based on non compliance with requirements (product and/or organisational).
Rearward looking process

Safety: Determining weakness in the organisational system which raises the exposure to risk.
Forward looking process

SMS – Operational Example



SMS

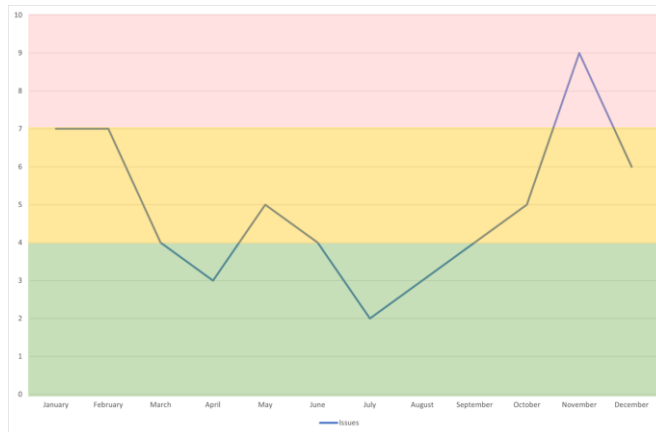
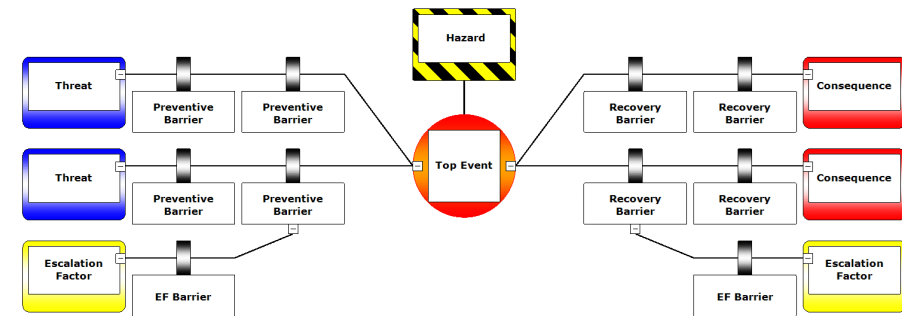


SMS in a nutshell

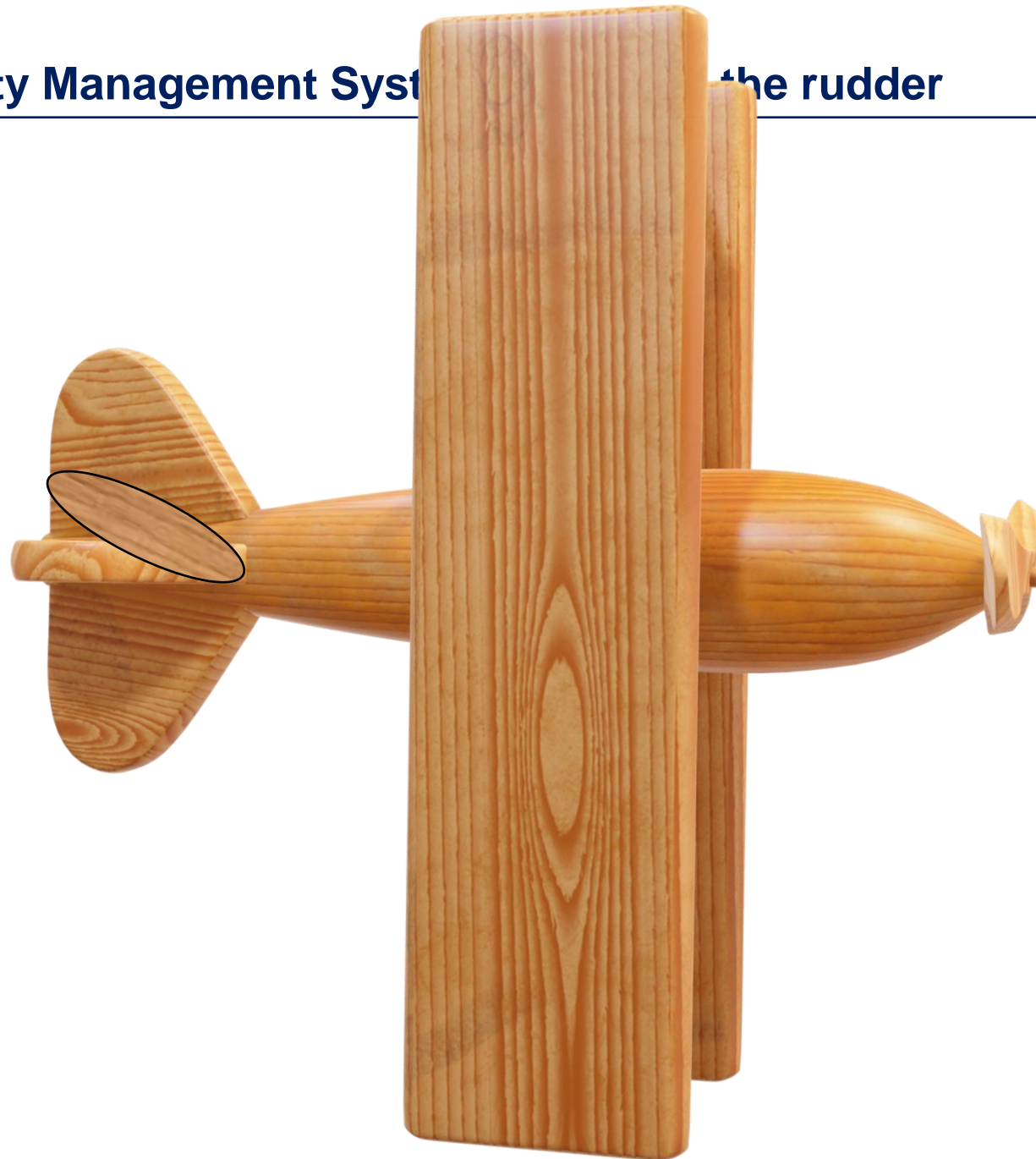
1. Identify your hazards and risks
2. Identify your threats
3. Identify your barriers
4. Create Safety Performance Indicators (SPI)
5. Define acceptance levels of your SPIs
6. Monitor your SPIs
7. Train & communicate your SMS
8. Manage changes
9. Create and promote SMS Policy
10. Have employees **report** issues



		Impact →				
		Negligible	Minor	Moderate	Significant	Severe
Likelihood ↑	Very Likely	Low Med	Medium	Med Hi	High	High
	Likely	Low	Low Med	Medium	Med Hi	High
	Possible	Low	Low Med	Medium	Med Hi	Med Hi
	Unlikely	Low	Low Med	Low Med	Medium	Med Hi
	Very Unlikely	Low	Low	Low Med	Medium	Medium

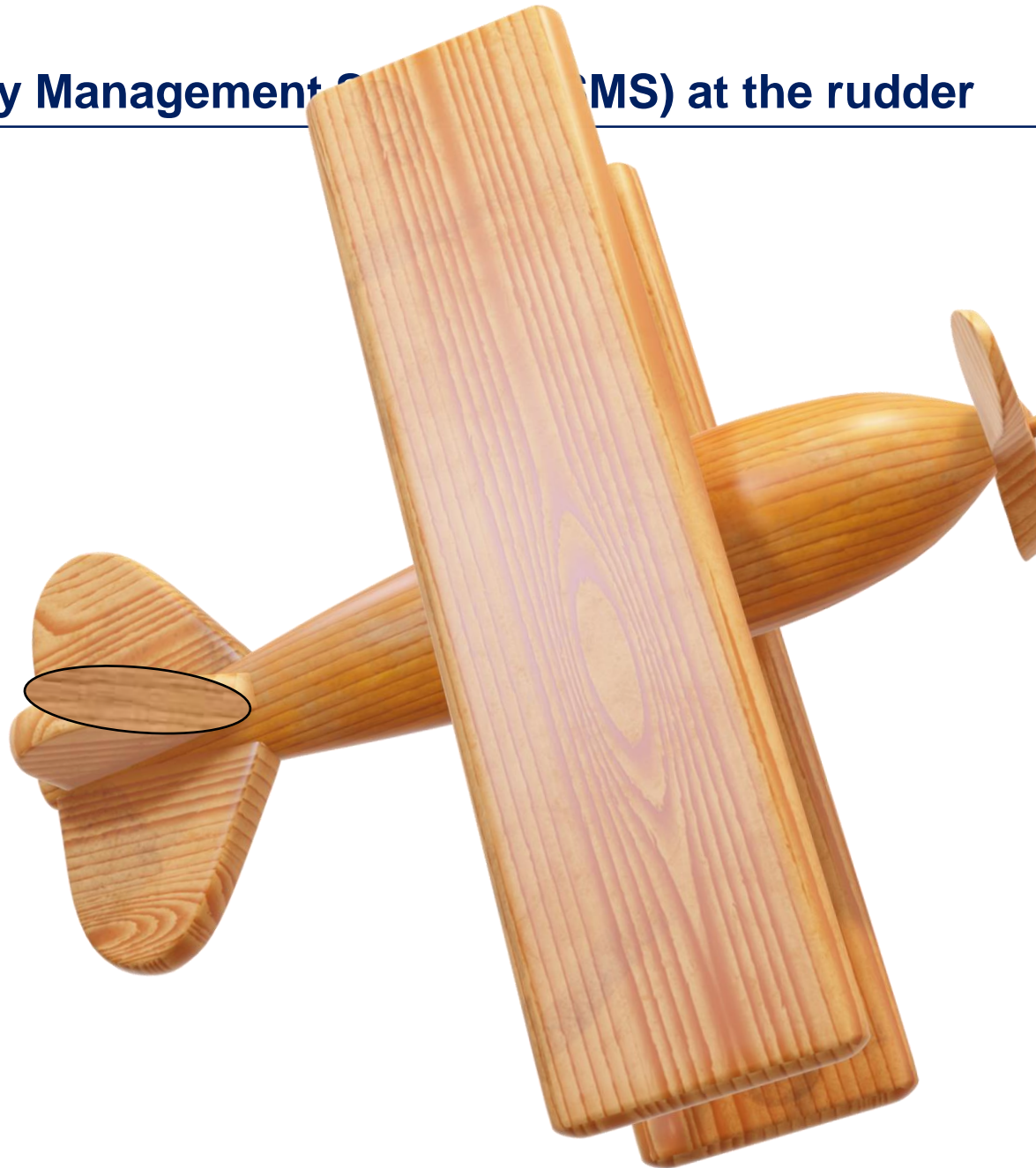


	KPI name	Unit	Responsible	Baseline	Targets					Monthly status													
					2021	2022	2023	2024	2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Financial	KPI F1	€	Name 1	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI F2	€	Name 2	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI F3	%	Name 2	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
Legal	KPI L1	€	Name 3	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI L2	%	Name 3	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI L3	/mnd	Name 3	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
Strategic	KPI S1	###	Name 4	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI S2	###	Name 4	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI S3	€	Name 2	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI S4	%	Name 4	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
Quality	KPI Q1	%	Name 5	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI Q2	/mnd	Name 5	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI Q3	/mnd	Name 5	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI Q4	/mnd	Name 5	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI Q5	€	Name 2	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI Q6	hours	Name 4	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
Safety	KPI SMS1	/mnd	Name 6	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI SMS2	/mnd	Name 6	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI SMS3	/mnd	Name 6	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI SMS4	/mnd	Name 6	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###
	KPI SMS5	/mnd	Name 6	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###	###





Yawing



Rolling

Safety Management Systems (SMS) at the rudder



Pitching

First Question:

What are the hazards with the biggest risks in a

- Maintenance organisation?
- Production organisation?
- Design organisation?

Second Question:

What are the threats per identified hazard?

Third Question:

What are you going to monitor in order to determine your performance?

Risks → threats → Monitoring?

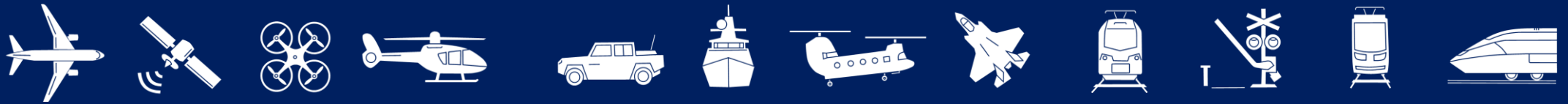
- Releasing an unairworthy product/part/component/design?
 - Threat: unauthorised person signs?
 - Monitoring: Compliance of training programme?
 - Monitoring: ...?

- Threat: Supplier delivers unairworthy part?
 - Monitoring: % findings during Incoming Inspections?
 - Monitoring: # Audit findings per audit at the supplier?

- Threat: Senior person is leaving (braindrain)?
 - Monitoring: % braindrain?
 - Monitoring: % of training vs new personel?

- Threat: Introducing an unacceptable change in the organization (e.g. uncontrolled improvements)
 - Monitoring: ...?

We. **Love.** Transport.



Passionate about
PLANES. TRAINS. SHIPS. AUTOMOBILES.