



Safety management in  
Part CAMO & Part 145  
organisations



# Heli-One

Heli-One is part of the CHC Helicopter, the world-leading helicopter service company with 78 years of experience.

Decades of expertise and excellent, long-standing relationships with leading global helicopter manufacturers make Heli-One the premier rotor wing MRO solution.



# Heli-One global support network

Heli-One is the market leader in rotor wing maintenance and CAMO services.

Our global network includes airworthiness management, base and line maintenance, component and engine overhaul, engineering and design.





## Supported Industries

**Heli-One** 

Air Medical

Oil & Gas

Military

Tourism

Law Enforcement

Heavy Lift

Search & Rescue



# Heli-One Poland facility

- 6500 sq m facility
- 4 dedicated helicopter maintenance bays
- Paint bay
- Outside ramp for ground runs and testing
- Sheet metal, avionics, wheels and brakes shop
- Storage hangar for 20 helicopters



# Heli-One Poland services



**S-92**



**S-76**



**AW139**



**AW189**



**AS 332**



**EC 225**



**EC 175**



**EC 135**



**B407**



**B412**



Transport  
Canada





# Evolution of safety



# Evolution of safety

According to ICAO, four main eras in aviation safety can be described as:

- Technical
- Human factors
- Organisational
- Total system





# Safety management system

- Corporate Integrated Safety Management Manual (ISMM)
- Local Safety Management Manual (SMM)
- Safety and Quality Integrated Database (SQID)



Integrated Safety Management  
Manual

(ISMM)

Publication date: 01 Oct 2024



Safety Management Manual  
/ Instrukcja Zarządzania Bezpieczeństwem

Heli-One Poland

(SMM)

Heli-One / SMM / 01




































Publication date / Data publikacji: 06 Sep 2024



# Safety & Quality Intergrated Database

## Centralized functions of the management system

Select stars to favorite up to (6) modules. Your favorite modules will appear in the upper right so that you can access your favorite modules any time.

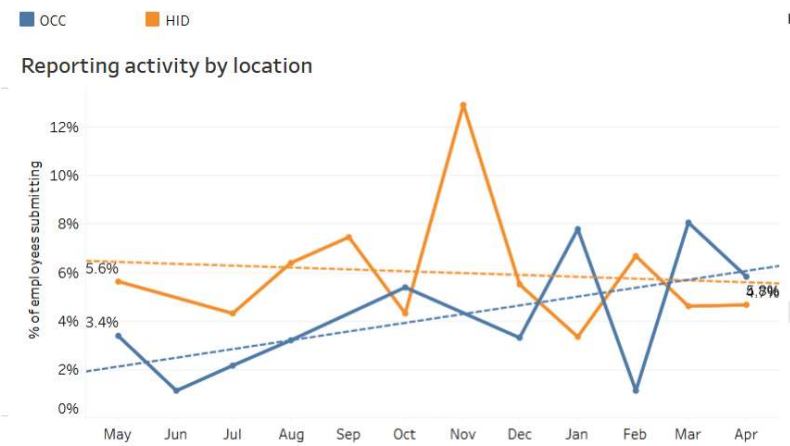
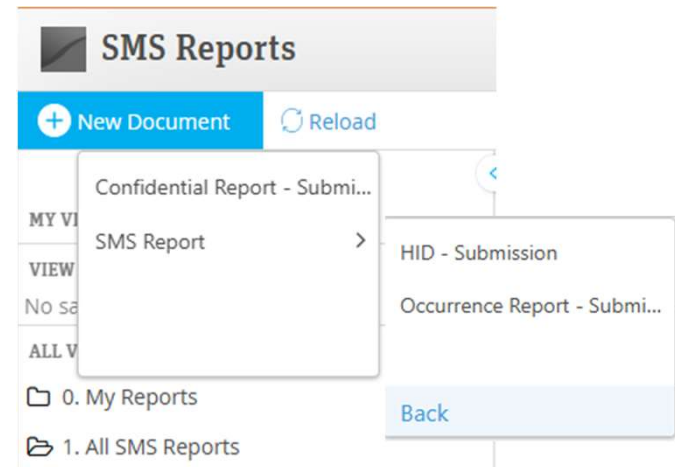
 Administration Center  	 Audits Management  	 Centralized Reporting and Alerts  	 Change Management  
 CHC Interfaces 	 Corrective and Preventative Action (CPA)  	 Delegation  	 Document Control  
 Document Control Archive  	 Meetings Management  	 Risk Register  	 SMS Reports  



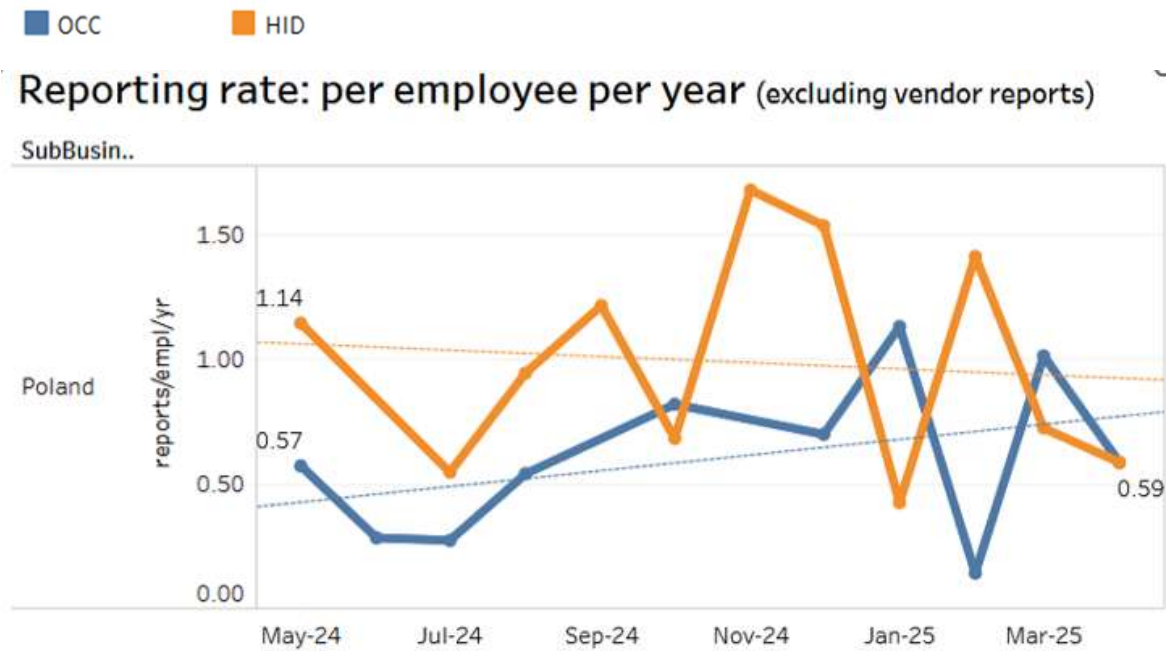
# SMS reporting

Report types:

- Confidential report
- Hazard Identification report (HID)
- Occurrence report (OCC)



# SMS reporting





# Risk analysis

## Operational risk:



**P**eople



**E**nvironment



**A**ssets



**R**esilience (Quality)



**S**ecurity

## Enterprise risk:



Brand / reputation



Finance (loss & gain)



Information technology



Regulatory compliance



Continuity of operations

# Risk analysis

Likelihood / probability: 1 – 5

Severity: 1 – 7

*probability × severity = risk level*

*ALARP < 7*

ALARP – As Low As Reasonably Practiactal

Operational risk					
	People (P)	Environment (E)	Assets (A)	Quality (Resilience) (R)	Security (S)
0	No injury Self-explanatory.	Zero effect Effect on the environment is of such short duration and of a small magnitude the incident is considered to be negligible.	Zero damage Self-explanatory.	Zero impact Self-explanatory.	Zero risk Self-explanatory.
1	Slight injury First aid required in the workplace. Injured person returns to work immediately.  No exposures	Slight effect Within the immediate area of the aircraft / work station, requires <1 hour to remedy, no insurance involvement, no required reporting to Authorities, costs <\$500 USD.	Slight damage No insurance involvement. Financial impact or a potential expense of < \$1000 USD, or deductible cost up to a value of \$10000 USD.	Slight impact Quality and compliance degradation barely noticeable, handled as a part of business as usual. Occurrences with no / very little impact on safety.	Slight risk Prevailing circumstances suggest few extra measures are necessary beyond cautioning workers on their movements, or situating assets in frequented areas to guarantee their security.  Incident does not directly present a threat to the security of operations, assets, workers, or customer.
2	Minor injury Injured person is required to visit a doctor or attend the ER and receives treatment. Worker is not kept overnight and returns to next scheduled shift.  Minor exposure Worker is exposed to chemical, biological, radiological, fatigue, or dangerous-noise event with no immediate impact.	Minor effect Within the immediate surroundings, can be remedied using base resources, no insurance involvement, no required reporting to Authorities, requires <1 day remedying, costs <\$5000 USD.	Minor damage Financial impact or a potential expense of <\$5000 USD.  Deductible costs plus increased insurance premium up to a value of \$50000 USD.  Aircraft returned to service within 24 hours.	Limited impact Limited but significant quality, safety, or compliance reduction. Defects or occurrences (e.g. maintenance error or incorrect part fitted, use of incorrect oil, fuel, or other fluids). Incorrect mass and balance information.  Dangerous goods spills causing short term effect.  No Regulator involvement.	Limited risk Circumstances may require workers to restrict their movements from time to time and assets to be checked periodically.  No injury to any person or damage to any assets, but involving a minor regulatory or internal policy breach requiring minor or no external agency involvement.
3	Considerable injury Injured person is required to attend hospital and is treated or monitored overnight. Considered a lost time injury (LTI) if the worker cannot report for their next scheduled shift.  Considerable exposure Worker is exposed to chemical, biological, radiological, fatigue, or dangerous-noise event which requires treatment at a doctor or ER.	Local effect Within the local area, requires Company and possibly outside resources to remedy the situation, insurance involved (payment of deductible with no increase in premium), requires reporting to authorities, requires <1 week to remedy, costs < \$50000 USD.	Moderate damage Financial impact or a potential expense of up to \$50000 USD.  Deductible costs plus increased insurance premium up to a value of \$100000 USD.  Aircraft returned to service within 72 hours.	Considerable impact A large reduction in quality, compliance, or safety margins, physical distress or workload such that workers cannot be relied upon to perform their tasks safely or completely. Occurrences requiring the workers to take emergency actions (e.g. events, process / system failures or threats that have a <u>major</u> impact within operations).  <u>No redundancy in place</u>  Defects or occurrences (e.g. maintenance error or escape) which have a <u>serious airworthiness impact</u> on the aircraft, fire in flight, engine mechanical failure resulting in IFSD.	Considerable risk Circumstances require that worker movements are restricted and assets protected by lock, guard, or witness techniques.  Superficial injury to a person or damage to assets, minor disruption to business operations / customer and / or some adverse media attention caused by a criminal act or regulatory breach resulting in external agency involvement.

# Risk analysis

Likelihood / probability				
A (1) – 1x10 <sup>7</sup> Never heard of within your industry	B (2) 1x10 <sup>5</sup> Heard of within your industry	C (3) 1x10 <sup>3</sup> Has happened in CHC / Heli-One OR > once / year in your industry	D (4) 10% < 1% Has happened at that location OR > once / year in CHC / Heli-One	E (5) More than 10% Has happened > once / year at that location
The probability of occurrence is considered negligible	Might occur if multiple defenses or controls are simultaneously breached	Will not occur under normal circumstances to qualified personnel or by following standard processes	Will occur under normal circumstances	Expected to occur in the short term if immediate mitigation is not deployed
0	0	0	0	0
1	2	3	4	5
2	4	6	8	10
3	6	9	12	15
4	8	12	16	20
5	10	15	20	25
6	12	18	24	30
7	14	21	28	35
Very low	Low	Medium (Tolerable)	High (Intolerable)	Extreme





# Risk analysis – practical applications


- HID / OCC reports
- Non-mandatory modifications
- Maintenance intervals escalation
- Management of change



# Field Focus Inspections

  
Home

  
Saved

  
Apps

Home > Audits > Continuing Airworthiness Management - CAM - Continuing Airworthiness Records

Fill Out

Details

Changes

View answers on bowties

Copy

Edit

Continuing Airworthiness Management - CAM - Continuing Airworthiness Records

This survey has all questions loaded regardless of risk against the continuing airworthiness records threat line.

Question

Answer

Show all

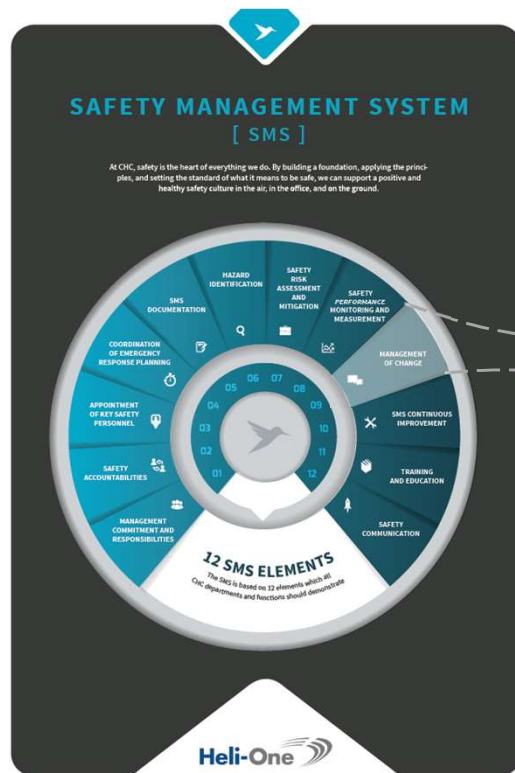
Filter

Question	Value	Remarks
Does the CAMO have material to train an AMO on the completion of maintenance certification documents? <div>Details</div>	Compliant Accepted	'HOW TO FULFILL MAINTENANCE RECORDS' INSTRUCTION FOR EXTERNAL AIRCRAFT MAINTENANCE ORGANIZATIONS, CAME, Chapter 1.3.2 CAME, Chapter 1.3.6
Does the CAMO have material to train an AMO on the completion of certificate of release to service (CRS) documents? <div>Details</div>	Compliant Accepted	Guidance material for Part-145 organisations 'Maintenance certification' CAME, Chapter 1.3.2
Does the CAMO have an established aircraft technical log (ATL) with clear instructions for use? <div>Details</div>	Compliant Accepted	CAME, Chapter 1.1a
Does the CAMO have an effective aircraft airworthiness records control process? <div>Details</div>	Compliant Accepted	CAME, Chapter 1.3
Does the CAMO electronic records archiving system (Air Vault) function efficiently? <div>Details</div>	Compliant Accepted	No remarks for Air Vault efficiency.
Does the CAMO have an effective records transfer process for the movement of aircraft to another operator/lease return? <div>Details</div>	Compliant Accepted	CAME, Chapter 1.3.4 CAME, Chapter 4A.4
Is the CAMO electronic maintenance record archive infrastructure (Air Vault) effective? <div>Details</div>	Compliant Accepted	No remarks for effectiveness of the infrastructure.
Does the IT system effectively support the Air Vault system? <div>Details</div>	Not Applicable Accepted	Not applicable for CAMO personnel. (IT department)
Does the CAMO review maintenance certification documents completed by an AMO? <div>Details</div>	Compliant Accepted	CAME, Chapter 1.3.2
Does the CAMO review certificate of release to service (CRS) documents completed by an AMO? <div>Details</div>	Compliant Accepted	CAME, Chapter 1.3.2

PN

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# Safety promotion



[ SMS ELEMENT 09 ]

## MANAGEMENT OF CHANGE

*Management of risks associated with any change that may affect the level of safety risk in our business is addressed through formal change management. Whenever a significant change is introduced, there is a risk to the system. To mitigate the risk, the implications associated with the change need to be identified so that a plan can be developed and implemented to ensure that the change happens smoothly.*

### What is management of change?

- Management of change allows us to identify significant changes and the put controls in place to ensure that people are informed and risks are addressed.
- To help ensure a seamless transition, we use a formal change management process that engages stakeholders affected by the change through open communication and documentation of the change.
- Our management of change processes ensure standards are adhered to when significant changes are implemented (such as adding a new aircraft type to the fleet or a base start up) by applying a structured framework of methods, tools, and processes.


### How can I help?

- Communicate effectively by ensuring that all people potentially affected by the change are involved, including individuals outside of your department.
- Identify a clear owner of the management of change process. If the owner of a particular change project is not clear, ask for clarification.
- Discuss forthcoming changes to the operation at meetings to plan for the change and identify potential risks from making the change.
- Support the completion of the management of change template on the CHC Landing Pad and ensure the change has been well documented and added to the SQID reporting system.



Taking Care





**Accident Prevention Notice**

03 FEB 2025

## AIRBORNE LASER HAZARDS

"Since 2009, 1248 laser incidents have been reported" - Civil Aviation Authority

### What is a Laser Strike?

A laser strike refers to the deliberate or accidental act of pointing a laser beam at an aircraft. This can create a significant safety hazard, especially if the laser beam illuminates the cockpit and impairs the vision of pilots during critical phases of flight, such as take-off, landing, or low-altitude operations.

### What has been done to stop it?

**Regulatory Actions:** "The Laser Misuse (Vehicles) Act 2018"

This law makes it a criminal offense to shine or direct a laser beam at vehicles, including airplanes, trains, boats, and cars, if it dazzles or distracts the operator.

**Penalties:**

- Up to 5 years in prison.
- Unlimited fines.

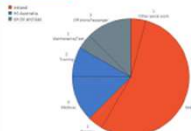
No requirement for prosecutors to prove intent to endanger—distracting or dazzling is enough for prosecution.

**Mandatory Reporting:** The CAA requires that laser attacks be reported as Mandatory Occurrence Reports (MORs). This reporting helps in identifying patterns and hotspots, enabling targeted interventions.

**Safety Notices and Guidance:** The CAA has issued Safety Notices providing detailed guidance on actions to be taken during and after a laser attack. These notices offer advice to aircrew, air traffic services personnel, and airside drivers on mitigating the effects of laser strikes and ensuring safety.

**Public Awareness Campaigns:** The CAA conducts outreach to educate the public about the hazards of aiming lasers at aircraft, emphasizing the serious safety risks and legal consequences.




### Figures from Tableau




CAA: <https://www.caa.co.uk/publication/download/278799>  
 Forbes: <https://www.forbes.com/sites/mariosgarcia/2024/10/02/dangerous-laser-strikes-on-airplanes-are-off-the-charts-as-war-torn/>

### Useful Links

CAA: <https://www.caa.co.uk/publication/download/278799>  
 Forbes: <https://www.forbes.com/sites/mariosgarcia/2024/10/02/dangerous-laser-strikes-on-airplanes-are-off-the-charts-as-war-torn/>



**CHC**

**Safety Alert**

CHCSA-2025-05

### HeliOffshore report: MRB hub damper bolt failure

Contact details:	N/A	Date of incident:	20 Feb 2025
Reference:	HeliOffshore InfoShare: 2025-024	Incident location:	N/A
Issue date:	04 Mar 2025	AC type / operation:	AW139

**This was not a CHC occurrence. This information was received from an anonymous operator by the HeliOffshore association.**

#### Brief account of events

During flight to an offshore facility, the flight crew heard an abnormal noise coming from outside. As a precautionary measure, the flight crew decided to return to base.

While the aircraft was returning to base, the flight crew experienced increased vibrations from the aircraft, and they decided to land at the nearest offshore facility.

The aircraft landed safely without further issues. Once landed and after shutdown, an inspection was performed by the flight crew and one main rotor (MR) damper was found detached from hub side. In addition, damage to one MR blade, at root of trailing edge, was observed potentially compatible with a contact with the damper.

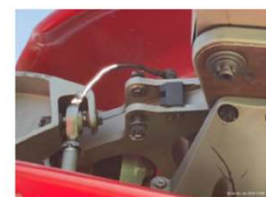

On 21 Feb, the OEM issued ISEN-2025-003 in relation to this event.

#### Cause

The MR damper bolt (p/n 3G6220L00351) that connects the MR damper to the MR hub, was found sheared allowing the damper to detach from hub.

Both remaining parts of the sheared bolt have been collected and the cause of the event is under investigation with the relevant national safety investigation Authority, supported by the operator and the OEM, to determine the root cause.

The operator performed an internal review of the HUMS data and found no alerts prior to the event.

Close up view of MRB damper

Overall view MRB damper

#### Actions taken

The MR blade, MR damper, and affected MR damper bolt were all replaced at the landing site.

A ferry-flight was successfully carried out and no anomalies or abnormalities were reported. The event aircraft is under maintenance for return to service in accordance with OEM instructions.

The operator elected to carry out a fleet-wide inspection of the MR damper bolts.

The NSIA has launched an investigation into this event.

#### OEM comment

The OEM is supporting the ongoing investigation.

Based on the information currently available, please be informed, the OEM recommends that operators continue to follow the approved and published scheduled inspections plan defined by AW139 AMPL.

The complete event, together with involved items, will be investigated and any possible action on in-service fleet, deemed as necessary based on the outcome of the investigation, will be shared by OEM through the usual channels.

"At CHC, safety is more than just a number. Safety means taking care in everything we do."

Safety Information Only - This information does not supersede any Company or OEM manual



**HeliOffshore**  
Safety Through Collaboration

# LIFE SAVING RULES

At CHC, safety means Taking Care in everything we do, even things that may seem small at the time – like keeping your work area clean or smoking only in designated areas. These simple safety procedures can make all the difference when it comes to keeping you, your co-workers, and our customers safe.



Driving



Line of Fire



Energy Isolation



Hot Work



Use Appropriate Personal  
Protective Equipment (PPE)



Confined Space



Work Securely



Bypassing Safety Controls



Safe Mechanical Lifting



Working at Height



Work Authorization



No Alcohol or Drugs  
While Working or Driving

*Taking Care on the job means doing a job right, the first time. It means paying attention to the details and refusing to cut corners to ensure a safer workplace for us all.*

# LIFE SAVING RULES

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## WORKING AT HEIGHT

### Protect yourself against a fall when working at height

If something you need is out of reach, your first impulse may be to use the closest object – like a chair, box, or unsecured ladder – to stand on, which can be very dangerous. You might be surprised to learn how many serious injuries result from not following proper work-at-height procedures.

Working at height on aircraft is best done using work stands and restraint systems, as directed by local procedures.

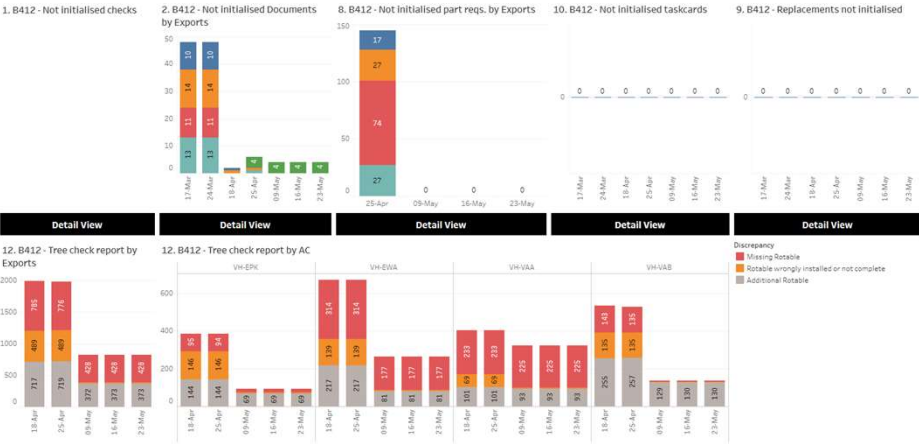
- » I inspect my fall protection equipment before use
- » I secure tools and work materials to prevent dropped objects
- » I tie off 100% to approved anchor points while outside a protected area



# CAMO Dashboard



CAMO Data Validation Dashboard





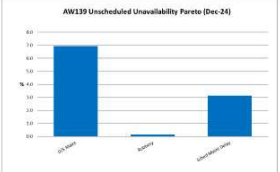
# CAMO Dashboard

## AMOS database:

- 71 000 technical publications
- 320 000 defined consumables
- 91 000 defined parts  
with 27 000 defined maint.  
requirements
- 9 master maintenance programmes
- 24 operator's maintenance programmes
- 9700 maintenance tasks

# CAMO Dashboard

### 3. Availability:



AW139 Fleet Reliability Report - January 2023

Category	Count	Percentage (%)
Engine	15	75
Other	5	25

### 4. Pilot Reports:

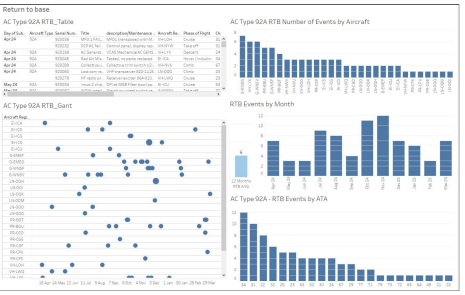
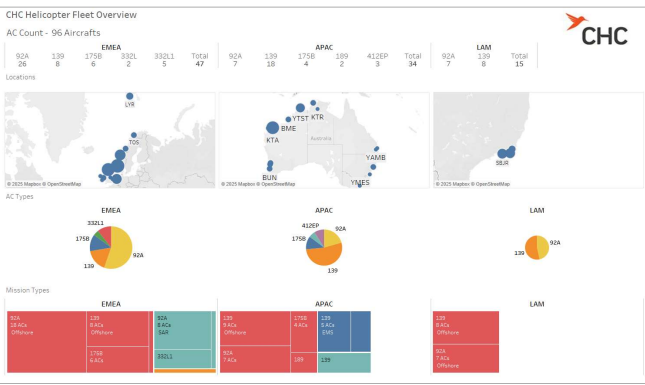
AW139 Pilot Reports

Category	Count	Percentage (%)
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Other	5	25

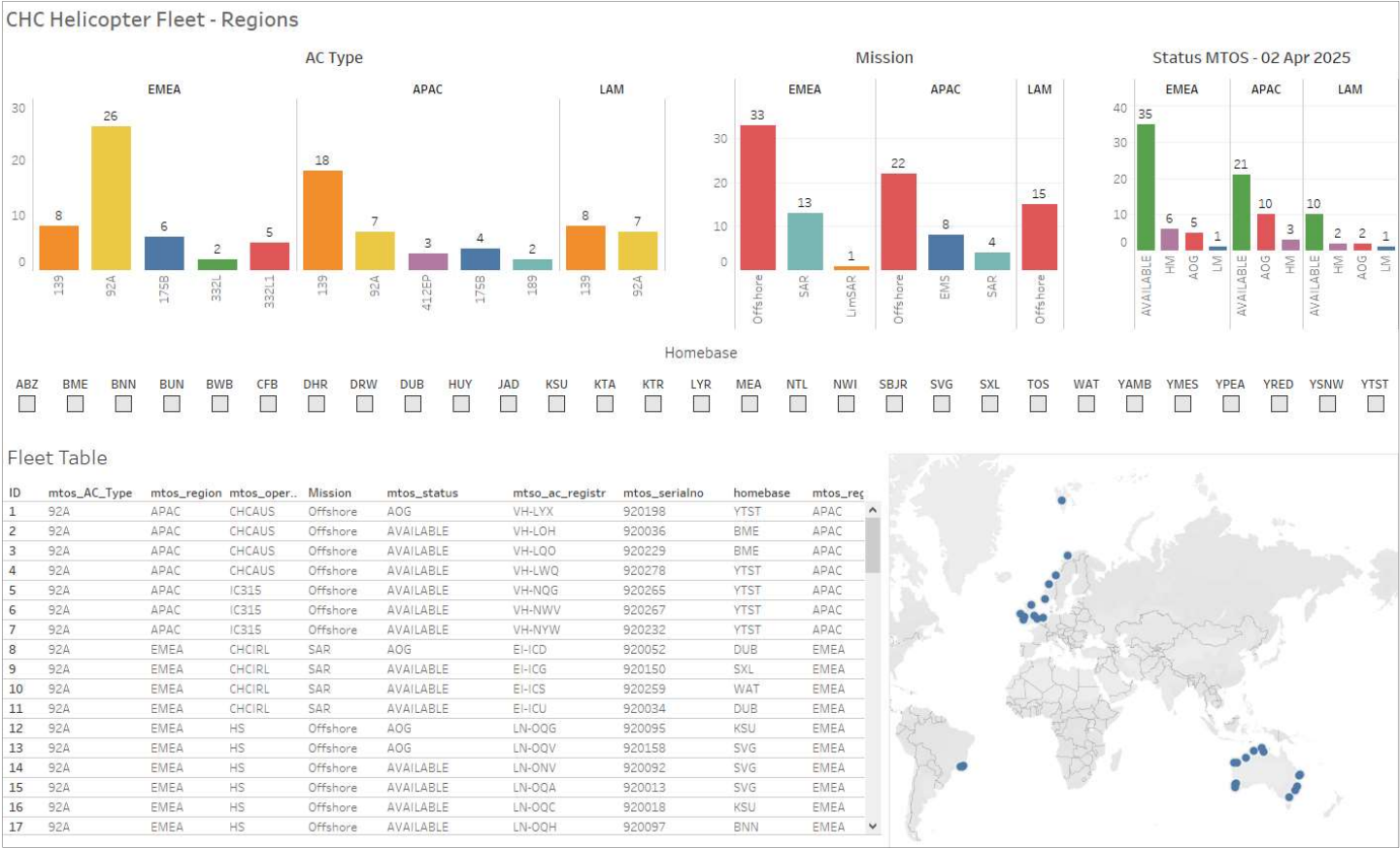
### 6. Maintenance defects

AW139 Maintenance defects (Rates are defects per 1000 flight hours)

Category	Count	Percentage (%)
Engine	15	75
Other	5	25

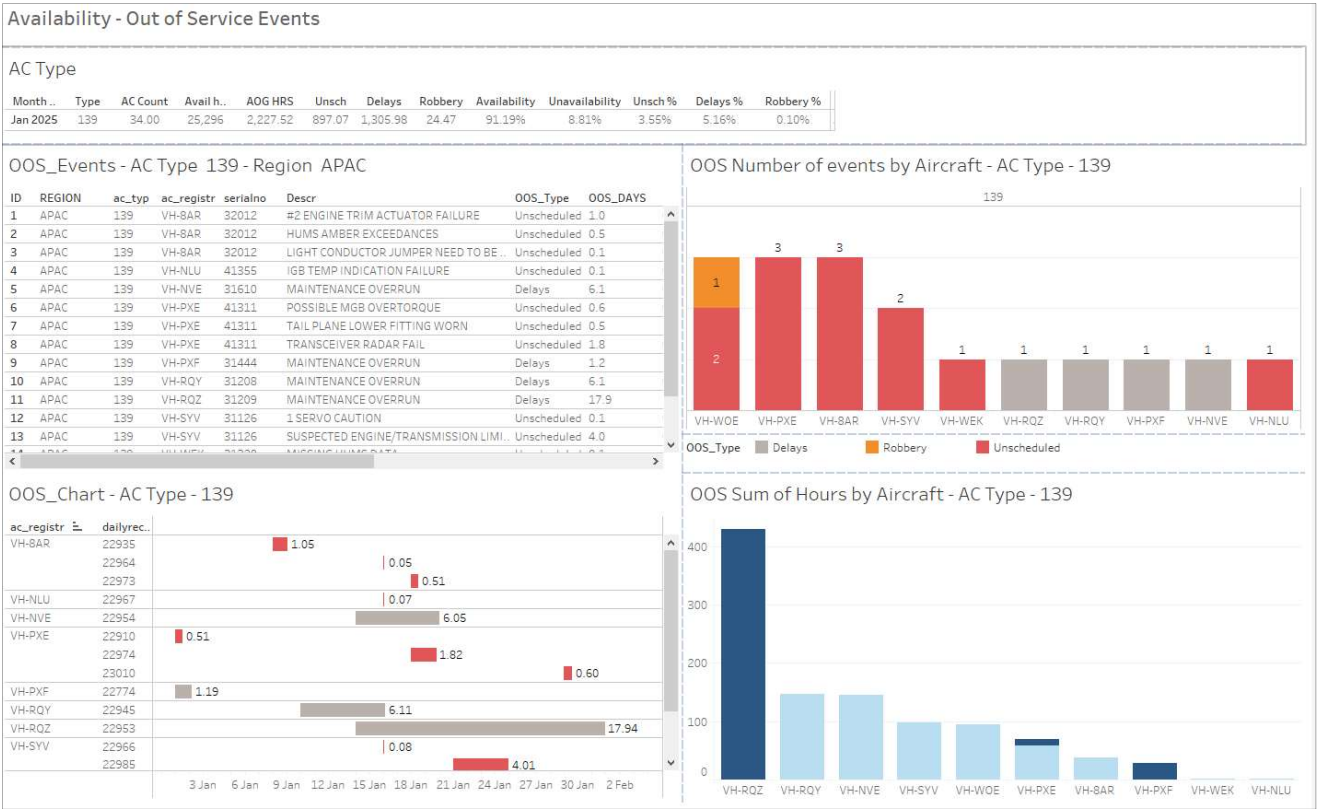


# CAMO Dashboard

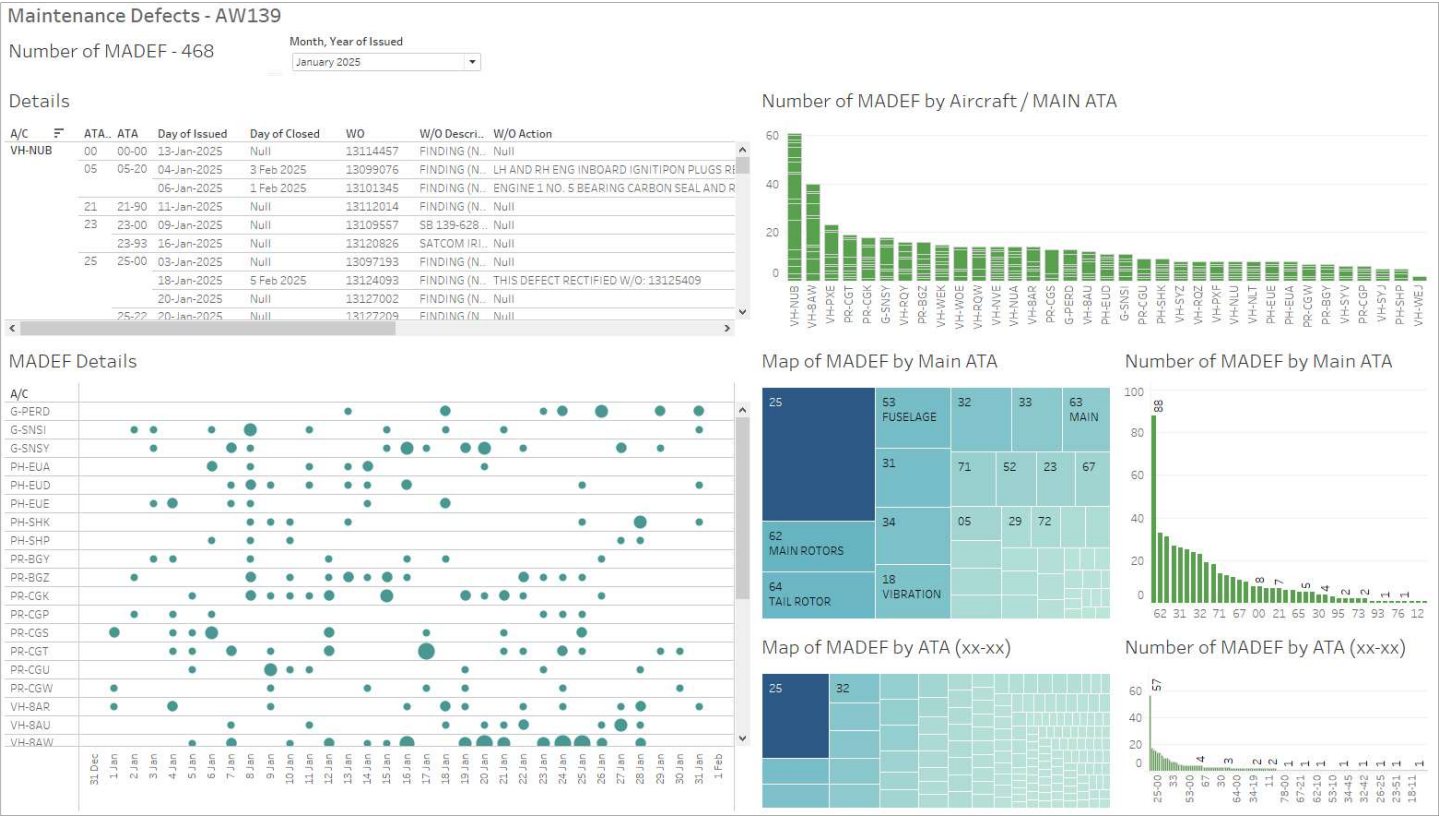




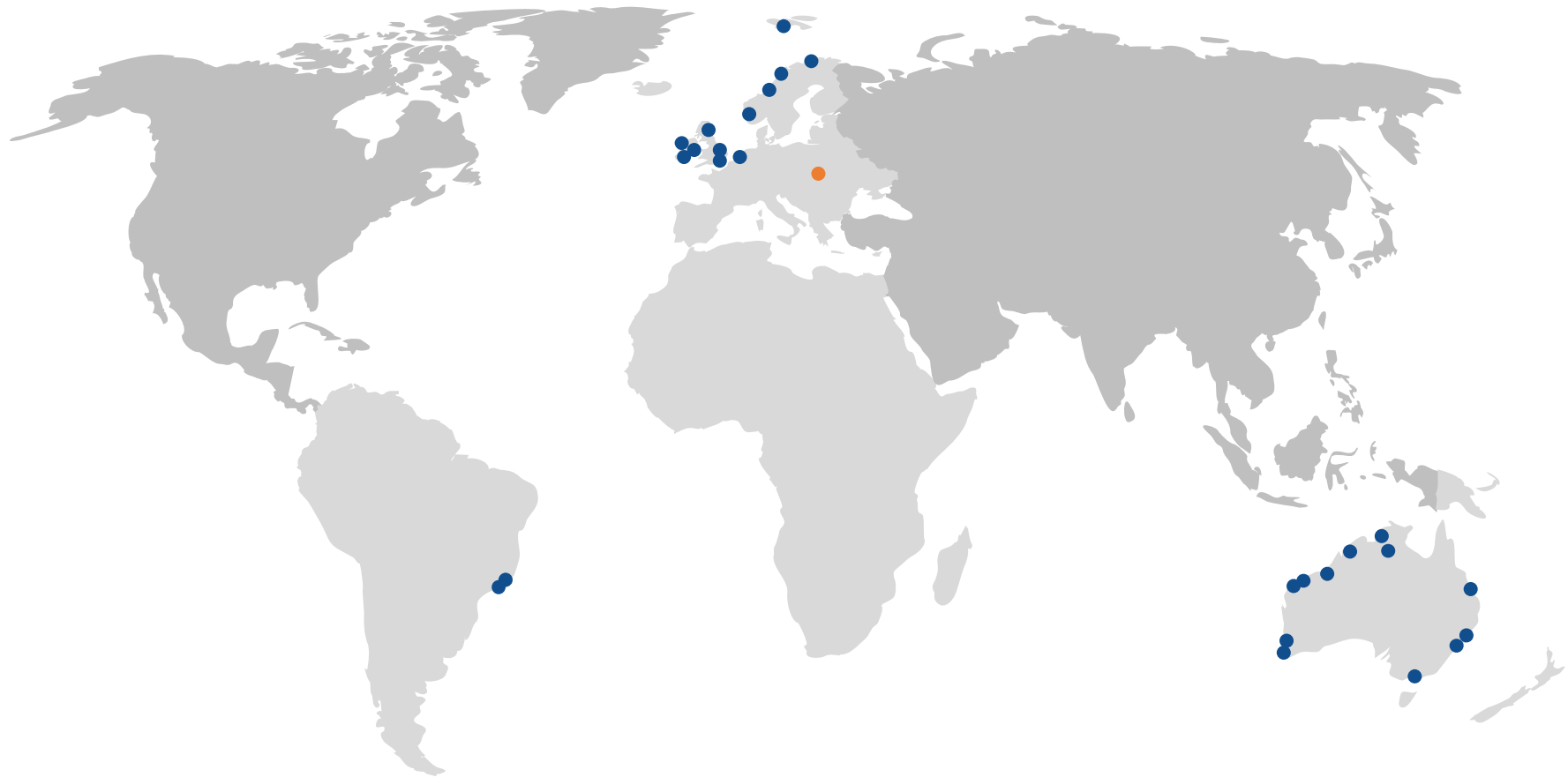
# CAMO Dashboard



# CAMO Dashboard

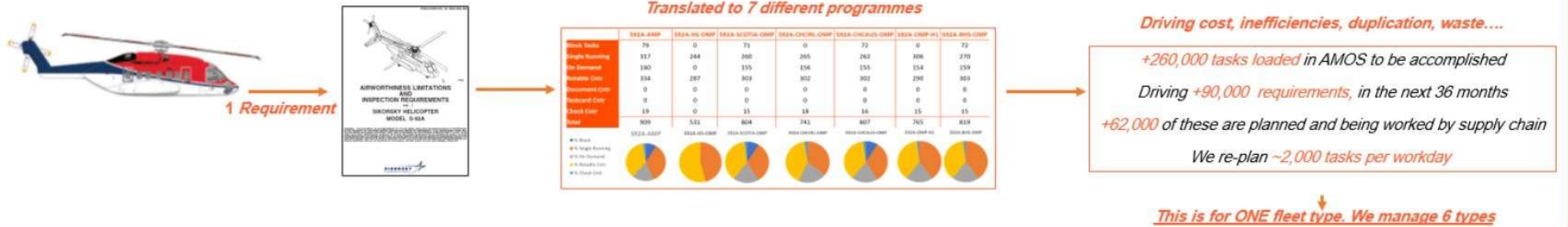


# One CAMO Concept



# One CAMO Concept

## The Need For Change





# One CAMO Concept

## Major challenges:

- International complex organisation
- Different local requirements for each region
- Resistance to change
- Non-standardized procedures



# One CAMO Concept

## Major benefits:

- Increased level of safety
- Increased productivity
- Reduced operational cost
- Reduced onboarding time





**Thank You!**