

How Does The CAA UK See The Industry Today?

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UK CAA

O&G
UK PLC

UK PLC

MCA

HO

DoH

UK PLC



Offshore
CAT

Onshore
CAT

SAR

Police

HEMS

NCC SPO



EASA



ANO



EASA



As the UK's independent aviation safety regulator we work so that:



- the aviation industry meets the highest safety standards,
- consumers have choice, value for money, are protected and treated fairly when they fly,
- through efficient use of airspace, the environmental impact of aviation on local communities is effectively managed and CO2 emissions are reduced,
- the aviation industry manages security risks effectively.

How do we do that?



- We regulate all UK operators to ensure they comply with relevant international safety standards including European-wide safety regulations set by the European Aviation Safety Agency (EASA).
- Apply EASA oversight requirements along with CAA **Performance Based Regulation** principles.
- Cross capability team of inspectors –
 - Flight operations
 - Airworthiness
 - Licensing
 - Aerodromes/Airspace/ATC
- Government and stakeholder liaison



**THE FARTHER
BACKWARD YOU
CAN LOOK, THE
FARTHER
FORWARD YOU
CAN SEE.**

Winston Churchill

Traditional and innovative methods of analysing the industry:

- MORs
- Accident and incident trends
- Oversight activity
 - 5 offshore flight operations inspectors
 - 6 dedicated inspecting officers
- Global NAA intelligence
- Internet scraping data laking!!
- AI
- Looking for best practice – Safety 2 principles



And Performance Based Oversight methodologies....



The **whole** point is the **whole** picture

Performance Based Regulation

1. Consistently **gathering and analysing safety risk information** about all parts of an organisation's operations and capturing them as a single regulated entity.
2. **Assessing and agreeing the performance** of each entity to manage their safety risks
3. **Grouping safety risk information into Sectors** of the industry with similar types of operation to create a better understanding of the top risks and good practice approaches to managing them.
4. Making more **informed decisions about the safety** outcomes that we and the industry should aim to deliver to better manage the top risks across the sectors - and setting out the actions required of different stakeholder groups for example, entities, sectors, EASA, ICAO, to achieve them.
5. **CAA resources proportionately applied to oversight activity** and safety improvement projects.

CAA Horizon Scanning

The Past – Trends/technologies/events have emerged and surprised the CAA

e.g.

- Volcanic ash
- Drones

The Future - What might the future hold?

- A shift towards autonomy
- New innovations
- Changing needs of workforce
- Cyber vulnerabilities
- Security threats
- Deep water exploration

How might these affect the industry? Are we prepared?

Saudi Arabia oil and gas production reduced by drone strikes

🕒 14 September 2019

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Abqaiq is the site of Aramco's largest oil processing plant

The offshore sector is highly complex

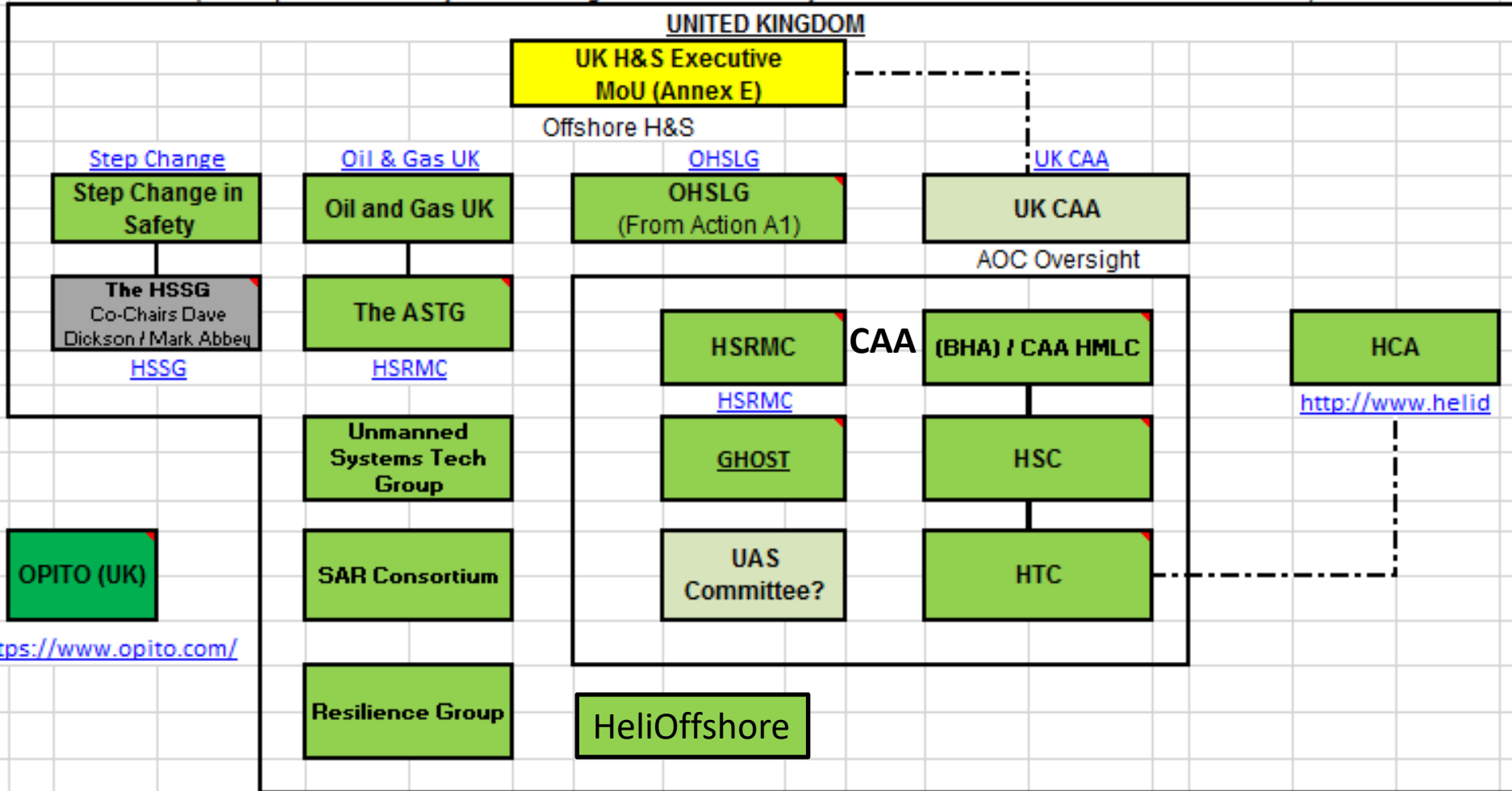


- Technical - Structurally and systemically with many processes, organisations and varying rule sets
- Non technical – Cultures, leaders, behaviours and values

Frog and bike thinking! (Alistair Mant)

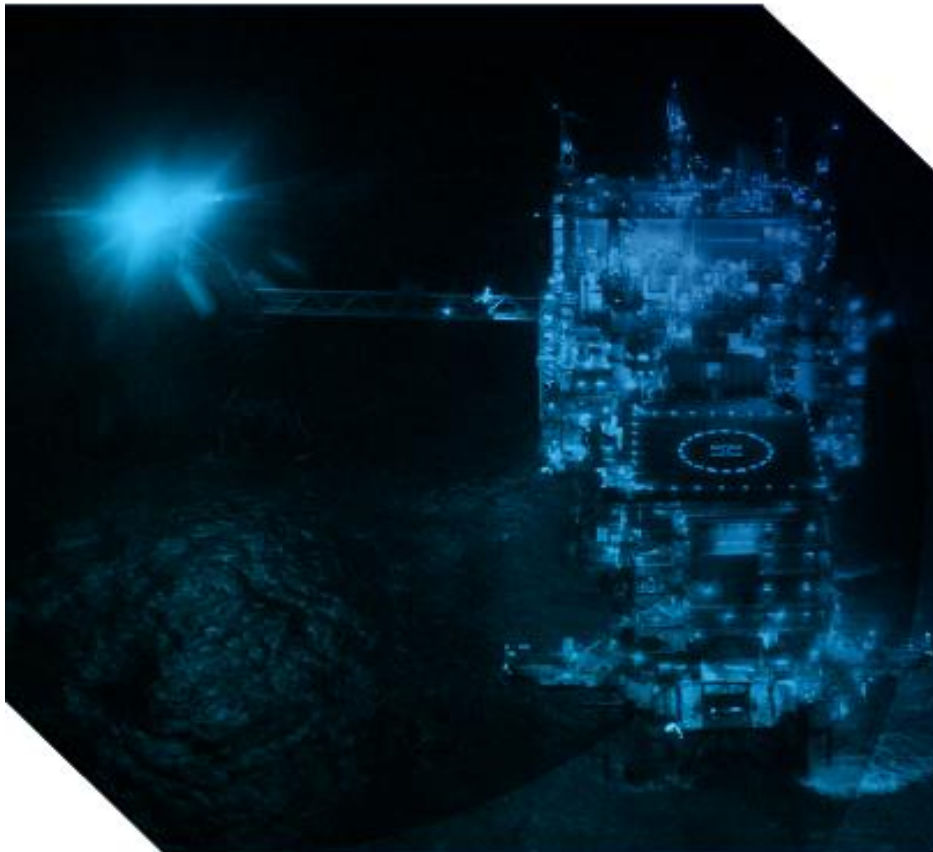
- Effective safety management and management of change across the overall system sharing mutually important information

OFFSHORE Sector



Civil Aviation Authority – Safety review of
offshore public transport helicopter operations
in support of the exploitation of oil and gas

CAP 1145



**5 accidents in the
preceding 4 years to
Aug 2013 Sumburgh**

Feb 2014

Reactive look at safety

Initial CAA safety directive:

- Ditching performance and flight over 6 m seas
- Use of Emergency Floatation Systems (EFS)
- Cat A Emergency Breathing Systems (EBS)
- Passenger seating

Review of UK offshore helicopter safety made:

32 CAA Actions

and

29 Recommendations to the industry/EASA.

- Significant effort on behalf of operators, manufacturers, regulators and safety/trade bodies in striving to achieve the highest safety standards.

- Subsequent introduction of SPA HOFO

Collaborative approach taken with:

- AOC operators,
- OEMs,
- EASA,
- HeliOffshore,
- StepChange in Safety
- OGUK

Change implemented through the Leadership of Offshore Helicopter Safety Leadership Group (OHSLG)

OHSAG leading to OHSLG:



Safety Leadership – and at all levels of management

Promoting the normal behaviours of:

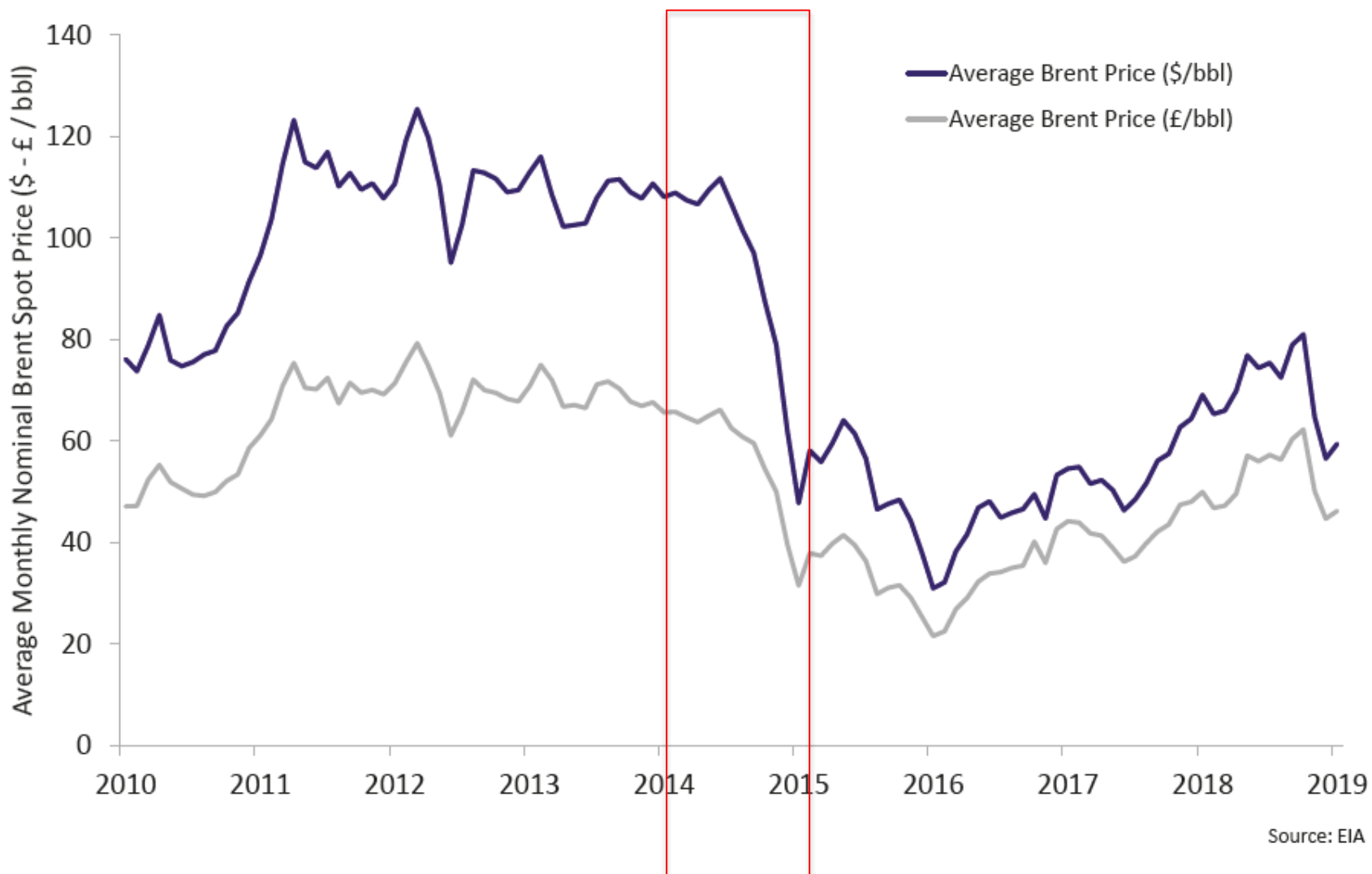
- Safety
- Risk consciousness
- Learning culture
- Collaboration

On going work including a final update report

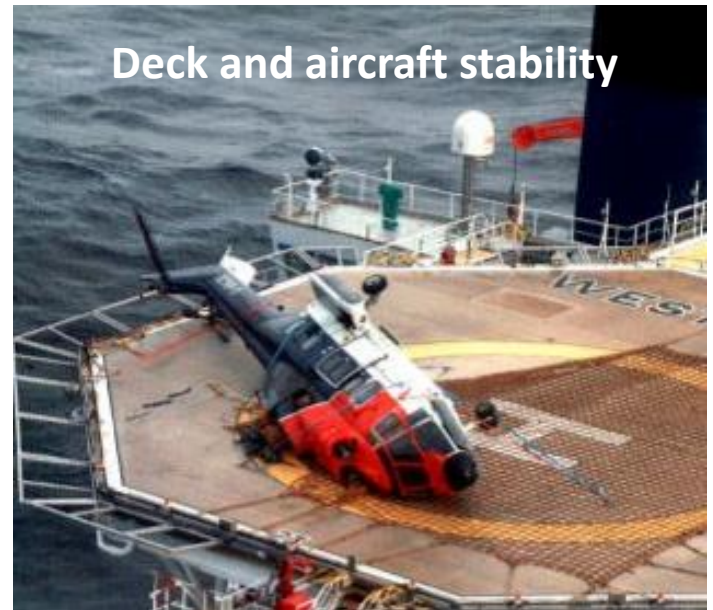
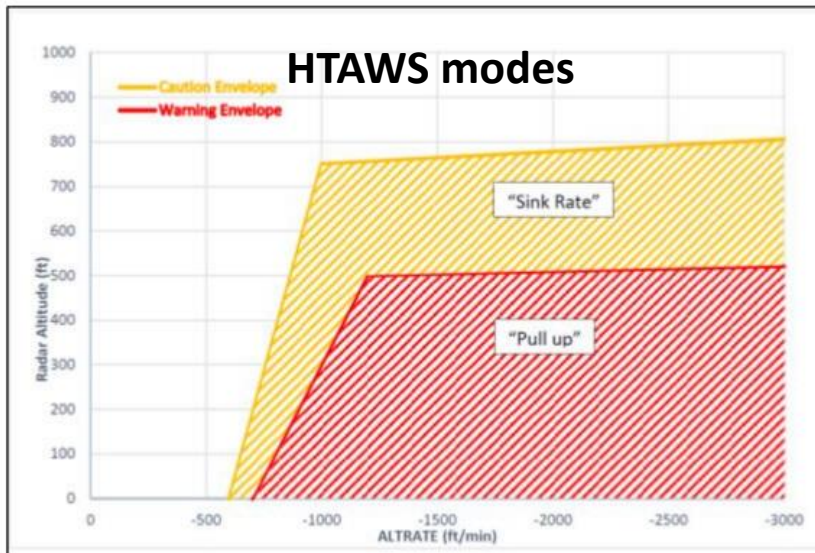
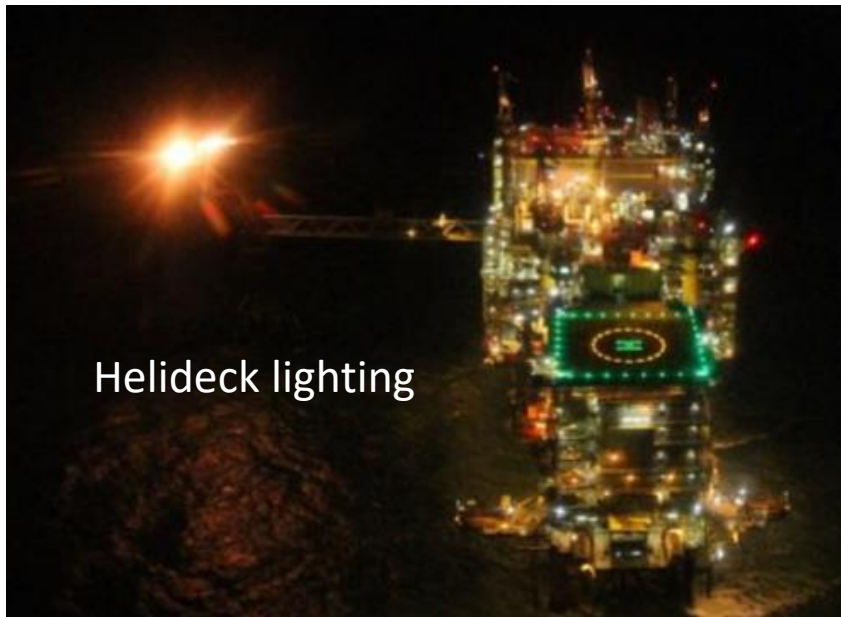


- Flight operations
- Airworthiness
- Pax safety and survival
- Improving knowledge and facilitating change

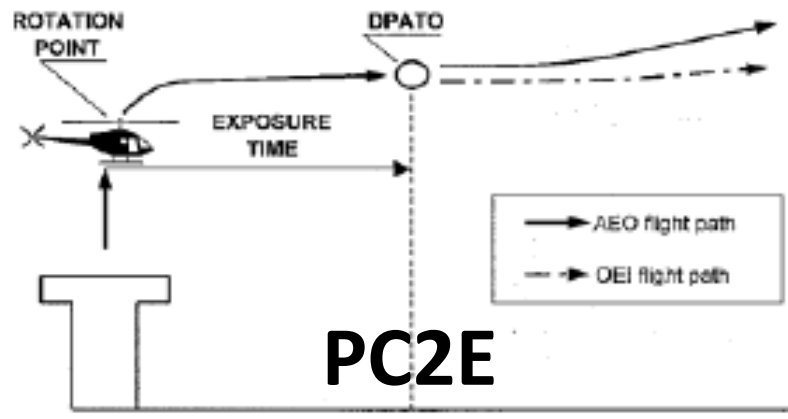
Brent Crude Prices



Source: EIA



Firefighting NUI



PC2E

FDM Programmes



Automation, Flight Path Management and EBT

Common Offshore operational sector risks (EPT derived)



- **Unstable decks with limited visual cues** - Contact with ship superstructure due to uncontained drift during landing and take off at night
- **Helideck operations** – wrong deck landing, obstacle environment, management
- **Inadvertent carriage of Lithium Metal Batteries as Cargo or pax baggage** to/from Offshore locations leading to uncontained fire in cargo compartment leading to uncontained fire in cargo compartment.
- **Down turn in the Offshore oil and gas market.** Pilot Distraction enroute and Distraction during Critical phases of flight Continuing uncertainty over job security and loss of pay and conditions due to loss of contracts and closure of bases
- **Oil and gas contracts** – tight termination clauses, tight margins or not being able to successfully bid for contracts. Investment in people, training and technology. Distraction and error leading to a safety incident.

Helicopter Airworthiness Common Risks



AW 169 / AW 189 Loss of Tail Rotor Effectiveness

- UK CAA continues its engagement with EASA and UK operators regarding the current inspection regimes on Tail Rotor Duplex bearing and in-service performance.











Operators Management of Critical Parts

- UK CAA is currently engaged in a pilot scheme with offshore operators to understand Critical Part rejection rates. AW 139 data is being gathered and analysed to understand if there are any trends in the rejection of Critical Parts, as defined by Leonardo.
- The UK CAA has also issued Safety Notice [SN 2019/006](#) regarding the provisioning of Strip Reports.
- The UK CAA has seen a positive trend in the reporting of MOR's regarding Critical Parts early rejections.

Health Monitoring – (VHM/HUMS)

- UK CAA has conducted a further independent review of operators use of HUMS and its own internal process – this will be concluded in September and summarised in CAP 1145 PIR











FO Safety Risks scored 9+

...	Code & Title	Current Assessment	Date Assessed
	SR-FO-001 Undeclared and/or mis-declared high hazard dangerous goods transpo...	 4x5 High	03 Jun 2019
	SR-FO-002 Inappropriate flight path management during operations in a degraded...	 3x4 Medium	31 May 2019
	SR-FO-010 Incorrect Performance Data	 3x5 Medium	03 Jun 2019
	SR-FO-014 Crew Fatigue leading to degraded performance	 2x5 Medium	03 Jun 2019
	SR-FO-022 Incorrect setting of both altimeters leading to a risk of CFIT during 3D...	 2x5 Medium	03 Jun 2019

← 1 of 2 →

CAA Top Risks from RSMS

FO Safety Risks scored 9+

...	Code & Title	Current Assessment	Date Assessed
	SR-FO-029 Pilot performance	 2x5 Medium	03 Sep 2019
	SR-FO-036 Loading errors	 2x5 Medium	03 Jun 2019
	SR-FO-039 New Aircraft Entry into Service (EIS)	 2x5 Medium	03 Jun 2019
	SR-FO-046 Boeing 737 MAX Aircraft Re-entry into Service	 4x5 High	03 Sep 2019
	SR-FO-047 Handling of undesirable aircraft trimming state	 2x5 Medium	03 Sep 2019

← 2 of 2 →

How does the CAA see the UK industry today?

- Safe, compliant and consumer focussed
(you are safe and should feel safe)
- Agile to change, but challenged in resilience
- Risk conscious
- Collaborative – all stakeholders inc Govt and OGUK