## Introduction

This Q&A report is designed to advance industry debate and support implementation of IOGP 690 recommended practice.  This paper summarises questions raised by HeliOffshore members in two consultative webinars held on Wednesday 26th August 2020.

## Why is R690 being published and what is its purpose?

**International Association of Oil and Gas Producers Report OHRP 690** (IOGP 690) is due for imminent publication.  This offshore helicopter operations recommended practice is the result of **unprecedented collaboration** with HeliOffshore, Flight Safety Foundation, International Civil Aviation Organization (ICAO), Helicopter Safety Advisory Conference (HSAC), Oil and Gas UK (OGUK), OPITO, manufacturers and many other industry bodies.  Driven by IOGP's Project SAFIRA and one of IOGP's five focus areas, IOGP 690 is an important step toward industry standardisation and compliance in the pursuit of zero fatalities.  IOGP 690's purpose is to align industry standards and raise the bar to **recognise best practice** where it exists and ensure it is **hard wired into industry contracting standards**.  The aim is to reward operators for implementing the very best practice, adopting new technologies and updating procedures and practices.

## Funding

Questions included:
- Who pays to implement R690 recommendations?
- While operators retain responsibility for adopting best practice, how will implementation of technology upgrades be supported by those contracting services?
- Is there recognition of the additional cost of a number of the new specifications, particularly aircraft equipment?

**Tony Cramp, Chairman of the IOGP Aviation Sub-Committee (TC):** Ultimately, it is the end customer.  However responsibility lies with oil companies to incorporate these specifications into contract renewals and with operators to ensure bids to reflect true costs.  Aviation technical authorities must hold internal conversations with procurement groups to explain why improvements have been requested and how technology might be incorporated over the term of current and/or future contracts.  We make no assumption about investment: some may consider lump sum support, others might choose to spread financial support over the contract term, others may want to negotiate support over the life of the aircraft.

**Tim Rolfe, HeliOffshore Chief Executive Officer (TR):** Transparency of costs is essential so all parties are clear how support is apportioned over the contract term.  We must hold transparent discussions on the actual cost of these requested improvements.  We must also work with oil and gas procurement to reflect pricing over the terms of the contract, recognising that the contract term may be much shorter than the useful life of the aircraft.  The contract is key; discussions are required at contract review, as well as contract renewal.  If investment is reduced due to the current economic challenges, we must prioritise and maximise the safety benefit.  We must continue to identify and target the key enhancements required to deliver the biggest safety improvements.  We must also identify how implementation differs depending on the nuance of different operations, regions and customers.  While we cannot identify or solve all individual contractual issues - this is the start of a new, honest, safety conversation.

## Implementation Schedule

Questions included:
- IOGP 690 has contractual implications by changing service expectations and standards. Do changes need to be made immediately? Within what time frame is IOGP hoping to have all oil companies incorporating these specifications into their contract?
- Given the oil price downturn, impact of the pandemic and limited resources, should some recommendations be prioritised over others?
- Once IOGP 690 is adopted, will it be possible to have a score card to show which members have adopted each part, and any differences from the standard text?

**TC:** IOGP members are expected to implement IOGP 690 as soon as practicable but, at the very least, by their next contract renewal and in all new contracts. It will be published with a structured gap assessment tool to allow parties to measure differences. IOGP members are expected to complete and register their differences with IOGP within six months to drive a standardisation agenda.

**TR:** We need a safety conversation about compliance versus cost, benefit versus cost. IOGP 690 will only succeed if all parties agree to a centralised safety standard and this forms the basis of a shared contract. HeliOffshore is currently developing plans and toolkits to support members throughout the implementation process for all HeliOffshore recommended practices and Safety Performance Model interventions. We will use HeliOffshore's Safety Intelligence Programme to track and measure operator member compliance and implementation at an industry level to identify challenges. This will complement the IOGP gap assessment tool.

Questions also included: IOGP 690 states a new specification for "enhanced HTAWS". Is HTAWS AW139 upgrade a good example of a key safety priority? How might we support upgrades like this?

**TC:** Yes, it is. We identified HTAWS as a key safety objective some time ago to save lives by avoiding controlled flight into terrain (CFIT) and loss of control (LOC) incidents. Seventy five percent of the AW139 fleet is at HTAWS Phase 7, so require just a software upgrade. Those still at HTAWS Phase 5 will require individual conversations and negotiations to establish a practical approach to sharing costs between customer and aircraft owner/operator. We are developing a safety case/business case for HTAWS to inform internal discussions. Contract is key. If mid-contract, it is important to be compliant with current contract stipulations. There will then be a contract review, potentially with an interim agreement, before an upgrade is confirmed at contract renewal. There is also an opportunity to consider innovative ideas. Might regional aircraft be pooled between contracting companies? Or could a consortium support improvements for the whole fleet?

## Compliance

Questions included:
- Is there more than one way to comply?
- Will IOGP publish potential 'alternative means of compliance'?
- Is there a planned review period to ensure IOGP 690 stays relevant?

**TC:** IOGP 690 tries to focus on the outcome, not necessarily the means of achieving the outcome. While there may be many ways to comply, we must achieve the desired outcome. Sometimes experience has demonstrated the need to be more prescriptive, for example, HFDM; we make no apologies for that because we believe in the safety benefit it will deliver. The key is to ensure we have transparency, communication and collaboration so we achieve the best practice together. We don't have any plans to publish alternative means of compliance. However, IOGP 690 is a 'live' document with a formal review process and working group, so specific 'means of compliance' could be added in the future if required and supported. If an operator suggests an alternative means of compliance, it would be assessed on a contract by contract basis and, if valuable to the industry, added to IOGP 690 in the future.

## Safety Culture

Questions included:
- How will these safety improvements help enhance the reputation of helicopters as a safe means of transport?
- How do we secure the future of helicopter transport from challenges and alternatives such as boats?

**TC:** Greater alignment and more consistent application of best practice standards will result in improved safety performance, which will directly improve the reputation of helicopters as a means of transportation. Worker confidence will also improve if there is confidence that everyone is applying best practice. To address the challenge from alternative modes of transport we have to maintain consistent safe performance, enhance and emphasise our strengths of speed, flexibility and reliability and work to ensure we are as cost competitive as possible.

**TR:** As Airbus' Régis Magnac said at the HeliOffshore conference 2020, trust in air travel is the new 'hearts and minds' challenge for us all. But through our collaboration, we can ensure we deliver safe flights with less. It's critical to remember that publication of a document – whether IOGP 690 or any other recommended practice - is just the first step toward ensuring no lives are lost through offshore aviation. The shared hard work of implementing best practice starts now.

## Training

Questions included:
- Any potential for robust evidence-based training (EBT) implementation replacing legacy training?

**TR:** Absolutely. As the fixed wing community recognise the need and have worked hard to shape the regulation to support an EBT approach, the work done by the HeliOffshore community to justify and support an EBT programme for helicopters, must be completed. In the meantime, operators could usefully familiarise themselves with this approach and incorporate a Competency Based Training Assessment into their existing training programmes.

**TC:** Removal of the old hours-based experience limits is something we have not achieved with 690, but we have put greater emphasis on the use of competency-based programmes as an alternative. We are eagerly awaiting the arrival of EBT and, with HeliOffshore and the work Tim has led over recent years now reaching maturity, we very much hope to be able to replace and remove those old limits sooner rather than later.

## Specific Technical Recommendations
The following questions have been answered by IOGP's leadership team and technical authorities.

**Multi-engine/multi-pilot helicopters.** The intention is to make dual engine/pilot instrument flight rules the baseline specification for offshore. However, it is acknowledged that single engine/pilot still have to be used in some areas for a variety of reasons. The legacy IOGP 590 document will still be available as footnote in IOGP 690 for those requiring guidance on single engine and single pilot operations.

**Six-month simulator training.** This very much reflects industry best practice, both from the airlines and the best offshore operators. The rationale for change is to increase competency and reduce risk in comparison with in-aircraft training. The implications of increased time spent travelling, resting, training have been noted and should be managed via contractual discussion and negotiation.

**Night Deck Landing Practice.** These specifications were detailed in the IOGP 590. Simulators have improved immensely but cannot simulate all facilities. There is a specification to practice on decks at night, especially to support medevacs or abnormal operations. There is a regional context that determines access to 'real night conditions' (potentially limited by local regulation or by differences in diurnal variation). There are also regional practicalities regarding the movement of crews to/from simulators and the proportion of non-revenue training flight specifications to achieve 'live' flight recency. The expectation is that the expense and implementation schedule of additional training flights will be managed via contractual specifications.

**Simplified safety management system.**  Effective safety management remains core to everything we do and want to achieve and so we have enhanced this area with the focus of Safety leadership, from observed industry best practice.  The SMS remains based on and aligned with ICAO Annex 16, and the R690 structure now more closely aligns with the ICAO SMM Structure.  Demonstrating compliance should be easier and aligned with local regulatory specifications.

**HUMS-In Flight Data Transfer**.  Please advise why the OEM has not mandated between flight and life streaming downloads if the aircraft and HUMS system need this to capture potential safety issues.  All these systems are not TC and only third party STC with varying definitions.  There are many practices that the OEMs do not mandate.  For HUMS the specifications are based on hard won experience and the causes of real accidents.  The R690 specification looks to use the latest technology, as it becomes available, to optimise the effectiveness of HUMS as a barrier.

**MEL authorisation periods.**  If live streaming is out of service is the aircraft out of service?  Please explain the MEL authorisation periods.  We would expect that to be reflected in the MEL, but wouldn't expect it to ground the aircraft and back up means should be available.

**ADF.**  Do you still consider the ADF mandatory for offshore operations?  This will be driven by local regulatory specifications for IFR operations.

**ACAS II.**  Ref.7C1 ACAS II is installed if available and certified for the aircraft type and supported by a Risk Assessment.  Some TCAS 2 service bulletins are not authorised by type but by serial number.  Please clarify the risk assessment statement.  The Risk Assessment should be completed in conjunction with the relevant IOGP Company and should consider the listed considerations, in addition to the local operating environment, other aircraft in the operator's fleet etc.

**Obstacle Detection Aids.**  Ref.21C.1 Obstacle Detection Aids, where available for the aircraft type and when assessed as appropriate by Risk Assessment are fitted.  Some Obstacle Detection Aid service bulletins are not authorised by type or SB but by serial number as a TC option.  Please clarify the risk assessment statement.  The Risk Assessment should be completed inconjunction with the relevant IOGP Company, and should consider the listed considerations, in addition to the local operating environment, other aircraft in the operator's fleet etc.

**Material and SB/STC lead times**.  As there will be protracted lead times for sourcing material and lengthy process seeking approvals with NAA for STCs, when would the above changes be introduced?  How do contractors work around phased changes?  Would clients support downtime to embody modifications?  Any modification needs to be discussed as part of the contract discussion and the timeline agreed between both parties.  Similarly there should be an expectation that some downtime may result for particular mods and that needs to be programmed by both parties.  With greater alignment between customers on the modifications specified, it is hoped that fleet management will become simpler for helicopter operators.

**Alignment of operational differences.**  The 21C.3 VFR minima and operating heights is shown in a table.  Is this now aligned with all IOGP members or will we still see customer specific operating procedures?  Is there any ambition to align customer operational differences further?  This was discussed at length by the working group and the intention is that all IOGP Companies align with the specifications in IOGP 690.  There will be a drive through the IOGP ASC to have companies file differences and work to eliminate those differences as soon as practicable.  We would also encourage conversations via HeliOffshore and IOGP Teams to highlight when these issues continue to arise after the transition phase.

**Certification standard.**  Is there any impact to aircraft certified on non-FAR/JAR/CS?  The specifications allow non-FAR/JAR/CS certified aircraft to be contracted when equivalence with the FAR/JAR/CS is demonstrated.

**Emergency locator transmitters.**  Is there any impact to emergency locator transmitters which built based on the ETSO-2C126 as it was the minimum standard in IOGP 590?  ETSO-C126 is a dated specification, 2003, and the latest specification, ETSO-C126B, dated 2016, covers not only more detailed performance, but specific lithium battery guidance, which adds another level of safety.

**Onboard observers.**  Please advise of IOGP thoughts regarding requiring an observer onboard (in addition to the cockpit camera installation).  IOGP will not be requiring an observer onboard for routine flights.  However, there will be occasions when an observer is specified, LOSA flights, Observed Flights during an audit, and provisions should be made in the aircraft to accommodate these personnel.


**More questions and comments?**  Join the safety conversation at www.helioffshore.org or email the HeliOffshore team at info@helioffshore.org.  We look forward to hearing what you think.