

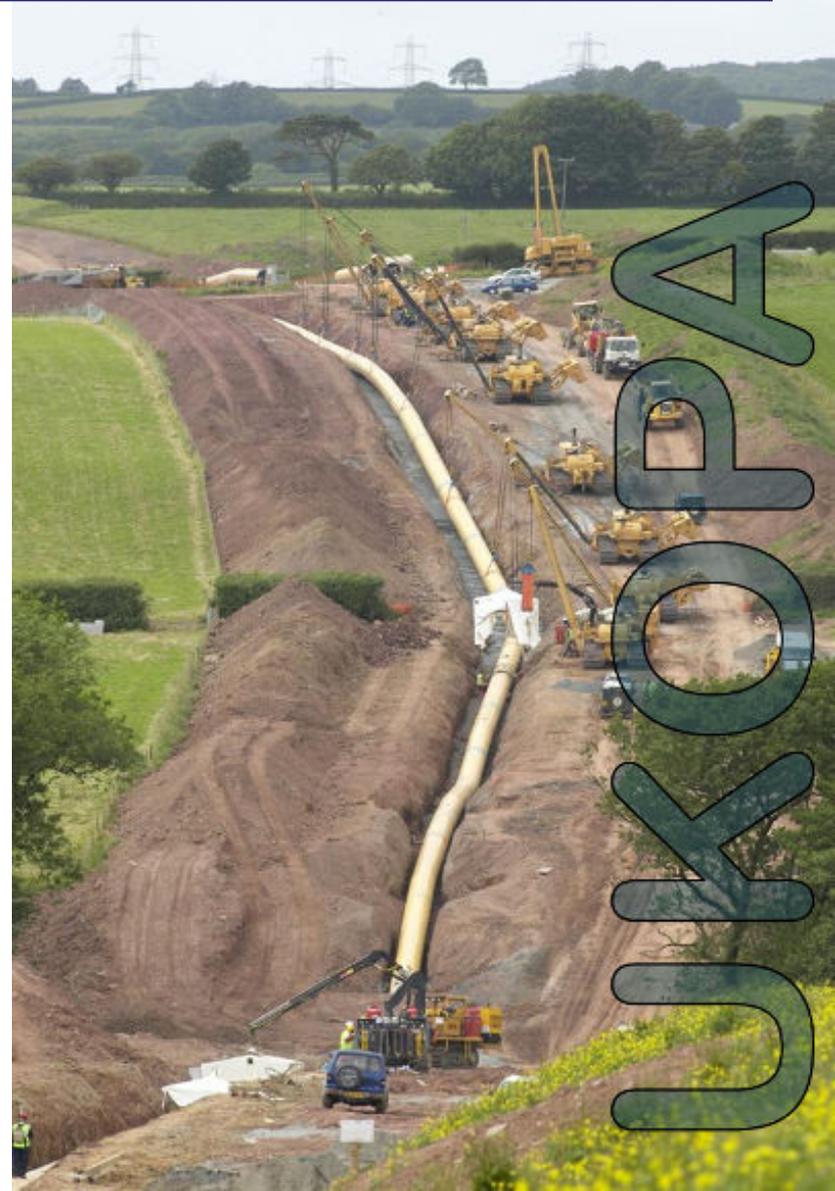
Use Of Drones

The Regulations You Need to Know and possible considerations for UKOPA

Simon Joyce – FARWG Chair

Jonathan Chandler - 360 Above

Nigel Taylor - Cadent



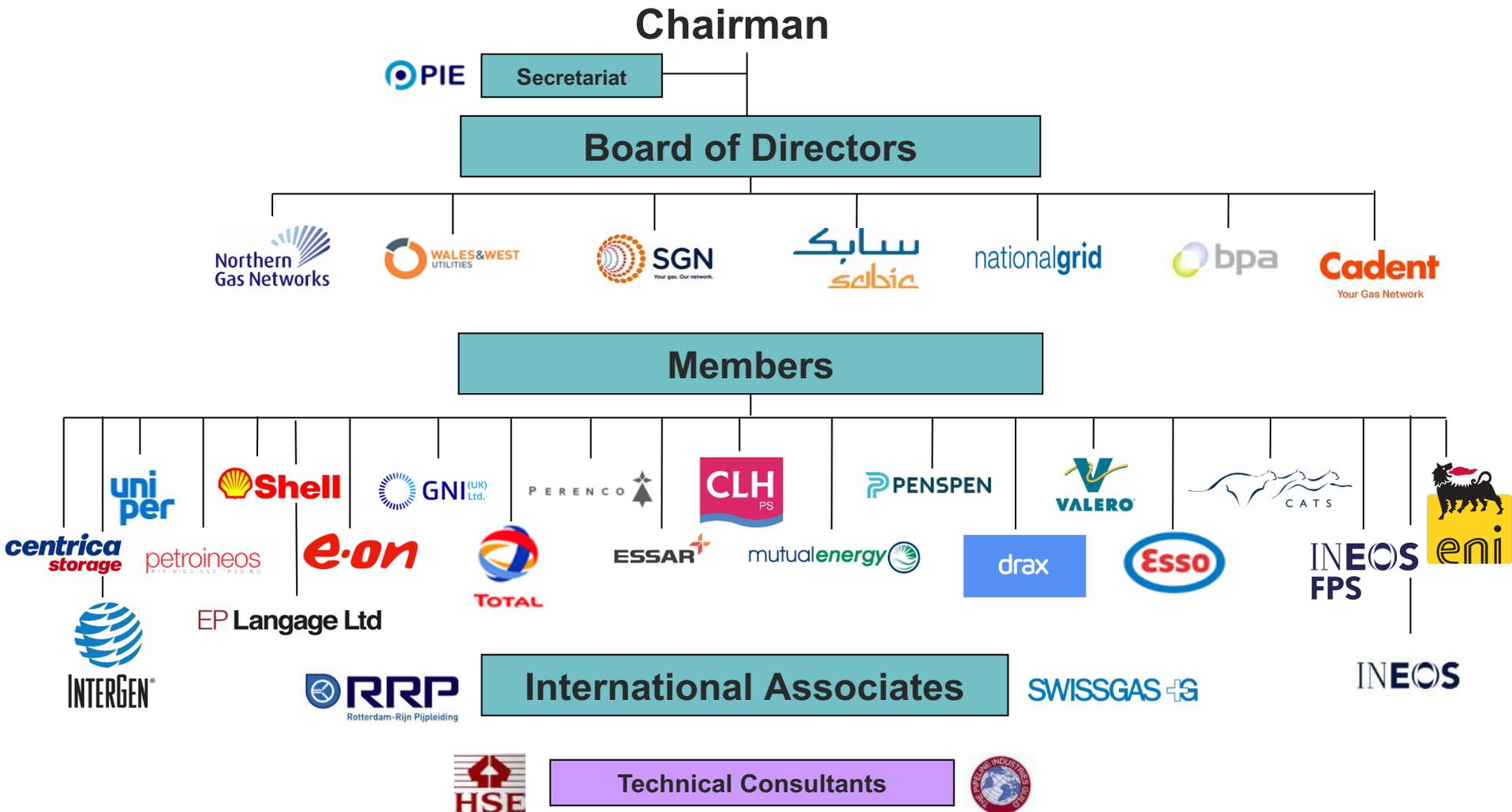
Webinar Series

- This is the first of Webinars to be provided by UKOPA during 2021
- All previous presentations can be found in the members centre
- For this session, please
 - Ensure your microphone is muted & webcam is off
 - Use the chat facility to raise any questions during the session ... this will also allow us to get back to you with a response if we didn't have time to answer your question during the session

UKOPA Overview

- UKOPA is an industry group comprised of UK onshore pipeline operators
- UKOPA exists to provide the recognised and authoritative view of UK pipeline operators on strategic issues relating to safety management, operations and integrity management of hydrocarbon pipelines. It seeks to effectively influence the development and implementation of pipeline related legislation and standards for the mutual benefit of all stakeholders
- Produces Good Practice Guides and Technical Bulletins and carries out research to support the industry

UKOPA Organisation



UKOPA Organisation

Working Groups

- Pipeline Integrity Working Group - Tim Rudd
- Fault & Risk Assessment Working Group – Simon Joyce
- Infringement Working Group – Phil Taylor
- Process Safety Working Group – John Ferrari
- Emergency Planning Working Group – Andy Middleton
- Possible addition to the working groups being considered by the UKOPA Board – Cathodic Protection Working Group

Overview

- Use of Drones – Pre January 2021
 - DMARES - Drone and Model Aircraft Registration and Education Service
 - What rules were in place for commercial operations?
- New rules – January 2021
 - Outline of Changes to Existing Rules
 - Why the Change?
 - EASA Operational Categories
 - New Aircraft Categories
- Should UKOPA do more work in this area
- Next steps

Use of Drones – Pre January 2021

- **DMARES – Drone and Model Aircraft Registration and Education Scheme**
 - Active regulation since November 2019
 - Renewed every 12 months.
 - All aircraft weighing more than 250g including the battery – even if not being used for commercial operations.
 - Owner of drone must register as an operator and display their operator ID on all their aircraft.
 - Pilots, even hobbyists, must complete an online exam to prove basic safety knowledge.
 - Why? – Accountability of ALL drone operators if lost etc.

Use of Drones – Pre January 2021

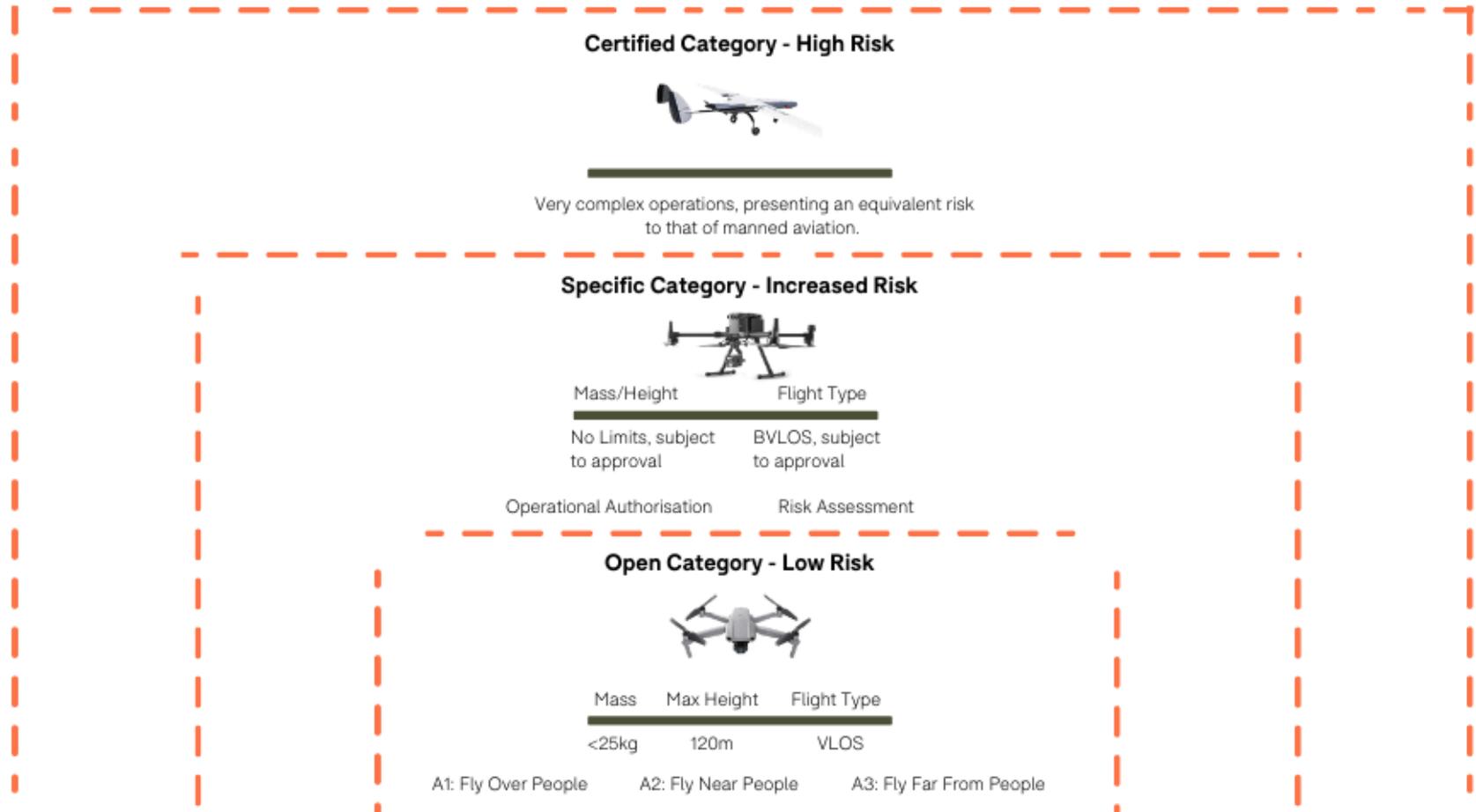
- **Permission for Commercial Operations - PfCO**
 - Only way to operate commercially/for financial gain
 - Operators must submit operations manual to the CAA for all types of work planned.
 - Renewed annually, along with operations manual, and flight logs.
 - Covers all drones up to 20KG
 - Minimum insurance requirement of £750,000 and in line with EC785/2004
- **Operational requirements/Distances**
 - No separation distance from any involved people
 - 50m distance from anyone not briefed and 'under the control' of the remote pilot
 - 50m distance from any building/structure not 'under control' of the pilot.
 - 50m distance from any built up area – Not defined by CAA - determined by remote pilot
 - 30m separation distance from un-involved people or buildings during take-off and landing.
 - 400ft MAX operating height

New Rules – January 2021 Onwards

- Outline of Changes to Existing Rules
 - DMARES registration – ALL drones must carry an operator ID if they are equipped with a camera
 - Previous PfCO rules still stand and can be renewed.
 - No new PfCO's issued
- Why the Change?
 - Come into line with unified European operations guidelines and practices – Despite Brexit!
 - Governed by EASA – **E**uropean **U**nion **A**viation **S**afety **A**gency
 - Runs as a risk based system to open up the use of drones and drone operations – Determined by size and capability of drone as well as intended use

New Rules – January 2021 Onwards

Operational Categories



New Rules – January 2021 Onwards

○ Operational Categories

- Open Category – Low Risk – Split into 3 sections – A1, A2 & A3
- Specific Category – Increased Risk
- Certified Category – High Risk – Equivalent to manned aircraft risk.

○ Aircraft Categories

- Each operating category is linked to certain aircraft categories depending on the weight and speed of the aircraft.
- No aircraft are currently manufactured that can receive any of these category markings.
- Transitional period until January 1st 2023 allows the use of 'Legacy Drones'
- All drones sold will then be required to be certified from 2023

New Rules – January 2021 Onwards

- **A1 Open Category – Fly Over People**
 - This category is for drones which pose the least risk, due to their weight and other factors.
 - **Class C0 drones and drones with sub-250g flying weight (i.e. DJI Mavic Mini):** No flight over assemblies of people.
 - **Class C1 drones and A1 Transitional drones (less than 500g, i.e. DJI Mavic Air and Spark):** No intentional flight over uninvolved persons.
 - **After 2023** – A1 Transitional drones will require a A2 CofC qualification
- **A2 Open Category – Fly Near To People**
 - A2 Certificate of Competency (A2 CofC) is the minimum required to fly within this category. Online test and practical flight training – lasts 5 years – No Ops Manual
 - Enables drones which are C2 rated (these drones will weigh up to 4kg) to fly up to 30 metres horizontally from people, or even closer in low-speed mode.
 - A2 Transitional drones – i.e. drones which are currently on the market but not class-marked – weighing up to 2kg can fly up to 50m horizontally from people. (DJI Mavic 2 Series/Mavic Air)

New Rules – January 2021 Onwards

- **A3 Open Category – Fly Far From People**
 - This subcategory involves flights far away from people
 - For larger aircraft (>2kg) and for pilots who have an A1 Transitional or A2 subcategory aircraft, but have not obtained an A2 CofC
 - No flights within 150m horizontally of residential, commercial, industrial or recreational areas
 - No uninjured persons to be present within the area of the flight
 - No Flights within 50m of people
- **Open Category – Classes of Drone**
 - New drones sold after January 2023 will all have class marking.
 - **Class C0:** May be flown in all subcategories.
 - **Class C1:** May be flown in all subcategories.
 - **Class C2:** May only be flown in subcategories A2 (with an A2 CofC) or A3.
 - **Class C3:** May be flown in subcategory A3 only.
 - **Class C4:** May be flown in subcategory A3 only

New Rules – January 2021 Onwards

- **Specific Category – Increased Risk**
 - For operations of greater risk than that of the Open category, or where one or more elements of the operation fall outside the boundaries of the Open category
 - Geared towards enterprise pilots
 - Operator must hold an Operational Authorisation from the CAA
 - Operational Authorisation has replaced the PfCO
 - Pilots must hold a GVC (**G**eneral **V**isual Line of Sight **C**ertificate) which lasts 5 years or can have been PfCO holders until 2024
 - Operational Authorisations include risk assessments of the proposed operational envelope – these can vary from company to company
 - Expect to be asked to sign an NDA to view any Operational Authorisation paperwork such as the operations manual

Governance of Responsibility

- **CAA**
 - Responsible for all areas of flight, from when the aircraft is ready to fly and until the aircraft comes to a rest with its primary propulsion system shut down.
 - Minor Incident reporting – Via ECCAIRS 2 online form.
- **HSE**
 - Responsible for all ground based operations as part of “Safety at Work”
 - Internal flights/Not in open air e.g. Elios Drone
- **Air Incidents Investigation Branch (AAIB)**
 - Responsible for investigating accidents and serious incidents involving non military aircraft during flight.
 - Normally called upon/involved by CAA
- **Police**
 - Police have a responsibility to take action when a drone is being used dangerously or in a way as to cause a nuisance or criminal offence i.e. is a drone was being used to film sensitive assets without permission.
 - People can behave illegally whilst operating within CAA guidelines.

When might UKOPA members make use of Drones (now / future)

- Pipeline surveillance flights
- Fixed asset surveys
- Vantage point surveys
- 3D mapping / surveying
- Structural inspections
- Reduction in CO₂ - allowing remote meetings whilst viewing the area / site / asset
- MOBS / HRB surveys
- Leakage detection
- Emergency Management (intrinsically safe) fly over a restricted incident area

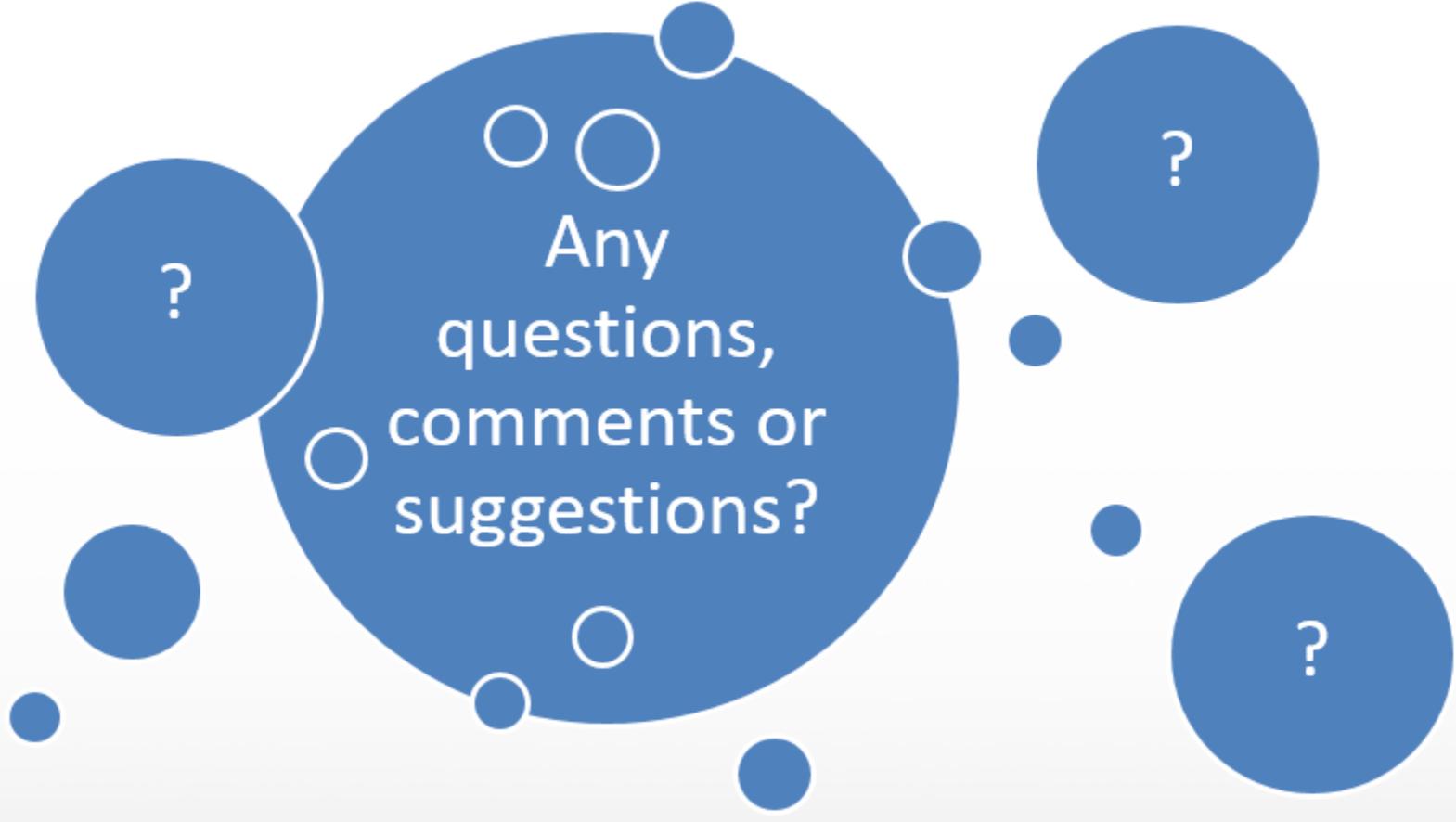
Is guidance for members wanted and if so, what might it cover?

- Contractor selection
- Flight planning and risk assessment
- Training, competency and licensing
- Proximity to assets, hazardous areas
- Data proximity / privacy
- Interpretation and use of data collected

Next Steps

- Seek members view for further work
- If wanted
 - Develop scope of work
 - Create subgroup to develop (manage development of) guidance document
 - If you are interested in this group, please indicate in the chat or drop Nikki Barker an email

Any Questions?



Any
questions,
comments or
suggestions?

UKOPA webinars

- Other webinars will be arranged during 2021, initially focusing on UKOPA published GPGs
- Any suggestions for future topics, please email Nikki Barker (nikki.barker@pieuk.co.uk)