Attendees:

Chair: Iain Gray, Cranfield
Geoff Pugh, Consortiq
Brian Hampson, ADS
Gavin Moir, NATS
Graham Brown, ARPAS
James Dunthorne, ARPAS
Stuart McGlynn, Cyberhawk
Chris Fleming, Cyberhawk
Simon Ritterband, Moonrock Insurance
Craig Roberts, PwC
Neil Watson, Thales
Mike Gadd, Altitude Angel
Mark Westwood, Connected Places Catapult
Andrew Chadwick, Connected Places Catapult
Official from BEIS

Apologies:
Stuart Young, Thales
Philip Tarry, Halo Drones
Nick Rogers, Sky Futures
Rikke Carmichael, Network Rail
Hector Figueiredo, Qinetiq
Owen McAree, LJMU
David Walters, Blue Bear
Kathy Nothstine, Nesta
Nikos Pronios, Innovate UK

1. Welcome and updates

Iain Gray welcomed all and thanked Consortiq for hosting. The previous meeting's minutes were adopted as a true and accurate record, and are available on the ARPAS-UK website.

Geoff Pugh, General Manager of **Consortiq** welcomed guests to their offices and outlined Consortiq's activities, including their drone training, consultancy and flight safety and planning services in the UK and across the world. They have trained over 1500 drone pilots at 11 locations, and currently have capacity to train over 900 per year. Summarising clients' perspectives, key issues remain the volume and complexity of drone regulations, burden of manually planning and maintaining records and fear of crashing / corporate liability.

Simon Ritterband of **Moonrock Insurance** gave a drone insurance market view. Moonrock insure c2,000 of the 5,000 UK operators. He reported:
- A disturbing trend of non-renewals as pilots/ operators failed to grow revenues. Some jobs are going to unregulated operators, who under-cut licenced, insured operators. Others were sub-contracting work or had closed down. A number of previously qualified pilots are still promoting and operating without PFCO and insurance.
- His view that more specific training and standards, focused within specialisms, could unlock growth and lower insurance premiums. Oil & gas, Network Rail and police are doing this, and Simon felt standards were best led by industry working with consumers and self-regulating. Numerous sectors (eg surveying, agriculture, TV/Film production, estate management) could all benefit from high training standards and suppliers to contract through formal frameworks.
- Pricing BVLOS flights is a current challenge, with few operators and uncertainty over liability and accountability. Simon called for an agreed data standard/ approach. Solutions are emerging and he would welcome those trialling BVLOS systems to share their Operational Safety Cases to present to underwriters so as to build a better understanding and costing model for insurers across the sector.

- Operators self-certify that they have appropriate training and insurance. Currently there is no audit. But as insurance is now digitally provided, this could be automated (as it is by DVLA for car insurance). **Action:** Simon to consider and present options, eg with CAA

Gavin Moir of **NATS** updated that their drone team had recently moved to their Regulated side of the business, as this is an essential public service they are providing (and not a commercial endeavour). Their Airspace User Portal (AUP) is working well but still only seeing modest use. They continue to face the challenge of communicating to pilots that a 'known' drone is OK. They thanked ARPAS users for feedback, and noted there are still users complaining of restrictions near airports not using the AUP with no right of redress for safe operators. Gavin said NATS operates commercial NQE training services and is well engaged in UK conspicuity in European and international discussions.

GOVERNMENT UPDATES
- DfT is busy with the Unmanned Aircraft Bill, which followed Government's consultation response in January and increases police enforcement powers. Timing of the Bill is still unknown, subject to Parliamentary scheduling.
- The drone registration scheme is still undergoing development by CAA. Consultation on the charges concluded on the 7 June. Beta phase is expected in October, with legal requirement to register 30 November. Lots of correspondence is being received, including from the model aircraft and DfT continues to engage with CAA.
- EASA drone regulations were laid recently, and DfT and CAA are working on how these will be implemented over the coming years.
- CAA has launched its innovation hub and Regulatory Sandbox. There are six in the first cohort of the Innovation Hub.
- Mark Westwood, CTO at **Connected Places Catapult,** committed to refresh and recirculate working group plans for Operating Safety Cases and Devspace. These would include objectives and frame what is needed for delivery. Craig Roberts offered to assist in structuring this, and BEIS would assist in circulating as relevant within government.

In discussion, the following points were made:
- While the CAA charge of £16.50 did not seem excessive, a number felt CAA had adopted the wrong logic, and that such a service (essentially a database) should cost much less than £2.8m a year to run, even serving 170k users. Other potential service providers exist. Altitude Angel said managing their 183k users costs a small fraction of that amount. Amazon Web Services has a free drone registration scheme, which has ICAO approval. ARPAS-UK was responding to the consultation. APPG on General Aviation was an important stakeholder.
- CAA had elsewhere stated that it would provide explanatory notes on the new EASA legislation and that as this is mostly around systems and manufacturing standards, it was not felt to be contentious. CAA is supportive of the approach, having spent a long time in Europe making the case for their current approach (Open, Specific, Certified).
- With all the changes (new innovation teams, registration, conspicuity, etc) the group had a number of questions for the CAA, and felt it could provide valuable input to CAA work, including the current electronic conspicuity activity. **ACTION**: Iain Gray and government will encourage more active CAA engagement with the group.
- Momentum needs to be kept up; MannaAero is currently doing drone delivery trials in Ireland.

2. Perceptions working group
Craig Roberts presented slides, updating on the activities of this working group. He reiterated the objective to facilitate the growth of the UK drone economy by:

- **Public**: Identifying and deploying actions to address negative perceptions held by the public and/or ensure the public has a balanced view of drones by emphasising "drones for good"
- **Industry:** Engaging with industry sectors that will benefit from drone-based solutions and deploying actions to improve awareness and accelerate the adoption of DroneTech.

The group strongly supported the focus of efforts into raising awareness/ perception of *industry* but, due to time constraints, this was not debated at length. There was good engagement and several contributions to the engagement strategy towards *public* perceptions. Ultimately, the working group's proposed approach was agreed. In conclusion:
- The group agreed to target the demographics with the most negative perceptions and/ or distrust (per the PwC survey) with drones-for-good stories that reflect the most supported use cases, also in the PwC survey. To illustrate, this could mean channelling search and rescue drones-for-good stories at the over-55s.
- It was noted this approach did not directly address public concerns about privacy, misuse, etc. These were not considered addressable by the working group and modest proposed budget, the group's objective being to try to "balance" public perceptions such that, should a privacy issue (or another Gatwick) arise, the public would be more reasonable if they had positive drone use cases in mind.
- It was noted also that future actions on public perception could be informed by the proposed approach and would need further input, review and budget.

Funding is required before any more time is spent on this subject and would be sought from across the IAG, from the wider sector and from government. **ACTION**: Iain Gray would write asking for contributions, attaching an abbreviated business case. BEIS and Craig Roberts would assist with this. Government would also look to make the case to provide some funding.

If insufficient funding for all the aspired activity (ie public <u>and</u> industry) was raised, the group would prioritise industry, targeting high growth, low (drone) saturation market with currently available solutions. Expected cost for this was a minimum of £40k for the first phase of activity.

3. AOB
Membership: The group is intended to serve as the principal collaborative forum for exchanging information between government and the sector. The group discussed how to ensure the right range and balance of participation. One approach from a business had been made via the website and the company had been invited, but was unable to attend. **Action**: Iain Gray and government would consider sending invitations to groups representing, among others, the big drone users/ customers, companies developing delivery/ passenger services, counter drone technology companies and insurance providers.