Drone Industry Action Group
27 April 2021 – Minutes
(by videoconference)

Attendees:

Chair: Iain Gray, Cranfield University
Rikke Carmichael, Network Rail
Simon Ritterband, Moonrock Insurance
Aleks Kowalski, Skypointe
Chris Blackford, Sky Futures
Hector Figueredo, Qinetiq
Owen McAree Aerofirm
Graham Brown, ARPAS
Simon Whalley, Skyports
Mike Gadd, Altitude Angel
Stuart McGlynn, Cyberhawk
Will Arinze, Animal Dynamics
Philip Tarry, Halo Drones
Daniel Wilson, BT
Dave Pankhurst, BT
Mark Watson NATS
William Barnes, Frazer-Nash
Mike Gadd, Blue Bear
Richard Nichols, Airwards
Craig Roberts, PWC
Anna Plaster, Oasis
Phil Tarry, Halo Drones
Charles Scales, Windracers

Ricky Bhargava, Skyports
John McKenna, sees.ai
Brian Hampson, ADS Group
Nick Rogers, KinectAir
Neil Watson, Thales
Dominic Walker, Aveillant
Anthony Venetz, Across Safety
Fred Harbottle, Drone Major
Lee Barfoot, Consortiq
Oliver Oswin, PA Consulting
Scott Biddle, PA Consulting
Samantha-Lea Wootton, BSI
Gary Cutts, Future Flight
Nikos Pronios, Innovate UK
Tony Fong, Offshore Renewable Energy Catapult
Dan Sumner, Offshore Renewable Energy Catapult
Marcel Quintana, Satellite Applications Catapult
Mark Westwood, Connected Places Catapult
Andrew Chadwick, Connected Places Catapult
Stephen Limb, Ofcom
David Tait, CAA
Jennifer Cooke, MCGA
Officials from BEIS, DFT and Home Office

1. Welcome and sector ambition proposal

Iain Gray welcomed all to the meeting. He recalled the group was convened in 2016 to help drive growth of the UK commercial drone sector and to provide a conduit between government, industry and academia. While less active during Covid, it had a successful history of sharing best practice and had provided trusted input over the years to support a range of activities, including drone registration, traffic management, industry standards, public perception and drones for good, technology roadmapping, the Pathfinder programme and most recently Future Flight.

Iain saw immense UK and global potential for commercial drones and felt the UK sector was at a crossroads. With leadership and a shared strategic ambition, the UK drone sector would be better placed to grow and fulfil this potential.

He called on the drone community to collaborate on this ambition, which he felt should focus on the small commercial drones (ie not counter drones, or larger passenger air mobility, or wider land or maritime autonomy). As well as a longer term (c 2030) ambition the focus should be on nearer-term opportunities possible with existing UK-based capability. A range of questions remained to be resolved, including the target audience and key blockers and enablers, and he called for volunteers to come together to articulate what was needed.

In response, DfT and BEIS welcomed this initiative, which they would aim to support. Ministers need to be engaged on the proposal and aviation, business growth, public engagement and international

challenges understood. The Connected Places Catapult offered its support and commitment of resources to help drive this initiative.

There was overwhelming support for the ambition from the participants on the call. In discussion, a number of points were made:

Process
- Ministerial engagement and support is critical, as are resources to drive activity and actions.
- Recent roadmapping workshops have covered much ground. Collating, amalgamating, validating and bringing attention to these would be an effective way of pooling the considerable effort already undertaken.
- While long-term ambitions are laudable, they can lack urgency. A 2025 timescale would better accelerate existing capability and projects.

Scope of ambition and activity
- Real benefits were seen of the potential economic, environmental and wider social benefits to the UK economy of uptake of drones and wider autonomy. Articulating the contributions to net zero would be important.
- The ambition should be clear of the volume and range of drone activity envisaged, including ideal or plausible scenarios of drone uses, and forecasts of the level and type of benefits. There are many different 'publics', some support GDP and job growth, others efficiency or positive social and public benefits. In many sectors, drones are delivering game-changing safety benefits, which should also be articulated.
- Ambitions are useful, but critical is to identify the key barriers, whether in identification, connectivity, insurance or U-space, and outline how the ambition will address these.
- A number of use cases would emerge soon from the winners of the first Airwards. a bold ambition, with time-bound targets and to help generate public awareness and support.
- While agreeing to limit scope, links to existing bodies representing counter-drone and UAM should be clear, with respective groups should sighted on each other's ambitions
- A proposed ambition was offered: "To make drones commonplace in a way that safely benefits society"

Issues and challenges
- Airspace integration is key. Real regulatory hurdles exist. Proving safety for BVLOS operations and integration with other users is a shared challenge and segregation through Temporary Danger Areas negatively impacts the wider aviation community. Government needs to help support wider, more seamless access to airspace.

- What's lacking is sharing learning and insights between operators across projects and programmes (including regulators), while respecting IP. The industry is still in the value creation stage of growing the market for all, so collaborating and widening access to knowledge is essential (eg through sector events like the Amsterdam Drone conference).

- Broad uptake of commercial drone solutions across the wider economy will need confidence in regulatory approvals and seamless, easy incorporation of the data.

2. Sector updates

Maritime and Coastguard Agency (Jennifer Cooke, Aviation Innovation and Future technology Lead) *– see attached slides*

The MCA operates across ten bases delivering about 2000 tasks over land and sea. Half of these are for emergency services, and wider aerial services include environmental (pollution, emissions, erosion), maritime safety and immigration with OGDs. The MCA is keen to collaborate with and learn from wider industry. They already work with police and universities on specific projects. They subcontract helicopter services to Bristows.

Looking ahead, the UKSAR2G programme will comprise four components: Rapid response (incl rescue); longer range rotary wing (incl rescue); fixed wing rapid search, surveillance and counter pollution response; combination of all three lots. The initial Supplier Questionnaire has already gone out and the full ITT is due to go out in Summer 2021.

Last year MCA piloted UAV search using Elbit's (Hermes) capability, which provided important information on the work going forward. They are aware that Temporary Danger Areas will not work for rapid response.

One participant commented that they hoped UK industry would respond positively to the future MCA contract, given the thriving aerospace industry in the UK.

sees.ai (John McKenna, Co-Founder and CEO) – *see attached slides*

John McKenna introduced sees.ai's technical expertise and ambitions. Their focus is drone operations across a wide range of controlled industrial environments. They have set themselves ten increasingly difficult technical and regulatory challenges to achieve BVLOS alongside live industrial (incl road and rail) activity over the coming 2 years. End-user partners include Skanska, HS2, Sellafield, emergency services, Network Rail and Atkins (road building). They were successful with two projects receiving Phase 2 Future Flight funding. Being a young company with a range of technical expertise, but new to aviation, they appreciate the benefits of coalition working. They are also concluding a trial which received FF Covid funding.

Their system flew remotely last week over 350 miles: pilots from Sellafield operated a physical drone system flew from sees.ai's office in Chichester. At this stage, a local pilot is on hand to assure safety, but they aim to move beyond this in time, once data proves reliability. They see cellular communications as a great enabler for the drone ecosystem and are working with Ofcom and network providers to establish new services and help ensure regulation is an enabler.

Airwards (Richard Nichols, Founder)

Richard Nichols updated on the imminent (24-28 May) announcement of the first round of Airwards winners. He greatly valued his engagement thus far with the Drone IAG community. Airwards had received over 200 entrants, whittled down by judges to 100 finalists within 16-20 categories. 80 people had been put forward for the people's choice awards in 5 categories. Richard was looking forward to the announcements and sharing a range of inspiring drones for good stories. 2,500+ followers across social media and 800k+ views of our industry-sharing GIFs.

Following the May announcements, Richard is aiming to build year-round, international learning events and initiatives to boost capability in the sector and ensure stories and messages get out to the public. Looking ahead, Airwards would like to work with DIAG participants to identify, recognise and champion global drone stories and to raise public awareness, excitement and engagement.

3. **Government updates**

DfT: [Air Traffic Management and Unmanned Aircraft Bill received Royal Assent on 29 April](). Police powers will become effective in two months. Secondary legislation is underway, including for fixed penalty notices. The next phase will look at product standards requirements on remote ID and geo-awareness, and DfT would reach out to the sector for input. DfT were also working with CPC to assess and award D-TRIG grants to 6 SME winners. Announcement for these expected in May.

Home Office updated that the inaugural Counter-drone Industry Action Group would take place 11 May, with [JSARC]() coordinating. The focus will be on supporting C-UAS technology development and Remote ID. The joint Home Office, CAA and NPCC [Operation Foreverwing]() aims to combat drone-related crime and increase awareness of the rules and regulations around drone use.

BEIS updated that Government's Innovation Strategy would be published this summer, with an Enterprise Strategy to follow. The Robotics Growth Partnership was developing a vision for the Robotics and Autonomous Systems, which they would be discussing at the forthcoming [KTN showcase event](), to which drone companies are welcome.

CAA: David Tait updated that CAA had been busy with covid response approvals and learnt valuable lessons through this process. Onboarding of Future Flight Phase 2 consortia into the sandbox is underway.

Regulatory Horizons Council - *see attached slides*: Tris Bishop updated on the RHC's aims to publish a futures report (scenarios and high-level regulatory principles) and international report in June. *Action***:** Comments welcome on the scenarios, recent workshop outputs or attached slidepack.

RHC interviews are underway to understand the detail of the UK's existing regulatory systems and model. The team is considering Switzerland, Singapore and USA as potential comparators and would welcome views on how the UK system works compared to overseas regulators. Matt Ridley and Iain Gray would meet to align the DIAG and RHC vision / ambition statements.

Future Flight: Gary Cutts provided a brief update, given time constraints. 2021 had been extremely busy for Future Flight, with £25m spending and 48 Phase 2 projects now underway. Preparation for Phase 3 had begun and would consider what fundamental system architecture is needed to support industry to achieve its ambitions. This would be rooted in their learning from Phase 2 projects.

Future Flight would ds raft itPhase 3 approach over Summer 2021, including though consultation, and aim to launch in Autumn. They anticipate this to deliver active demonstration of real use cases: eg by March 2024 delivering novel operational drone services at scale, including widespread engagement with public. They would support the best of Phase 2, to support their effectiveness.

4. **AOB**

Class Lima: *see Jim Scanlan's paper on 'Class Lima' attached*. Anyone with questions or comments should please contact him directly: J.P.Scanlan@soton.ac.uk

Ofcom: *see attached slides*