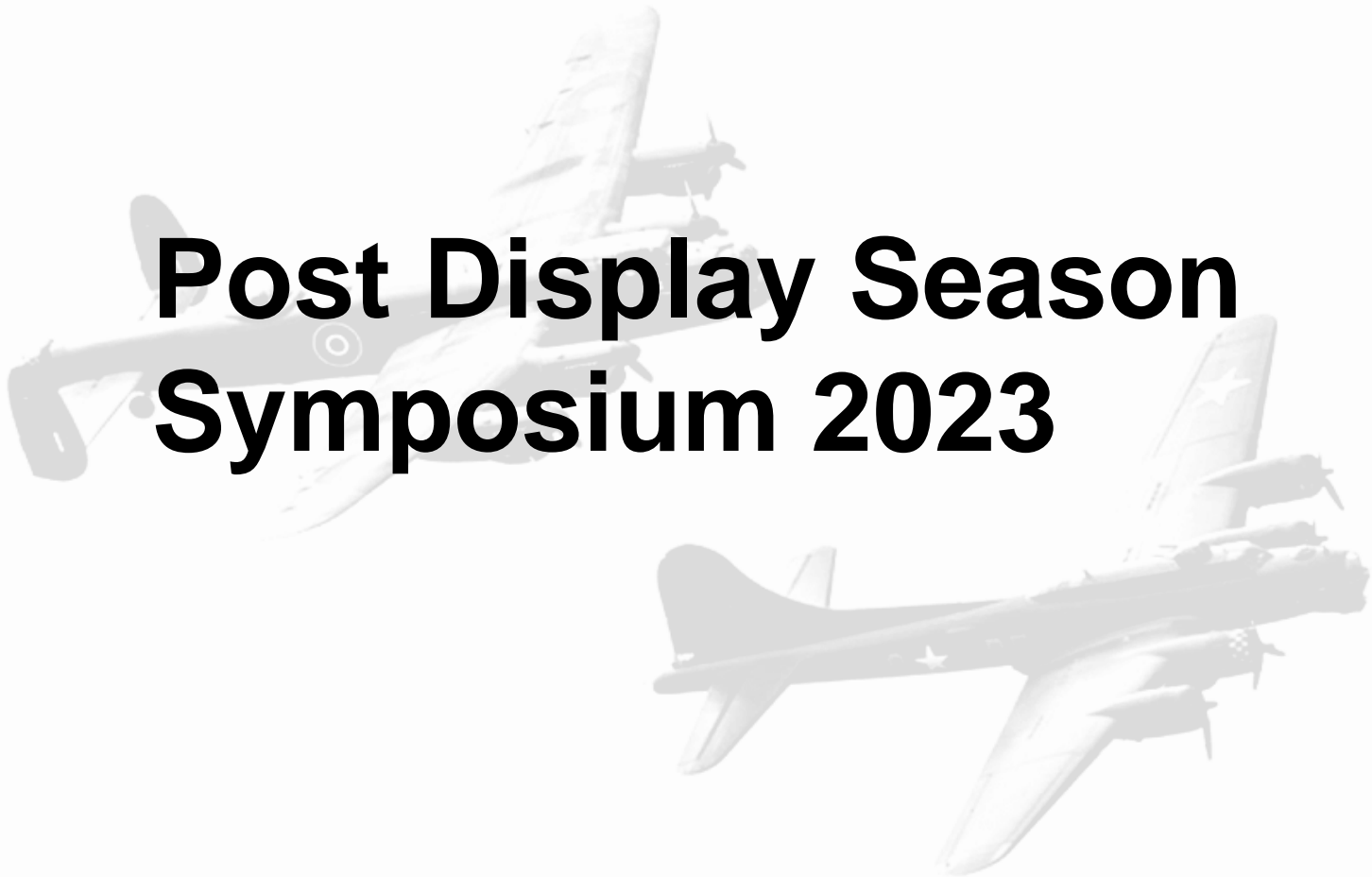




Post Display Season Symposium 2023

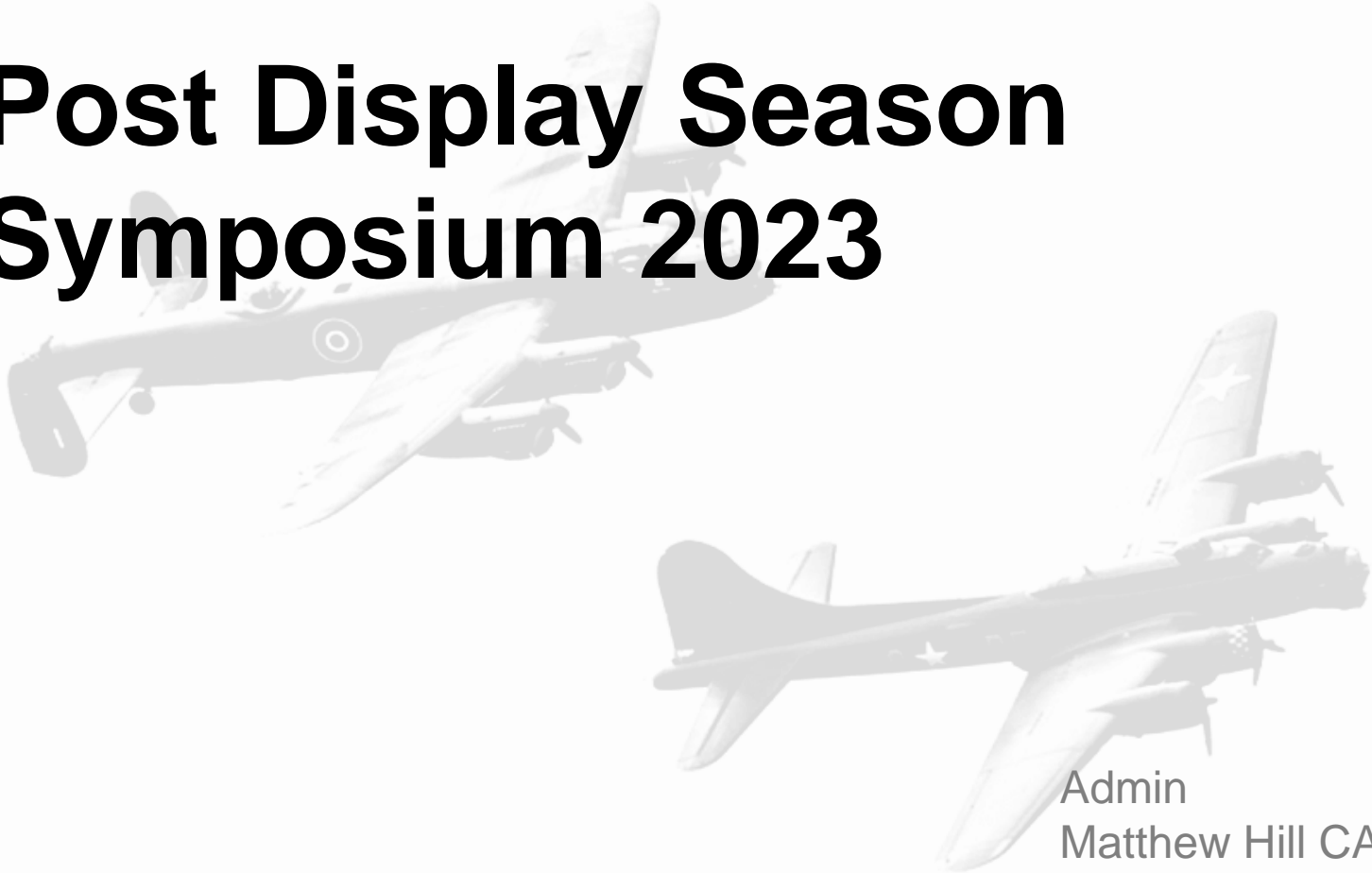




Admin



Post Display Season Symposium 2023



Admin
Matthew Hill CAA

Admin

- **Toilets**
- **Fire Alarms**
- **Fire Muster Points**
- **First Aid**
- **Smoking**
- **Phones**
- **Wi-Fi – Duxford Events**
- **Passwork - MulberryB**

Domestics
Adam Kendall - IWM



Welcome



Post Display Season Symposium 2023

**Paul Sall – Air Display Lead
CAA GA & RPAS Unit**

**Wg Cdr Russ Lavis
DSA-MAA-OpAssure-TEST-AirOps**

Facilitate the identification of lessons from the preceding Display Season, share best practice and review issues and trends arising.

Importantly it provides an opportunity to generate feedback for the Regulators and contribute to the ongoing improvement of safety within the flying display environment.

Agenda

- **1000** **Intro/Welcome**
- **1010** **DS23 – CAA outbrief**
- **1045** **DS23 – MAA outbrief**
- **1120** **DS23 – Safety Survey**
- **1150** **FDFG – outbrief**
- **1205** **Comfort Break**

- **1220** **Honourable Company of Air Pilots**
- **1225** **ROCC briefing / discussion**
- **1250** **Future Dates**
- **1300** **Lunch**
- **1345** **BADA**

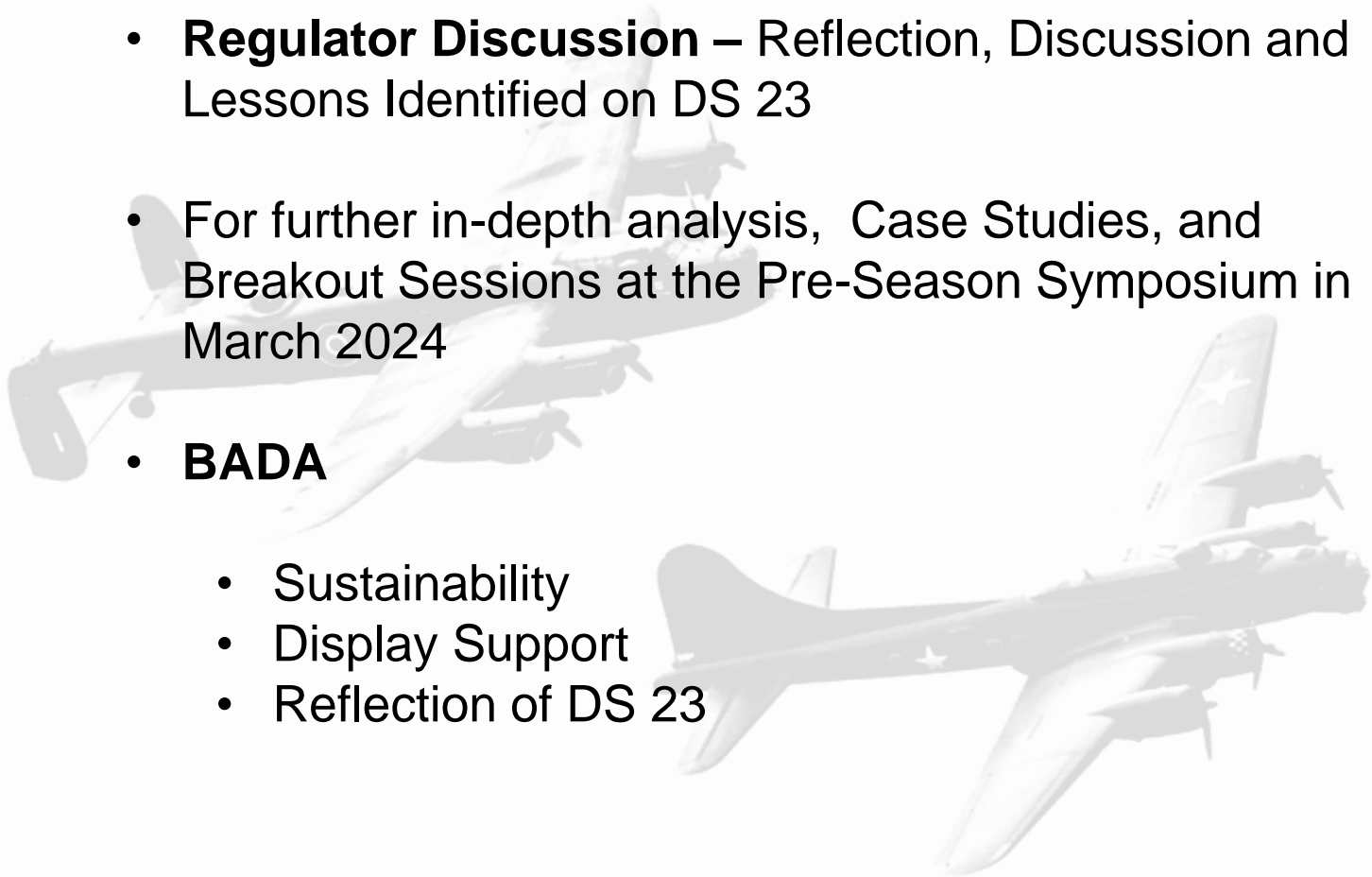
- **Post Display Symposium Changed Format**

- **Regulator Discussion** – Reflection, Discussion and Lessons Identified on DS 23

- For further in-depth analysis, Case Studies, and Breakout Sessions at the Pre-Season Symposium in March 2024

- **BADA**

- Sustainability
- Display Support
- Reflection of DS 23





DS23 - CAA Outbrief



DS23 - CAA Outbrief

Fast Facts & Figures



Total FDDs 86
Total DAEs 50
Total DA Pilots 254

6 Mechanical malfunctions

5 Airspace infringements

2 Drone activity/infringements



3  calls

19 'too close' calls
18 'too low' calls
14 'terminate' calls



44% Late applications

6% Applications <7 days

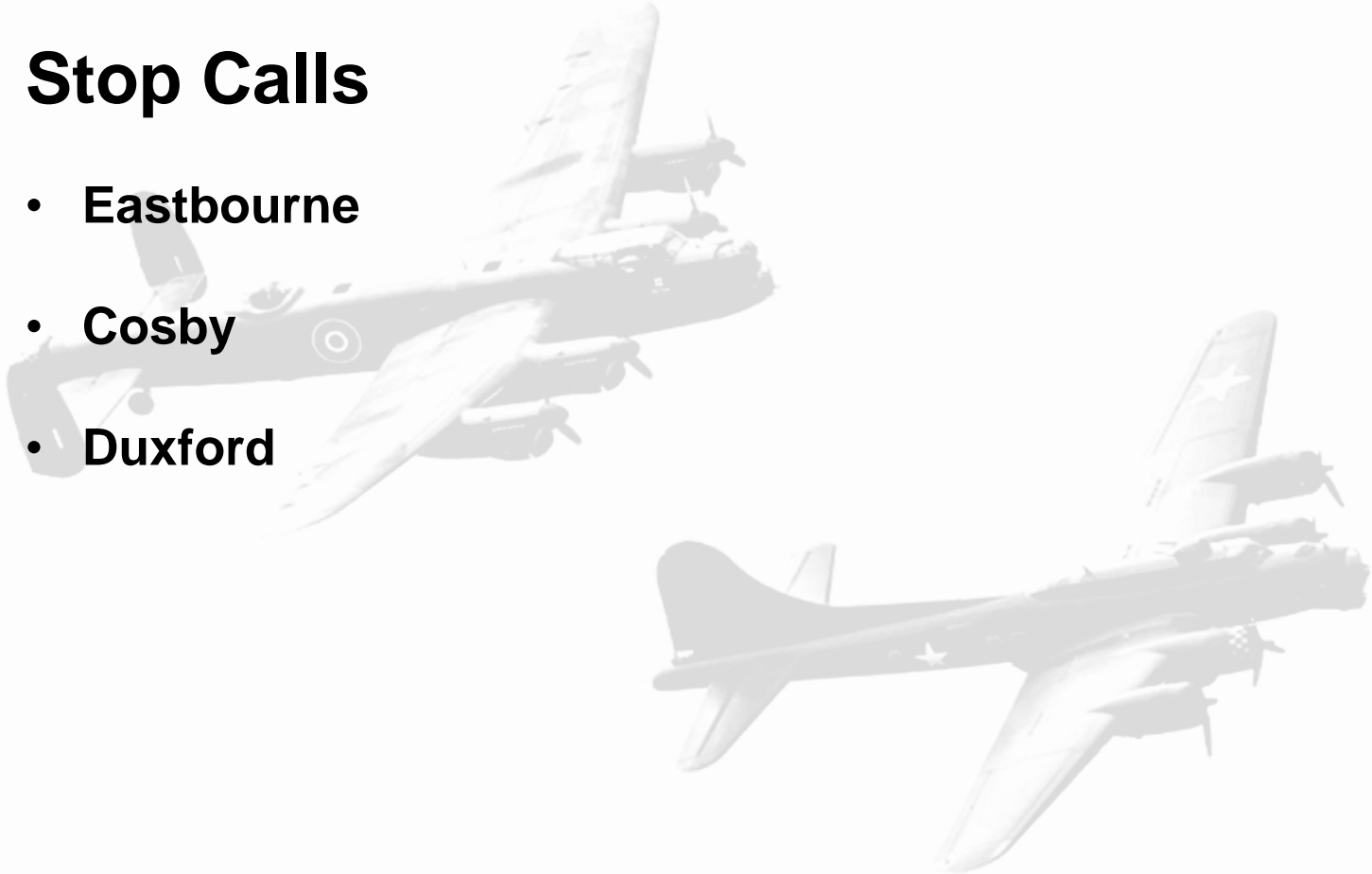
100% Post Event Reports Received

27 of 27 Assurance visits

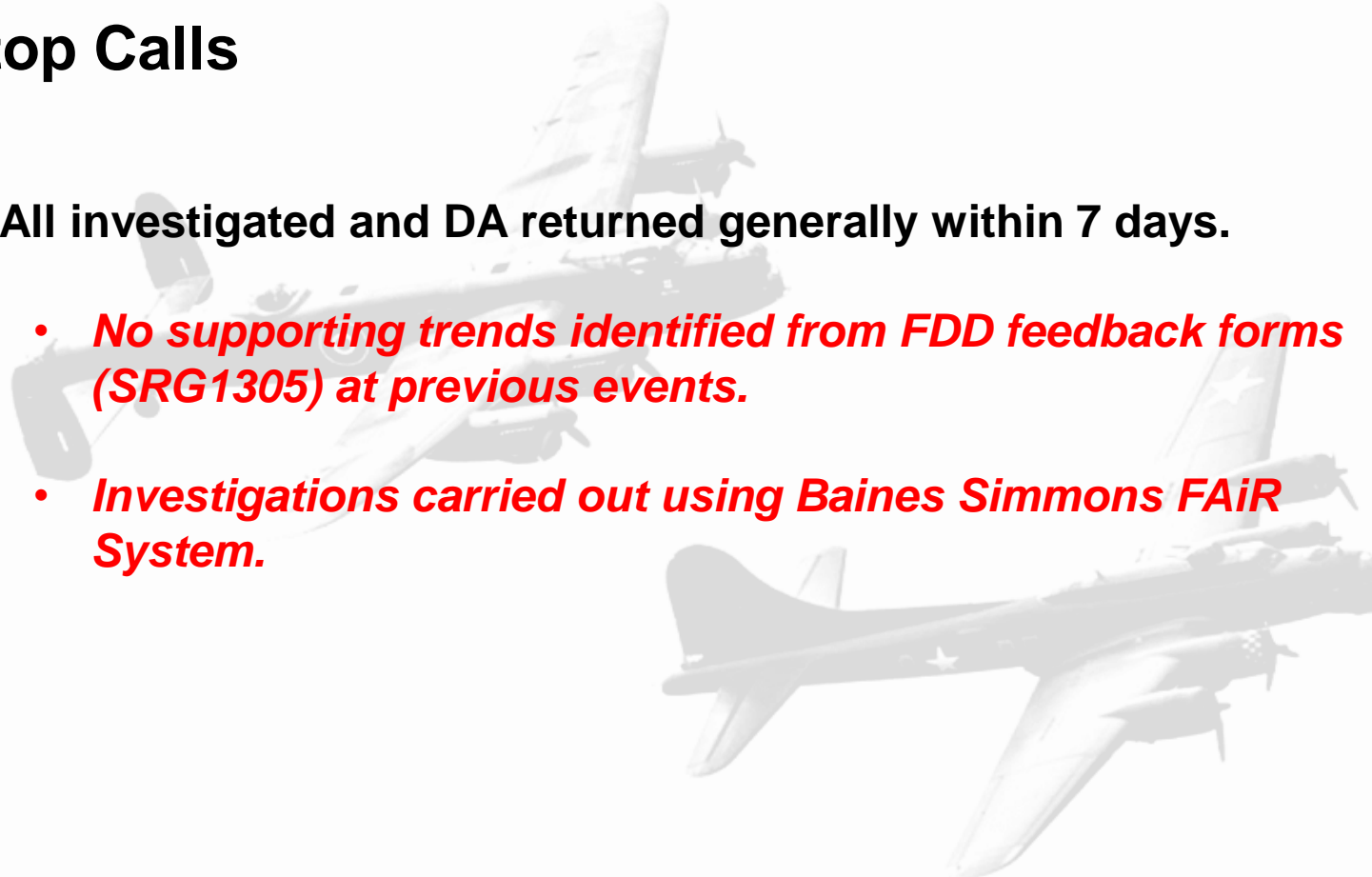
16 of 19 DAE Oversight Visits completed

Stop Calls

- Eastbourne
- Cosby
- Duxford



Stop Calls

- All investigated and DA returned generally within 7 days.
 - *No supporting trends identified from FDD feedback forms (SRG1305) at previous events.*
 - *Investigations carried out using Baines Simmons FAiR System.*
- 

Stop Calls

- **Duxford**
 - **Communication is key between FCC/DFDD/FDD**
- **Eastbourne**
 - **Red 10 Presentation to come at Pre-Season Display Symposium**
- **Cosby**
 - **A manoeuvre not highlighted or briefed to the FDD**



DS23 - CAA Out brief



FAiR System is an innovative management tool designed:

To help organisations investigate events to determine the nature and causes of unwanted acts and thereby ensuring appropriate and effective interventions are taken.

Designed as a behavioural classification framework, the FAiR®3 System ultimately helps organisations support and sustain a Just Culture.

FAiR System process is also used to determine an appropriate and effective intervention for events outwith STOP calls:

- ***Whistle Blower reports***
- ***Display Incidents***
- ***Alleged Breach of Air Navigation Legislation***

Out with the STOP CALLS - Two display occurrences required investigation and resulted in further discussion with DAE and retraining as required.



DS23 - CAA Outbrief

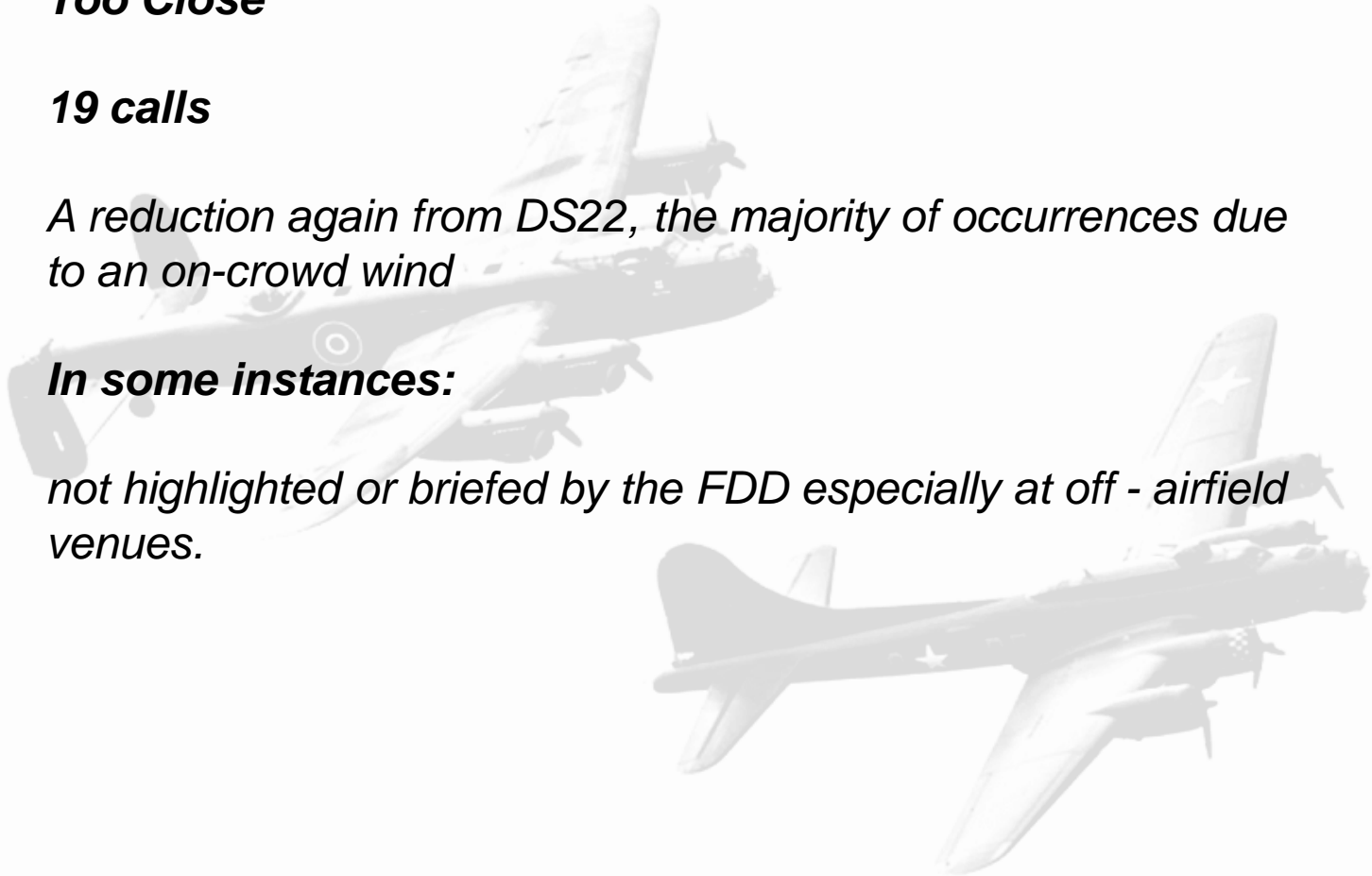
Too Close

19 calls

A reduction again from DS22, the majority of occurrences due to an on-crowd wind

In some instances:

not highlighted or briefed by the FDD especially at off - airfield venues.



Too Low

18 calls

- *A small reduction from last year, many of them flirting with the minimum heights.*
- *There were no repeats during the performance from the pilots after they had been given the warning*

A reminder:

‘the minimum is not a target’

DS23 - CAA Outbrief

Terminate

14 calls

A broad range of reasons for calls:

- *Self terminates*
- *Weather*
- *Low Light*
- *Time*
- *Airspace*
- *Pedestrian encroachment*
- *Engine misfire*
- *Breakdown of SA*

Terminate can be called for a variety of reasons – don't be afraid to use it

Issues/Trends arising

Warning Calls

Why – advisory (other than STOP or Terminate)

Who – FDD/FCC

When – as considered appropriate by the FDD/FCC

What – STOP and TERMINATE will cause a change in plan whilst other calls are just advice

Ultimately it is a dynamic judgement by the FDD or the FCC

Issues/Trends arising

Warning Calls

- It is not a punitive measure but aims to enhance Safety and Learning
- Assess most appropriate time to issue a warning call.
- What will your actions be if the pilot doesn't respond?
- Consider your approach to making a terminate call, and what the key safety factors are in allowing a pilot to safely re-commence.

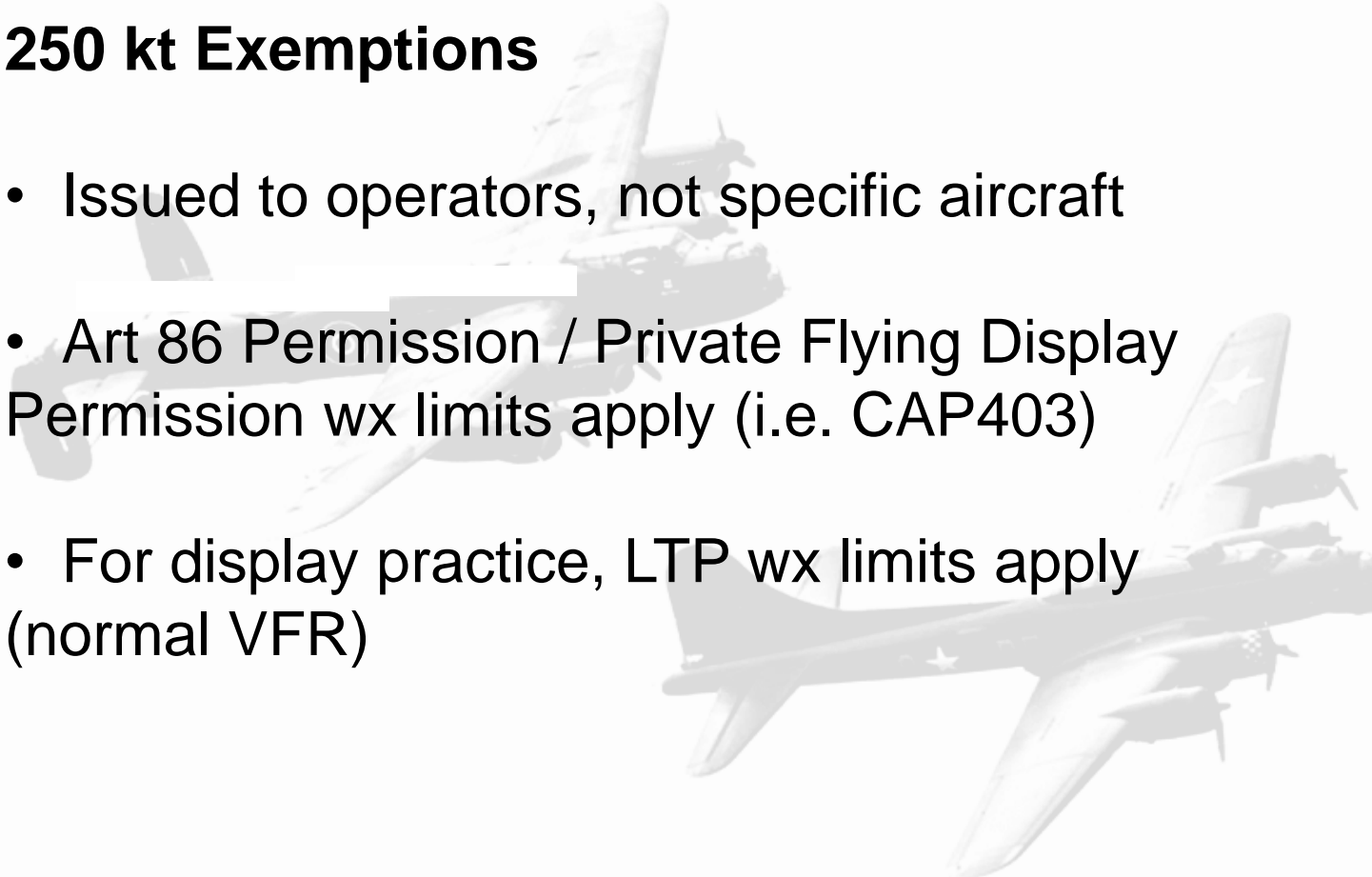


Paul Szluha
ADRT - FSO

DS23 - CAP Updates

- Both CAPs **no significant change.**
- Mostly minor editorial and clarification.
- Target dates:
 - **CAP403** - Public consultation – End of Q4 2023
 - Publication date – Q1 2024
 - **CAP1724**
 - Public consultation – End of Q4 2023
 - Publication date – Q1 2024

250 kt Exemptions

- Issued to operators, not specific aircraft
 - Art 86 Permission / Private Flying Display Permission wx limits apply (i.e. CAP403)
 - For display practice, LTP wx limits apply (normal VFR)
- 



2023 Flying Display Safety Survey



Paul Sall
CAA Air Display Lead





2023 Flying Display Safety Survey



Safety indicators used to:

monitor, identify and analyse contributing or causal factors for occurrences during civil flying displays

and, if necessary,

to review or introduce additional safety mitigations.





2023 Flying Display Safety Survey



- ✓ **17 Questions**
- ✓ **4th meaningful year (Covid)**
- ✓ **48 respondents to date (interim data)**



2023 Flying Display Safety Survey

Respondents



	2019	2021	2022	2023
Tyro Display Pilot (TDA)	1.79%	0.00%	5.17%	6.25%
Display Pilot (DA)	42.86%	65.48%	68.97%	58.33%
Display Pilot Evaluator (DAE)	7.14%	14.29%	37.93%	29.17%
Flying Display Director (FDD)	39.29%	34.52%	22.41%	31.25%
Flying Control Committee (FCC)	26.79%	23.81%	18.97%	25.00%
Event Organiser (EO)	5.36%	8.33%	1.72%	2.08%
Air Display Event Commentator	3.57%	3.57%	0.00%	2.08%

* yellow highlights indicate an increase from 2022 to 2023



* yellow highlights indicate an increase from 2022 to 2023





2023 Flying Display Safety Survey



- The Air Display organisations and people I worked with or observed during this year's display season:

	2019	2021	2022	2023
	Agree/Strongly Agree %	Agree/Strongly Agree %	Agree/Strongly Agree %	Agree/Strongly Agree %
Have a strong safety culture	95	92	98	98
Rarely deviate from operating procedures, flying regulations or general flight discipline	93	85	96	79
Report all adverse incidents, near misses and issues encountered during a flying display	78	77	83	79
Operate a just culture where the reporting of safety violations, unsafe behavior or human error is encouraged	79	79	89	81





2023 Flying Display Safety Survey



The Survey suggests a stable just environment, where regulations are adhered to and reporting of adverse incidents, errors and unsafe behavior or human error is reported or encouraged

BUT HOW CAN WE MAKE IT BETTER





2023 Flying Display Safety Survey



Please indicate the extent to which you agree or disagree with the following statements:

	2019	2021	2022	2023
	Agree / Strongly Agree %	Agree / Strongly Agree %	Agree / Strongly Agree %	Agree / Strongly Agree %
I always ensure that I am conversant with current regulations	98.22	96.39	98.30	100
I consider that recent changes set out in CAP 403 and CAP 1724 have helped improve flying display safety	44.64	40.47	50.84	65.96

* yellow highlights indicate an increase from 2022 to 2023





2023 Flying Display Safety Survey



Comments from the survey

What is the biggest air display-related safety concern you have?

Ad hoc mixed type formations

Pilots with multiple commitments.

Formation flying, specifically pilots who have gained a formation skill level but do not remain current or who have a poor background knowledge of formation principles





2023 Flying Display Safety Survey



What is the biggest air display-related safety concern you have?

Old school pilots who are very experienced in hours and years not heading to current practices and operating systems.

Individuals who work outside organisations and work to their own processes without oversight.

Worrying about FCC and infringement calls being negative to your season rather than just an advisory

Lack of ability/legal power to move people who put themselves in potentially dangerous positions





2023 Flying Display Safety Survey



Have you witnessed or do you have any flying display related concerns? If so, what are they?

Reluctance to caution a pilot, on debrief, if a display item exhibited some element of risk. (FCC / EO/ SAG member comment)

FDDs and FCC members concerning themselves with operating related issues instead of focusing on display related issues. (DA / DAE/ FDD / FCC comment)





2023 Flying Display Safety Survey



The 'So what'

- Appropriate briefings/debriefings for the activity.
- Warning Calls should be considered normal practice for Safety and Learning.
- Review and address risks emerging
- Don't Hesitate to Consult with the CAA/MAA.



The Survey remains open until the end of November

Please complete it by searching:

CAA Safety Survey 2023



surveymonkey.co.uk

<https://www.surveymonkey.co.uk> › ... ⋮

CAA Post Flying Display Season Safety Survey 2023

This **survey** is designed to elicit information from the air display community about matters affecting **safety** so that trends can be identified and addressed, ...





DS23 - FDFG Outbrief



DS23 – FDFG Outbrief

Paul Sall

CAA Flying Display Lead





DS23 - FDFG Outbrief



Flying Display Focus Group

Aim: To assist the GA Unit in the development of Flying Display policies, procedures and guidance in order that due attention is given to the areas of interest or concern in a collective effort to maintain and improve safety at Flying Displays, for Flying Display participants and the general public.

Make-up: Currently 40 invited members, drawn from all stakeholders in the air display community (FDDs, FCC, DAEs, DAs, BADA, MAA).

Two FDFG Meetings held in 2023: May and September

DS23 - FDFG Outbrief

May 2023 Discussion Points:

1. The criteria driving the decisions to carry out assurance visits at flying displays.
2. The limitation of a DA being renewed no more than twice consecutively by the same DAE.
3. **The SRG1303B form.**
4. Temporary DA validations
5. Overflight of crowds at flying displays.
6. Display category for electric aircraft.
7. Minimum crew in display aircraft.
8. Human Factors in Air Displays course.
9. On-site display practices on the day of an event.
10. Article 86 Long Term Permission project.
11. ROCC.
12. Stakeholder feedback on CAA assurance visits to flying displays.
13. FDD briefings to DAs.

DS23 - FDFG Outbrief

September 2023 Discussion Points:

1. Members' impressions of DS23 to date.
2. **H&SE 'Purple Guide' inclusion of Flying Displays.**
3. Drones at flying displays.
4. Article 86 Long Term Permission project.
5. Future arrangements for Display Symposia.
6. Airspace Coordination Notice requests.
7. STOP calls.
8. SRG1327 returns and a collective flying display data repository.
9. Applications for display frequencies.
10. **Article 89 requirement for pyrotechnic displays.**
11. Simplifying the 250kt exemption for CAP632 operators.
12. On-site display practices on the day of an event.

DS23 - FDFG Outbrief

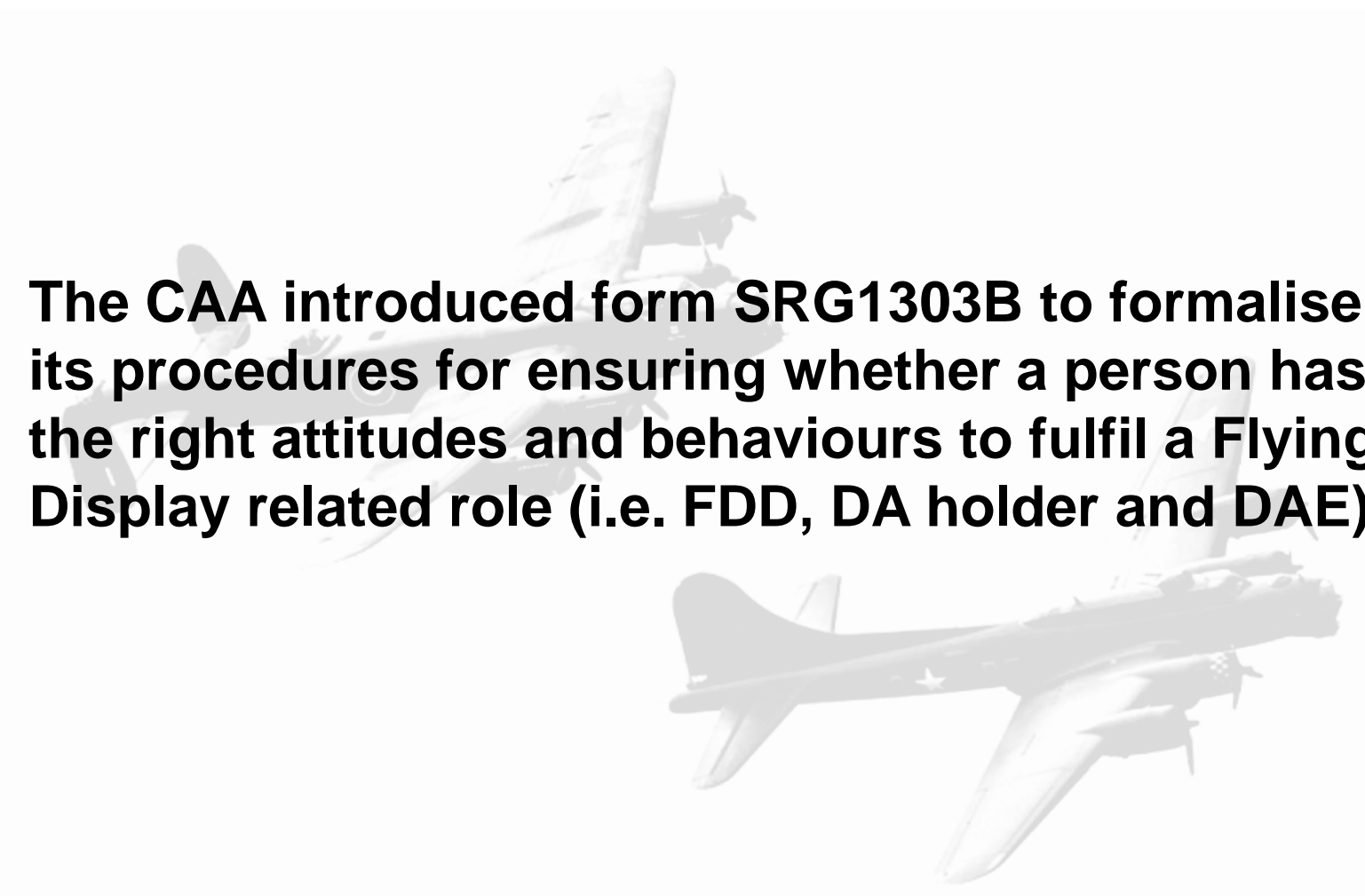
- 
1. H&SE 'Purple Guide' inclusion of Flying Displays.
 2. SRG1303B.
 3. Article 89 requirement for pyrotechnic displays.

DS23 - FDFG Outbrief

H&SE 'Purple Guide' inclusion of Flying Displays.

The background of the slide features two military aircraft in flight, rendered in a light grey, semi-transparent style. The aircraft in the upper left is a four-engine bomber, possibly a B-29 Superfortress, with a circular insignia on its fuselage. The aircraft in the lower right is a four-engine bomber, possibly a B-29 Superfortress, with a star insignia on its tail. The aircraft are positioned diagonally across the slide, with the upper one appearing to be in a climb and the lower one in a level flight.

SRG1303B



The CAA introduced form SRG1303B to formalise its procedures for ensuring whether a person has the right attitudes and behaviours to fulfil a Flying Display related role (i.e. FDD, DA holder and DAE)

SRG1303B

- **To be submitted:**
- **DA, DAE and FDD Initial Issue.**
- **DA renewals and upgrades only where there has been a change to previously declared information.**
- **(A)FDDs once every three years to coincide with (A)FDD revalidation.**
 - Or earlier if there has been a change to previously declared information
- **DAEs once every three years to coincide with DAE re-appointment.**

ANO Article 89

Article 89 prohibits the dropping of articles from an aircraft in flight unless the exceptions or alleviations in that Article apply, or "with the permission of the CAA".

The CAA may permit the dropping of articles provided persons or property are not endangered.

ANO Article 89

- **The provision of an Art 89 Long Term Exemption for use at a nominated site is to be reinstated**
- **If the pyrotechnic display is to be included as an item at a Flying Display, and the FDD's risk assessment includes the use of pyros, a separate pyro Risk Assessment is not required**
- **Where a FDD's Flying Display risk assessment covers the use of pyros, the FDD may apply for the Exemption.**

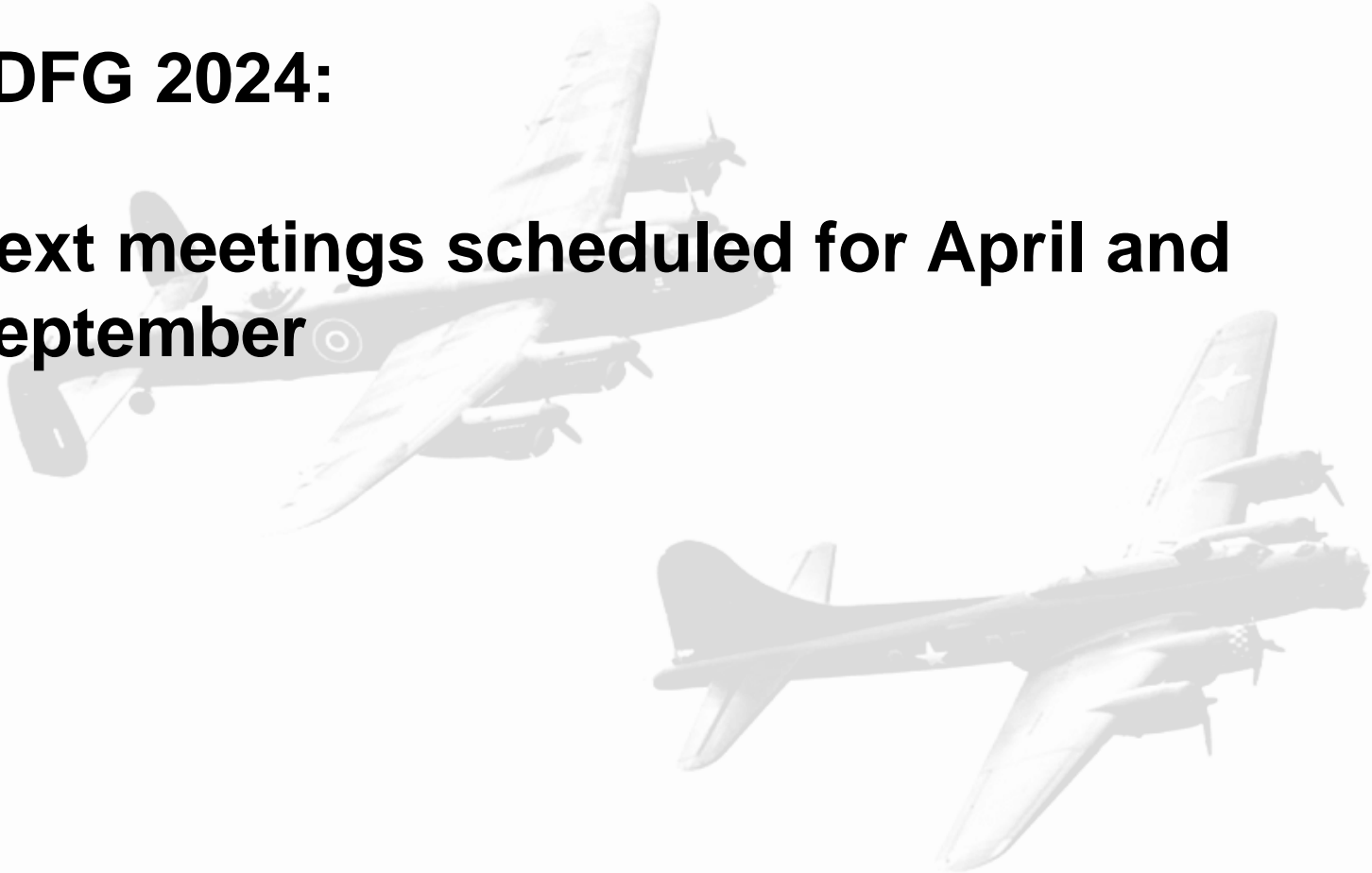


DS23 - FDFG Outbrief



FDFG 2024:

Next meetings scheduled for April and September





Comfort Break

15 mins Please





Hugh Gordon-Burge Memorial Award

**Honourable Company of Air Pilots
Richie Piper**



ROCC Briefing



Leon Gilmour – Inspector ATS
(Operations)

Jo Willis – Policy Specialist: Personnel
Licensing





ROCC Briefing



Housekeeping

Slide Deck will be available

Questions at the end please.

ROCC Briefing

Definitions:

“Aeronautical radio station” means a radio station on the surface, which transmits or receives signals for the purpose of assisting aircraft” (ANO, 2016 as amended)

Law:

Article 202 & 203 Air Navigation Order 2016/765
(Chapter 4 Certificate of competence to operate an
aeronautical radio station)

&

Article 152(9), Air Navigation Order 2016/765 (Chapter 2
Flight crew licensing – grant of licence and maintenance of
privileges)

ROCC Briefing

Why are we here?

- To talk to you about the licensing requirements for Flying Display Directors (FDD) or anyone involved who may transmit safety critical messages from a fixed or mobile Aeronautical radio station.
- Proposed solutions for FDD & FCC.

ROCC Briefing

Simply put...

- If you intend to or could be called upon to use an Aeronautical radio station to transmit to an aircraft, then you need to be correctly certificated.
- Show of hands...who holds ATCO/FISO licence or ROCC? If you have raised your hand, you don't require anything further

ROCC Briefing

The facts...

- If you hold an ATCO/FISO/ROCC, you comply with the law.
- If you don't hold any of these but would never transmit or be called on to transmit from an aeronautical radio station, you comply with the law.

ROCC Briefing

A solution...

- If you do not hold an ATCO/FISO/ROCC and you intend to or could be called upon to use aeronautical radio station, then you need a solution that protects you.
- The solution is not an FRTOL.

The FRTOL...

The Wireless Telegraphy Act 2006 and the Air Navigation Order 2016/765 requires the **Licensee of radio transmitting and receiving equipment installed in an aircraft to hold an Aircraft Radio Licence.** The Licensee shall not permit any person to use the equipment unless they hold a FRTOL or act under the supervision of a person who holds a FRTOL issued by the UK CAA in accordance with Air Navigation Order 2016/765 Article 152(9), and the ITU General Radio Regulations Article 37.

Article 202 (extracts)...

- (1) Subject to paragraph (3), a person must not operate an aeronautical radio station for any purposes specified in paragraph (4), or hold themselves out, whether by use of a radio call sign or in any other way, as one who may do so unless that person—
- b) holds and complies with the terms of an aeronautical radio station operator certificate of competence granted under article 203 authorising the holder to provide such a service.

ROCC Briefing

How are we helping...

- Today's briefing.
- Attendance at the FDD accreditation course in December.
- Changes to the Aeronautical Ground Station Radio Licence Application Form (Ofcom Form 586a) Links to CAP 403 & Guidance & Additional questions/aide memoirs.

ROCC Briefing

Aeronautical ground station radio licence application form – OfW586a

Guidance for completing this form

Who should use this form?

You may use this form to apply, amend or surrender an aeronautical ground station licence in the United Kingdom Isle of Man, Jersey and Guernsey or a platform in the UK Continental Shelf.

If you are making an application for an aeronautical radar ground station you should use form OfW593 or for an aeronautical navigational aid ground station use form OfW594.

Conditions

To establish an Aeronautical Ground Radio Station, you must normally have:

- An equipment approval under the Air Navigation Order (ANO), issued by the CAA's Safety and Airspace Regulation Group (SARG);
- A frequency assignment, issued by the CAA's SARG; and
- An aeronautical radio licence under the Wireless Telegraphy Act 2006 ('the WT Act'), issued by Ofcom.

All three are required before you may establish or use any aeronautical ground station radio equipment. When making a new application, you may wish to check with

Completing this form

When completing this application please refer to the notes and complete in dark ink in **BLOCK CAPITALS**.

All fields are mandatory unless stated otherwise.

Important

Ofcom makes regulations, which set out the fees for licences to use equipment issued under the WT Act. Further information about how we calculate your licence fees is available on the Ofcom website:

<https://www.ofcom.org.uk/manage-your-licence/radiocommunication-licences/aeronautical-licensing/licence-fees-calculator>

How we use your data

We require this information to carry out our licensing duties under the Wireless Telegraphy Act 2006.

Please see Ofcom's General Privacy Statement for further information about how Ofcom handles your personal information and your corresponding right: www.ofcom.org.uk/about-ofcom/foi-dp/general-privacy-statement

ROCC Briefing

The solution offered is...

- Streamlined application process for Restricted ROCC Flying Display Director (FDD) only.
- Restricted ROCC (Temporary) Flying Display Director (FDD) ONLY. Unforeseen circumstances/short notice/one event only.
- All certificates are issued based on the learning obtained on the FDD accreditation course and GAU approval. FDD may operate as FCC.

ROCC Briefing

What about FCC?...

- Streamlined application process for Restricted ROCC Flying Control Committee (FCC) ONLY.
- Restricted ROCC (Temporary) Flying Control Committee (FCC) only. Unforeseen circumstances/short notice/one event only.
- All certificates are issued based on the attestation & approval of GAU who should be assured that the applicant is competent. FCC must not operate as FDD without accreditation course.

ROCC Briefing

What the Restricted ROCC (FDD and FCC) is not...

- Permission to operate in any other role such as AGCS, CDO, OCS, PARA without additional learning/certification.

ROCC Briefing

General Information (Admin)

- **Cost - £42 (June 2023)**
- **Turnaround time - 10 working days**
- **Turnaround time (temporary FDD or FCC) – Unforeseen circumstances/short notice only to avoid event cancellation. Discuss with GAU ASAP.**
- **Do military qualifications exempt me? - No**

ROCC Briefing

General Information (Technical)

- **FDD & FCC Validity of Certificate** - for life unless revoked (Nov 23). Must also be signed by WTA licence holder to exercise the privileges.
- **Currency Expectations** – FDD - accreditation course attendance. FCC - operating as an FCC.

ROCC Briefing

UNITED KINGDOM
 CIVIL AVIATION AUTHORITY



**RESTRICTED RADIO OPERATOR'S
 CERTIFICATE OF COMPETENCE (ROCC)**

FLYING DISPLAY DIRECTOR (FDD) ONLY

Holder's Name
 Certificate Number
 Date of Birth

This is to certify that the holder has satisfied the Civil Aviation Authority as to their knowledge and competence to operate VHF radiotelephony equipment and exchange spoken messages in the aeronautical radio services.

Signature of Issuing Officer

Stamp and Date of Issue

CA 1308C 110123

Station	Ocom Licence No	Signature of Licensee and certificate No	Date of Issue	Date of Expiry

NOTE: Certificate not valid without Ocom radio station licence holder details entered above, prior to permitting the certificate holder to operate the particular radio station.

CA 1308C 110123

3

Restricted to United Kingdom airspace and territorial waters or when operating from a United Kingdom registered merchant vessel or platform at sea.

**AUTHORITY TO OPERATE AN AERONAUTICAL
 RADIO STATION**

The licensee is also responsible for ensuring that the operator has read CAP 452 and is correctly briefed on the up-to-date procedures and limitations of the operational service to be provided.

I understand that this Certificate entitles me to operate an air ground aeronautical radio station only with the authority of the holder of a radio licence granted by Ofcom as specified overleaf. I have read CAP 452. Only phraseology contained within CAP 403 must be used.

Signature of Holder

The holder of this certificate is authorised to operate an aeronautical radio station only at the locations endorsed within this certificate.

The certificate must not be cut or otherwise defaced in order to remain valid.

This is not a licence

CA 1308C 110123

Station	Ocom Licence No	Signature of Licensee and certificate No	Date of Issue	Date of Expiry

NOTE: Certificate not valid without Ocom radio station licence holder details entered above, prior to permitting the certificate holder to operate the particular radio station.

CA 1308C 110123

4

ROCC Briefing

CA 1308C 1 0123

Station	Ofcom Licence No	Signature of Licensee and certificate No	Date of Issue	Date of Expiry

From WTA Licence

From WTA Licence

Self-Explanatory

Self-Explanatory

N/A

NOTE: Certificate not valid without Ofcom radio station licence holder details entered above, prior to permitting the certificate holder to operate the particular radio station.

Additional pages, if required FoC, hold with certificate.

Abbreviations

AGCS – Air Ground Communication Service

ATS – Air Traffic Services

CAP – Civil Aviation Publication

CDO – Clearance Delivery Officer

FCC - Flying Control Committee

FDD – Flying Display Director

FRTOL Flight Radio Telephony Operators Licence

GAU – General Aviation Unit

Ofcom - Office of Communications

OCS – Offshore Communication Service

PARA – Parachuting

ROCC Radio Operator Certificate of Competence

SRG - Safety Regulation Group

VHF – Very High Frequency

WTA – Wireless Telegraphy Act 2006

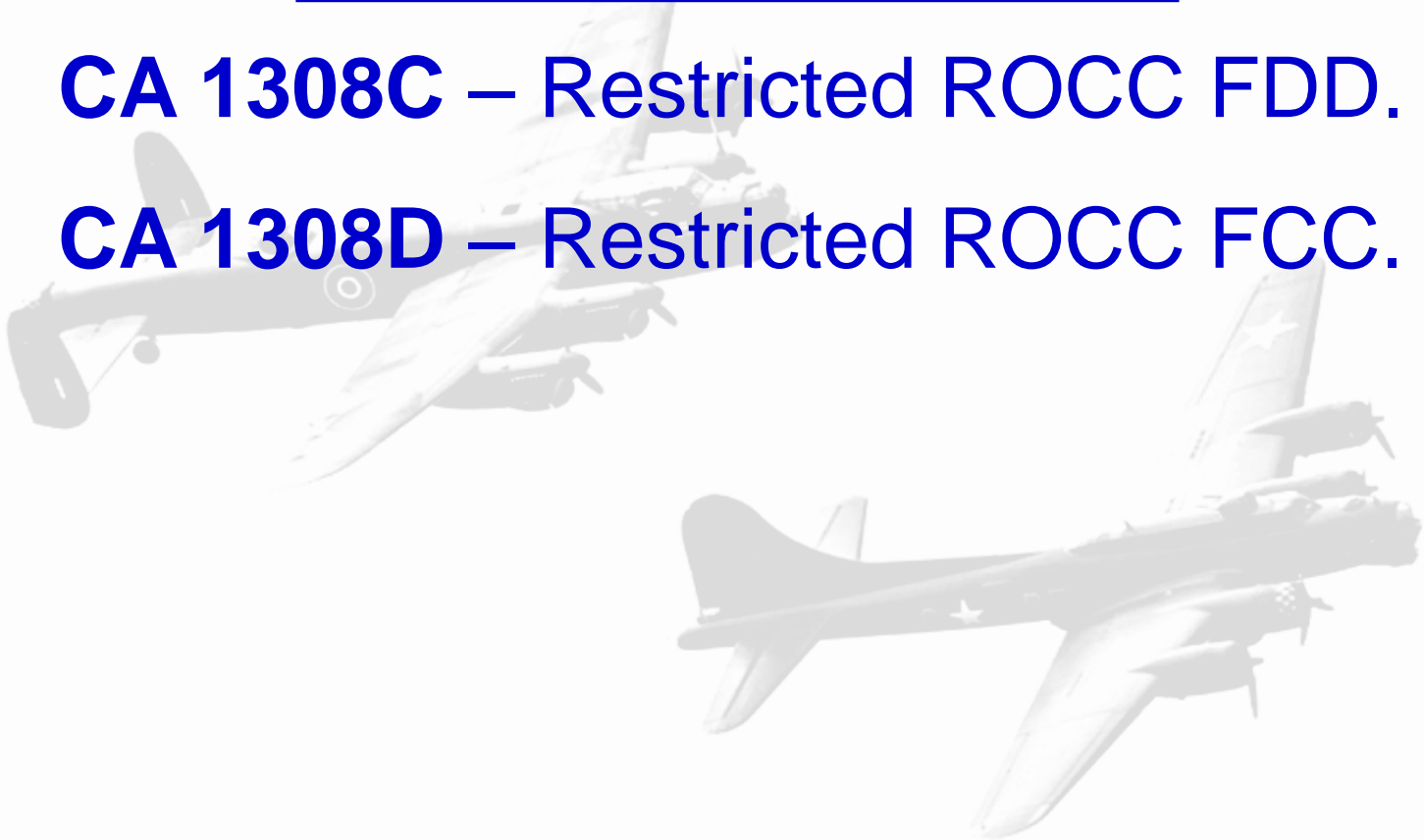
References

- **SRG 1413A** - FDD Application form (GAU approval)
- **SRG 1413B** - FCC Application form (*TBD*) (GAU approval)
- **Ofcom Form 586a** - radio licence application form.
- **CAP 403** - Flying Displays and Special Events: Safety and Administrative Requirements and Guidance
- **CAP 413** - Radiotelephony Manual
- **Air Navigation Order 2016/765**
- **Wireless Telegraphy Act 2006**

ROCC Briefing

Certificate References

- **CA 1308C** – Restricted ROCC FDD.
- **CA 1308D** – Restricted ROCC FCC.



ROCC Briefing



Future Dates

FDD & AFDD Training Course Dates 2023

- 11 Dec 2023 – FDD Revalidation
- 12 Dec 2023 – AFDD Initial Accreditation
- 12-13 Dec 2023 – FDD Initial Accreditation

2024

- 12 Mar 2024 – FDD Revalidation
- 13 Mar 2024 – AFDD Initial Accreditation
- 13-14 Mar 2024 – FDD Initial Accreditation
- 10 Dec 2024 – FDD Revalidation
- 11 Dec 2024 – AFDD Initial Accreditation
- 11-12 Dec 2024 – FDD Initial Accreditation

Future Dates

FDD & AFDD Training Courses

How to apply

- Via the CAA Web site

caa.co.uk

- Directly to the course provider

fddtraining.co.uk



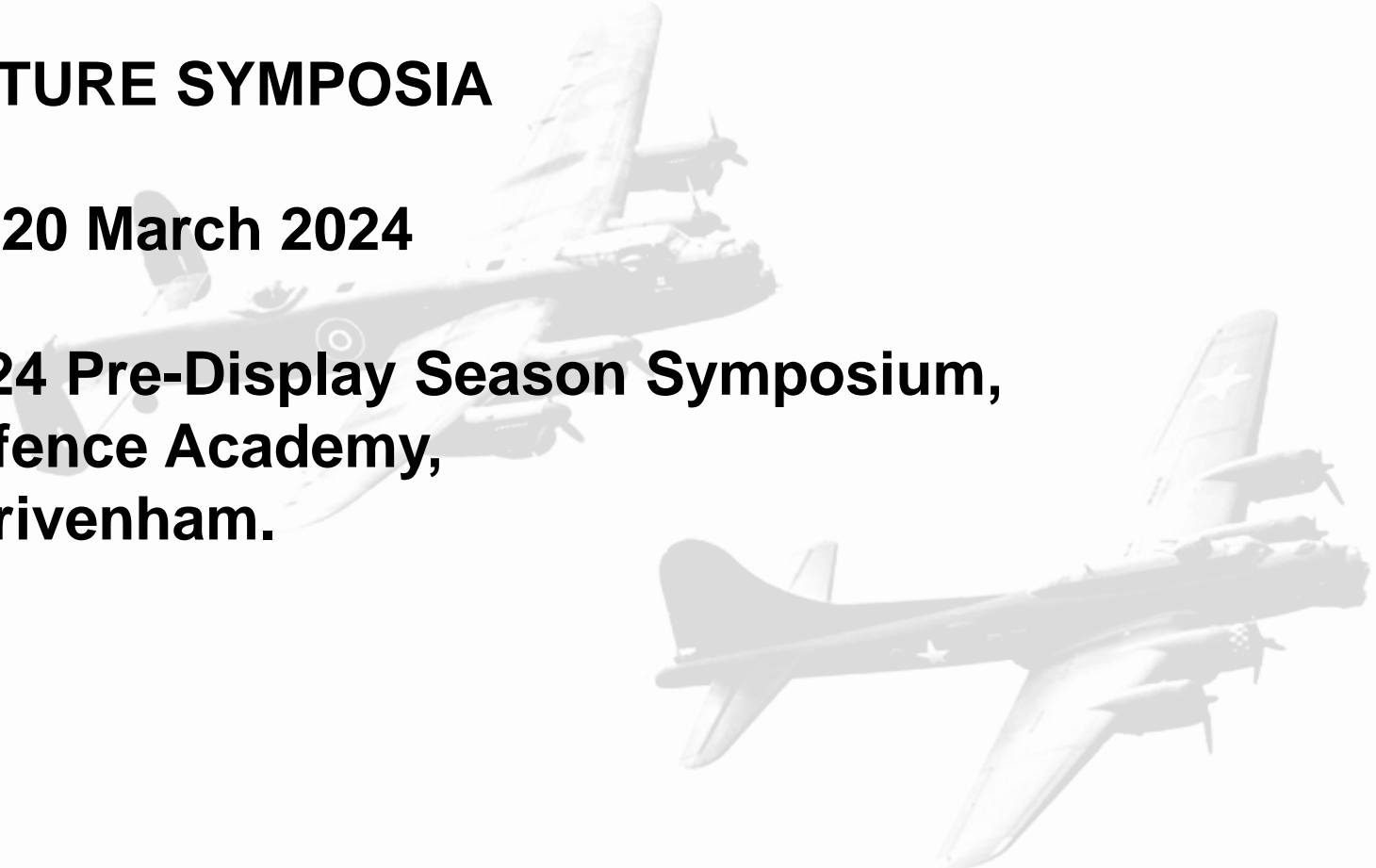
Future Dates



FUTURE SYMPOSIA

19-20 March 2024

**2024 Pre-Display Season Symposium,
Defence Academy,
Shrivenham.**





And Finally

- We want to know how we (CAA/MAA) can help you, what are we not doing?
- If, in the run up to, or during DS 24, we are not supporting you, then I want to know
- You can email us any time at: paul.sall@caa.co.uk
- Russ Lavis DSA-MAA-Display@mod.gov.uk
- We look forward to working together next year.

Questions

GA@caa.co.uk

paul.sall@caa.co.uk

DSA-MAA-Display@mod.gov.uk



LUNCH



BADA - Matt Wilkins



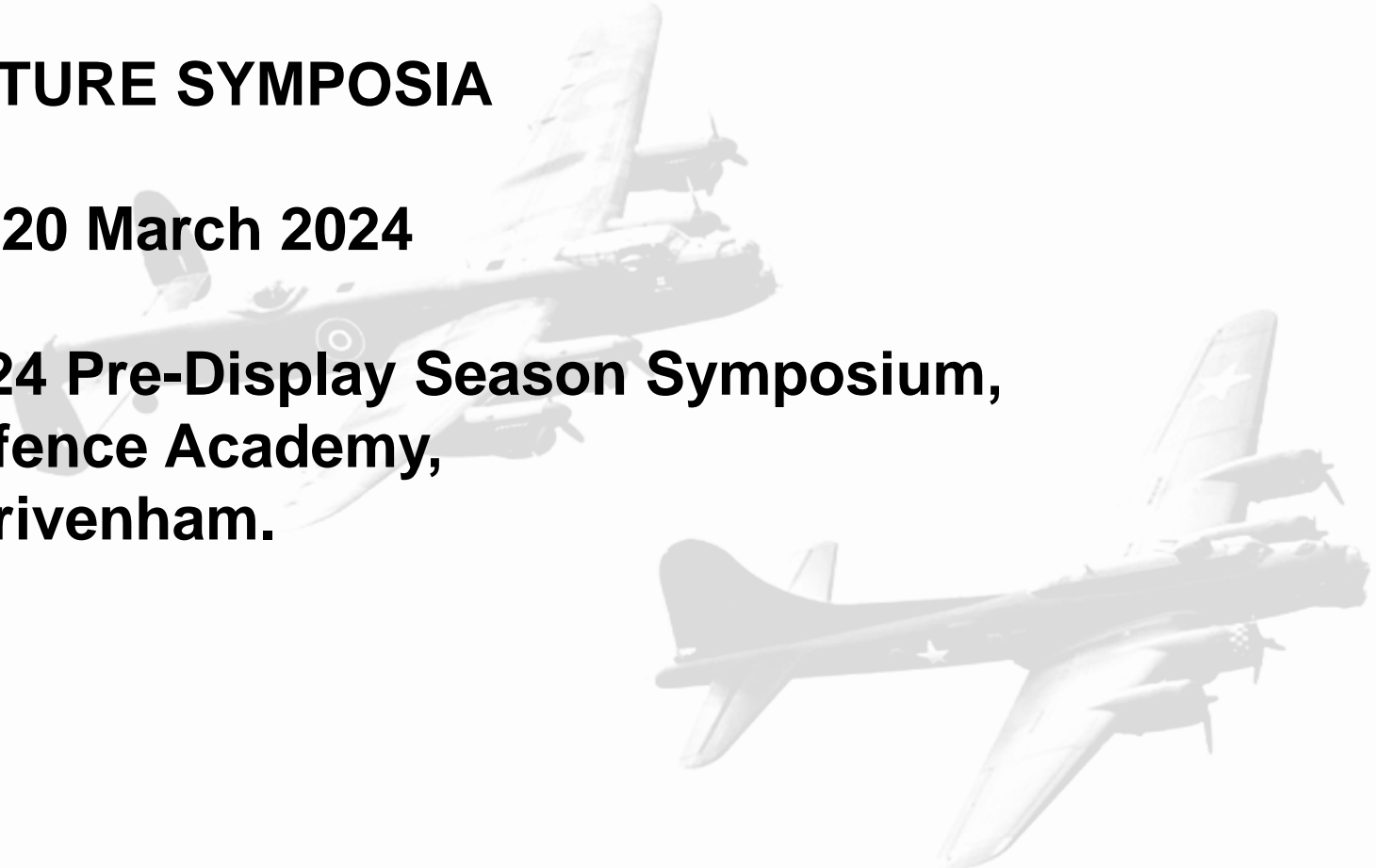
Future Dates

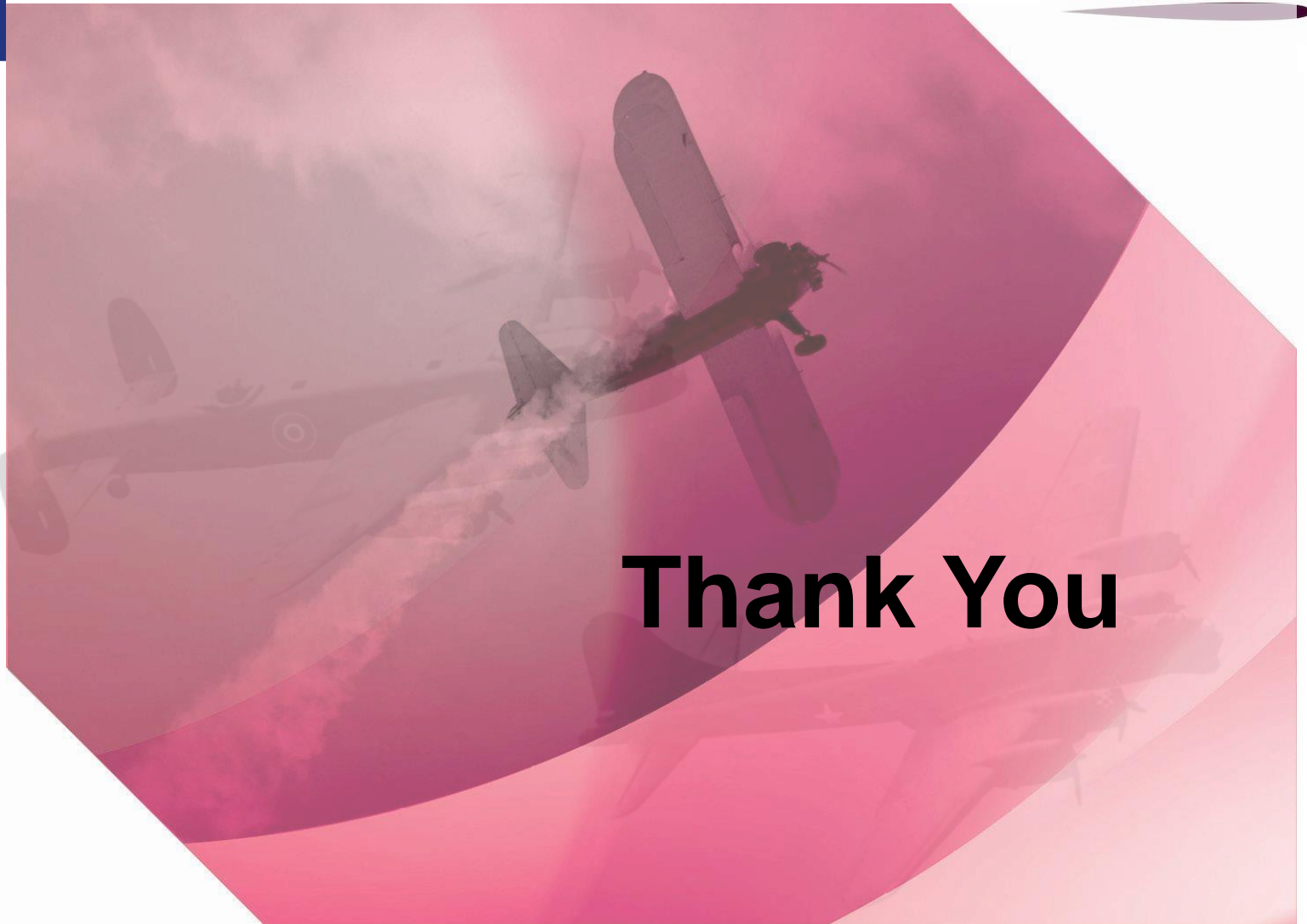


FUTURE SYMPOSIA

19-20 March 2024

**2024 Pre-Display Season Symposium,
Defence Academy,
Shrivenham.**

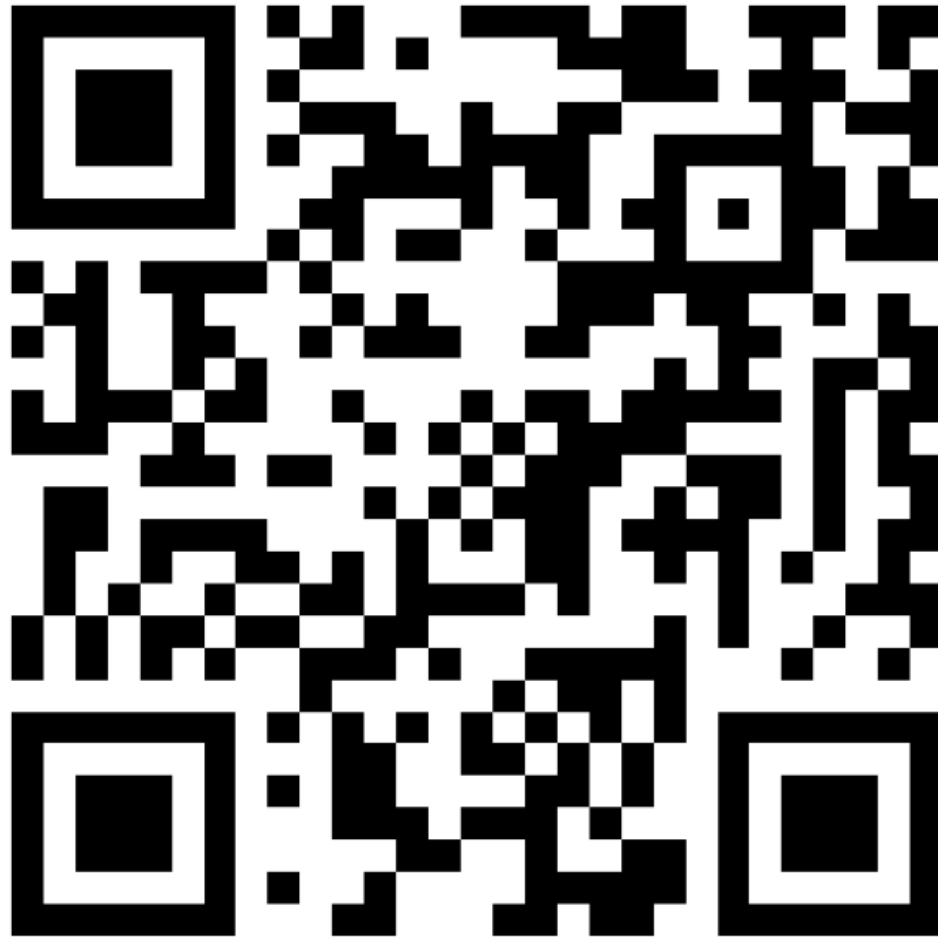




Thank You



2023 Flying Display Safety Survey





2023 Seminar Feedback

