Part- OPS | OPS.CAT
OPS.COM
OPS.SPA

OPS Workshop Austria
16 June 2009

Willy Sigl
EASA

Outline

1. **Commercial Air Transport Aeroplane -EU-OPS – IR-OPS differences**
   - Transposition of JAA material
   - Other changes in Part-OPS
2. **Commercial Air Transport Helicopters - Highlights and differences with JAR-OPS 3**
3. **Commercial operations other than commercial air transport (aerial work)**
4. **Operations requiring specific approvals**

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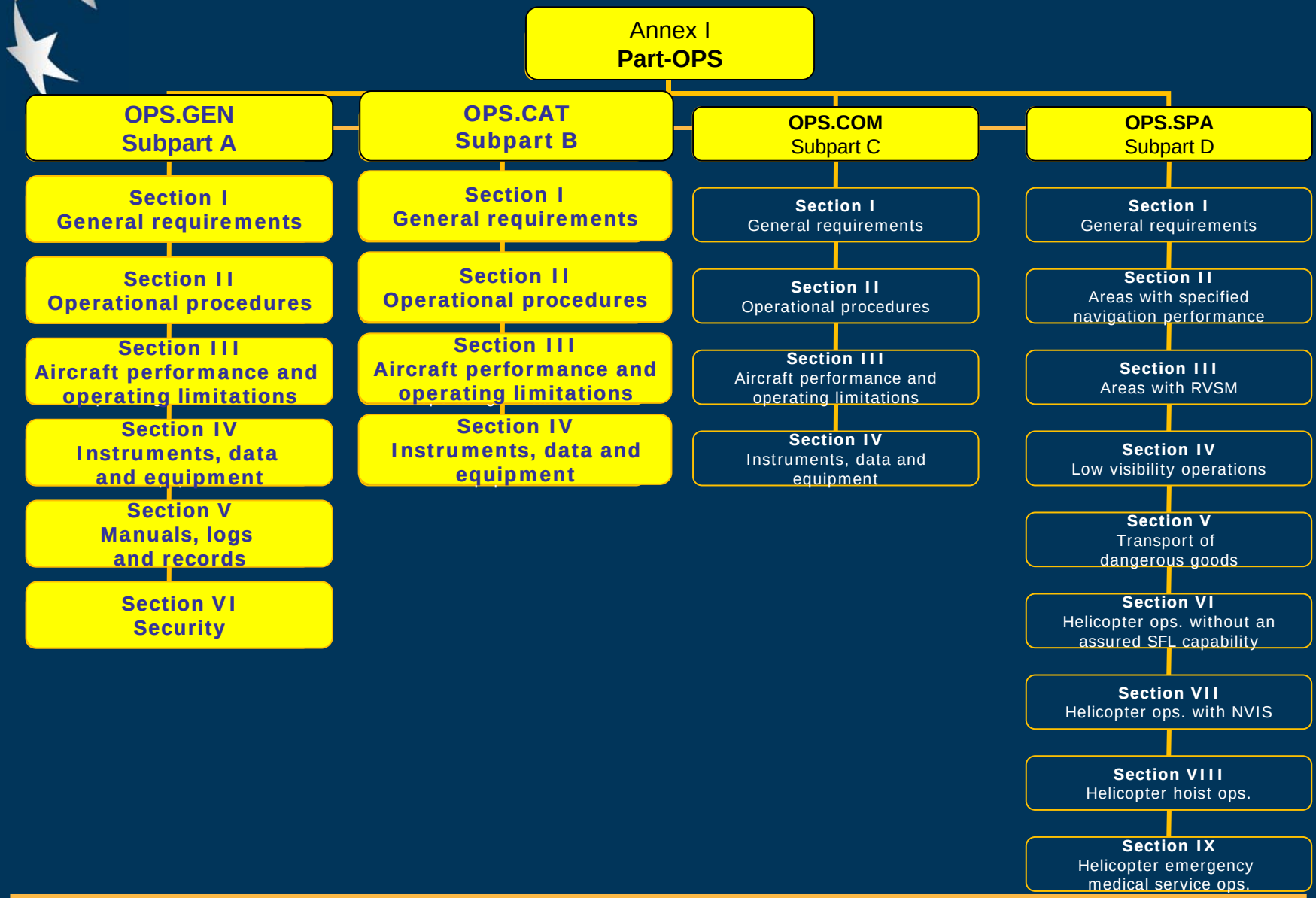

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1. Commercial Air Transport Aeroplane - EU-OPS – IR-OPS differences

Transposition of JAA material

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JAA Material

- JAA NPA in an advanced phase of the JAR-11 Rulemaking process
- JAA Working Papers having sufficient consensus and not presenting a major impact
- JAA Temporary Guidance Leaflets (TGL)
- JAA Safety Information Communication (SIC)

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Operational Procedures

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JAA NPA-OPS included

OPS.GEN – Section II
Operational Procedures

- **NPA-OPS 53 Noise Abatement**
  - to provide for alignment with ICAO PANS OPS Volume 1
  - operators to define two departure procedures for each aeroplane type

- **Transferred to AMC/GM OPS.GEN.165.A Noise Abatement - Procedures**

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JAA NPA-OPS included

OPS.CAT – Section II
Operational Procedures

- D-NPA-OPS 61 Selection of Aerodromes and In-Flight Fuel Management
  - allows operators using one en-route alternate and one destination alternate versus two destination alternates in certain circumstances
  - takes into account the results and comments from JAA Fuel symposium, mainly text clarification
- Transferred to OPS.CAT.155.A Selection of alternate aerodromes

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JAA WP included

OPS.GEN – Section II
Operational Procedures

- OPSG WP Approach Ban Point
  - replacing the outer marker used as a reference point by a height criteria of 1000 ft above the aerodrome (OPS.GEN.200)

- OPSG WP Critical Phase of Flight
  - Clarification of definition (OPS.GEN.010)

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Aircraft performance and operating limitations

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JAA NPA-OPS included

OPS.GEN – Section III
Aircraft performance and operating limitations

- NPA-OPS 39C (Type IA FDRs) & Fuel Codes
  - civilian fuel codes

- Transferred to GM OPS.GEN.310(a)(3) Mass and balance system – Fuel density

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Instruments, data and equipment

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JAA NPA-OPS included

OPS.GEN – Section IV
Instruments, Data and Equipment

- **NPA-OPS 39B2 TAWS B**
  - implements Amendment 27 of ICAO Annex 6 Part I
  - introduces forward looking terrain avoidance function combined with reduced GPWS performance for certain piston-engined aeroplanes
- **Transferred to OPS.GEN.465.A TAWS, subparagraph (b)**

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JAA NPA-OPS included

OPS.GEN – Section IV
Instruments, Data and Equipment

- NPA-OPS 39C Type IA FDRs (& Fuel Codes)
  - implements Amendment 26 of ICAO Annex 6 Part I
  - Type IA FDRs new recording parameters
- Transferred to AMC OPS.GEN.490.A Flight data recorder

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JAA NPA-OPS included

OPS.GEN – Section IV
Instruments, Data and Equipment

- NPA-OPS 48A Data Link Recording Forward Fit
  - applicability date aligned with Art. 70 BR
- Transferred to OPS.GEN.500 Data link recording

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JAA NPA-OPS included

OPS.GEN/CAT – Section IV
Instruments, Data and Equipment

- **NPA-OPS 51 FAK/EMK**
  - amended GM on content of kits
- **Transferred to**
  - AMC 2 OPS.GEN.455 First-aid kits
  - AMC OPS.CAT.457.A Emergency medical kit

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JAA NPA-OPS included

OPS.GEN/CAT – Section IV
Instruments, Data and Equipment

- D-NPA-OPS 43 Circuit Protection Devices
  - text clarification – those intended to be replaced during flight
- Transferred to
  - OPS.GEN.405 Equipment for all aircraft
  - OPS.CAT.407.A Number of spare electrical fuses

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JAA NPA-OPS included

OPS.CAT – Section IV
Instruments, Data and Equipment

- NPA-OPS 39B3 Pitot
  - annunciation of pitot heater failure

- Transferred to OPS.CAT.415 Flight instruments and equipment for VFR night flights and IFR flights

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Operations requiring specific approvals

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JAA NPA-OPS included

Section III - OPS.SPA.RVSM

- D-NPA-OPS 57B RVSM
  - implements Amendment 29 of ICAO Annex 6 Part I
  - specifies general approval requirements
- Transferred into several paragraphs of that section

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JAA NPA-OPS included

Section V - OPS.SPA.DG

- D-NPA-OPS 70 JAR-OPS 3 Dangerous Goods
  - implements latest edition of ICAO T.I.
- Transferred into several paragraphs of that section

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Organisation Requirements

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JAA NPA-OPS included

Part-OR.GEN
Organisation Requirements
Subpart General Requirements

- D-NPA-OPS 66 SMS
  - implements ICAO SMS
- Taken into account for OR.GEN.200 Management System

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JAA NPA-OPS included

Part-OR.OPS.FC

- D-NPA-OPS 65 Subpart N ICAO Alignment
  - implements Amendment 29 of ICAO Annex 6 Part I
  - Recent experience requirements
- Transferred to
  - FCL.060 Recent experience
  - OR.OPS.115 FC Composition of flight crew Single pilot)

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JAA Temporary Guidance Leaflets (TGL)

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JAA TGL included

Part OPS

- TGL 11 Guidance for operators on training programmes for the use of ACAS
- TGL 23 Use of autoland system on ILS CAT I facilities or CAT II / III facilities when LVP are not in force
- TGL 27 Training Programme for use of TAWS
- TGL 29 Portable Electronic Devices

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JAA TGL included

Part OR.GEN

- TGL 21 Quality inspection / audit pools
- TGL 32 Quality assurance programme for small operators

Part OR.OPS

- TGL 3 Guidance for operators in compiling procedures and training programmes for cabin crew

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JAA Safety Information Communication (SIC)

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JAA SIC included

Part-CC and OR.OPS.CC

- SIC No. 5 Cabin crew responsible for pair of exits and
- SIC No. 6 Cabin crew training for icing conditions

1. Commercial Air Transport Aeroplane - EU-OPS – IR-OPS differences

Other changes in Part-OPS

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Definitions

- Additional definitions because of larger scope, e.g. aerodrome / operating site (OPS.GEN.010)

- Some definitions deleted
  - not used, e.g. maximum structural take off mass and maximum zero fuel mass; or
  - now explained in the rule / AMC / GM itself

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Operational procedures

Special categories of passengers

- revised text to provide more clarity (OPS.CAT.110)

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Performance

- IRs = common safety objectives that substantiate the Essential Requirements
- AMC = related technical content
- performance classes = part of the OM
- any change to this performance part necessitates prior approval by the competent authority (OR.OPS.015.MLR(h))

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Equipment

- **OPS.GEN.400 Instruments and equipment – General**
  - **In general, instruments and equipment shall be approved and installed in accordance with Part-21**
  - **Except: additional instruments and equipment not required by Part-OPS and not required to be approved in accordance with Part-21, shall comply with the following:**
    - **The information provided by these instruments, equipment or accessories shall not be used by the flight crew to fly the aircraft;**
    - **The instruments and equipment shall not affect the airworthiness of the aircraft, even in the case of failures or malfunction, the safety of the aircraft and its occupants.**

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Equipment

- OPS.GEN.410 and OPS.GEN.415 Flight instruments and equipment required for conducting VFR and IFR
  - EU-OPS: exact number and type of instrument

  vs.

  - IRs: means of measuring and displaying the required information

- Similar for navigation equipment (OPS.GEN.535); link with SES established

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Equipment

- **Cosmic radiation indicator** requirement not transferred

- Regulated through Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation

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Equipment

Upper torso restraint system (OPS.CAT.406.A)

- aeroplanes with a maximum certificated take-off mass of less than 5 700kg and with a maximum passenger seating configuration of less than 9
  - requirement for a safety harness (Upper Torso Restraint system as an acceptable means of compliance) for each passenger seat for persons over the age of 24 months
  - stems from safety recommendations following fatal accidents contained in EASA Safety Information Bulletin (SIB) 2008-24

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OPS.SPA.SPN

- proposed provisions introduce ICAO concept of Performance Based Navigation and refer to ICAO Doc 9613 Performance Based Navigation Manual

- GM1 OPS.SPA.001.SPN provides further guidance

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OPS.SPA.LVO

- Approval also required for all LVTO's with an RVR below 400 m

- EU-OPS
  - 1.450 required the training programme for LVO operations to be approved
  - 1.440 and Appendix 1 to 1.430 required a specific approval for take-off below specified minima (150/200 m RVR)

- Change of administrative procedure

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OPS.SPA.LVO

- Amended table containing the failed or downgraded equipment that did not take into account changes related to EVS and HUDLS

- AMC2 OPS.SPA.020.LVO

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2. Commercial Air Transport Helicopters Highlights and differences with JAR-OPS 3

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Performance

- **OPS.CAT Section III - Aircraft performance and operating limitations**

- **Helicopter performance:**
  - **All provisions from JAR-OPS 3 transferred**
  - **Split into 2 sections:**
    - Those generally applicable in OPS.CAT
    - Those with ‘exposure’ requiring specific approval in OPS.SPA.SFL

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Performance

- OPS.CAT.355.H Performance applicability
  - Defining in which cases PC 1, 2 and 3 are required
- OPS.CAT.360.H Performance General
  - Mass limitations
- OPS.CAT.365.H Obstacle accountability
- OPS.CAT.370.H Flight hours reporting

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Performance

- **OPS.SPA.SFL transposes elements relating to 'exposure' contained in:**
  - **JAR-OPS 3 amendment 5, in particular:**
    - Appendices to 3.005 (c), (d), (e) and (i)
    - 3.517 and those requirements referring to it contained in subparts F (Performance general), H (PC 2) and I (PC 3)

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Performance

- **OPS.SPA.035.SFL Helicopter Flight Manual Limitations**
  - **contains the JAR-OPS 3 alleviation contained in Appendix 1 to JAR-OPS 3.005 (c): 'For helicopters certificated in Category A, a momentary flight through the height velocity (HV) envelope is allowed during the take-off and landing phases.'**
- **For CS-29 helicopters the Height Velocity (HV) envelope is contained in the limitations section of the approved AFM and the alleviation therefore in conflict with Annex IV 4.a. of the BR**
- **Issue is being studied (CS-29 RM task MDM.053, legal assessment)**

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Instruments, data and equipment

- Appendices to JAR-OPS 3.005 for equipment have been included in OPS.GEN/CAT, except:
  - carriage of supplemental oxygen when flying above 10 000 ft up to 16 000 ft (excursions of short duration up to 16 000 ft in Appendix 1 to JAR-OPS 3.005(f) para (d)(12))
- Reasons:
  - no definition of short duration
  - criteria of pilots acclimatised to high altitudes is not objective

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OPS.SPA.NVIS

- JAR-OPS 3 amendment 5 introduced in 3.005 (j) the possibility to conduct VFR night operations with the aid of NVIS, provided a specific approval being obtained

- JAA TGL 34 contained additional information and provisions to be met, as well as minimum training standards to be followed

- Transposition in OPS.SPA.NVIS

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OPS.SPA.HHO

- Transposition of Helicopter Hoist Operations provisions contained in Appendix 1 to 3.005 (h)

- In addition, draft JAA NPA-OPS 69 incorporated (Attachment C to explanatory note)
  - Resulting from difficulties in interpretation and implementation of the Appendix

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OPS.SPA.HEMS

- Transposition of Helicopter Emergency Medical Services (HEMS) provisions contained in Appendix 1 to 3.005 (d)

- HSST-WP-07-03.4 included (Attachment D to explanatory note), recommending PC 2 at the HEMS operating site instead of PC 1, as far as possible
  - Stakeholders are specifically requested to give their views

3. Commercial operations other than commercial air transport (aerial work)

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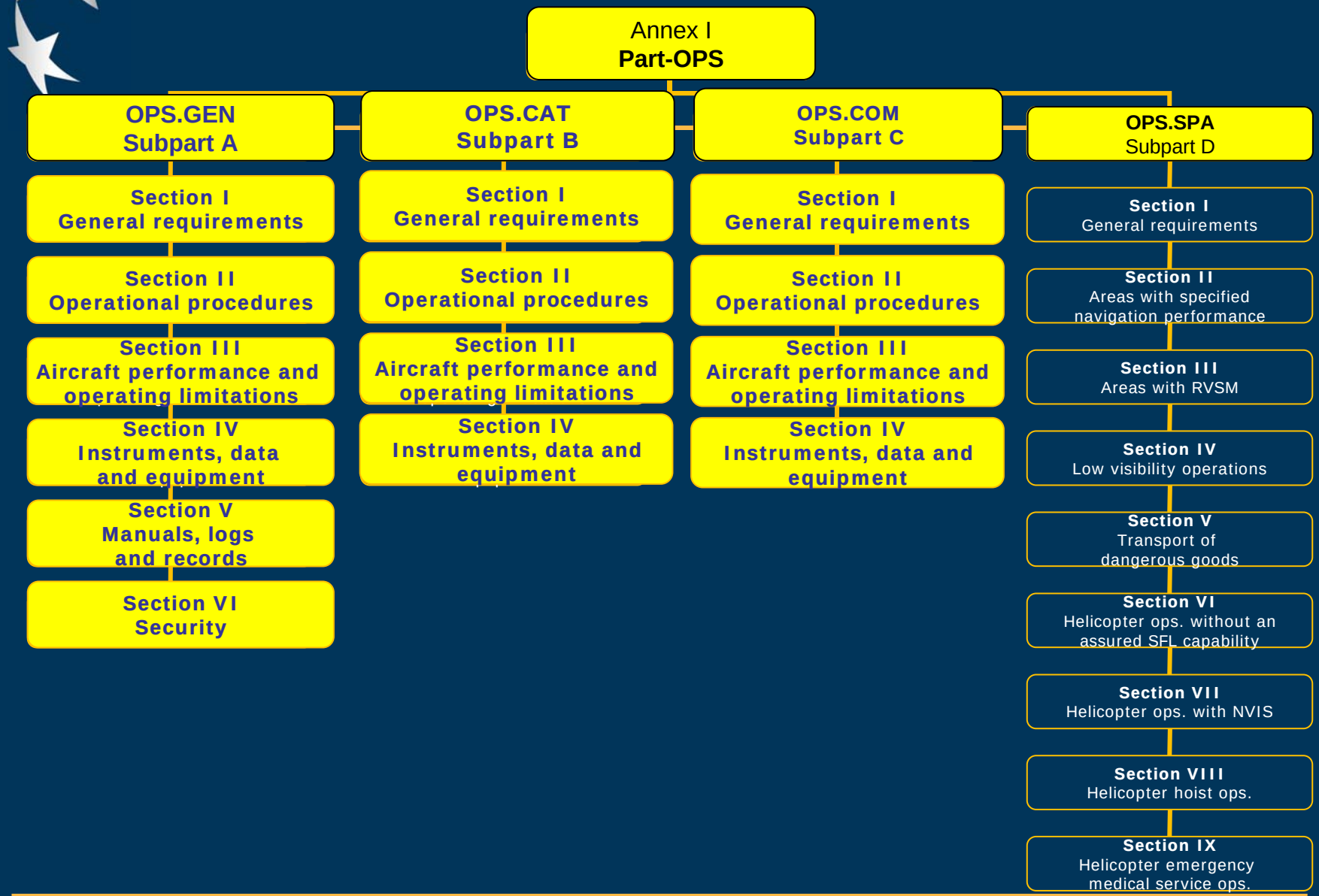
COM other than CAT

- **Commercial operations other than commercial air transport (COM)**
  - **Generally referred to as aerial work**
  - **However, scope of COM is considered to be wider**


Annex I
Part-OPS
OPS.GEN
Subpart A
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Section III
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Section VII
Helicopter ops. with NVIS
Section VIII
Helicopter hoist ops.
Section IX
Helicopter emergency medical service ops.

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OPS.COM Content

Section I - General Requirements

- OPS.COM.005
  - Scope
- OPS.COM.035
  - Application and use of dangerous goods in specialised tasks
- OPS.COM.040
  - Carriage and use of weapons in specialised tasks

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OPS.COM Content

Section II - Operational Procedures

- **OPS.COM.115**
  - **Briefing of operational personnel**
- **OPS.COM.270**
  - **Standard operating procedures - specialised operations other than the transport of persons, cargo or mail**

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OPS.COM Content

Section II - Operational Procedures

- **OPS.COM.270 Standard Operating Procedures**
  - **COM operations shall be performed in accordance with Standard Operating Procedures (SOPs)**
  - **The SOP shall be based on a risk assessment**
  - **AMCs to OPS.COM.270**
    - **Provides a general method to develop a SOP**
    - **Provide templates and a diagram for the development of a SOP**
    - **Provide an example for Helicopter External Load Operations (HELO) SOP**

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OPS.COM Content

Section III – Aircraft Performance and Operating Limitations

- **OPS.COM.316.A**
  - Performance criteria aeroplanes
- **OPS.COM.350.H**
  - Performance criteria helicopter

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OPS.COM Content

Section IV – Instruments, Data and Equipment

- OPS.COM.406 Restraining devices
- OPS.COM.420.H Life jackets - Helicopters
- OPS.COM.425.H Ditching – Helicopters
- OPS.COM.426.H Survival suits - Helicopters
- OPS.COM.465.A Terrain Awareness Warning System (TAWS) – Aeroplanes
- OPS.COM.486 Emergency egress from the cockpit
- OPS.COM.487 Crash mitigation equipment
- OPS.COM.488 Individual protective equipment

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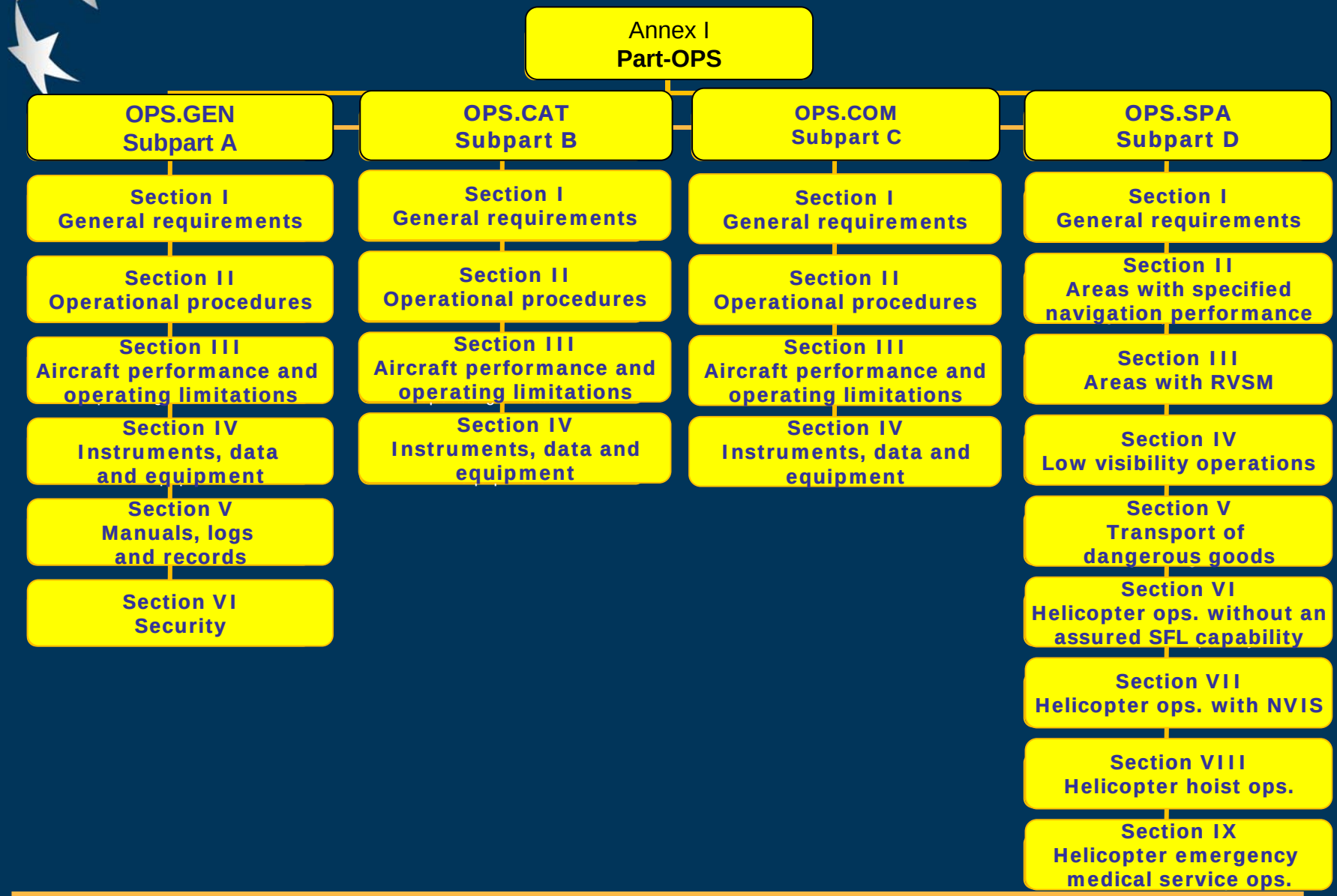
OPS.COM Content

- COM operations encompass many specialised aerial operations
- Not all of these are captured yet in IRs and AMCs
- For the time being, the proposed rules mitigate the general risks
- EASA welcomes the establishment of industry best practices
- It encourages trade associations and individual operators to develop alternative means of compliance, in particular for SOPs

4. Operations requiring specific approvals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Helicopter hoist ops.
Section IX
Helicopter emergency medical service ops.

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Part-OPS.SPA

- **Operations with specific approvals**
  - **SPA operations allow the operator to**
    - Access specified airspace
    - Transport dangerous goods
    - Conduct operations with alleviations or to lower limits
  - **Specific hazards need to be controlled through**
    - Implementation of mitigating procedures
    - Specialised equipment
  - **All SPA operations require that the operator has been approved by the competent authority**

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Part-OPS.SPA

OPS.SPA…GEN

Competent authority

- State of Operator for commercial operators
- State of Registry for non-commercial operators – notwithstanding…
- Reference to OPS.GEN.001

Applicability

- Commercial operators
- Non-commercial operators (except HEMS)

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Part-OPS.SPA

OPS.SPA...GEN

Application for a specific approval

- Compliance with requirements of applicable section
- Aircraft and equipment comply with airworthiness requirements / approvals
- Training programme has been established
- Operating procedures specified in OM
- Reference to OR.GEN.015 Application

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Part-OPS.SPA

OPS.SPA...GEN

- **Privileges shall be specified in**
  - OM and approval certificate
  - OPSSPECS for AOC holders
  - Reference to OR.GEN.025 Terms of approval
- **Changes to operations under OPS.SPA**
  - Operator shall notify competent authority
  - Reference to OR.GEN.030 Changes to approval
- **Validity**
  - Specific approvals shall be issued for an unlimited duration
  - Reference to OR.GEN.035 Continued validity

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Part-OPS.SPA

- **OPS.SPA…SPN**
  - **Scope**
    - Operations in areas with specified performance based navigation
      - **Required Navigation Performance (RNP)**
      - **Area Navigation (RNAV)**
      - **Minimum Navigation Performance Specifications (MNPS)**

Part-OPS.SPA

OPS.SPA…SPN

Source IR

- ICAO concept of PBN, ICAO Doc 9631
- Approval requirement: EU-OPS 1.243 (Subpart D) Amendment 2
- Equipment requirement: EU-OPS 1.865, 1.870 (Subpart L)

Source AMC

- JAA TGL developed by CNS/ATM SG

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Part-OPS.SPA

OPS.SPA…RVSM

Scope

- Reduced vertical separation minimum of 1000 ft above FL290
- Reduced tolerance of height keeping errors
- Procedures
- Crew training

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Part-OPS.SPA

OPS.SPA...RVSM

Source IR

- Approval requirement: EU-OPS 1.241 (Subpart D) Amendment 2
- Equipment requirement: EU-OPS 1.872 (Subpart L)
- JAA TGL No. 6 RVSM

Source AMC/GM – operational procedures

- JAA TGL No. 6 RVSM

RM task 20.006

- Update and transfer technical content of various remaining JAA TGLs into EASA AMC-20

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Part-OPS.SPA

- **OPS.SPA…LVO**
  - **Scope**
    - Take-off less than 400m RVR
    - Approach
      - **Lower than standard Category I**
      - **Category II**
      - **Other than Standard Category II**
      - **Category III**
      - **Utilising EVS, HUDLS**

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Part-OPS.SPA

OPS.SPA…LVO

Source

- EU/JAR-OPS Subpart E AWO
- NPA-OPS 41 introduced in Amendment 2 to EU-OPS, editorial errors corrected
- Proposals of the JAA AWOSG related to EVS and HUDLS

Reference

- OPS.GEN.150

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Part-OPS.SPA

OPS.SPA…DG

Source

- ICAO T.I.
- EU/JAR-OPS Subpart R
- JAA D-NPA-OPS 70 implemented latest edition of ICAO T.I.
- Complements OPS.GEN.030 Transport of dangerous goods

Reference

- OPS.GEN.030
- ICAO T.I.

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Part-OPS.SPA

- **OPS.SPA…SFL**
  - **Scope**
    - Operations without an assured safe forced landing capability
      - **An unavoidable landing or ditching without a reasonable expectancy of no injuries to persons in the aircraft or on the surface**
      - **Helicopter operation**

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Part-OPS.SPA

- **OPS.SPA…SFL**
  - **Source**
    - JAR-OPS 3 amendment 5, in particular:
      - **Appendices to JAR-OPS 3.005**
      - **Subparts F, H, I**

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Part-OPS.SPA

OPS.SPA…SFL

Applicability

- At a HEMS operating site
- Offshore operations
- Take off and landing outside of congested hostile environments for Performance Classes 2 and 3
- En-route in a specified, remote or mountain area with turbine powered helicopters having a MPSC of 6 or less for Performance Class 3
- At a public interest site with multi-turbine powered helicopters having a MPSC of 6 or less

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Part-OPS.SPA

OPS.SPA…SFL

Flight Manual limitations

- For Category A certificated helicopters, a flight through the HV envelope during take-off and landing could be allowed
- RM task MDM.053 to amend CS-29

Part-OPS.SPA

OPS.SPA…NVIS

Scope

- Night VFR operations with helicopters using Night Vision Imaging Systems (NVIS)

Night visions imaging systems

- includes as a minimum: Night Vision Goggles (NVG), NVIS lighting, helicopter components (such as radio altimeter, visual warning system and audio warning system), training and continuing airworthiness

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Part-OPS.SPA

OPS.SPA…HHO

Scope

- Facilitate the transfer of persons and/or cargo by means of a helicopter hoist

Source

- Appendix 1 to JAR-OPS 3.005 (h)
- Draft JAA NPA-OPS 69 (refer to Attachment C to Appendix I of the Explanatory Note)

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Part-OPS.SPA

OPS.SPA…HEMS

Scope

- Facilitate helicopter emergency medical service, where immediate and rapid transportation is essential by carrying
  - **Medical personnel, or**
  - **Medical supplies, or**
  - **Ill or injured persons and other persons directly involved**

Part-OPS.SPA

OPS.SPA…HEMS

Source

- Appendix 1 to JAR-OPS 3.005 (d)
- Partly HSST-WP-07-03.4 (refer to Appendix D to Explanatory note) option 2
  - **Stakeholders are specifically requested to give their views**

Thank you
for your attention

Willy Sigl
EASA