



EASA
European Aviation Safety Agency

1st EASA Workshop for DAT providers

Cologne, 10 November 2016

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EASA

European Aviation Safety Agency

Welcome note

Wilfried SCHULZE

Head of ATM/ANS & Aerodromes Departmentpt &
Deputy Director FS Directorate

Cologne, 10 November 2016

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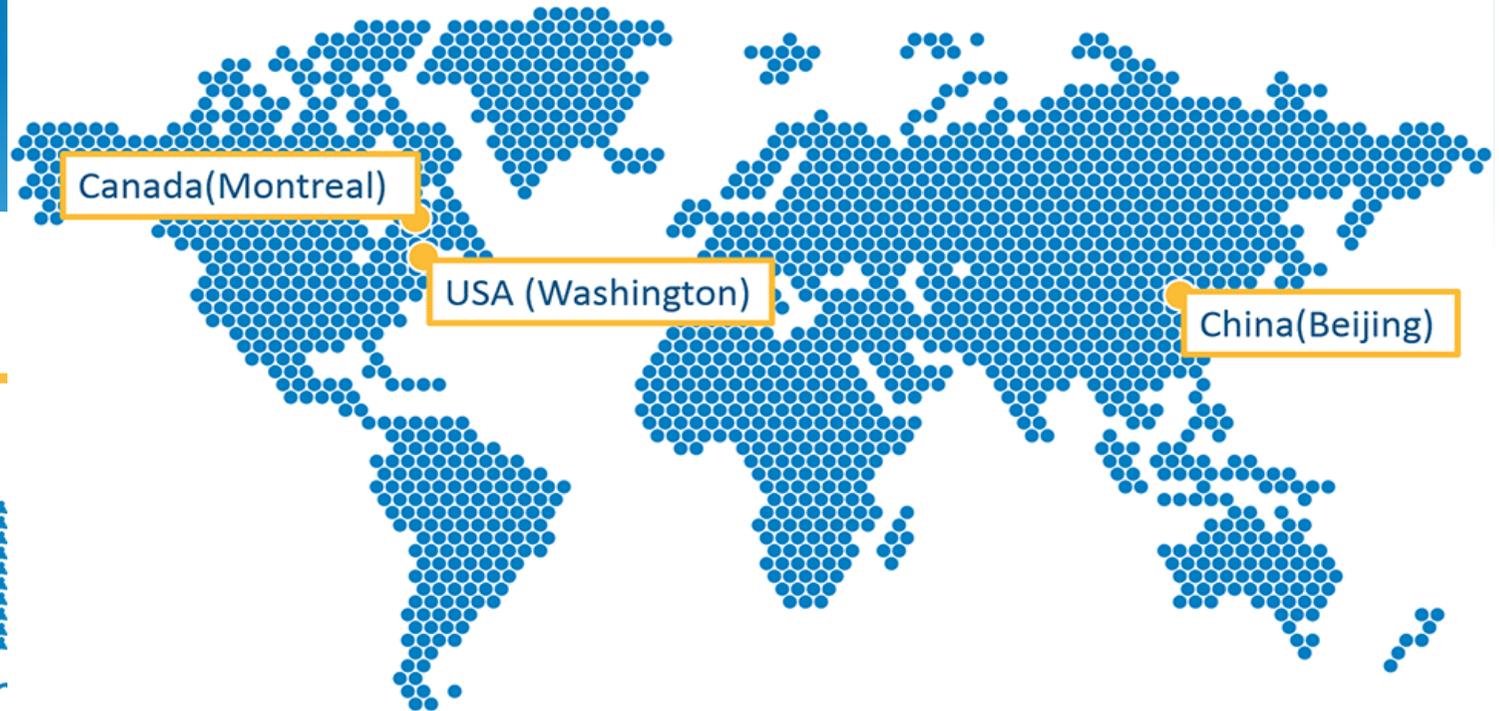


EASA

Established
2002

800

aviation experts
& administrators



Headquarters in
Cologne



Office in
Brussels



EASA

European Aviation Safety Agency

Workshop general information

Manfred DIEROFF
Head of ATM/ANS Standardisation & Oversight Section
FS Directorate

Cologne, 10 November 2016

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Today's aim : implementation support

We will try to:

- provide an **overview** of the requirements
- highlight **new requirements and differences**
- focus on understanding **the move from LoA to DAT provider certification process**
- answer **questions and queries**



Organisational issues

- Location & Emergency
- Agenda & Timings
- Lunch break
- Questions & answers session
- Availability of the workshop material
 - <http://www.easa.europa.eu/newsroom-and-events/events/1st-easa-workshop-dat-providers>
- Individual queries can at all times be addressed to EASA via e-mail at atm@easa.europa.eu



EASA
European Aviation Safety Agency

Introduction

Anastasiya Terzieva
ATM/ANS Regulations officer
FS Directorate

Cologne, 10 November 2016

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Aviation safety system in the EU

- Draft rules in all fields pertinent to the EASA mission**
- Certify & approve products and organisations, in fields where EASA has exclusive competence**
- Provide oversight and support to MS;**
- Promote the use of European and worldwide standards**
- Cooperate with international actors in order to achieve the highest safety level for EU citizens globally (e.g. EU safety list, TCO authorisations)**



National Aviation Authorities

- Issue most certificates, approvals and licences
- Oversee organisations
- Implement EU law



Industry

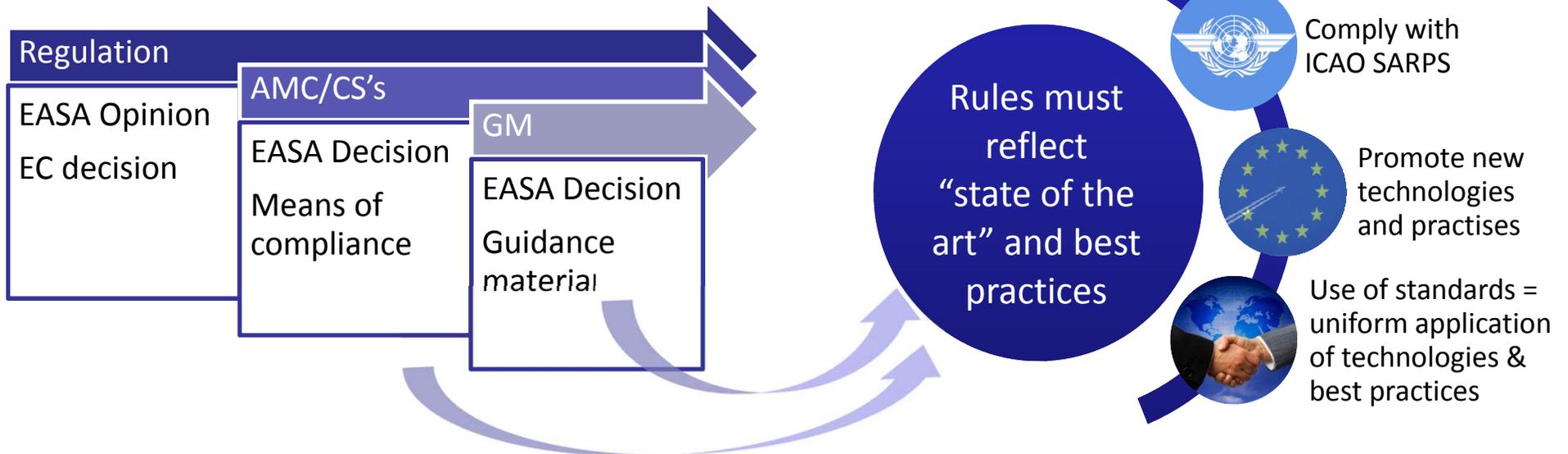
- Adopts rules**
- Launches infringement procedure**



Regulatory measures by EASA

Rulemaking Programme

RM tasks





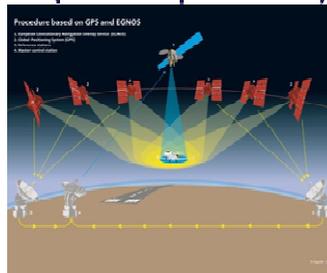
EASA today in ATM/ANS as competent authority

Pan European services and functions

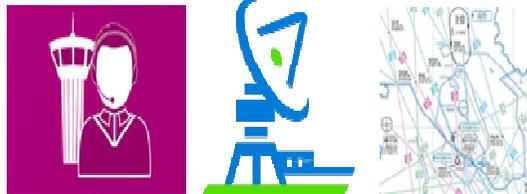
Network Manager



ESSP (EGNOS provision)



Foreign organisations providing ANS in Europe



Foreign ATCO TOs





ATS



ASM

ATM



ATFM



CNS



MET

ANSPs

AD 1.3 INDEX TO AERODROMES AND HELIPORTS

Aerodrome/Heliport name Location indicator	Type of traffic permitted to use the aerodrome/heliport			Reference to AD section and remarks	
	International/National (INTL/NL)	FR/VFR	Scheduled (S) Non-scheduled (NS) Private (P)		
1	2	3	4	5	
Aerodrome					
ABERDEEN/DYCE	EGPD	INTL/NL	FR/VFR	S, NS, P	AD 2 - EGPD page AD 2 (EGPD-1)
ALDERNEY	EQJA	INTL/NL	FR/VFR	S, NS, P	AD 2 - EQJA page AD 2 (EQJA-1)

AIS



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European Aviation Safety Agency

Current (voluntary) process → Experience with the LoA

Friedhelm Runge
Chief Expert - Avionics & Electrical Systems
Certification Directorate

Cologne, 10 November 2016

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Voluntary activity, in the framework of:

➤ Agency Opinion 01/2005:

➤ Agency Conditions

(http://easa.europa.eu/agency-measures/docs/opinions/2005/01/rule_Op_01_05_Nav_database_supp_doc.pdf)

➤ Compliance checklist

(http://easa.europa.eu/agency-measures/docs/opinions/2005/01/rule_Op_01_05_NavDatabaseCompCheck.pdf)

➤ ED76/DO-200A standard

➤ Fees and Charges Regulation (EU) No 319/2014

*for additional information refer to [EASA LOA webpage](#)



EASA specifics

- The service is at the edge of EASA's initial competency
- Process is purely voluntary
- POA process overview principles are used to allow “self certification” of each data base release. As consequence the process is starting with “approved design data” and AIP data are considered “approved design data” in this context.
- Release certificate is requested, no form available
- Not listed within Fees and Charges



EASA LOA Process

- **Based on POA (Part 21 Subpart G) and RTCA DO-200A/EUROCAE ED-76 process approach**
- **State published AIP data for navigation are seen as “approved design data”. The process is designed to keep the quality of that data**
 - Problems with state published data can not be solved at this stage and are excluded from the responsibility of the process but problems found have to be reported to the originator
- **LOA Type 1 collect data in electronic format and meet data requirements (from equipment and from operator)**



Specifics for EASA LOA Type 2

- Data is used in **the approved airborne equipment** to perform its intended function
- Selected data are transposed **into equipment compatible format and intended function is verified** on the target hardware
- **Hardware restrictions apply** e.g. not all leg types are supported or the data capacity is limited etc.
- **Data may not be used for a different function without new assessment.**



Actual overview of EASA LOA's

➤ **Number of LOAs issued by EASA*: 6**

➤ **Locations: UK, DE, CH, FR, IT**

➤ **Scope of work:**

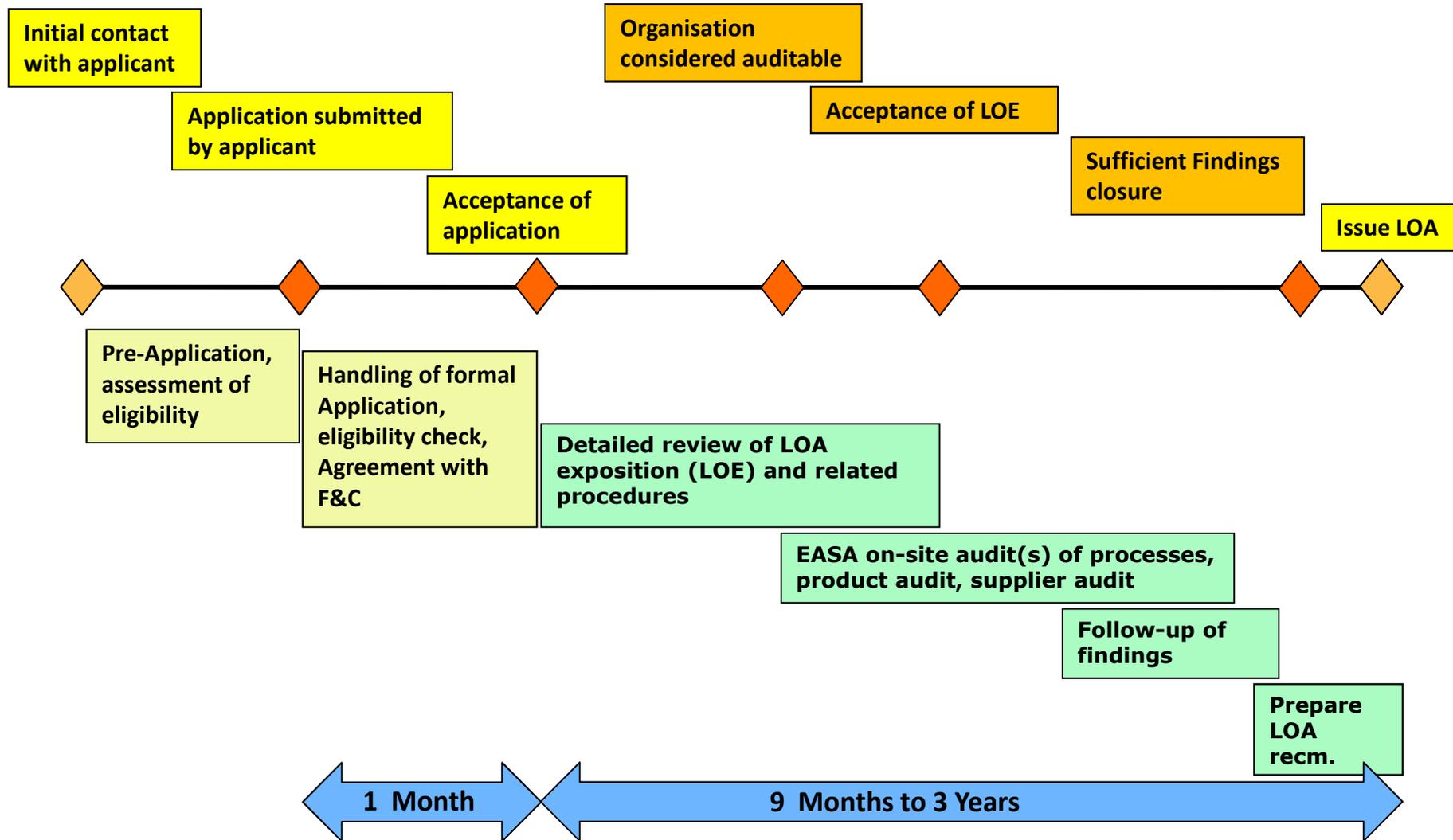
➤ LOA Type 1 holders – 4

➤ LOA Type 2 holders – 4

- List of EASA LOAs is available on: <http://www.easa.europa.eu/navigation-database-suppliers-letters-acceptance>



LOA Initial investigation





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European Aviation Safety Agency

DAT rulemaking – RMT.0593

Anastasiya Terzieva
ATM/ANS Regulations officer
FS Directorate

Cologne, 10 November 2016

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EASA - Legal framework

	Regulation	Competence
Initial	1592/2002/EC	Airworthiness Environmental Compatibility
1st ext.	216/2008/EC	Flight Crew Licensing Operation of Aircraft Safety of 3rd country aircraft
2nd ext.	1108/2009/EC*	Safety of Aerodromes and ATM/ANS

**Entered into force on 14 December 2009*



ATM/ANS Regulations development (as it stands today)

ATM/ANS



SINGLE EUROPEAN SKY

ATCO licencing

ATM/ANS Oversight

Common Requirem.

AUR and ACAS II

SERA

ATCO Licencing

- Regulation (EU) 2015/340
- ED Decisions 2015/010/R & 2015/014/R

Remote TWR

- ED Decision 2015/014/R on GM

Service providers & oversight

- Regulation (EU) 2016/1377 subject of revision
- Parts - OR/AR, Part-MET, **Part-DAT**, Part-PERS (ATSEP)
- ED Decision pending publication of the revised IR

AIS/AIM

- NPA 2016-02 issued 28.04.2016
- Consultation closed end Sept'2016

ASD

- NPA 2016-13 issued 25.01.2016
- Consultation till 31 Jan'17

ATS

- NPA 2016-09 issued 14.06.2016

PBN implementation

- **Opinion 10/2016 on 2.08.2016**
- CRD/ED Decision on AMC/GM pending adoption of the IR

SPI2 Regulation

- ToR issued
- NPA Q2/2017

SERA Part C

- **Regulation (EU) 2016/1185**
- CDR/ED Decision on AMC/GM publication soon

HETA

- EASA Report issued

ATM Safety KPIs – AMC/GM

- ED Decision 2014/035/R
- ED Decision 2015/028/R



Background

- The Data services (DAT) provider - receives, assembles, translates, selects, formats, distributes and/or integrates aeronautical data and information for use in aeronautical databases to be fed into certified a/c systems for the purpose of safety critical air navigation
 - collected through State AIPs (regulated through ICAO Annex 15; at EU level - Regulation (EU) No 73/2010 (ADQ1))
 - ADQ2 mandate to Eurocontrol – withdrawn and requested the Agency to lead the rule development and integrate it into the EASA regulatory structure.
- Voluntary audit system = EASA Opinion 1/2005
 - LoA holders
 - oversight by operators contacting data suppliers' services
- Basic Regulation:
 - Art. 3 'Definitions': "ATM/ANS ... and services consisting in the origination and processing of data and formatting and delivering data to general air traffic for the purpose of safety-critical air navigation";
 - services shall comply with the ER as per Article 8b(1)
 - hold a certificate as established by Article 8b(2).



Definition in Article 3(q) of Reg. (EC) 2016/2008

“ATM/ANS”

ATM (Art. 2(10) of Reg (EC) No 549/2004)

+

ANS (Art. 2(4) of Reg (EC) No 549/2004)

+

DAT

services consisting in the origination and processing of data and formatting and delivering data to general air traffic for the purpose of safety-critical air navigation.



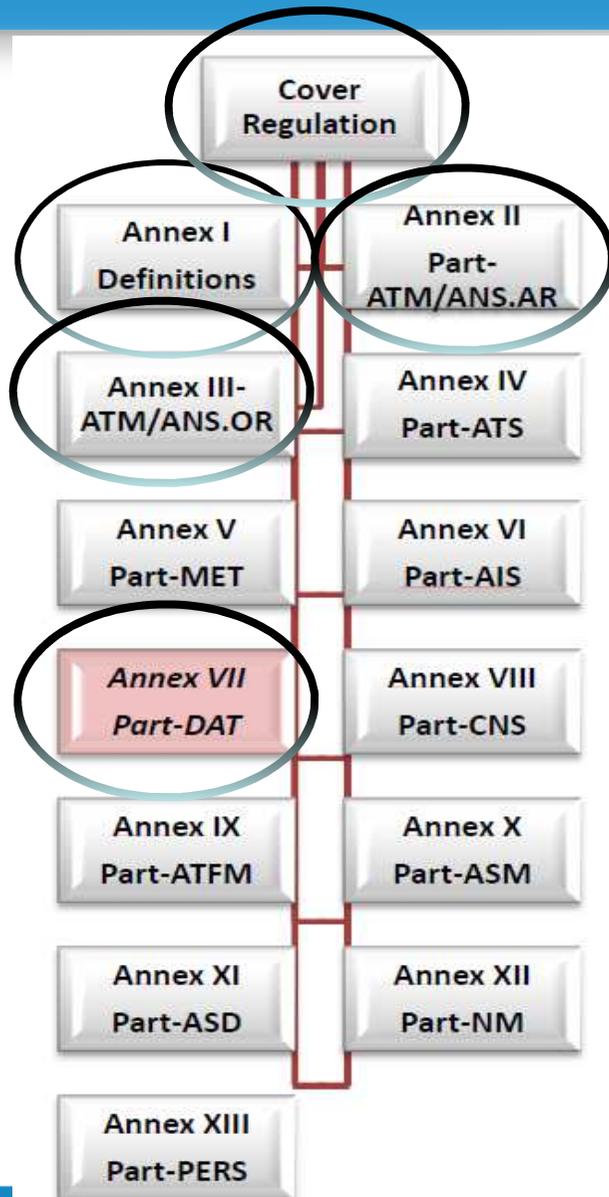
RMT.0593&0594 objective

- ▶ to develop the **specific organisation requirements** and responsibilities applicable to Data Services (DAT) providers as well as the associated **technical requirements** for the provision of data services
 - **Part-DAT**;
- ▶ to **avoid double oversight** of these DAT providers by the competent authority and by the operators contracting their services; and
 - **amendment of AirOPS rule**
- ▶ to ensure that the **SES objectives on interoperability** with respect to data used on aircraft systems are achieved.

Goal → *harmonisation; simple and clear rules & proposed rules to reflect today's practice*



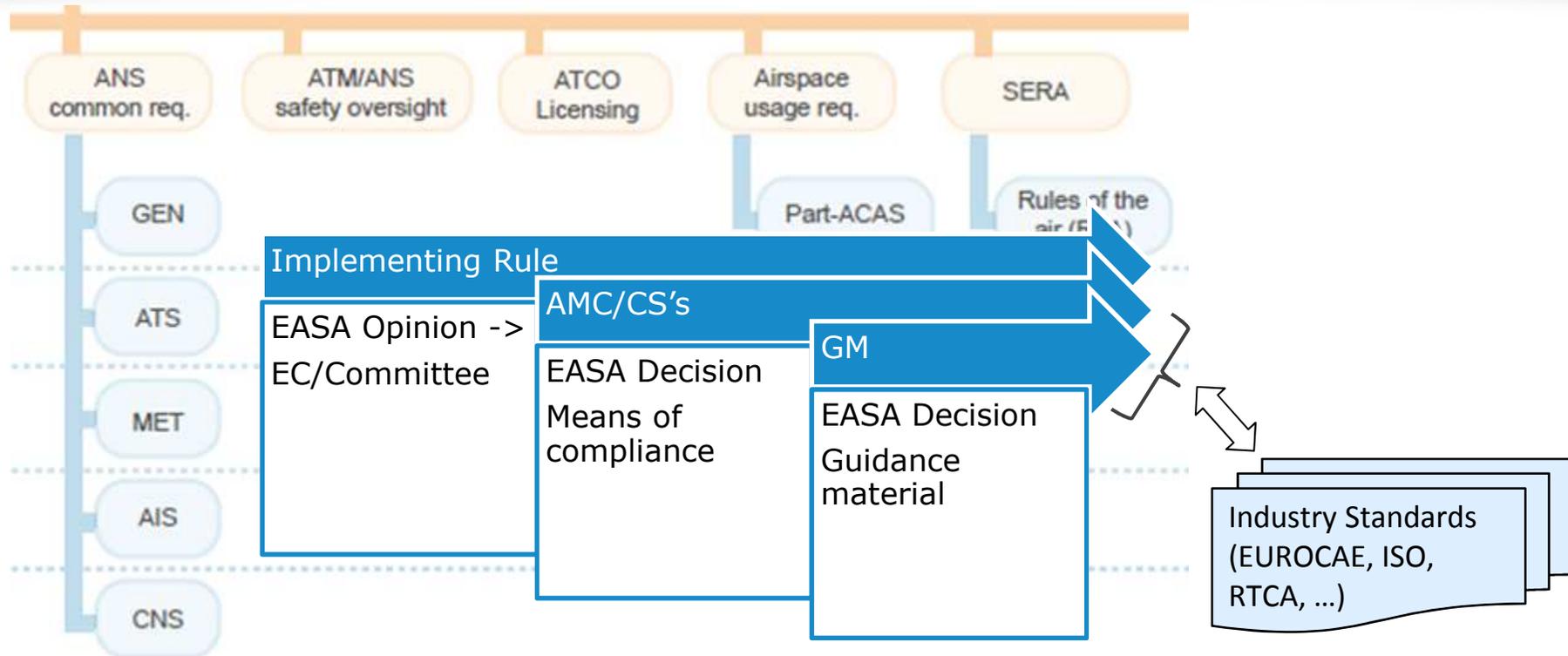
Rule-structure (Opinion 03/2014)



- **Cover Regulation:** Scope, main definitions, transition period, etc.
- **Annex I:** Definitions
- **Annex II:** Requirements for Authorities
- **Annex III:** Common Requirements for providers
- **Annex IV:** Requirements for Air Traffic Services
- **Annex V:** Requirements for Meteorological Services
- **Annex VI:** Requirements for Aeronautical Information Services
- **Annex VII:** Requirements for data services
- **Annex VIII:** Requirements for Com, Nav & Surv
- **Annex IX:** Requirements for Air Traffic Flow Management
- **Annex X:** Requirements for Air Space Management
- **Annex XI:** Requirements for Air Space Design
- **Annex XII:** Requirements for the provision of other ATM functions
- **Annex XIII:** Requirements for Personnel



Means of compliance & industry standards



Means of compliance and Guidance material

- To facilitate compliance – for ANSPs and authorities
- Provide one set of means
- Recognition of industry standards*



Rule development



Technical requirements and operational procedures
for the provision of data for airspace users
for the purpose of air navigation

RMT.0593 & RMT.0594 – Issue 1 – 11/10/2013

Consultation:
Aug' 14/Oct' 14

Members:

BENGTSON, Morten	ACI EUROPE
BERTRAM, Günter	Europe Air Sports
EMMERLING, Walter	Thomas Cook Airline Group
KURZ, Werner	AIA/Boeing
LAUER, Jan-Philipp	CANSO
MAZZA, Giovanni	Italian Civil Aviation Authority (ENAC)
BONILLO-MARTINEZ, Carmen	EASA
Fitz, Alexander	AUA
GENOTTIN, Jean-Paul	AIRBUS

Secretary:

TERZIEVA, Anastasiya EASA



- 5 RMG meetings => NPA;
- 1 Thematic Review meeting with RMG members & Most active commentators are invited => CRD and Opinion 02/2015



Observers: EC, FAA, Eurocontrol

10 November 2016

1st EASA Workshop for DAT providers

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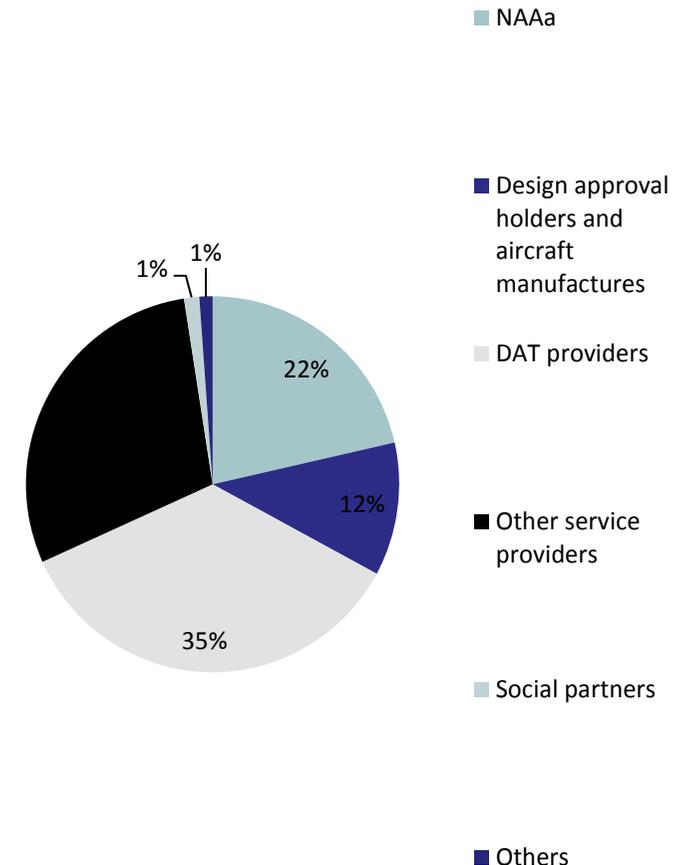
Results of public consultation

- NPA published on 08 August 2014
- Public consultation 3 months
- 410 comments received from approx. 30 users – mainly organisations
- Repetitions/comments show focus areas
- Positive comments / support recorded
- Alternative text proposals received
- No comment = agreement with original NPA proposal

Main commented topics:

- Definitions and scope
- Technical and operational competence and capability
- Management system (DAT.OR.115);
- Reporting requirements (DAT.OR.200);
- Working methods and operation procedures (DAT.TR.100)
- Required interfaces (DAT.TR.105);
- Amendments to OPS rule (Reg. No 965/2012)

NPA 2014-20





Options & consequences

The preferred option:

Oversight of **DAT providers** of navigation and other aeronautical databases by the **Agency (Option II)**.

→ **RIA developed, consulted & confirmed by the stakeholders**

➤ Consequences:

- Decrease of workload by DAT providers
- Decrease of workload by aircraft operators + NAAs
- Possible initial increase in workload (+ Fees & charges) for EASA
- Revision of TIP for airworthiness and environmental certification between the FAA and EASA



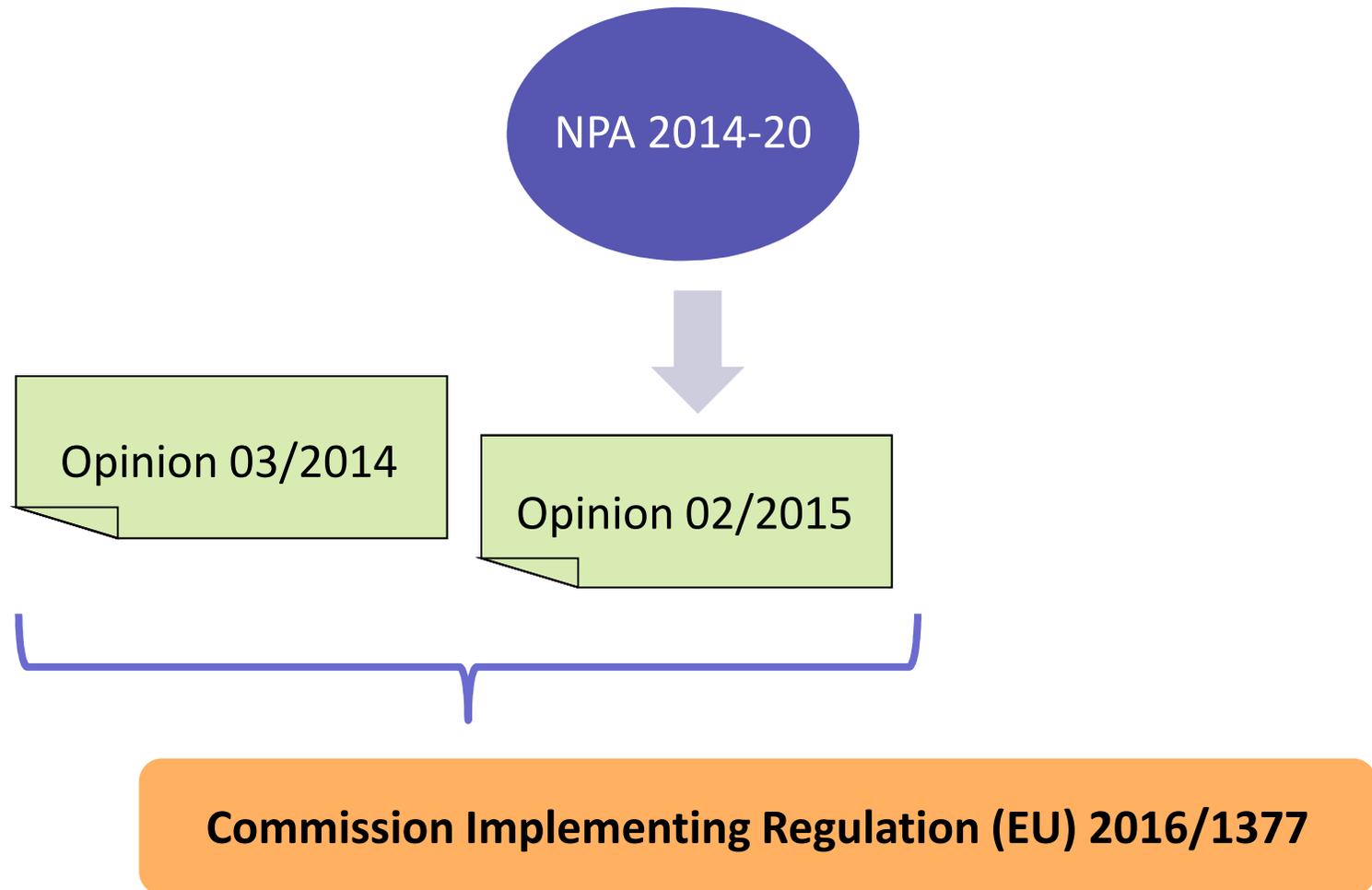
Conclusions

➤ The rule **aims** at:

- **maintaining safety while reducing the regulatory burden** (decreasing the oversight activities performed by a/c operators and by CA as well) = Implementing the BR objectives
- **Aligning with AC 20-153B (FAA) scope;**
- **PBN enabling;**
- Implementation of the **SES IOP objectives** (on Commission's request = ADQ2 mandate)



CR & Oversight + Part-DAT – adoption





EASA

European Aviation Safety Agency

Commission Implementation Regulation (EU) 2016/1377 (aka. "The accidental Regulation")

Jyrki Paajanen
European Commission

Cologne, 10 November 2016

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II

(Non-legislative acts)

REGULATIONS

COMMISSION IMPLEMENTING REGULATION (EU) 2016/1377

of 4 August 2016

laying down common requirements for service providers and the oversight in air traffic management/air navigation services and other air traffic management network functions, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011 and (EU) No 1035/2011 and amending Regulation (EU) No 677/2011

(Text with EEA relevance)

published accidentally on 19 August 2016 in Official Journal (OJ)
before the various translations had been finalised



Process of correcting...

EC in process of correcting the issues resulting from accidental publication of Regulation (EU) 2016/1377:

- another Commission Implementing Regulation will repeal Regulation (EU) 2016/1377
- republication of the Regulation with purely editorial issues (typos/page setting); no changes to DAT aspects
- Applicability date & transition period for DAT providers remains;
- All other service providers – applicable as from 2.01.2020
- Publication of the NEW Regulation – anticipated in Jan'17



EASA
European Aviation Safety Agency

Applicable requirements for data services (DAT) providers & the use of AMC/GM

Cologne, 10 November 2016

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Rules

ED Decision

Cover Regulation

ED Dec. Annex XIV = AMC & GM to the (Cover) Regulation

ED Dec. Annex I = AMC & GM to Part - DEF

Annex I
Definitions

Annex II
Part-ATM/ANS

ED Dec. Annex II = AMC & GM to Part - ATM/ANS.AR

ED Dec. Annex III = AMC & GM to Part - ATM/ANS.OR

Annex III
Part-ATM/
ANS.OR

Annex IV
Part-ATS

Annex V
Part-MET

Annex VI
Part-AIS

ED Dec. Annex VII = AMC & GM to Part - DAT

Annex VII
Part-DAT

Annex VIII
Part-CNS

Annex IX
Part-ATFM

Annex X
Part-ASM

Annex XI
Part-ASD

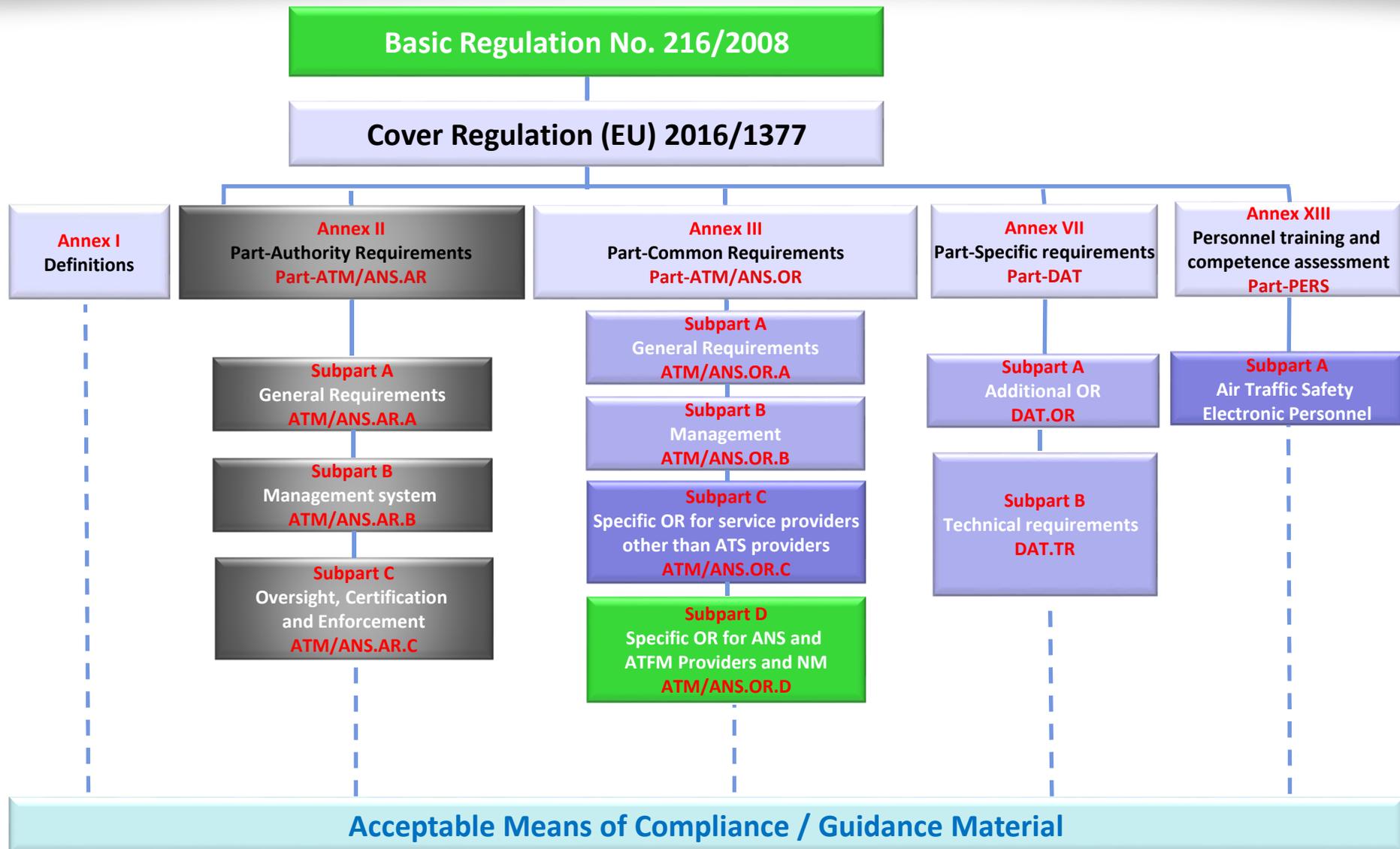
Annex XII
Part-NM

ED Dec. Annex XIII = AMC & GM to Part - PERS

Annex XIII
Part-PERS

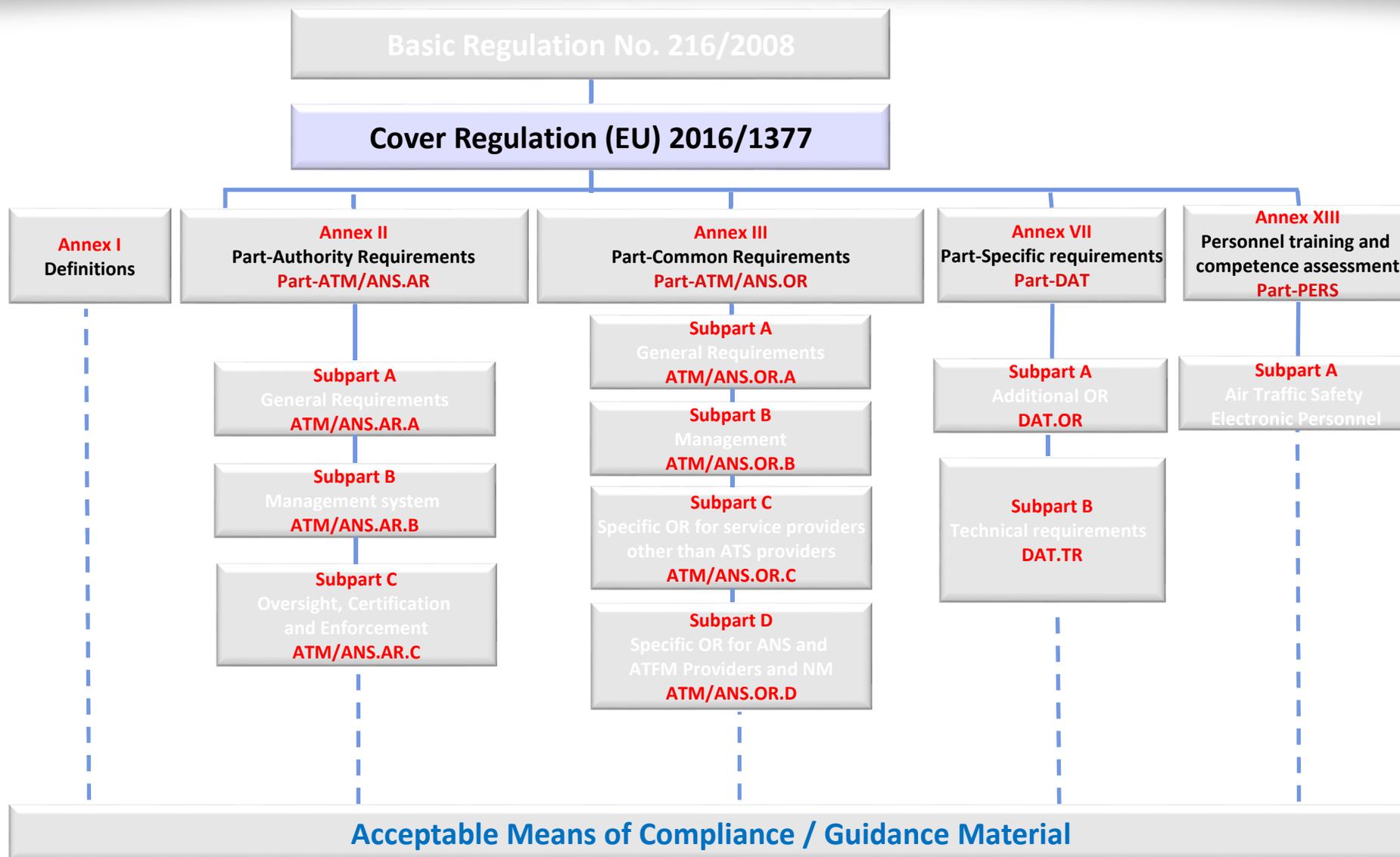


Where are the applicable requirements for DAT providers?





Where are the applicable requirements for DAT providers?





Who is the competent authority

➤ Article 4 (1)

(...)

For the purposes of this Regulation, **providers of data services** and the Network Manager **shall be considered to be pan-European service providers** in respect of which, in accordance with Article 22a(c) of Regulation (EC) No 216/2008, **the Agency is the competent authority.**



Service providers

*“means any legal or natural person providing functions and/or services of **ATM/ANS as defined in Article 3(q)** of Regulation (EC) No 216/2008 and/or other ATM network functions, either individually or bundled for general air traffic;”*

(Article 2(2), Cover Regulation)



Article 5 – Service providers

Article 5

Service providers

Service providers shall be granted a certificate and be entitled to exercise the privileges granted within the scope of that certificate, where they comply and continue to comply, in addition to the requirements referred to in Article 8b(1) of Regulation (EC) No 216/2008, with the following requirements:

- (a) for all service providers, in addition to the requirements of points (b) to (l) as applicable and the requirements of point (m), the requirements laid down in Annex III (Part-ATM/ANS.OR), Subparts A and B;
- (b) for service providers other than providers of air traffic services ('ATS'), in addition to the requirements of points (a) and (m), the requirements laid down in Annex III (Part-ATM/ANS.OR), Subpart C;
- (g) for providers of data services ('DAT'), in addition to the requirements of points (a), (b) and (m), the requirements laid down in Annex VII (Part-DAT);
- (m) for all service providers, in addition to the requirements of point (a), the applicable requirements laid down in Annex XIII (Part-PERS).



Article 9 - Entry into force

Article 9

Entry into force

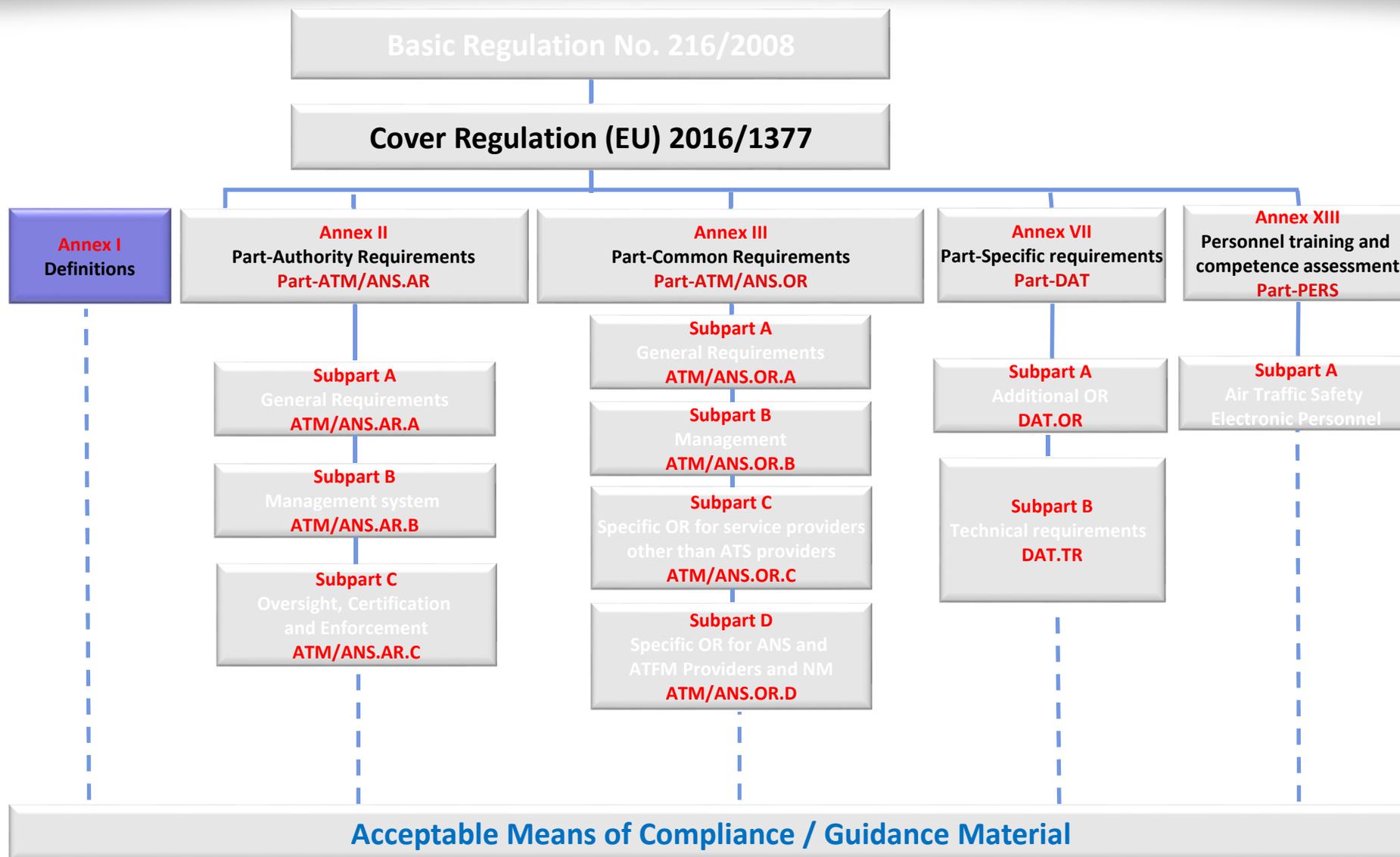
This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 1 January 2019

However, Article 5 shall apply from the date of entry into force of this Regulation in respect of a provider of data services, where that provider applies for a certificate in accordance with that provision.



Where are the applicable requirements for DAT providers?





Data services (DAT) providers

“means an organisation, which is:

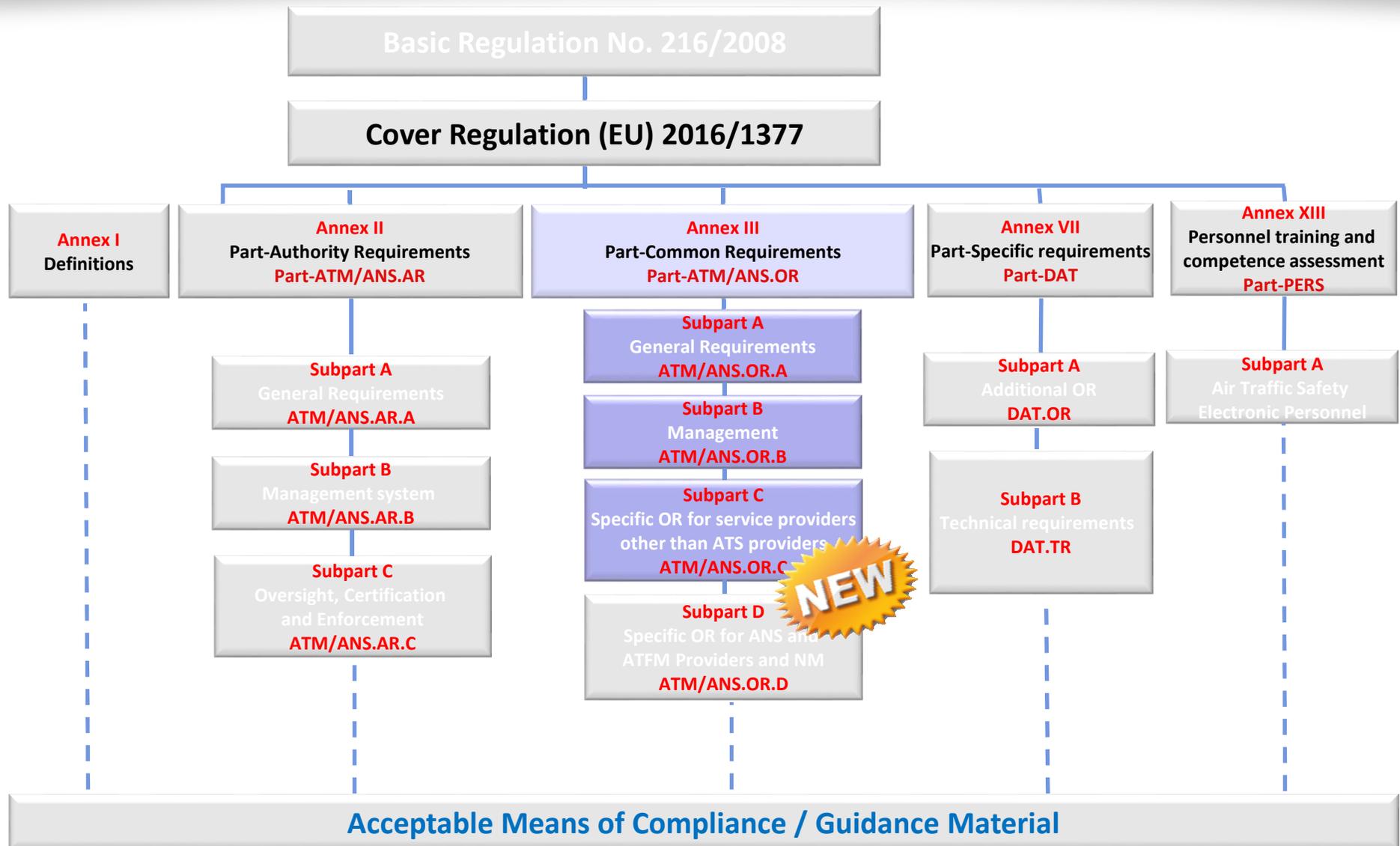
*(a) **Type 1 DAT provider** that processes aeronautical data for use on aircraft and provides an aeronautical database meeting the DQRs, under controlled conditions, **for which no corresponding airborne application/equipment compatibility has been determined;***

*(b) **Type 2 DAT provider** that processes aeronautical data and provides an aeronautical database for use on certified aircraft application/equipment meeting the DQRs **for which compatibility with that application/equipment has been determined.**”*

(point 43, Annex I)



Common requirements for providers of data services





ATM/ANS.OR.A (1)

Annex III
Part-Common Requirements
Part-ATM/ANS.OR

Subpart A
General Requirements
ATM/ANS.OR.A

Subpart B
Management
ATM/ANS.OR.B

Subpart C
Specific OR for service providers
other than ATS providers
ATM/ANS.OR.C

Subpart D
Specific OR for ANS and
ATFM Providers and NM
ATM/ANS.OR.D

Application for a service provider certificate

(ATM/ANS.OR.A.005)



L 324/32 Official Journal of the European Union 13.2.2014

Annex 3

CERTIFICATE FOR SERVICE PROVIDER
EUROPEAN UNION
COMPETENT AUTHORITY
SERVICE PROVIDER CERTIFICATE
(CERTIFICATE NUMBER/ISSUE No.)

Pursuant to Regulation (EU) ... and subject to the conditions specified below, the [competent authority] hereby certifies

(NAME OF THE SERVICE PROVIDER)
(ADDRESS OF THE SERVICE PROVIDER)

as a Service Provider with the privileges, as listed in the attached service provision conditions.

CONDITIONS:
This certificate is issued subject to the conditions and the scope of providing services and functions as listed in the attached service provision conditions.

This certificate is valid until the certified service provider remains in compliance with Regulation (EU) ... and the other applicable regulations and, when relevant, with the provisions in the service provider's documentation as required by Regulation (EU) ... Part XXXX.

Subject to compliance with the foregoing conditions, this certificate shall remain valid unless the certificate has been surrendered, lifted, suspended or revoked.

Date of issue:
Signed:
(Competent authority)

EASA Form 157 Issue 1 – Page 1/4

L 324/34 Official Journal of the European Union 13.2.2014

Services/Functions	Type of Service/Function	Scope of Service/Function	Limitations (*)
Aeronautical Information Services (AIS)	AIS	Provision of the whole AIS service	
Conditions (*)			
Data Services (DAT)	Type 1	Provision of Type 1 DAT authorises the supply of aeronautical databases in the following format: (list of the generic data formats)	
	Type 2	Provision of Type 2 DAT does not authorise the supply of aeronautical databases directly to end-user/aircraft operators. (Manufacturer) Certified Application/Equipment model (XXX), Part No. (YYY)	
Conditions (*)			
Meteorological Services (MET)	MET	Meteorological Watch Office Aeronautical Meteorological Offices Meteorological Stations WAC WAPC TCAC	
Conditions (*)			

AMC1 ATM/ANS.OR.A.005 Application
for service provider certificate
EXPOSITION – DAT PROVIDERS





ATM/ANS.OR.A (2)

Annex III
Part-Common Requirements
Part-ATM/ANS.OR

Subpart A
General Requirements
ATM/ANS.OR.A

Subpart B
Management
ATM/ANS.OR.B

Subpart C
**Specific OR for service providers
other than ATS providers**
ATM/ANS.OR.C

Subpart D
**Specific OR for ANS and
ATFM Providers and NM**
ATM/ANS.OR.D

ATM/ANS.OR.A.020 Means of compliance

- (a) Alternative means of compliance (AltMOC) to the AMC adopted by the Agency may be used by the service provider to establish compliance with the requirements of this Regulation.
- (b) When the service provider wishes to use an AltMOC, it shall, prior to implementing it, provide the competent authority with a full description of the AltMOC. The description shall include any revisions to manuals or procedures that may be relevant, as well as an assessment demonstrating compliance with the requirements of this Regulation.

A service provider may implement these alternative means of compliance subject to prior approval by the competent authority and upon receipt of the notification as prescribed in ATM/ANS.ARA.015(d).

Continued validity of a certificate

(ATM/ANS.OR.A.025)

- **No date of validity:** remains valid subject to compliance with the applicable requirements (it can be surrendered or revoked)
- The certificate shall be returned to the CA when revoked or surrendered



Changes & changes to a functional system

(ATM/ANS.OR.A.040 & ATM/ANS.OR.A.045)

The changes shall be **notified**

- Changes to the functional system;
- Changes to the provision of service and the service provider's management system that do not affect functional system
 - Require prior approval;
 - Not require prior approval = managed via procedure approved by the competent authority



Other common requirements

- ATM/ANS.OR.A.035 Demonstration of compliance
- ATM/ANS.OR.A.050 Facilitation and cooperation
- ATM/ANS.OR.A.060 Immediate reaction to a safety problem
- ATM/ANS.OR.A.065 Occurrence reporting
- ATM/ANS.OR.A.070 Contingency plan
- ATM/ANS.OR.A.075 Open and transparent provision of services



ATM/ANS.OR.A (5)

Annex III
Part-Common Requirements
Part-ATM/ANS.OR

Subpart A
General Requirements
ATM/ANS.OR.A

Subpart B
Management
ATM/ANS.OR.B

Subpart C
Specific OR for service providers
other than ATS providers
ATM/ANS.OR.C

Subpart D
Specific OR for ANS and
ATFM Providers and NM
ATM/ANS.OR.D



Findings and corrective actions

(ATM/ANS.OR.A.055)

- Identify the root cause
- Define a corrective action plan
- Demonstrate the corrective action implementation

➤ ...a system to analyse findings for their safety significance

- **Level 1 finding**
 - immediate & appropriate action to prohibit or limit activities
 - revoke, limit or suspend the certificate
- **Level 2 finding**
 - grants corrective action implementation period in CAP;
 - assesses the corrective action and implementation plan proposed;
 - accepts it, if sufficient
- **Observation**
 - a way to communicate and draw future audit teams' attention on specific matters that deserve scrutiny. It should be communicated to the audited service provider (GM1 ATM/ANS.AR.C.050(f))



ATM/ANS.OR.B (1)

Annex III
Part-Common Requirements
Part-ATM/ANS.OR

Subpart A
General Requirements
ATM/ANS.OR.A

Subpart B
Management
ATM/ANS.OR.B

Subpart C
Specific OR for service providers
other than ATS providers
ATM/ANS.OR.C

Subpart D
Specific OR for ANS and
ATFM Providers and NM
ATM/ANS.OR.D

ATM/ANS.OR.B.005 Management system - established and implemented that includes:

- clearly defined lines of responsibility and accountability
- description of the overall philosophies and principles with regard to safety, quality and security of its services;
- means to verify the performance of the service provider's organisation
- a process to identify changes;
- maintain trained and competent personnel;
- All documentation and key processes associated to the MS
- Monitor compliance with the requirements
- Management system - proportionate to the size of the service provider.



ATM/ANS OR B (1)

AMC2 ATM/ANS.OR.B.005(a) Management system

ISO 9001/EN 9100 CERTIFICATE(S) — TYPE 1 DAT PROVIDERS

An ISO 9001 or EN 9100 certificate issued by an appropriately accredited organisation addressing all the elements required in the respective Subparts should be considered a sufficient means of compliance for the Type 1 DAT provider. In this case, the Type 1 DAT provider should accept the disclosure of the documentation related to the certification to the competent authority upon its request.

AMC3 ATM/ANS.OR.B.005(a) Management system

EN 9100 CERTIFICATE — TYPE 2 DAT PROVIDERS

An EN 9100 certificate issued by an appropriately accredited organisation addressing all the elements required in the respective Subparts should be considered a sufficient means of compliance for the Type 2 DAT provider. In this case, the Type 2 DAT provider should accept the disclosure of the documentation related to the certification to the competent authority upon its request.



GM1 to AMC2 ATM/ANS.OR.B.005(a) Management system

ISO 9001/EN 9100 CERTIFICATEs — TYPE 1 DAT PROVIDERS

The elements required by this Regulation in reference to the management system that are not covered by the certificate issued by an appropriately accredited organisation should be subject to oversight by the competent authority.

GM1 to AMC3 ATM/ANS.OR.B.005(a) Management system

EN 9100 CERTIFICATE — TYPE 2 DAT PROVIDERS

The elements required by this Regulation in reference to the management system that are not covered by the certificate issued by an appropriately accredited organisation should be subject to oversight by the competent authority.



ATM/ANS.OR.B (2)

Annex III
Part-Common Requirements
Part-ATM/ANS.OR

Subpart A
General Requirements
ATM/ANS.OR.A

Subpart B
Management
ATM/ANS.OR.B

Subpart C
Specific OR for service providers
other than ATS providers
ATM/ANS.OR.C

Subpart D
Specific OR for ANS and
ATFM Providers and NM
ATM/ANS.OR.D

ATM/ANS.OR.B.015 Contracted activities

- Organisation not certified can be contracted to perform any part of the certified organisation activities
- It shall work **under the oversight of the service provider**
- The CA shall have access to the contracted organisation

ATM/ANS.OR.B.020 Personnel requirements

- appoint an accountable manager - responsible for establishing and maintaining an effective management system.
- define the authority, duties and responsibilities of the nominated post holders, in particular of the management personnel in charge of (...)quality, (...), finance and human resources-related functions.

Other management requirements

- ATM/ANS.OR.B.025 Facility requirements
- ATM/ANS.OR.B.030 Record keeping
- ATM/ANS.OR.B.035 Operations manuals



ATM/ANS.OR.C.005 Safety support assessment and assurance of changes to the functional system

*‘Functional system’ means a combination of procedures, human resources and equipment, including hardware and software, organised to perform a function **within the context of ATM/ANS** and other ATM network functions;*

(point 57, Annex I)

Annex III
Part-Common Requirements
Part-ATM/ANS.OR

Subpart A
General Requirements
ATM/ANS.OR.A

Subpart B
Management
ATM/ANS.OR.B

Subpart C
Specific OR for service providers
other than ATS providers
ATM/ANS.OR.C

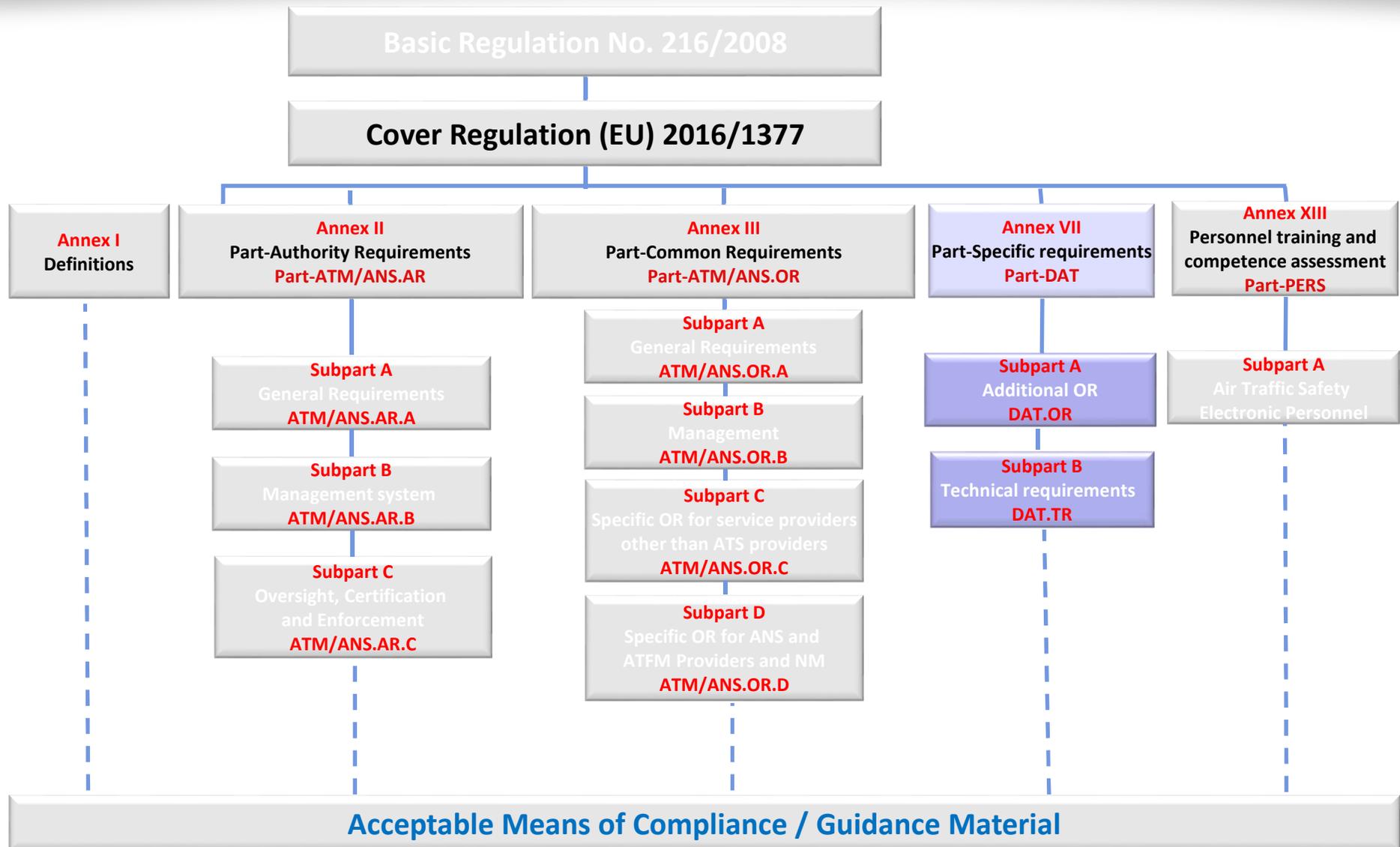
Subpart D
Specific OR for ANS and
ATFM Providers and NM
ATM/ANS.OR.D

Any change to the functional system:

- Notified to EASA;
- safety support assessment carried out covering the scope of the change
- provide assurance via a complete, documented and valid argument that the service will behave and will continue to behave only as specified in the specified context

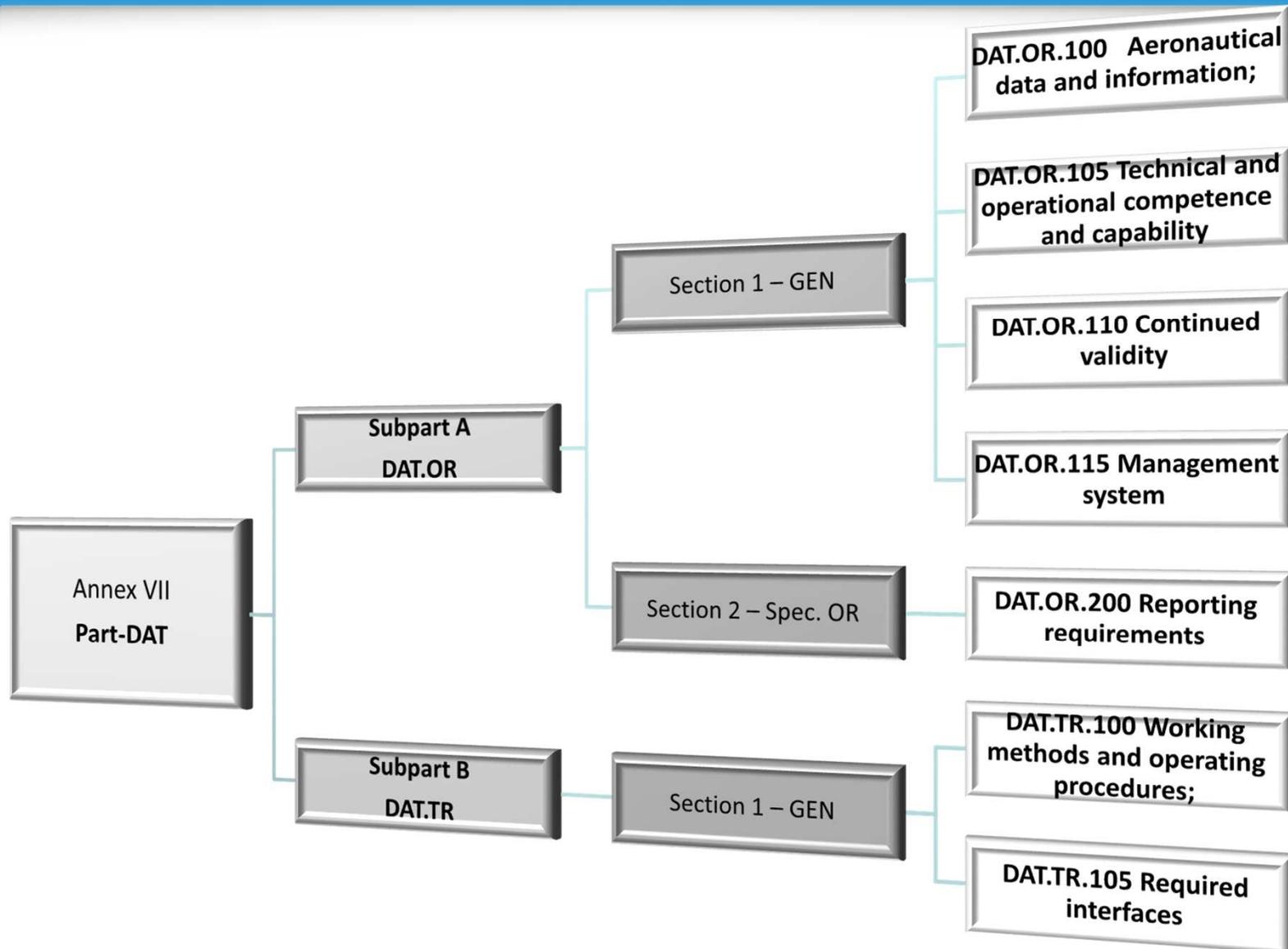


Specific requirements for providers of data services





Additional organisation requirements – structure





DAT.OR.100 Scope

DAT.OR.100 Aeronautical data and information

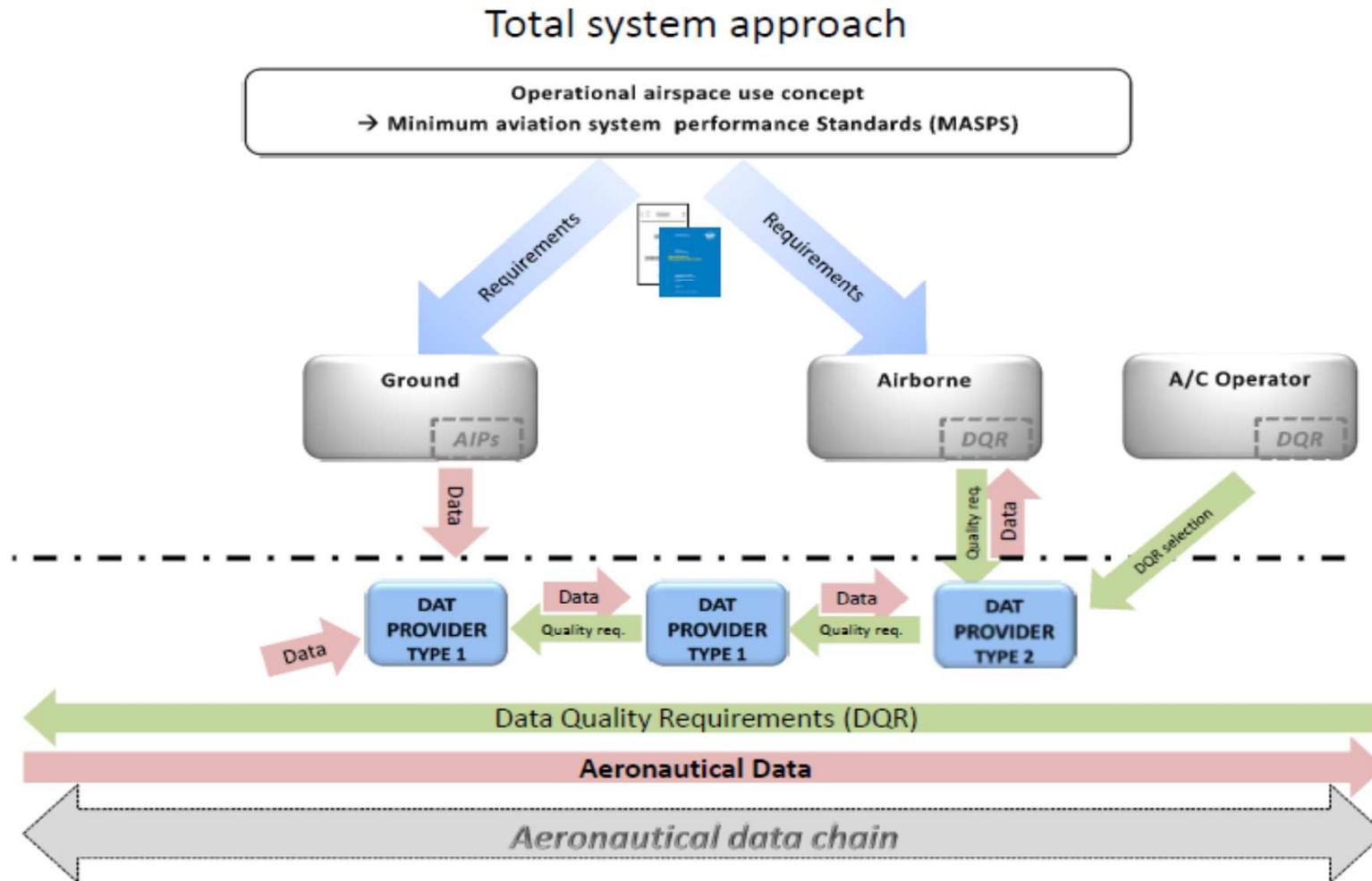
- (a) The DAT provider shall receive, assemble, translate, select, format, distribute and/or integrate aeronautical data and information that is released by an authoritative source for use in aeronautical databases on certified aircraft application/equipment.

In specific cases, if aeronautical data is not provided in the Aeronautical Information Publication (AIP) or by an authoritative source or does not meet the applicable data quality requirements (DQRs), that aeronautical data may be originated by the DAT provider itself and/or by other DAT providers.. In this context, that aeronautical data shall be validated by the DAT provider originating it.

- (b) When so requested by its customers, the DAT provider may process tailored data provided by the aircraft operator or originating from other DAT providers for use by that aircraft operator. The responsibility for this data and its subsequent update shall remain with the aircraft operator.



Scope of activities | DQRs set-up | Interfaces between actors

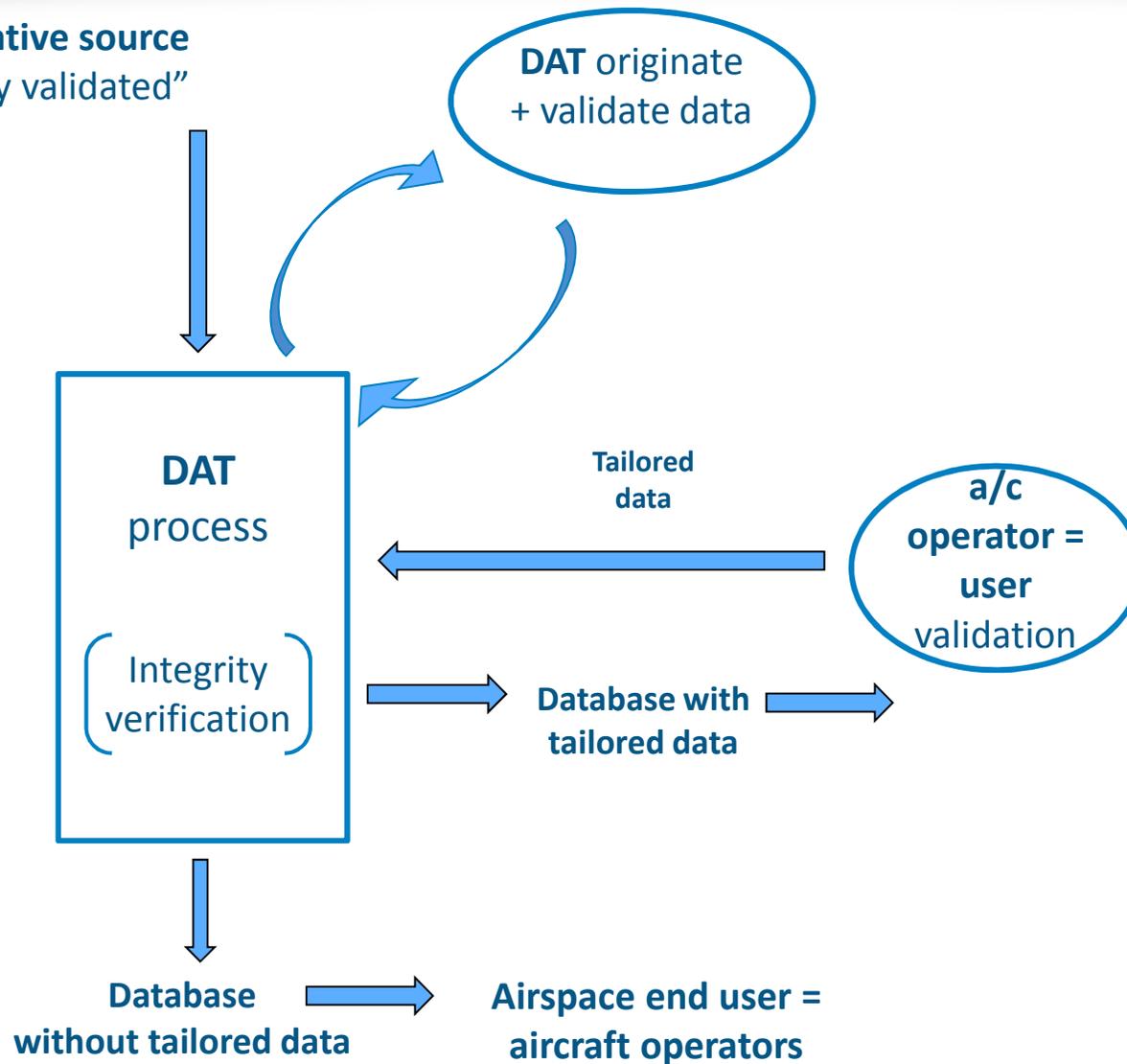




Data source | tailored data



Authoritative source
“= already validated”





Specific organisation requirements

Annex VII
Part-Specific requirements
Part-DAT

Subpart A
Additional OR
DAT.OR

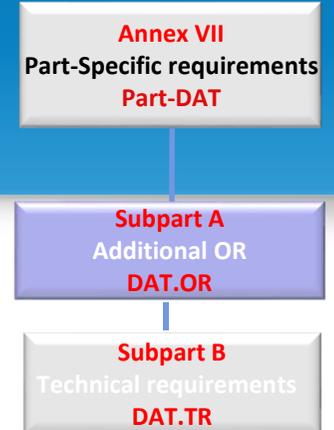
Subpart B
Technical requirements
DAT.TR

DAT.OR.105 Technical and operational competence and capability

- ▶ 'produce' aeronautical databases for certified aircraft application/equipment.
- ▶ **Type 2 DAT provider** ensures that the **DQRs are compatible with the intended use** of the certified aircraft application/equipment through an appropriate arrangement with the specific equipment design approval holder or an applicant for an approval of that specific design;
- ▶ **issue a statement of conformity**; and
- ▶ provide assistance to the equipment design approval holder in dealing with any continuing airworthiness actions that are related to the aeronautical databases that have been produced.
- ▶ **for release of databases** - the accountable manager nominates **attesting staff** and allocates their responsibilities



Specific organisation requirements (2)



DAT.OR.110 (additional) Management system

(...) control procedures for:

- (a) document issue, approval or change;
- (b) DQRs change;
- (c) verification that incoming data has been produced in accordance with the applicable standards;
- (d) timely update of the data used;
- (e) identification and traceability;
- (f) processes for reception, assembly, translation, selection, formatting, distribution and/or integration of data into a generic database or database compatible with the specific aircraft application/equipment;
- (g) data verification and validation techniques;
- (h) identification of tools, including configuration management and tools qualification, as necessary;
- (i) handling of errors/deficiencies;
- (j) coordination with the aeronautical data source provider(s) and/or DAT provider(s), and with the equipment design approval holder or an applicant for an approval of that specific design when providing Type 2 DAT services;
- (k) issue of statement of conformity; and
- (l) controlled distribution of databases to users.

+ record keeping



Specific organisation requirements (3)

Annex VII
Part-Specific requirements
Part-DAT

Subpart A
Additional OR
DAT.OR

Subpart B
Technical requirements
DAT.TR

DAT.OR.200 Reporting requirements

(a) The DAT provider shall:

- (1) report to the customer and, where applicable, the equipment design approval holder all the cases where aeronautical databases have been released by the DAT provider and have been subsequently identified as having deficiencies and/or errors, thus not meeting the applicable data requirements.;
- (2) report to the competent authority the deficiencies and/or errors identified according to subparagraph (1), which could lead to an unsafe condition. Such reports shall be made in a form and manner acceptable to the competent authority;
- (3) where the certified DAT provider is acting as a supplier to another DAT provider, report also to that other organisation all the cases where it has released aeronautical databases to that organisation and have been subsequently identified to have errors; and
- (4) report to the aeronautical data source provider instances of erroneous, inconsistent or missing data in the aeronautical source.

(b) The DAT provider shall establish and maintain an internal reporting system in the interest of safety to enable the collection and assessment of reports in order to identify adverse trends or to address deficiencies, and to extract reportable events and actions.

This internal reporting system may be integrated into the management system as required in ATM/ANS.OR.B.005.



Specific technical requirements (DAT.TR)

Annex VII
Part-Specific requirements
Part-DAT

Subpart A
Additional OR
DAT.OR

Subpart B
Technical requirements
DAT.TR

DAT.TR.100 Working methods and operating procedures

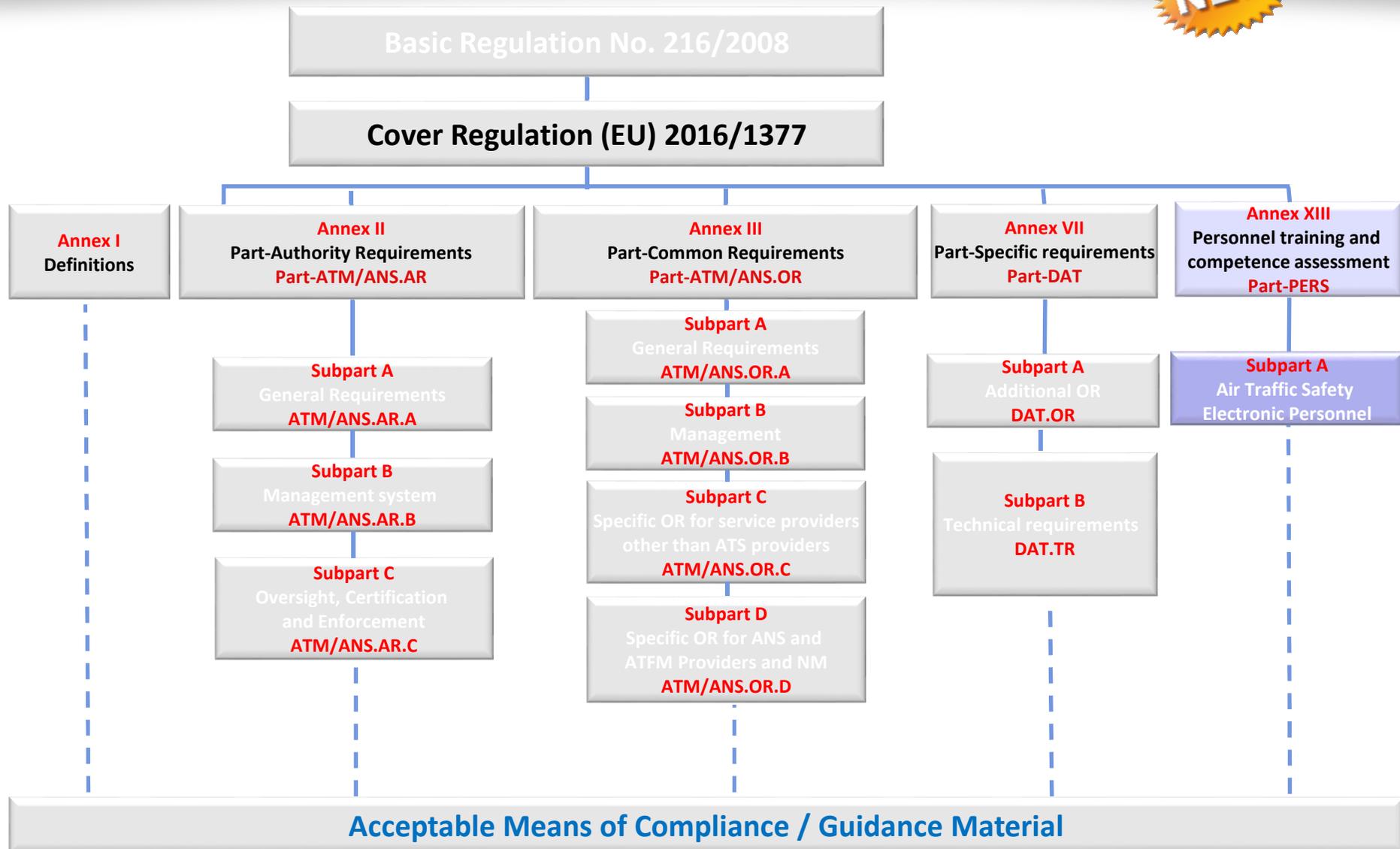
- With regard to all necessary aeronautical data
 - DQR;
 - Use data from...
 - Procedure to ensure that the data is correctly processed; and
 - Process on tailored data.
- With regard to attesting staff
 - Knowledge, background, experience;
 - Record keeping; and
 - Authorisation.

DAT.TR.105 Required interfaces

- Aeronautical sources and/or other DAT provider;
- Equipment design approval holder for Type 2 DAT provision;
- a/c operator, as applicable.



Personnel Training and competence assessment for... ATSEP





Annex XIII

Annex XIII
Personnel training and
competence assessment
Part-PERS

Subpart A
Air Traffic Safety
Electronic Personnel

ANNEX XIII

REQUIREMENTS FOR SERVICE PROVIDERS CONCERNING PERSONNEL TRAINING AND COMPETENCE ASSESSMENT

(Part-PERS)

SUBPART A —AIR TRAFFIC SAFETY ELECTRONIC PERSONNEL

*'Air traffic safety electronics personnel (ATSEP)' means any **authorised personnel** who are competent to operate, maintain, release from, and return into operations **equipment of the functional system**;*

(point 20, Annex I)

The training for the ATSEP (= 'IT' personnel):

- shall meet the requirements in Annex XIII;
- commensurate to the DAT providers needs;
- However, it should achieve that



ATSEP to be assessed before performing duties

Initial and on-going

Assessment against some defined criteria

GM to understand the concept of initial and on-going competence assessment



Current Rule vs. the future EU rules?

LoA (voluntary basis)

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European Aviation Safety Agency

LETTER OF ACCEPTANCE TYPE 2

Voluntary system

CONDITIONS

1. This acceptance requires compliance with the procedures specified in the LOA Exposition; and
2. This acceptance is valid whilst the accepted Navigational Database Provider remains in compliance with the Conditions for the issuance of Letters of Acceptance for navigation database Suppliers by the Agency. (Further in this LOA referred to as "Conditions") and the documented Data Quality Requirements.

Date of original issue:	Date of this issue:	Signed:
25 July 2011	06 May 2015	
		For EASA Jiří MOVY

LOA certificate TE.POA.00016-001 - Sheet A.

1. 224/2014 Official Journal of the European Union 19.8.2014

Appendix 1

CERTIFICATE FOR SERVICE PROVIDER
EUROPEAN UNION
COMPETENT AUTHORITY
SERVICE PROVIDER CERTIFICATE
(CERTIFICATE NUMBER/ISSUE NUMBER)

Pursuant to Regulation (EU) .../... and subject to the conditions specified in ...

[NAME OF THE SERVICE PROVIDER]
[ADDRESS OF THE SERVICE PROVIDER]

as a Service Provider with the privileges, as listed in ...

CONDITIONS:
This certificate is issued subject to the conditions, procedures and functions as listed in the attached service provision conditions.

This certificate is valid whilst the service provider remains in compliance with Regulation (EU) .../... and the other applicable regulations and, where applicable, the service provider's documentation as required by Regulation (EU) .../..., Part ...

Subject to compliance with the conditions specified in this certificate, the certificate shall remain valid unless the certificate has been surrendered, withdrawn or annulled.

Date of issue: ...
Signed: ...

EASA Form 157 Issue 1 - Page 1/4





EASA
European Aviation Safety Agency

AirOPS impact from the DAT provider certification

Giovanni CIMA,
Air Operations Regulation Officer
FS Directorate, EASA

Cologne, 10 November 2016

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OPS changes - 1

General

- Extension of the provisions for “aeronautical data management” to helicopters (in all Annexes)
- Extension of the provisions for “aeronautical data management” to other types of operations (NCO, SPO)

Changes to existing requirements (Part-CAT and Part-NCC)

- Scope extended from NAV DATA to all aeronautical databases used on certified aircraft systems applications.
- Obligation for the operator to monitor the integrity of the databases and related processes deleted (because covered by the certification of the data provider)
- Operators required however to report to the data provider eventual erroneous, inconsistent or missing data detected during operations.



OPS changes - 2

New requirements (Part-NCO & Part-SPO)

- Provisions extended to non-commercial operations of other-than complex aircraft and to specialised operations.
- NCO Requirements simplified and limited to databases used for primary navigation purposes.
- SPO rules combine the requirements of Part-NCC and Part-NCO.

AMC & GM

- Various types of DAT providers are specified
- Additional information on the certification of DAT providers, standards for data bases and timely distribution of databases
- References to Part-DAT to avoid repetition of rules
- Equivalence with recognised non-EU standards



Entry into force & Transition period

Entry into force

- New provisions are published with Reg. (EU) 2016/1199 of 22.07.2016 (amending Reg. 965/2012)
- Revised OPS rules on “Management of aeronautical databases” enter into force on **01.01.2019**.
- However the possibility for operators to use certified data providers before 2019 is foreseen

Transition phase

- ED Decisions containing the necessary AMCs and GMs have been put on hold due to the on-going ‘recast’ of Reg. (EU) 2016/1377 (Part-DAT)
- An AMC, applicable at the date of publication, will specify that DAT providers certified in accordance with Reg. (EU) 2016/1377 (Part-DAT) (even if the certificate is obtained before 01.01.2019 after a voluntary early application) are equivalent to the currently accepted data providers (LoA holders) and may be used to comply with the current rules
- New AMCs/GMs to the revised OPS rules, and applicable from 01.01.2019, will be published as well to be used after that date



EASA

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Mutual recognition with FAA

Cologne, 10 November 2016

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Mutual recognition with FAA

Before 1 January 2019

- Data services (DAT) provider Certificate or EASA Letter of Acceptance (LoA)

After 1 January 2019

- Data services (DAT) provider Certificate

EU-USA

- <https://www.easa.europa.eu/document-library/bilateral-agreements/eu-usa>



EASA
European Aviation Safety Agency

ATM/ANS Organisation Approval (AOA)

AOA Processes

FS4.1 ATM/ANS Standardisation and Oversight Section
FS Directorate

Cologne, 10 November 2016

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Contents

- **Application for initial approval**
 - Application package
 - Application eligibility check/ Request and acceptance of quote
- **Investigation process**
 - Overview
 - Step-by-step (Phase 1 to Phase 5)
 - Timing
- **Oversight**
- **Significant Changes**
- **Changes to Functional Systems**



Application for initial approval

Application Package

Email: anp.organisation@easa.europa.eu (fax or regular mail also possible)

Initial application package must include:

- Application form for ATM/ANS Service Provider Organisation Approval
- Copy of Organisation's Legal Status Document
(Certificate of Incorporation / National Company Registration) with a translation in English if document drawn up in a non-EU language
- Organisation Exposition
including company flow-charts and, as relevant, detailed description and information on ATM/ANS activities and organisation of partners or subcontractors



Application for initial approval (2)

Application Eligibility Check

- **Administrative eligibility check** is performed by the Applications management section within the EASA Applications Management department (RS-Dir)
- **Technical eligibility check** is performed by the AOA Section Manager with support from EASA ATM/ANS experts. It comprises:
 - Completeness of documentation
 - Clear description of intended service provision and the relevant functional systems

Request and Acceptance of Quote

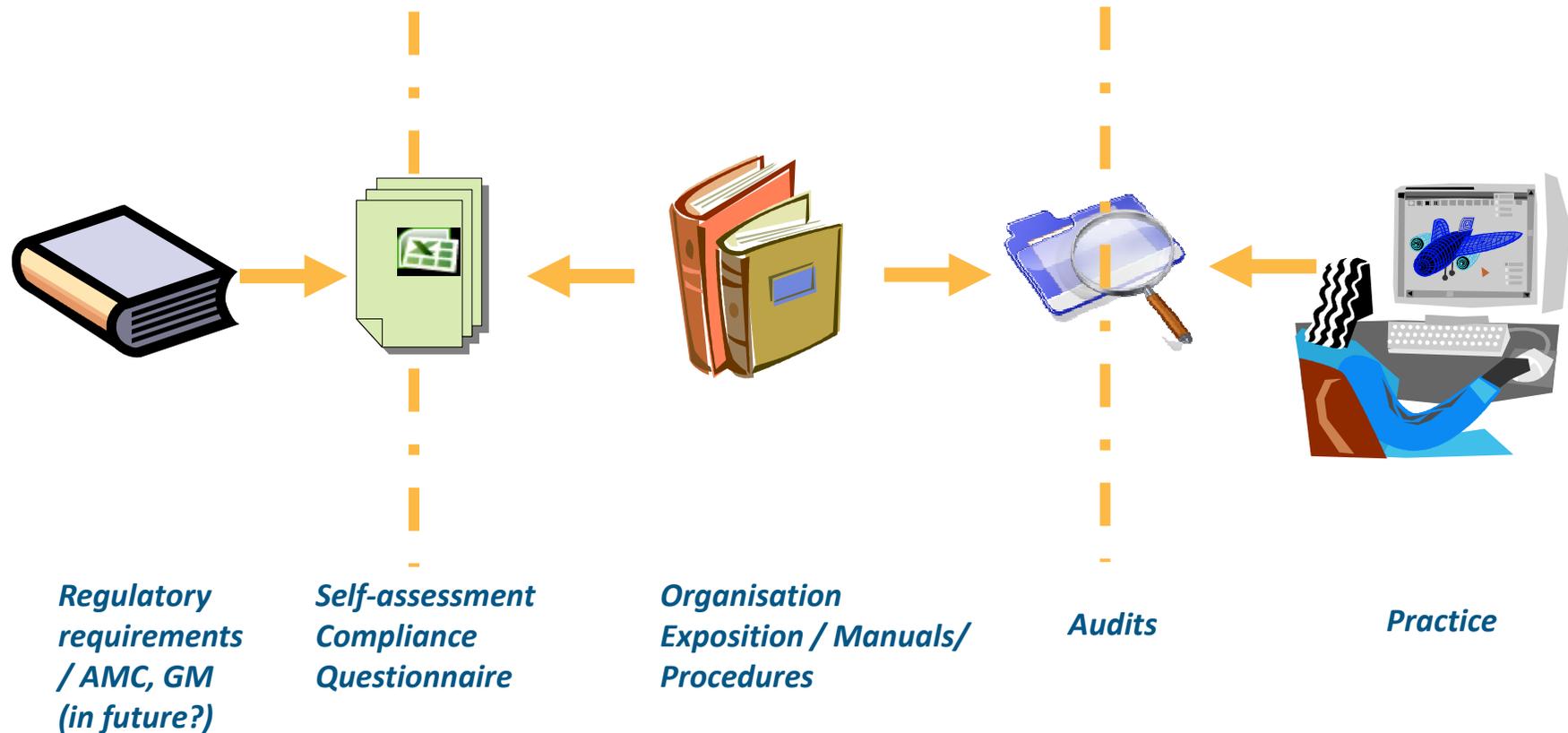
- A quotation of estimated fees and charges for the initial investigation **may be requested by the applicant** by ticking the appropriate box in the application form.
- The technical investigation does not start before such **quote has been accepted in writing by the applicant**. (60 days deadline)



Investigation process

AOA Investigation

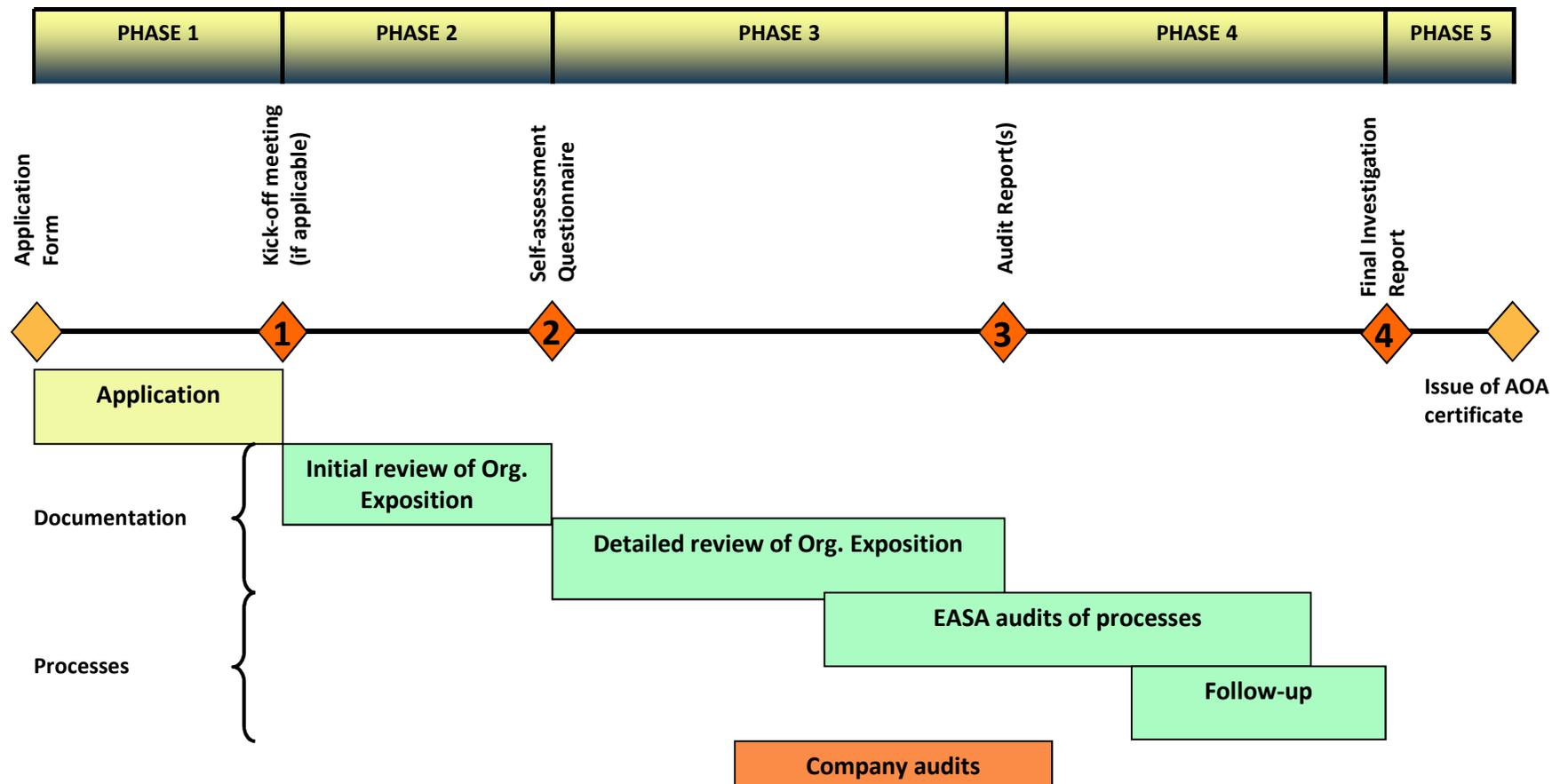
The AOA investigation is performed to show that your organisation is fulfilling all applicable requirements:





Investigation process

Overview

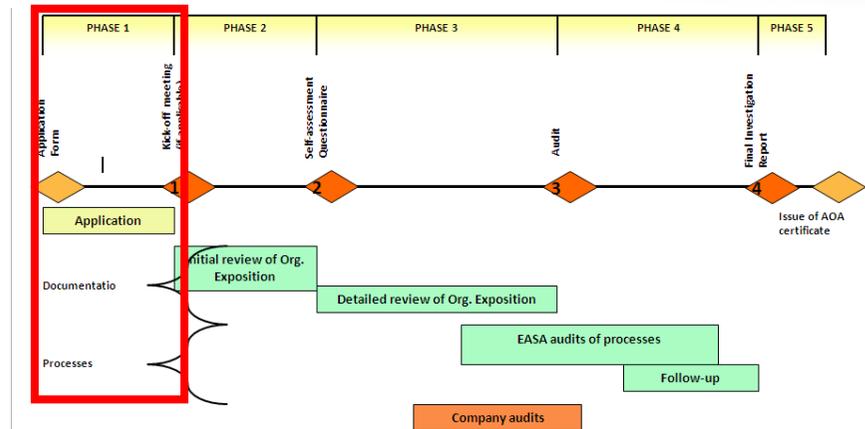




Investigation process (2)

Step-by-Step

Phase 1: Initiation



ATM/ANS Organisation Approval Team is nominated

- Composed of a Team Leader and Team Members
(Team Members could be persons from FS4.1 Section, ATM/ANS experts from other business areas within EASA or experts from NAA/QEs. The team will also make use of EASA specialists pool on an ad-hoc basis if the need arises)
- Size of the team is determined on a case-by-case basis taking into account the scope applied for and complexity of the organisation

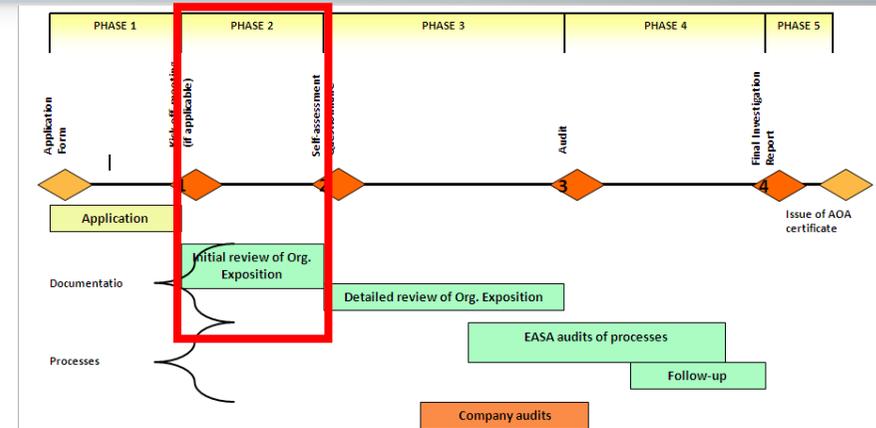
This first meeting (or alternatively telephone meeting supported by email exchanges) formally initiates the AOA investigation:

- General presentation of the applicant
- A description of the investigation procedure



Investigation process (3)

Phase 2: Preparatory phase



At the beginning of the investigation, the AOA team will:

- Study the Organisation Exposition and associated data/ procedures
- Create self-assessment compliance questionnaire to be filled in by the applicant
- Establish the investigation program and audit schedule
- Coordinate the investigation program and audit schedule with the company



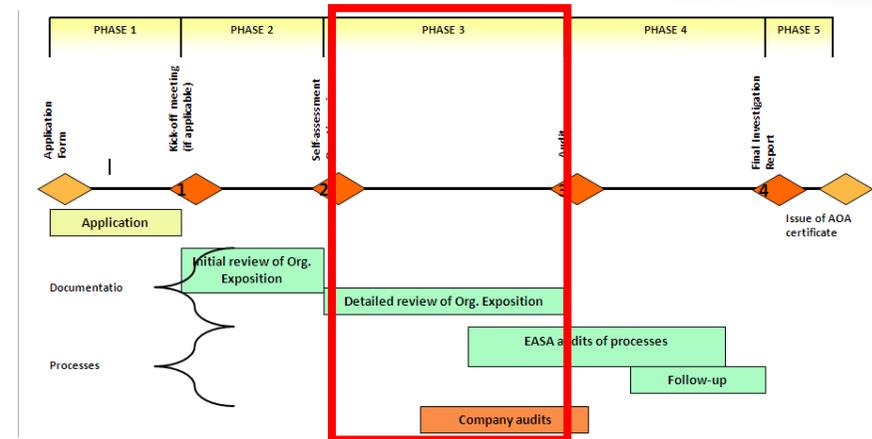
Investigation process (4)

Phase 3: Detailed document review

During this phase, the complete system shall be reviewed to check that the organisation complies with the applicable requirements, e.g.:

- › Organisation Exposition
- › Management Manuals and Handbooks
- › Business Plan (*not applicable for DAT providers*)
- › Change Management Procedures
- › Operations Manuals
- › Record Keeping

Final results of this phase will be recorded in the AOA Document Review table

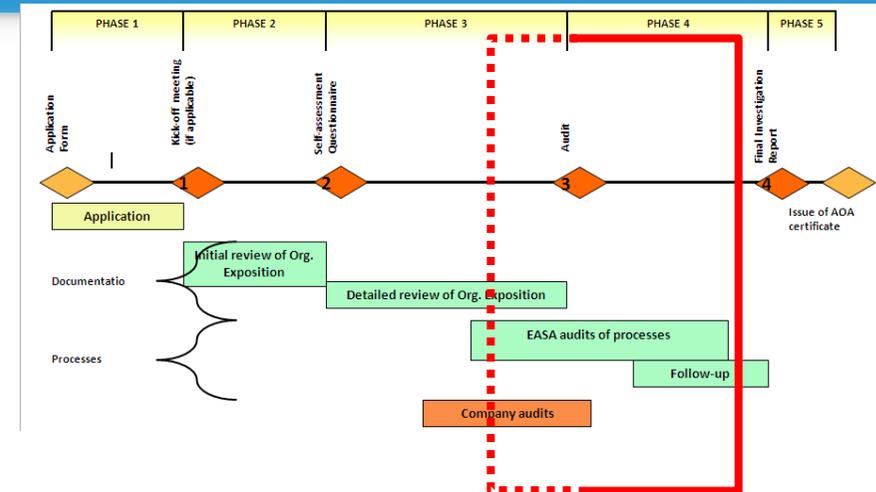




Investigation process (5)

Phase 4: EASA Audit of processes

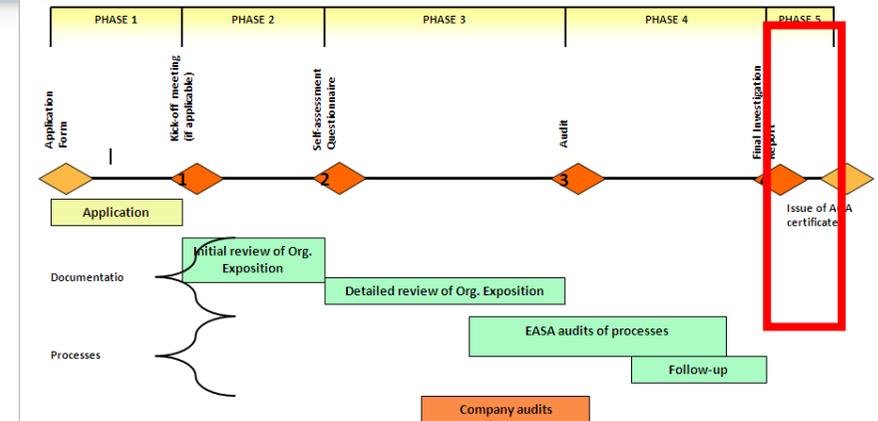
- Phase 4 may be overlapping with Phase 3 for efficiency
- EASA will audit the company's processes (based on real working examples and processes of the organisation) to verify the effectiveness and further compliance with the requirements, e.g.:
 - Safety Support Management Processes
 - (Quality) Management Process
 - Security Management Process (*not applicable for DAT providers*)
 - Change Management Process
 - Performance (Financial) Management Process (*not applicable for DAT providers*)
- Phase 4 is complete when all subjects have been processed and/or a corrective action plan agreed by the AOA team
- AOA team will provide the **conclusions of the investigation**





Investigation process (6)

Phase 5: Conclusion



Issuing the Organisation Approval Certificate following:

- Submission of final investigation report
- Approval by the ATM/ANS Standardisation and Oversight Section Manager
- Confirmation of agreed terms of approval (Derogations, Limitations, etc)
- AOA investigation final report

The AOA Certificate will be prepared by the ATM/ANS Standardisation and Oversight Section Manager and signed by the EASA Management.



Investigation process (7)

Timing

The timing of the whole process is dependant on:

- Quality of Organisation Exposition
- Resources
- Responsiveness
- Training
- Implementation
- Good communication



AOA Oversight Program

After initial approval of the AOA an oversight program is started.

The AOA Team Leader will:

- Produce a program defining the **oversight activities** for of the coming **cycle of 2 years**
 - Process audits
 - System audits
 - Review of procedure updates
- Produce a **bi-annual oversight report**, with activities performed and update of cycle programme as needed

The bi-annual oversight report is approved by ATM/ANS Standardisation and Oversight Section Manager.

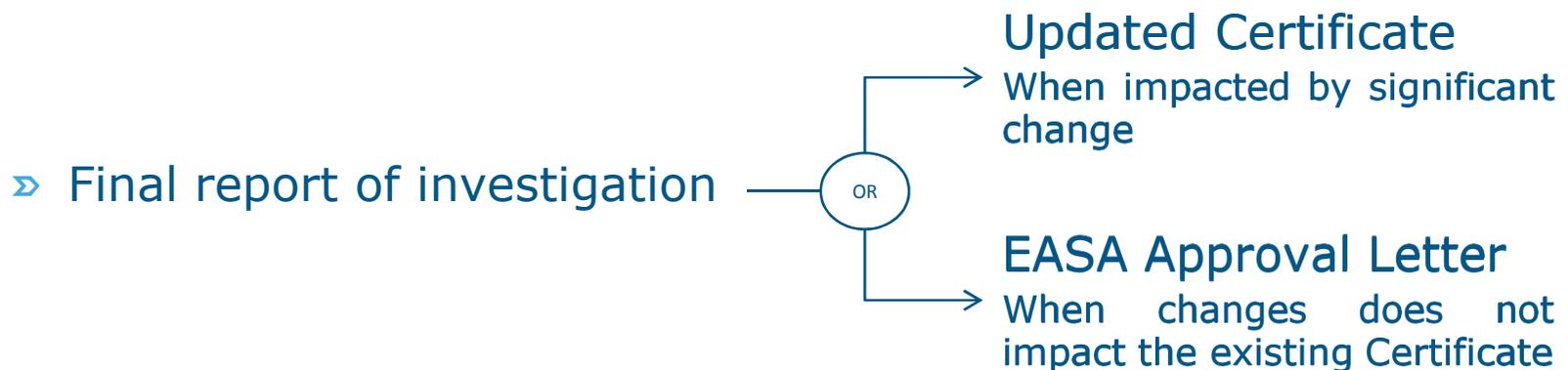


Changes

AOA Significant Changes

Change to the provision of service, the service provider's management system and/or safety management system, that does not affect the functional system.

- They require EASA approval
- The application form and process are the same as for initial approval (email: anp.organisation@easa.europa.eu)
- Additional investigations are performed:
 - Short and simple (e.g. name change, location change); or
 - Complex, nearly complete re-evaluation (e.g. new services provided)





Changes to Functional Systems

Investigation of changes to Functional Systems

*Functional system' means a combination of **procedures, human resources and equipment, including hardware and software**, organised to perform a function within the context of ATM/ANS and other ATM network functions.*

Changes to functional systems (as defined by Reg. 1377/2016)

- All changes must be notified to EASA (classification criteria and notification means to be part of the organisation approved procedures)
- The Notification Form shall be sent to the AOA section (email: AtmAnsOrg@easa.europa.eu)
- Criteria for the EASA review decision is documented
- If NO REVIEW decision is taken, change will be implemented according to the organisation change management procedures (accepted by the EASA)
- If REVIEW decision is taken, an investigation process will be launched to assess compliance involving:
 - Evaluation of review needs and definition of Level of Involvement
 - (if necessary) Technical briefing from the ATM/ANS organisation
 - Execution of the activities as defined in the Level Of Involvement (e.g. holding of different meetings/teleconferences, desktop review)
 - Final Report with the result of the investigation



Changes to Functional Systems (2)

Result of the investigation

In case of acceptable compliance demonstrations:

- Letter confirming the acceptance of the change
 - EASA Letter of Acceptance (when change does not impact the Approval Certificate) or Updated Approval Certificate
- Change can be implemented

In case of non-acceptable compliance demonstrations:

- Letter to the organisation stating the conclusions
- Change cannot be implemented



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**Way forward may include some
adjustments and evolution**

Thank you & Let's discuss...



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Open discussion (1)

- Are there additional audit related supporting documents like the current EASA Checklist? For the purpose of future audits at DAT providers: Is EASA going to publish a checklist similar to the form “Conditions for the issuance of letters of acceptance for navigation database suppliers compliance check list”?
- What will be the role of the Airframer in the new databases production process?
- Will EASA accept applications for the new certification for Q2 2017?



Open discussion (2)

- Is EASA going to accept surveillance audits according to its present LOA audit program in 2017 and 2018?
- How is EASA going to train auditors with regard to the new certification program?
- Will the interoperability regulation EC 552/2004 apply to DAT providers?
- Lack of authoritative sources for some data: Databases use by certified applications is increasing and data not coming from authoritative sources as well (terrain data, cultural data, ...) . What is the plan in Europe to encourage Members States to designate and to recognize organizations as authoritative sources for the provision of such data?



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Closing & Conclusions

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Conclusions

- Overview of applicable requirements for DAT presented
- The move from LoA process to certification of DAT providers described
- The current EASA LoA and the future DAT providers met their competent authority (= EASA personnel engaged in the ATM/ANS oversight activities)
- ‘Open’ questions and queries addressed



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