

MODULE-0.1

AOC Responsibilities

Contents

- Module 0.1 – AOC responsibilities;
- Module 0.2 – ATO detailed requirements;
- Module 0.3 – FSTD Operators.

AOC Holder Responsibilities

Essential Requirement for Air Operators (Annex01 to COVER):

*“operator must use only **suitably qualified** and **trained personnel** and implement and maintain **training and checking programmes** for the crew members and other relevant personnel that are necessary to ensure the currency of their certificates, ratings and qualifications”*

As Detailed in TCAR OPS regulation (ORO.MLR.100 and ORO.FC and associated AMC GM)

*“Flight Crew Training and Checking Programmes and syllabus shall be specified in **Operations Manual** and **Approved** by CAAT”*

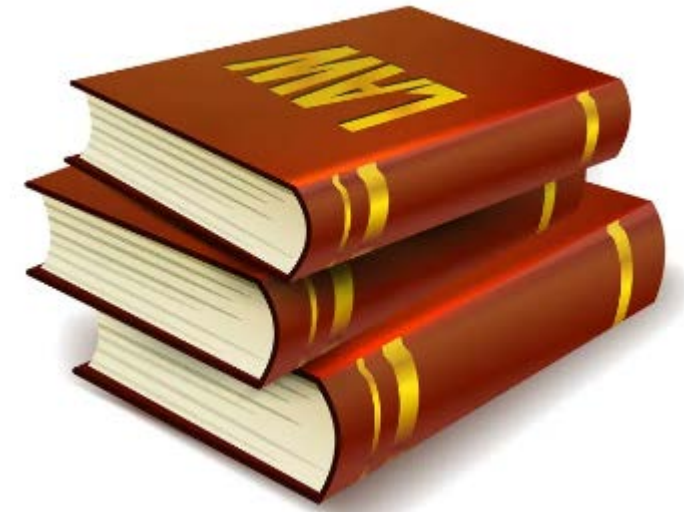


AOC Holder Responsibilities

ORO.FC.145 (a): *All training, checking and assessment required in this Subpart shall be conducted in accordance with the **training programmes** and **syllabi** established by the operator in the operations manual.*

AMC3 ORO.MLR.100: Operations Manual Part-D

- *Description and Scope*
- *Content (Programmes)*
 - *Flight crew, all relevant in **ORO.FC**, **Part-CAT** and **Part-SPA***
 - *Cabin Crew*
 - *Operations Control personnel (FOO/FD)*
- *Procedures*
- *Description of documentation to be stored and storage periods.*



AOC Holder Responsibilities

- Training programmes and syllabi shall be based on **OSD** (includes **mandatory[M]** & **non-mandatory elements [AMC]**)
- Training & Checking programmes, syllabi and means to deliver (FSTD) shall be **approved by CAAT**
- **FSTD** shall be **qualified** i.a.w PEL regulation and '**replicate**' aircraft used

NOTE: *differences between FSTD vs Aircraft shall be addressed by briefing or training (as appropriate)*

- System to **monitoring** of the **change** of **FSTD** (to ensure adequate of training)



MULTIPLE OF AEROPLANES and SINGLE FLOT HIGHT PERFORMANCE COMPLET	Regulatory occurrences			Additional occurrences			Session references	
	FIS			OTHER FSTD				
Manoeuvres/Procedures	Total	T1	T2	Total	T1	T2	T1	T2
SECTION 1								
1. Flight preparation								
1.1. Performance calculation								
1.2. Aeroplane external visual inspection location of each item and purpose of inspection								
1.3. Cockpit inspection								
1.4. Use of checklist prior to starting engines, starting procedures, radio and navigation equipment check, selection and settings of navigation and communication frequencies								
1.5. Taxiing in compliance with air traffic control or instructions of instructor								
1.6. Before take-off checks								
SECTION 2								
2. Take-offs								
2.1. Normal take-offs with different flap settings, included expedited take-offs								
2.2. * Pattern take-off transition to								

Flight Crew Training Programmes Requirements

Basic contents that are related to the Flight Crew Training Programmes (OM-D):

ORO.GEN.110	Operator responsibilities (dangerous goods)
ORO.GEN.200	Management System
ORO.FTL.250	Fatigue Management Training
ORO.FC.105	Designation as pilot-in-command/commander
ORO.FC.115	Crew resource management (CRM) training
ORO.FC.120	Operator conversion training
ORO.FC.125	Differences training, familiarisation, equipment and procedure training
ORO.FC.130	Recurrent training and checking
ORO.FC.145	Provision of training, checking and assessment
ORO.FC.146	Personnel providing training, checking and assessment
ORO.FC.205	Command course
ORO.FC.215	Initial operator's crew resource management (CRM) training
ORO.FC.220	Operator conversion training and checking
ORO.FC.230	Recurrent training and checking

Flight Crew Training Programmes Requirements

Basic contents that are related to the Flight Crew Training Programmes (OM-D):

ORO.FC.140 ORO.FC.240	Operation on more than one type or variant S/MFF
ORO.FC.135 ORO. FC. A.201	Pilot Qualification to operate in either pilot's seat Inflight relief of flight crew member (IRFCM)
CAT.GEN.MPA.170 CAT.GEN.MPA.175 CAT.GEN.MPA.215	Psychoactive substances Endangering Safety Support Programme
CAT.OP.MPA.290 CAT.OP.MPA.295	TAWS ACAS
CAT.OP.MPA.303 CAT.OP.MPA.311	In-flight check of the landing distance at time of arrival – aeroplanes Reporting on runway braking action
Part-SPA AMC 20-6	Operations requiring a specific approval ETOPS

Flight Crew Training Programmes Requirements

Basic contents that are related to the Flight Crew Training Programmes (OM-D):

CAT.GEN.MPA.200 SPA.DG	Transportation of Dangerous Goods
FCL ORA.ATO.125 FCL.060 FCL subpart J & K	Appendix – 9 Type rating course – aeroplane (with FSS): ZFTT Recent experience Instructor & Examiners
ORO.GEN.120 (b)	<p>Acceptable means of compliance (AMC) are non-binding standards adopted by the CAAT to illustrate means to establish compliance with requirements of the Regulation.</p> <p>AOC holder must demonstrate compliance to regulation by using compliance matrix.</p>

Flight Crew Training Programmes Requirements

Develop and Verify OM-D compliance

Compliance matrix is a way to demonstrate compliance

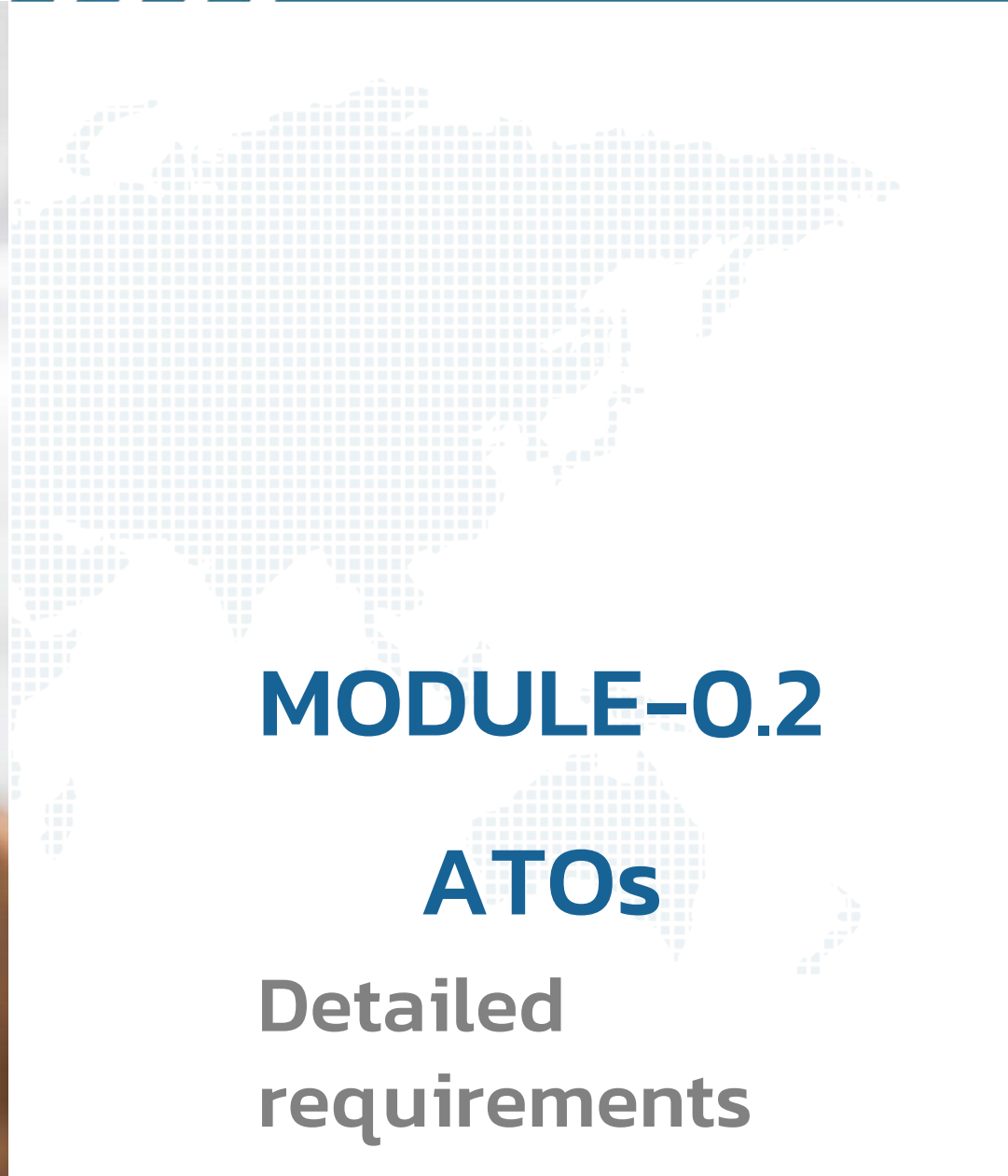
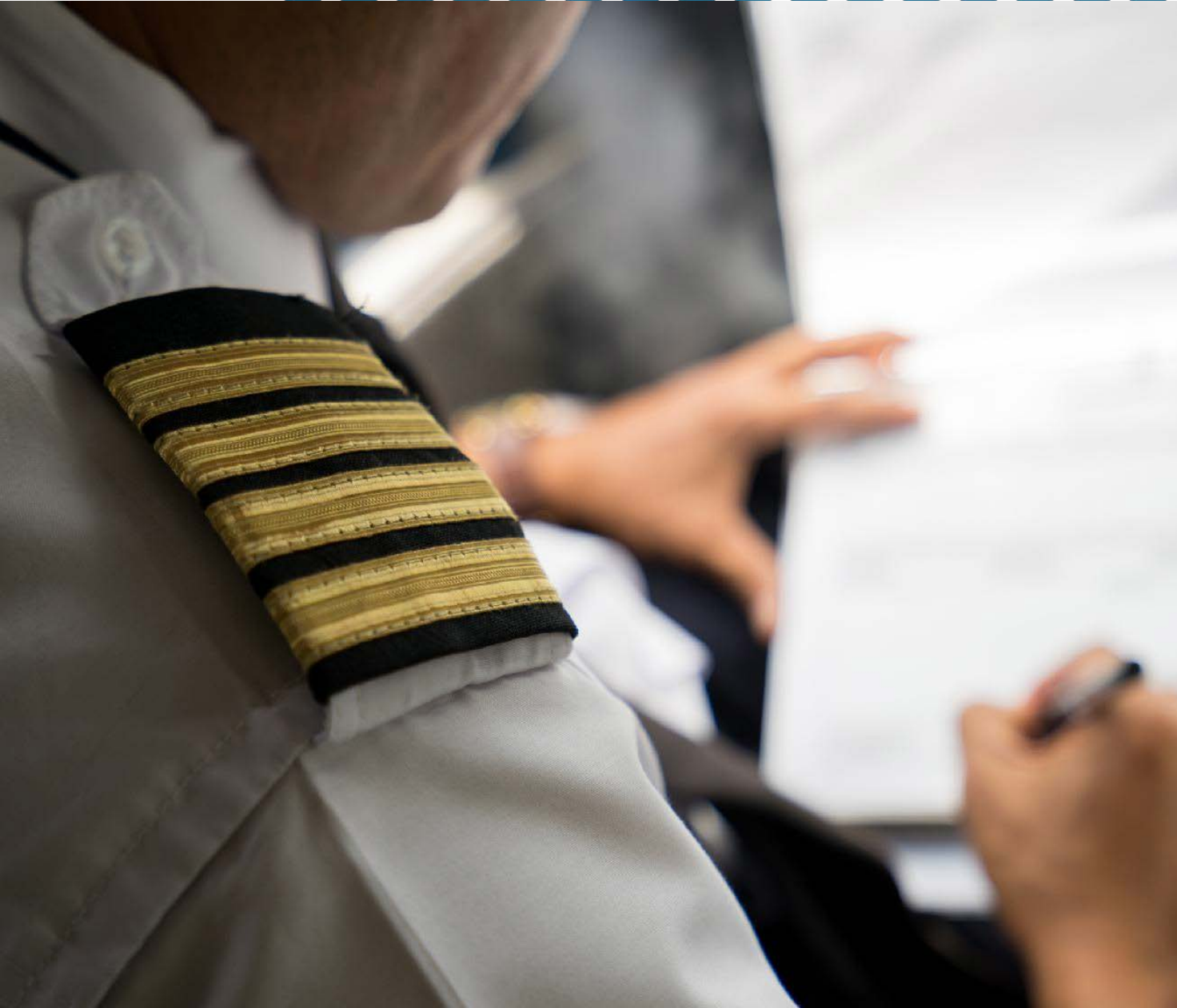
When elaborating an OM-D,
AOC shall **verify and demonstrate the compliance of the manuals** with the requirements

The use of compliance matrix is a way to address it.

/i\ The following modules will assist you to draft the OM-D including FC training programmes.

Flight Crew Training Programmes Requirements

Module	Descriptions
0. ATO & AOC	Responsibility of ATO and AOC, TCAR PEL regulations
1. Overview	Overview of flight crew training in TCAR OPS
2. CAAT approval	Approval concept of OM-D, FC Training
3. Overview of TCAR PEL	Overview of TCAR PEL & Conversion of instructors
4. OCC	Operator Conversion Course training
5. LIFUS	Line Flying under supervision
6. CRM	Crew Resource Management
7. RTC	Recurrent Training & Checking
8. CC	Command Course
9. LTC / LC	Line Training Captain / Line Checker
10. PICUS	PIC under supervision
11. IFRFCM	In-flight relief flight crew member
12. Commander on RHS	Operation on either pilot's seat
13. S/MFF	Operation on more than one type or variant



MODULE-0.2

ATOs

**Detailed
requirements**

Privileges for Training Organisations

Approved Training Organisations ATO

- Have privileges that can extend **up to** CPL, MPL, IR, Theoretical ATPL
- Class, **Type ratings** & Additional ratings including instructors
- Must develop compliant organisation and management system (Part ORA)

And are approved by the CAAT

AOC Holders also shall become **ATO**

Privileges for Training Organisations – ATO

Privileges of an Approved Training Organisation (ATOs)

ORA.GEN.125 Terms of approval and privileges of an organisation

A certified organisation shall comply with the scope and privileges defined in the terms of approval attached to the organisation's certificate.

ATOs can deliver training courses to **obtain licences** :

- **LAPL** (A), (H), (G), (B): Theoretical and/or Flying training
- **PPL** (A), (H), (As), GPL, BPL: Theoretical and/or Flying training
- **CPL** (A), (H), (As), (PL): Theoretical and/or Flying training
- **MPL** : Theoretical and Flying training in coordination with an AOC
- **ATPL** (A), (H), (As): Theoretical Knowledge training

Privileges for Training Organisations - ATO

Privileges of an Approved Training Organisation (ATOs)

ATOs can also deliver training courses to **obtain ratings** :

- **IR** (A), (H), (As) including PBN
- **Class** ratings,
- **Type** ratings including ZFTT training in coordination with an AOC
- Training to **variants**,
- **Refresher Training** for ratings renewal,
- **Additional** ratings:
 - **Night** rating
 - **aerobatic**
 - glider and banner **towing**.

Privileges for Training Organisations - ATO

Privileges of an Approved Training Organisation (ATOs)

ATOs can also deliver:

- **MCC Training** course before entry to the first MPA TR course
- **Advanced UPRT** Training course before entry to the first MPA TR course
- **Instructors certificates**
- **Examiners standardisation**

PEL Training Organisations under AOC

Some training programs can be delivered directly by an AOC

FCL.710 Class and type ratings — variants

(a) ...

(b) **The differences training** shall be conducted at any of the following:

(1) an ATO;

(2) a DTO in the case of LAPL holder for the purpose of extension of privileges:

(i) to another class or variant according to FCL.135 (A);

(ii) to another type or variant according to FCL 135(H).

(3) an AOC holder having an approved **differences training programme** for the relevant class or type.

PEL Training Organisations under AOC

Some training programs can be delivered directly by an AOC

FCL.725 Requirements for the issue of class and type ratings

/i\ [For Single pilot aeroplane only]

(b) Single-pilot and multi-pilot operation

(1) A pilot who already holds a class or a type rating for the relevant aircraft class or type, with the privilege for either single-pilot or multi-pilot operations, shall be considered to have already fulfilled the theoretical requirements when applying to add the privilege for the other form of operation on the same aircraft type.

(2) Such a pilot shall complete **additional flight training** for the other form of operation in the relevant class or type in accordance with **Appendix 9** to this Part, unless specified otherwise in the operational suitability data established in accordance with EASA Part 21 or equivalent material acceptable to the CAAT. This training shall be completed at either of the following:

(i) an ATO

(ii) **an organisation to which TCAR OPS Part ORO applies and that is entitled to provide such training on the basis of either an approval or, in the case of single-pilot helicopters, a declaration.**

PEL Training Organisations under AOC

Some training programs can be delivered directly by an AOC

APPENDIX 9 - Training, Skill test and proficiency check for MPL, ATPL, type and class ratings, and proficiency check for IRs

Landing [Base] training

A.GENERAL

17. When the type rating course has included less than 2 hours flight training on the aircraft, the skill test may be conducted in an FFS and may be completed before the flight training on the aircraft.

The approved training shall be performed by a qualified instructor under the responsibility of:

(a) an ATO

(b) an organisation holding an AOC and specifically approved for such training or

(c) the instructor in cases where no aircraft flight training for SP aircraft at an ATO or AOC holder is approved and the aircraft training was approved by the CAAT

Detailed Requirements – ATOs

Structure of TCAR PEL Part ORA – Organisation Requirements for Aircrew

Part ORA Subpart GEN

General requirements applicable to ATOs and FSTD Operators involved in the training of Flight Crew; and to Organisations operating FSTD.

Part ORA Subpart ATO Section 1 General requirement

General requirements applicable to ATOs only

Part ORA Subpart ATO Section 2 and 3

Additional requirements applicable depending on the type of training

ORO. requirement [AIROPS] Vs ORA. Requirement [AIRCREW]

Organisation requirements are very similar.....

TCAR OPS Part-ORO

▲ SUBPART GEN: GENERAL REQUIREMENTS

▲ SECTION I General

- ORO.GEN.005 - Scope
- ORO.GEN.105 - The competent authority
- ORO.GEN.110 - Operator responsibilities
- ORO.GEN.115 - Application for an AOC
- ORO.GEN.120 - Means of compliance
- ORO.GEN.125 - Terms of approval and privileges of an AOC holder
- ORO.GEN.130 - Changes related to an AOC holder
- ORO.GEN.135 - Continued validity of an AOC
- ORO.GEN.140 - Access
- ORO.GEN.150 - Findings
- ORO.GEN.155 - Immediate reaction to a safety problem
- ORO.GEN.160 - Occurrence reporting

▲ SECTION 2 Management

- ORO.GEN.200 - Management system
- ORO.GEN.205 - Contracted activities
- ORO.GEN.210 - Personnel requirements
- ORO.GEN.215 - Facility requirements
- ORO.GEN.220 - Record-keeping

TCAR PEL Part-ORA

▲ SUBPART GEN - GENERAL REQUIREMENTS

▲ SECTION I – General

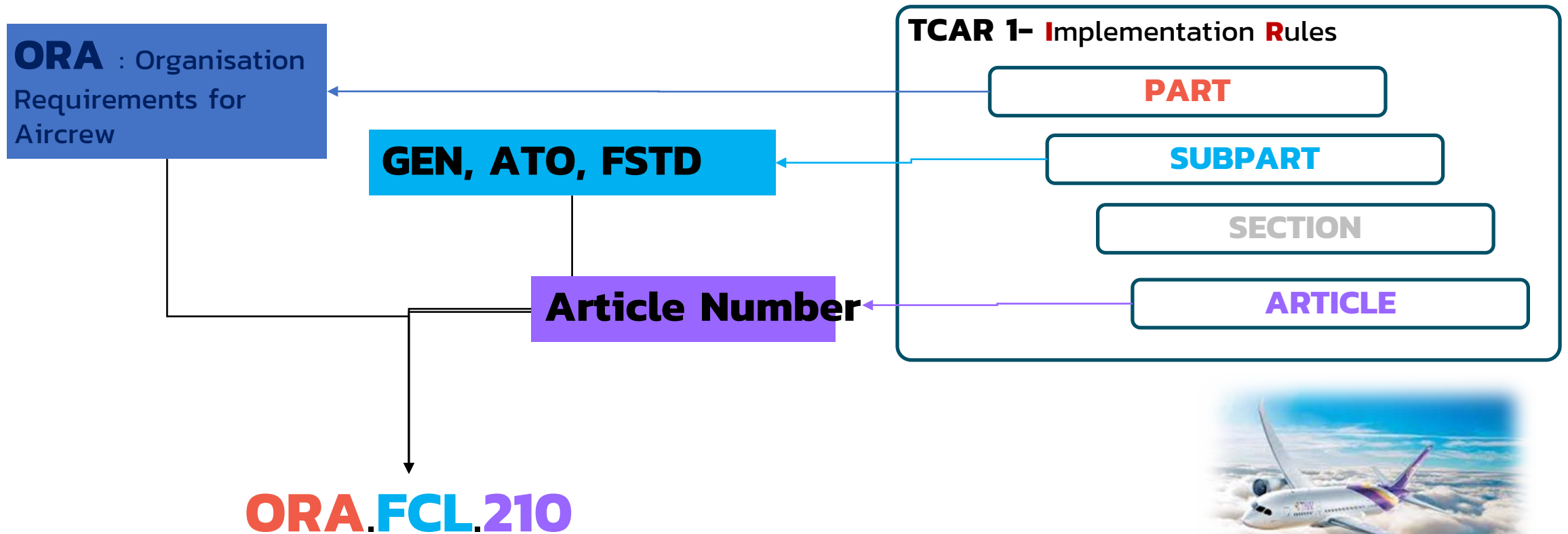
- ORA.GEN.105 Competent Authority
- ORA.GEN.110 Foreign Approved Training Organisation and Flight Simulation T
- ORA.GEN.115 Application for an organisation certificate
- ORA.GEN.120 Means of compliance
- ORA.GEN.125 Terms of approval and privileges of an organisation
- ORA.GEN.130 Changes to organisations
- ORA.GEN.135 Continued validity
- ORA.GEN.140 Access
- ORA.GEN.150 Findings
- ORA.GEN.155 Immediate reaction to a safety problem
- ORA.GEN.160 Occurrence reporting

▲ SECTION II - Management

- ORA.GEN.200 Management system
- ORA.GEN.205 Contracted activities
- ORA.GEN.210 Personnel requirements
- ORA.GEN.215 Facility requirements
- ORA.GEN.220 Record-keeping

Detailed Requirements - ATOs

Part ORA – Articles numbering



Detailed Requirements – ATOs

Part ORA – Structure for ATOs – Subpart GEN

This Part ORA Subpart GEN contains detailed requirements applicable to ATOs involved in the training of Flight Crew; and to Organisations operating FSTD.

SUBPART GEN - GENERAL REQUIREMENTS

SECTION I - General

- ORA.GEN.105 Competent Authority
- ORA.GEN.110 Foreign Approved Training Organization and Flight Simulation Training devices
- ORA.GEN.115 Application for an organisation certificate
- ORA.GEN.120 Means of compliance
- ORA.GEN.125 Terms of approval and privileges of an organisation
- ORA.GEN.130 Changes to organisations
- ORA.GEN.135 Continued validity
- ORA.GEN.140 Access
- ORA.GEN.150 Findings
- ORA.GEN.155 Immediate reaction to a safety problem
- ORA.GEN.160 Occurrence reporting

SECTION II - Management

- ORA.GEN.200 Management system
- ORA.GEN.205 Contracted activities
- ORA.GEN.210 Personnel requirements
- ORA.GEN.215 Facility requirements
- ORA.GEN.220 Record-keeping

Detailed Requirements - ATOs

Part ORA – Structure for ATOs – Subpart ATO

Part ORA Subpart ATO contains detailed requirements specific to ATOs involved in the training of Flight Crew. It contains 3 sections:

SUBPART ATO - APPROVED TRAINING ORGANISATIONS

- ▷ SECTION I - General
- ▷ SECTION II - Additional requirements for ATOs providing training for CPL, MPL and ATPL and the associate...
- ▷ SECTION III - Additional requirements for ATOs providing specific types of training

- **Section 1** is applicable to **all ATOs** (common);
- **Section 2 and 3** are additional (Specific) requirements **applicable depending on the training provided.**

Detailed Requirements - ATOs

Part ORA – Structure for ATOs – Subpart ATO

Section 1

contains additional “General” requirements applicable to all ATOs:

SECTION I - General

ORA.ATO.100 Scope

ORA.ATO.105 Application

ORA.ATO.110 Personnel requirements

ORA.ATO.120 Record-keeping

ORA.ATO.125 Training programme

ORA.ATO.130 Training manual and operations manual

ORA.ATO.135 Training aircraft and FSTDs

ORA.ATO.140 Aerodromes and operating sites

ORA.ATO.145 Pre-requisites for training

ORA.ATO.150 Training in third countries

Detailed Requirements - ATOs

Part ORA – Structure for ATOs – Subpart ATO

Section 2 of Subpart ATO contains **additional** requirements for

- **CPL** Training
- **MPL** Training
- **ATPL** Training

SECTION II - Additional requirements for ATOs providing training for CPL, MPL and ATPL and the associate.

ORA.ATO.210 Personnel requirements

ORA.ATO.225 Training programme

ORA.ATO.230 Training manual and operations manual

Section 3 of Subpart ATO contains **additional** requirements for :

- **Distance learning** course
- **ZFTT** Training course
- **MPL** courses

SECTION III - Additional requirements for ATOs providing specific types of training

▷ Chapter 1 - Distance Learning Course

▷ Chapter 2 - Zero Flight-Time Training

▷ Chapter 3 - Multi-crew pilot licence (MPL) courses

Zero Flight Time Training – ZFTT specific arrangement

ZFTT can only be delivered by ATOs of AOC or ATOs having an arrangement with **an AOC**, provided the AOC holder has appropriate experience with the type. (ORA.ATO.330) and use appropriate FSTD (ORA.ATO.335).

It is partially documented in TCAR PEL and complemented by provisions in TCAR OPS.

It is called a ZFTT because the first time the applicant will fly the real aircraft it would be during normal operations that may include the transportation of passengers.

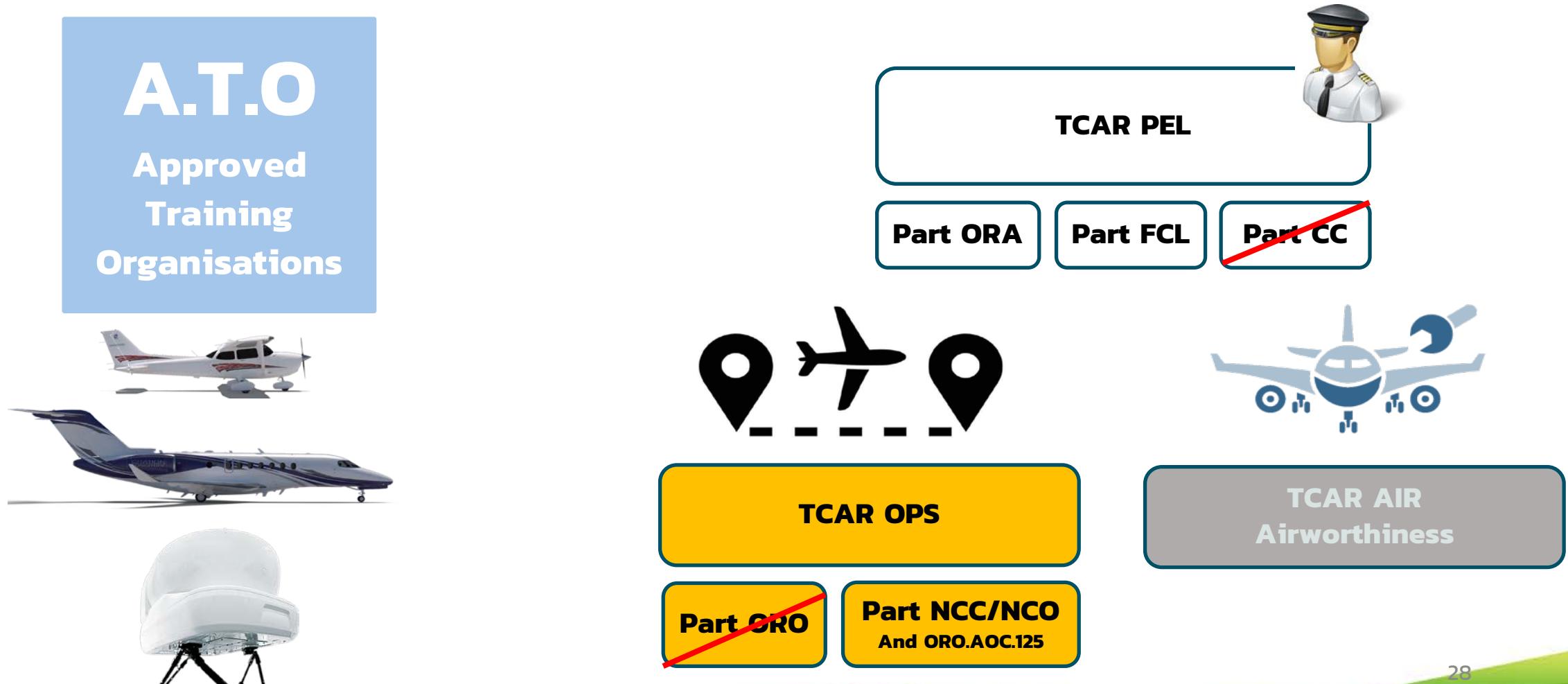
It requires:

- Compliance with **additional prerequisites** to enter the training; and,
- Compliance with **additional requirements** in ORO.FC.220 (e) (OPS regulation)
 - For entering the **LIFUS**
 - To perform an additional session in an FSTD (the **ZFTT session**)
 - To perform the first **4 Take-offs & landings in a real aeroplane with TRI(A) LIFUS**

More details in Module 5

Detailed Requirements - ATOs

Applicability of TCAR Parts to ATOs operating aircrafts



Detailed Requirements - ATOs

Applicability of TCAR Parts to ATOs not operating aircrafts

A.T.O
Approved
Training
Organisations



TCAR PEL

Part ORA

Part FCL

~~Part CC~~



**TCAR OPS
Air Operations**

~~Part GRO~~

~~Part NCC/NCO~~



**~~TCAR AIR
Airworthiness~~**

/i\ Good practice: provides student AOC OM's to operate the simulators like the real A/C

ORO. requirement [AIROPS] Vs ORA. Requirement [AIRCREW]

Organisation requirements are very similar.....

TCAR OPS Part-ORO

▲ SUBPART GEN: GENERAL REQUIREMENTS

▲ SECTION I General

- ORO.GEN.005 - Scope
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- ORO.GEN.160 - Occurrence reporting

▲ SECTION 2 Management

- ORO.GEN.200 - Management system
- ORO.GEN.205 - Contracted activities
- ORO.GEN.210 - Personnel requirements
- ORO.GEN.215 - Facility requirements
- ORO.GEN.220 - Record-keeping

TCAR PEL Part-ORA

▲ SUBPART GEN - GENERAL REQUIREMENTS

▲ SECTION I - General

- ORA.GEN.105 Competent Authority
- ORA.GEN.110 Foreign Approved Training Organisation and Flight Simulation T
- ORA.GEN.115 Application for an organisation certificate
- ORA.GEN.120 Means of compliance
- ORA.GEN.125 Terms of approval and privileges of an organisation
- ORA.GEN.130 Changes to organisations
- ORA.GEN.135 Continued validity
- ORA.GEN.140 Access
- ORA.GEN.150 Findings
- ORA.GEN.155 Immediate reaction to a safety problem
- ORA.GEN.160 Occurrence reporting

▲ SECTION II - Management

- ORA.GEN.200 Management system
- ORA.GEN.205 Contracted activities
- ORA.GEN.210 Personnel requirements
- ORA.GEN.215 Facility requirements
- ORA.GEN.220 Record-keeping



TCAR OPS Parts applicable per type of operations

	Annex: Type of ops:	TCAR OPS							TCAR PEL
		Part-DEF	Part-ORO	Part-CAT	Part-SPA	Part - NCC	Part-NCO	Part-SPO	Part-ORA
Commercial Operations	CAT	✓	✓	✓	✓				
	Commercial SPO	✓	✓		✓			✓	
Non-commercial Operations (<i>General Aviation & Aerial work</i>)	CMPA	✓	✓		✓	✓			
	Other than CMPA	✓			✓		✓		
	Specialised operations with CMPA	✓	✓		✓			✓	
	Specialised operations with non-CMPA	✓			✓		✓		
Approved Training organisation	ATO with CMPA	✓	ORO covered by ORA		✓	✓			✓
	ATO with other than CMPA	✓	ORO covered by ORA		✓		✓		✓

For ATO of an AOC see provisions of **ORO.AOC.125** for non- commercial operations



ORO.AOC.125 – Non CAT operations of A/C listed in OPS SPEC

When the operator conducts non-revenue flight by using A/C listed in OPS SPEC, Operators shall:

- Establish details in Operation Manual (OM-A , 8.7) to identify the applicable regulation (e.g NCC or NCO);
- Differentiation procedures / requirements between CAT operation and Non-CAT;
- Provide the familiarisation training to all relevant personnel (e.g Flight Crew , FOO/FD)

NOTE: Declaration is not applicable to this case.

Example for the non-revenue flight in AOC activity [see DEF GM1 Annex I Definition]

A flight for instructional purposes for students of the ATO of the AOC provided:

The training course is approved by the CAAT.

Type rating instructors TRI/r LT (landing Training) or the Class rating instructors of the ATO are also pilots and instructors in the AOC and are specifically trained and standardized for this purpose.

Detailed Requirements – ATOs

Part ORA – Content – Management System

ORA.GEN.200 Management system

- (a) The organisation shall establish, implement and maintain an effective management system that includes:

(1) A safety Management system.

This safety Management system shall include:

- (i) clearly defined lines of responsibility and accountability throughout the organisation, including a direct safety accountability of the accountable manager;
- (ii) a description of the overall philosophies and principles of the organisation with regard to safety, referred to as the safety policy;
- (iii) the identification of aviation safety hazards entailed by the activities of the organisation, their evaluation and the management of associated risks, including taking actions to mitigate the risk and verify their effectiveness;

This shall include, as part of safety risk management and safety assurance:

- Hazard identification processes
- Risk assessment and mitigation processes
- Internal safety investigation
- Safety performance monitoring and measurement
- The management of change
- Continuous improvement
- A process or plan to manage an emergency situation, implement immediate safety actions, while ensuring safe continued operation in coordination with other organisations.

- (iv) maintaining personnel trained and competent to perform their tasks;
- (v) documentation of all safety management system key processes, including a process for making personnel aware of their responsibilities and the procedure for amending this documentation;

- (2) a compliance monitoring system which has the function to monitor compliance of the operator with the relevant requirements. Compliance monitoring key processes shall be documented and shall include a feedback system of findings to the accountable manager to ensure effective implementation of corrective actions as necessary; and
- (3) any additional requirements that are prescribed in the relevant Subparts of TCAR OPS Part ORO or other applicable regulations.

More detailed requirements for Management System

Management System including a SMS and a Compliance Monitoring system shall be in place in ATOs & FSTD Operators

Detailed Requirements – ATOs

Part ORA – Content – Management System

- (b) The management system shall correspond to the size of the operator and the nature and complexity of its activities, taking into account the hazards and associated risks inherent in these activities.

Notwithstanding point (a) (1) (iii); for non-complex organisations safety risk management and safety assurance shall include at least:

- The use of Hazard checklists or similar risk management processes integrated into the activities of the organisation;
- The management of change;
- A process or plan to manage an emergency situation, implement immediate safety actions, while ensuring safe continued operation in coordination with other organisations.

- (c) Notwithstanding point (a), in an organisation providing training only for the LAPL, PPL, GPL or BPL and the associated ratings or certificates, safety risk management and compliance monitoring defined in points (a)(1) (iii) and (a)(2) may be accomplished by an organisational review, to be performed at least once every calendar year. The CAAT shall be notified about the results of this review by the organisation without undue delay.

- (d) Notwithstanding (a) (1), organisations providing only theoretical knowledge instruction shall not be required to have a safety management system.

However, such organisations shall:

- have clearly defined lines of responsibility and accountability throughout the organisation
- maintain personnel trained and competent to perform their tasks;
- prevent negative transfer of training.

Including specific requirements for Non-Complex organisations

... and for other organisations with very limited privileges

Detailed Requirements – ATOs

Part ORA – Content – Management System

AMC1 ORA.GEN.200(b) Management system

SIZE, NATURE AND COMPLEXITY OF THE ACTIVITY

- (a) An organisation should be considered as complex when it has a workforce of more than 20 full time equivalents (FTEs) involved in the activity subject to The Air Navigation Act B.E 2497 and its associated Regulations.
- (b) Organisations should be considered complex when one of the following criteria is met:
 - (i) use of full flight simulators (FFSs); or
 - (ii) training for multi-pilot (MP) type rating; or
 - (iii) zero-flight-time training (ZFTT); or
 - (iv) use of complex motor-powered aircraft; or
 - (v) training using different categories of aircraft; or
 - (vi) instructor certificates for multi-pilot (MP) type rating and training for complex motor-powered aircraft; or
 - (vii) where the training environment is primarily offshore, or in mountainous area ...
- (c) Regardless of the criteria mentioned in (a) and (b), the following organisations should be considered as non-complex:

Approved Training Organisations (ATOs) only providing training for the light aircraft pilot licence (LAPL), private pilot licence (PPL), Glider pilot licence (GPL) or balloon pilot licence (BPL) and the associated ratings and certificates.

Detailed Requirements - ATOs

Part ORA – Content – Management System

Many AMCs available to comply with Management System requirements for all types of ATOs

AMC1 ORA.GEN.200(a)(1) (i) Management system

COMPLEX ORGANISATIONS - ORGANISATION AND ACCOUNTABILITIES

The management system of an organisation should encompass safety by including a safety manager and a safety review board in the organisational structure.

(a) Safety manager

- (1) The safety manager should act as the focal point and be responsible for the development, administration and maintenance of an effective safety management system.
- (2) The functions of the safety manager should be to:
 - (i) facilitate hazard identification, risk analysis and management;
 - (ii) monitor the implementation of actions taken to mitigate risks, as listed in the safety action plan;
 - (iii) provide periodic reports on safety performance;
 - (iv) ensure maintenance of safety management documentation;
 - (v) ensure that there is safety management training available and that it meets acceptable standards;
 - (vi) provide advice on safety matters; and
 - (vii) ensure initiation and follow-up of internal occurrence / accident investigations.

(b) Safety review board

SECTION II - Management

AMC1 ORA.GEN.200(a)(1) (i) Management system
GM1 ORA.GEN.200(a)(1) (i) Management system
GM2 ORA.GEN.200(a)(1) (i) Management system
AMC1 ORA.GEN.200(a)(1) (ii) Management system
GM1 ORA.GEN.200(a)(1) (ii) Management system
AMC1 ORA.GEN.200(a)(1) (iii) Management system
GM1 ORA.GEN.200(a)(1) (iii) Management system
GM3 ORA.GEN.200(a)(1) (iii) Management system
GM4 ORA.GEN.200(a)(1) (iii) Management system
AMC1 ORA.GEN.200(a)(1) (iv) Management system
GM1 ORA.GEN.200(a)(1) (iv) Management system
AMC1 ORA.GEN.200(a)(1) (v) Management system
AMC2 ORA.GEN.200(a)(1) (v) Management system
GM1 ORA.GEN.200(a)(1) (v) Management system
AMC1 ORA.GEN.200(a)(2) Management system
GM1 ORA.GEN.200(a)(2) Management system
GM2 ORA.GEN.200(a)(2) Management system
GM3 ORA.GEN.200(a)(2) Management system
AMC1 ORA.GEN.200(b) Management system
AMC2 ORA.GEN.200(b) Management system
AMC1 ORA.GEN.200(c) Management system
GM1 ORA.GEN.200(c) Management system
GM2 ORA.GEN.200(c) Management system
AMC1 ORA.GEN.205 Contracted activities
GM1 ORA.GEN.205 Contracted activities
AMC1 ORA.GEN.215 Facility requirements
AMC2 ORA.GEN.215 Facility requirements
AMC1 ORA.GEN.220(b) Record-keeping
GM1 ORA.GEN.220(b) Record-keeping

Detailed Requirements - ATOs

ATOs need an **Operations Manual & Training Manual**

Detailed Requirements - ATOs

ORA.ATO.130 Training manual and operations manual

- (a) The ATO shall establish and maintain a training manual and operations manual containing information and instructions to enable personnel to perform their duties and to give guidance to students on how to comply with course requirements.
- (b) The ATO shall make available to staff and, where appropriate, to students the information contained in the training manual, the operations manual and the ATO's approval documentation.
- (c) The operations manual shall establish flight time limitation schemes for flight instructors, including the maximum flying hours, maximum flying duty hours and minimum rest time between instructional duties-.

Detailed Requirements - ATOs

ORA.ATO.230 Training manual and operations manual

- (a) The training manual shall state the standards, objectives and training goals for each phase of training that the students are required to comply with and shall address the following subjects:
- training plan,
 - briefing and air exercises,
 - flight training in an FSTD, if applicable,
 - theoretical knowledge instruction.

Detailed Requirements – ATOs

Operations Manual

ATOs certification follows a full certification process in **5 Phases approval** including document evaluation and onsite inspection. **(described in CAAT procedures)**

ATOs need an **Operations Manual & Training Manual** :

- **The Operations Manual Part A, B and C** have to comply with:
 - with **Part ORA Subpart ATO** in terms of **content required**;
 - With the **Aircraft Flight Manual** for Part B;
 - With **TCAR OPS Part NCC** for complex aircrafts operations;
 - or with **TCAR OPS Part NCO** for other aircrafts operations.

Detailed Requirements – ATOs

Operations Manual

ATOs need an **Operations Manual & Training Manual** :

- **The Operations Manual Part A, B and C arrangement for ATOs of an AOC:**

The use of some parts of approved Operations manual compliant to Part CAT may be acceptable (ORA.AOC.125).

/!\ The Organisation Management Manual shall comply with TCAR PEL Part ORA Subpart GEN.

It shall describe the Management system of the organisation.

It can be integrated into Operations Manual or be a separate document.

It is recommended to have a separate document as the OPS manual shall be provided to the trainees who do not need to know about the details of the management system.

Detailed Requirements - ATOs

Operations Manual

ATOs need an **Operations Manual & Training Manual** :

- **The Operations Manual Part D** shall comply with:
 - with **Part ORA Subpart ATO** in terms of **content required**;
 - With **TCAR PEL Part FCL Subpart J** for instructors training;

It shall describe how the instructors competencies are built and maintained

Detailed Requirements – ATOs

Operations Manual

AMC1 ORA.ATO.230(b) Training manual and operations manual

[Link to ATO of AOC OM](#)

Detailed Requirements - ATOs

Training Manual

ATOs need an **Operations Manual & Training Manual** :

- **The Training Manual** have to comply **with**:
 - **Part ORA Subpart ATO** in terms of **content required**;
 - **Part FCL Subpart** depending on the type of training (**GEN + Others**)

It shall describe how the training is organised and delivered.

Detailed Requirements – ATOs

Training Manual

ORA.ATO.230 Training manual and operations manual

- (a) The training manual shall state the standards, objectives and training goals for each phase of training that the students are required to comply with and shall address the following subjects:
- training plan,
 - briefing and air exercises,
 - flight training in an FSTD, if applicable,
 - theoretical knowledge instruction.
- (b) The operations manual shall provide relevant information to particular groups of personnel, as flight instructors, flight simulation training instructors, theoretical knowledge instructors, operations and maintenance personnel, and shall include general, technical, route and staff training information.

Many AMCs were developed to clarify CAAT expectations to comply with **ORA.ATO.230**

AMCs can be found for **TCAR PEL Part ORA** and also in for **TCAR OPS Part NCC and NCO**

AMC1 ORA.ATO.230(a) Training manual and operations manual
AMC2 ORA.ATO.230(a) Training manual and operations manual:
AMC3 ORA.ATO.230(a) Training manual and operations manual
AMC4 ORA.ATO.230(a) Training manual and operations manual
GM1 ORA.ATO.230(a) Training manual and operations manual
GM2 ORA.ATO.230(a) Training manual and operations manual
GM3 ORA.ATO.230(a) Training manual and operations manual

AMC1 ORA.ATO.230(a) Training manual and operations manual

GM4 ORA.ATO.230(a) TRAINING MANUAL

GM5 ORA.ATO.230(a) Training manuals for use at an ATO to conduct integrated or modular flight training courses should include the following:

AMC1 (a) The training plan:

(1) The aim of the course (ATP, CPL/IR, CPL, etc. as applicable)	A statement of what the student is expected to do as a result of the training, the level of performance, and the training constraints to be observed.
(2) Pre-entry requirements	(i) Minimum age, educational requirements (including language), medical requirements; (ii) Any additional requirements for Kingdom of Thailand.
(3) Credits for previous experience	To be obtained from the CAAT before training begins.
(4) Training syllabi	As applicable, the flying syllabus (single-engine or multi-engine, as applicable), the flight simulation training syllabus and the theoretical knowledge training syllabus.
(5) The time scale and scale, in weeks, for each syllabus	Arrangements of the course and the integration of syllabi time.
(6) Training programme	(i) The general arrangements of daily and weekly programmes for flying

Detailed Requirements – ATOs

Training Manual

[TM guidance](#)

TRAINING MANUAL (TM) GUIDANCE

Scope	Training Manual (TM) published as a template in Word format, based on ORA.ATO.130/230.
Who is concerned	Training organisations wishing to establish a manual system in order to become an Approved Training Organisation (ATO).
Valid from	3 Nov 2022
Purpose	The purpose of this template is to assist an Approved Training Organisation (ATO) with guidance/information to compile their manual system. It covers the major aspects of the required structure and content of a Training Manual (TM) and has been developed on the basis of the CAAT.

Combination between Type Rating and OCC

AMC1 ORO.FC.220 - Operator conversion training and checking

OPERATOR CONVERSION TRAINING SYLLABUS

(a) General

(4) The operator's conversion **may be combined** with a new type/class rating training, as required by TCAR PEL Part FCL.

Type Rating is defined in ATO Training manual and approved by **PEL**
OCC is defined in AOC OM Part D and approved by **OPS**

Combination is possible, provided AOC and ATO of AOC coordinate to organise the **footprint** of the **TR** course to include **OCC**.

OCC and TR shall be clearly identified.

Some **credits** can be obtained (e.g. **Aircraft systems**, **normal**, **abnormal** and **emergency procedures**)

Combination between Type Rating and OCC

GROUND TRAINING AND CHECKING: GTC

Type of training	OCC	
	Operator change Initial*	Change type
Systems and Procedures Course. AMC1 ORO FC.220 (a)(1)(i) and (b)		
➤ Aircraft systems	/ (1)	/ (1)
➤ Normal (including operational), Abnormal and Emergency procedures	/	/
SPA (PBN, MNPS, RVSM, ETOPS, LVO, EFB) if applicable		
➤ PBN RNP AR APCH AMC1 SPA.PBN.105(b)	/	/
➤ MNPS	/	/ (2)
➤ RVSM	/	/ (2)
➤ LVO AMC1 SPA.LVO.120(b); AMC2 SPA.LVO.120(b); AMC3 SPA.LVO.120(b)	/	/
➤ ETOPS AMC 20-6 rev. 2 APPENDIX 6	/	/ (2)
➤ EFB AMC4 SPA.EFB.100(b)(3)	/	/ (2)
➤ RRLD AMC1 CAT.POLA.255(b)(2)(iv); AMC1 CAT.POLA.335(b)(5) and (b)(6)	/	/ (2)
➤ Steep Approach CAT.POLA.345; CAT.POLA.345	/	/ (2)
➤ Short landing CAT.POLA.250; CAT.POLA.350	/	/ (2)
Flight Path Management (MAN or AUT) during Unreliable Airspeed indication and other failures at high ALT in aeroplanes with MAX CRZ ALT > FL300		
➤ Elements as specified in Table AMC1 ORO.FC.120&130	/	/
UPRT		
➤ AMC1 ORO.FC.220&230	/	/
Emergency and Safety Equipment Training and Checking (ESETC)		
➤ First-aid in general	/	/
➤ First-aid as relevant to the ACFT type of operation and crew complement	/	/
➤ Aero-medical topics	/	/ (2)
➤ Smoke	/	/
➤ Actual Fire Fighting	/	/
➤ Operational procedures of security, rescue and emergency services	/	/
➤ Survival Training	/	/ (2)
➤ Ditching procedures and actual use of corresponding equipment	/	/
➤ Wet-drill Training	/	/
➤ Location/use of Emer/Safety equipment and associated procedures/drills	/	/
➤ PAX handling for OPS where no cabin crew is required	/	/
➤ Discipline and responsibilities for OPS where no CC is required	/	/
➤ PAX briefing/safety demonstrations, for OPS where no CC is required	/	/
CRM Training		
• Elements as specified in Table 1 AMC1 ORO.FC.115 Column 1	/	/
• Elements as specified in Table 1 AMC1 ORO.FC.115 Column 2	/	/
• Elements as specified in Table 1 AMC1 ORO.FC.115 Column 3	/	/
DG Training AMC1 SPA.DG.105(a) and ORO.GEN.110(j)	/	/ (2)
Fatigue Management Training FMT ORO.FTL.250	/	/ (2)
SMS Training		
➤ Training and Communication on Safety AMC1 ORO.GEN.200(a)(4)	/	/
➤ Compliance monitoring AMC1 ORO.GEN.200(a)(6)(e)(3)	/	/
Security Training AMC1 ORO.GEN.110(a)	/	/ (2)
EWIS EASA AMC 20-22	/ (3)	/ (3)
Psychoactive substances and endangering safety CAT.GEN.MPA.170(b), CAT.GEN.MPA.175	/	/
Global Reporting Format (GRF) AMC1 CAT.OP.MPA.303 & CAT.OP.MPA.311	/	/ (2)
Ground checking AMC1 ORO.FC.220 (b)(2)	/	/

*First OCC of a CAT pilot

- (1) Not applicable if covered by the TR
- (2) If applicable due to the change in type of holding
- (3) If applicable

Type of training	OCC	
	Operator change Initial*	Change type
Systems and Procedures Course. AMC1 ORO FC.220 (a)(1)(i) and (b)		
➤ Aircraft systems	/ (1)	/ (1)
➤ Normal (including operational), Abnormal and Emergency procedures	/	/

*First OCC of a CAT pilot

(1) Not applicable if covered by the TR

(2) If applicable due to the change in type of holding

(3) If applicable

Develop and Verify ATO compliance

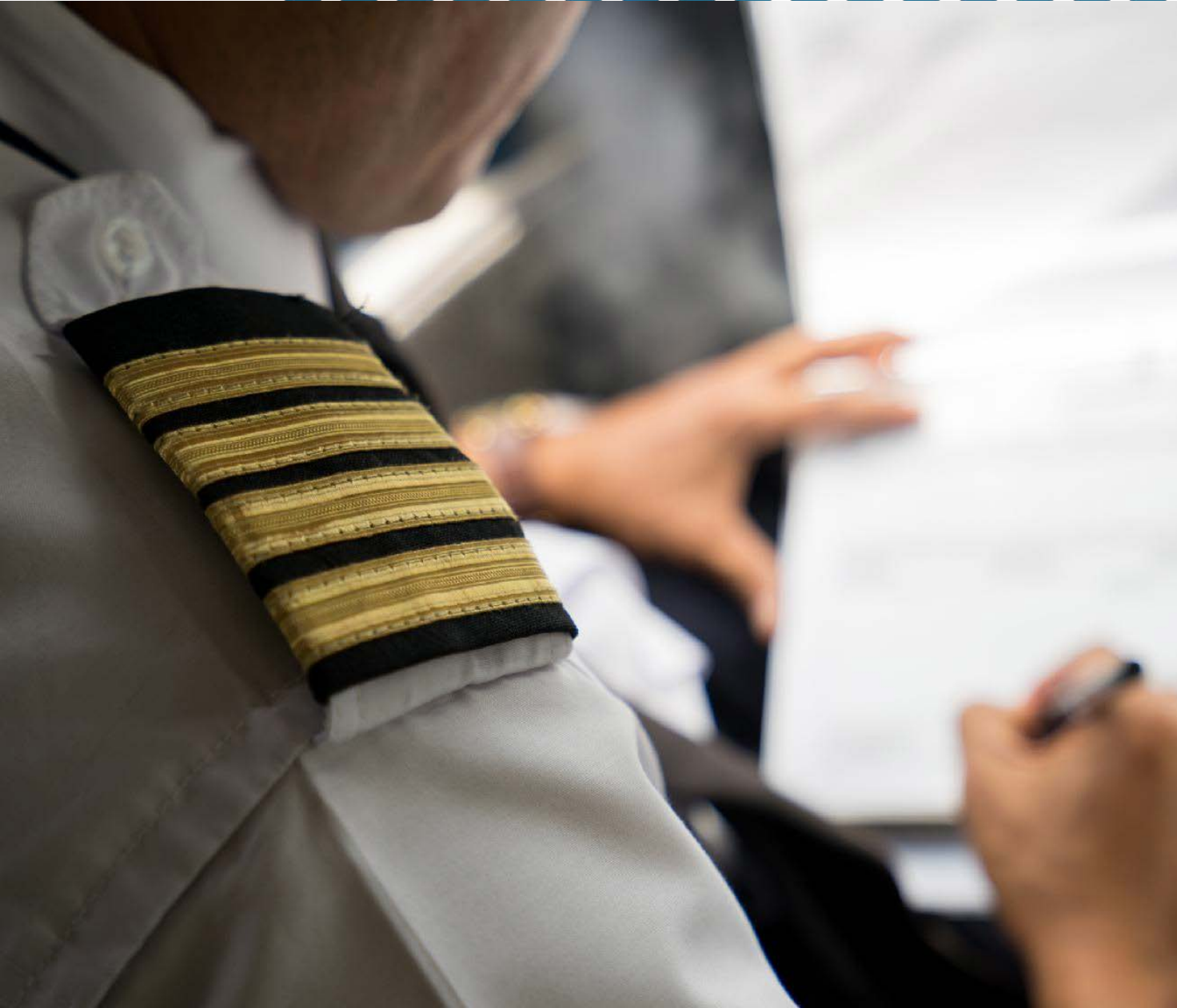
Compliance matrix a way to demonstrate compliance

When elaborating Management system and ATO Manuals,

Shall verify and demonstrate the compliance of the organisation with the requirements

A method should also be used to demonstrate compliance to the CAAT.

The use of compliance matrix is a way to address it.



FSTD Operators – ATOs (Part ORA)

TCAR PEL **Part ORA Subpart GEN** and **Subpart FSTD** are applicable to **FSTD Operators**

SUBPART GEN - GENERAL REQUIREMENTS

- ▷ SECTION I - General
- ▷ SECTION II - Management

SUBPART FSTD - REQUIREMENTS FOR ORGANISATIONS OPERATING FLIGHT SIMULATION TRAINING DEVICE...

- ▷ SECTION I - Requirements for organisations operating FSTDs
- ▷ SECTION II - Requirements for the qualification of FSTDs

FSTD Operators – ATOs (Part ORA)

Part ORA Subpart **GEN**

General requirements applicable to ATOs and FSTD Operators involved in the training of Flight Crew; and to Organisations operating FSTD.

Part ORA Subpart **FSTD Section 1** Requirements for **organisations operating FSTDs**

General requirements and requirements to maintain the FSTD qualification

Part ORA Subpart **FSTD Section 2** Requirements for **organisations operating FSTDs**

Requirements for the qualification of FSTDs

FSTD Operators – ATOs (Part ORA)

Part ORA Subpart GEN

General requirements applicable FSTD Operators includes:

SECTION I – General

- ORA.ATO.100 Scope
- ORA.ATO.105 Application
- ORA.ATO.110 Personnel requirements
- ORA.ATO.120 Record-keeping
- ORA.ATO.125 Training programme
- ORA.ATO.130 Training manual and operations manual
- ORA.ATO.135 Training aircraft and FSTDs
- ORA.ATO.140 Aerodromes and operating sites
- ORA.ATO.145 Pre-requisites for training
- ORA.ATO.150 Training in third countries

FSTD Operators – ATOs Subpart FSTD

Part ORA Subpart FSTD Section 1 Requirements for organisations operating FSTDs

SECTION I - Requirements for organisations operating FSTDs

ORA.FSTD.100 General

ORA.FSTD.105 Maintaining the FSTD qualification

ORA.FSTD.110 Modifications

ORA.FSTD.115 Installations

ORA.FSTD.120 Additional equipment

Includes the **conditions to maintain FSTD qualification** and in case of modification.

It also includes **conditions on the environment of the FSTD**

FSTD Operators – ATOs Subpart FSTD

Part ORA Subpart FSTD Section 2

Requirements for the qualification of FSTDs

SECTION II - Requirements for the qualification of FSTDs

ORA.FSTD.200 Application for FSTD qualification

ORA.FSTD.205 Certification specifications for FSTDs

ORA.FSTD.210 Qualification basis

ORA.FSTD.225 Duration and continued validity

ORA.FSTD.230 Changes to the qualified FSTD

ORA.FSTD.235 Transferability of an FSTD qualification

ORA.FSTD.240 Record-keeping

Includes the **conditions to for FSTD qualification, changes to be notified and addressed with the CAAT**

FSTD Operators – ATOs Subpart FSTD

Part ORA Subpart FSTD Section 2

ORA.FSTD.225 Duration and continued validity

- (a) The full flight simulator (FES), flight training device (FTD) or flight and navigation procedures trainer (FNPT) qualification certificate shall be issued for a duration not exceeding one year.
- (b) The Basic Instrument Training Device (BITD) qualification certificate shall be issued for a duration not exceeding three years
- (c) These qualification certificates shall remain valid subject to:
 - (1) the FSTD and the operating organisation remaining in compliance with the applicable requirements;
 - (2) the CAAT being granted access to the organisation as defined in ORA.GEN.140 to determine continued compliance with the relevant requirements of the Air Navigation Act B.E 2497 and its associated regulations; and
 - (3) the qualification certificate not being surrendered or revoked.

FSTD Operators – ATOs Subpart FSTD

Part ORA Subpart FSTD Section 2

- (d) The validity period of 12 months established by CAAT for FFS, FTD and FNPT may be extended up to a maximum of 36 months, in the following circumstances:
 - (1) the FSTD has been subject to an initial and at least one recurrent evaluation that has established its compliance with the qualification basis;
 - (2) the FSTD qualification certificate holder has a satisfactory record of successful regulatory FSTD evaluations during the previous 36 months;
 - (3) the CAAT performs a formal audit of the compliance monitoring system defined in ORA.GEN.200(a)(6) of the organisation every 12 months; and
 - (4) an assigned person of the organisation with adequate experience reviews the regular reruns of the qualification test guide (QTG) and conducts the relevant functions and subjective tests every 12 months and sends a report of the results to the CAAT.
- (e) A BITD qualification shall remain valid subject to regular evaluation for compliance with the applicable qualification basis by the CAAT.
- (f) Upon surrender or revocation, the FSTD qualification certificate shall be returned to the CAAT

