

Establishing and managing an ICAO-compliant training system



CE-4 Qualified technical personnel

Annex 19 Appendix 1



4.1 The State shall establish minimum qualification requirements for the technical personnel performing safety oversight functions and provide for appropriate initial and recurrent training to maintain and enhance their competence at the desired level.

4.2 The State shall implement a system for the maintenance of training records.

2008 FAA IASA findings



- CAAI has not established any formal initial / recurrent curriculums for its inspectors or technical staff;
- CAAI does not have any type rated (or) type checked operation inspectors on types of aircraft;
- Only 1 inspector received type rating and has not received any maintenance training;
- In the past 12 months, 75% of inspectors have not received any type rating or hire. Most technical training was received prior to being hired by CAAI;
- CAAI has no training program and no documentation to substantiate such training;
- CAAI airworthiness authority regularly grants approvals for special operations (CAT II/II, ETOPS, RVSM, RNP) without any documented training in the area;

Does not meet international standards

Before the Change

- ❑ Starting point: zero training, no training system
- ❑ 2008 – recruitment of training manager
- ❑ 2009 –
 - ❑ establishing of TEVEL Team – to manage all activities required for return to Category 1
 - ❑ Allocating training budget
 - ❑ Contracting formal training courses 18700, 18701, 18710 – conducted in Israel for the all CASIs
 - ❑ Preparing and conducting bridging training

Why do we even need training?



- Part of Organizational culture of professionalism and excellence
- Essential element of training professionally and ethically
- A key component in surveillance and certification activities

Part of the CAAI DNA

CAAI Training Concept



CASIs
Engineers
All others

Organizational
Technical
management

Target
groups

Training
subjects

Variety in instruction
and learning methods
and means
Integration of CBT
Development of in-house
training capabilities

Training
strategy

Tools &
equip.

Training program &
plans
Training records
Training classrooms
Supporting systems

CASI Training Policy

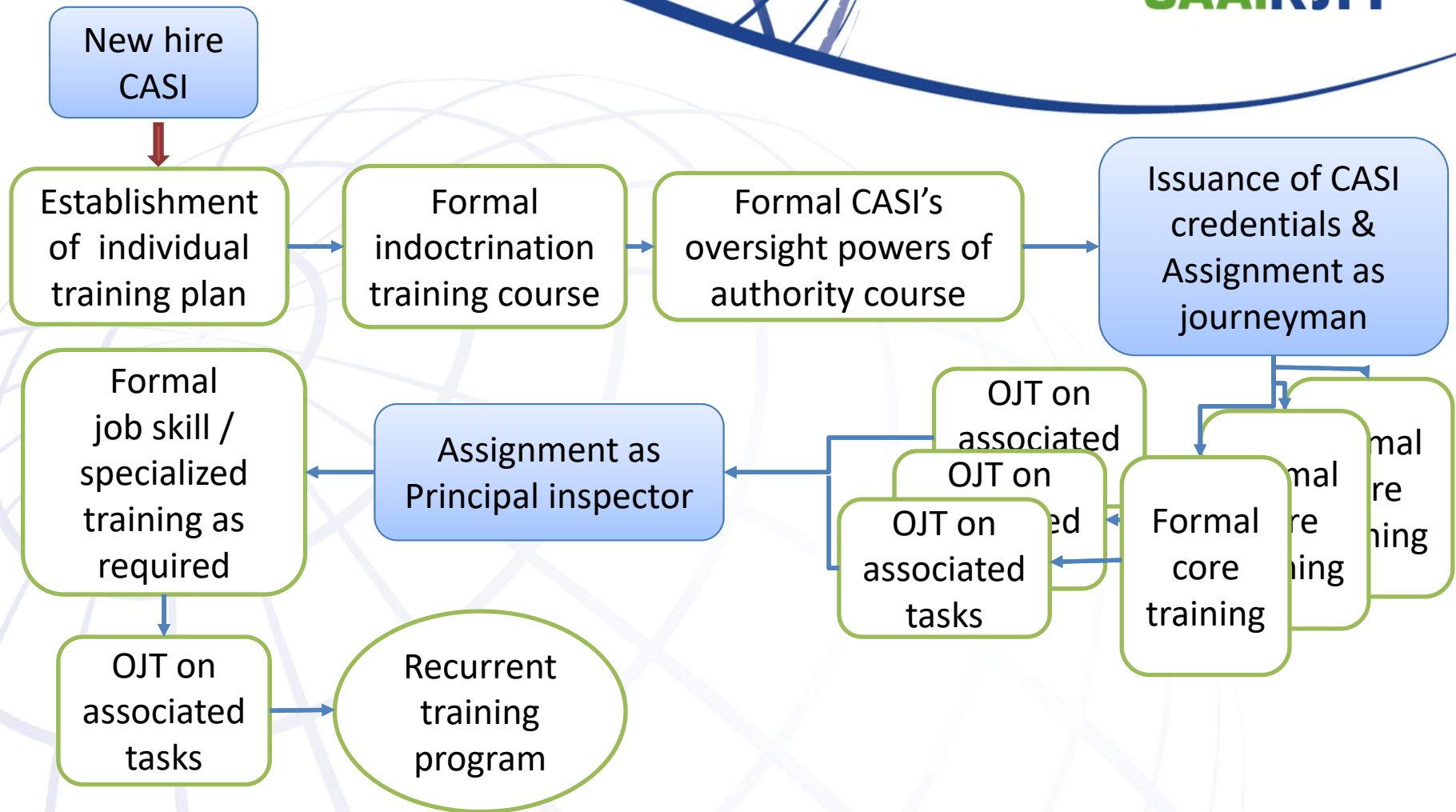


- management commitment to
 - invest the necessary time and budget
 - the development of a highly skilled and qualified CASIs
 - Training CASI in all **training components** ▶
- Provisions for tailored training plan -
 - Training profile for each CASI position (fix menu) ▶
 - Training plan for each CASI ▶

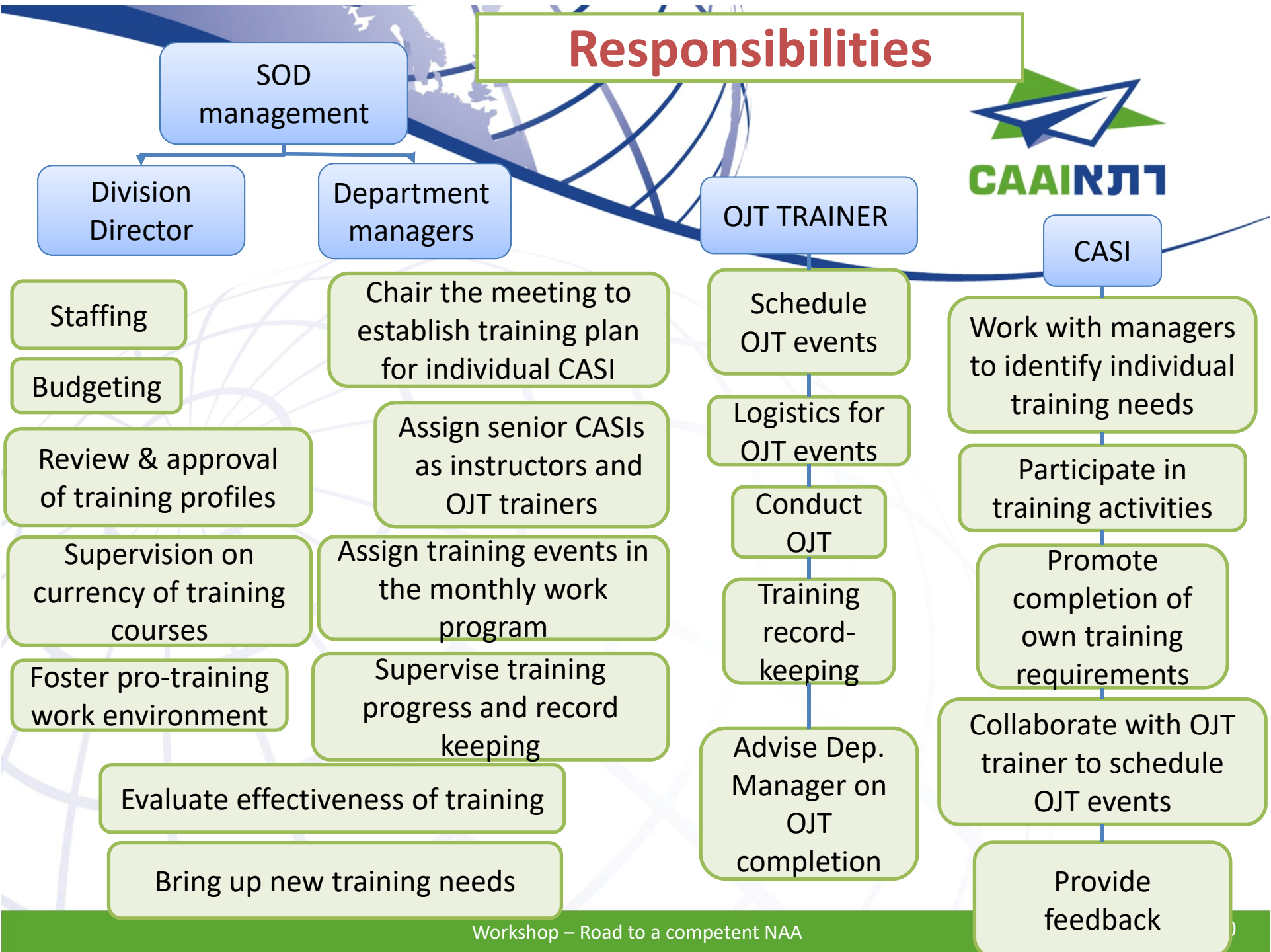
Training Records

- CAA should establish and implement a system for maintenance of training records for technical personnel
- A personal record for each CASI
- The record shall include
 - Curriculum vitae & certificates/ licenses copies
 - CASI nomination
 - Other formal nomination if required (POI/PMI, 79)
 - Course completion certificates
 - Course attendance record
 - Recording of all basic , formal , OJT and recurrent training
 - Authorised Instructor nomination (if relevant)

Training Process



Responsibilities



Training Dep. roles

- Management of the CAA training program in accordance with ICAO SARPs and CSC. REG.
- Development and management of in-house trainers cadre
- Production of conferences in technical areas for employees and stakeholders
- Development and implementation of training budget, training program and training plans
- Training coordinator and POC for out-sourced training organizations








End



Training Components



- Initial (indoctrination, inspector powers of authority) -
 - pre condition for CASI credentials
 - not cleared to perform safety oversight tasks
- Formal training in
 - core skills 
 - Job-skills 
 - specialized /advanced - SMEs 
- 3 phase OJT training (i. guidance material review , ii. observation , iii. work under supervision – competence assessment and approval) 
- Management training (instructor / trainer etc.)
- Recurrent (periodic) 



Core training



1. Indoctrination
2. Certification
3. Surveillance
4. Investigation
5. Personnel Licensing

Table 1 – Cluster-specific Core Training categories

	OPS	PEL	AGA	ANS			MFG
				ATS/AIS	PANS OPS	CNS	
Core Training Categories	1-5	1-5	1-4	1-4	1-3	1-4	1-4





OPS/PEL CASI Training Profile Job-Skills

Training Category	Course number	Formal Course	Job Tasks
Job Skills	6/1101	EFB	Approve EFB (OPS)
	6/2101	RVSM & MNPS	Approve MNPS (OPS)
			Approve RVSM (OPS)
	6/4101	ETOPS	Approve ETOPS Program (OPS)
6/5101	RNAV / RNP	Approve RNP / RNAV (OPS)	
	6/6101	CAT II/III	Approve CAT II & III (OPS)
	6/7101	Cabin Safety Training	Review Carry-on and Exit Row Seating Programs
			Review Cabin Attendant Manual
			Evaluate Cabin Safety Supervisor

AW CASI Training Profile Job-Skills

Job Skills	6/1101	EFB	Approve EFB (AW)
	6/2101	RVSM & MNPS	Approve MNPS (AW)
			Approve RVSM (AW)
	6/4101	ETOPS	Approve ETOPS Program (AW)
	6/5101	RNAV / RNP	Approve RNP / RNAV (AW)
	6/6101	CAT II/III	Approve CAT II & III (AW)
		Fuel Tank Safety	
		MSG I, II & III Maintenance Programs	
	Reliability Programs	Control	

Aerodrome CASI Training Profile Job-skills

Job Skills		Airside Safety and Operations	
	PNB	Basic AIS Course	
		AUTOCAD	
		ArcView10	
		Geodesy Master Class	
OME	PNB	Airport Environmental	

ANS/ATM-AIS CASI Training Profile

Job-Skills



Job Skills		Basic AIS course	Text editing, AIP	
			Amendments/Supplements/AICs	
			QA on AIP	
			Amendments/Supplements/AICs	
			Advanced AIS	Formatting AIP
				Amendments/Supplements/AICs
			Chart editing, AIP	
			Amendments/Supplements/AICs	
			QA- Annexes and DOCs Defining	
			creation of AIP AICs	
			Text editing, NOTAM	
			QA on NOTAM	
			Formatting NOTAM	
			Conduct International NOTAM	
		Office Audit		
		Air Traffic Safety		
		Air Assurance		
		TRM in ATM		
		EAD		

ANS/PANS-OPS CASI Training Profile

Job-Skills



Job Skills		ArcView10	Needs & gaps Analysis in regulation and planning of Aerial infrastructure request
			Updating and publishing Aeronautical Information (AIP)
			Updating and publishing Supplemental Aeronautical Information (AIP)
			Databases management of professional data and software
			Aeronautical Maps planning a/o updating
		ArcView10 ADVANCED	
		Aeronautical Charts-Paper & Electronic (Annex 4)	Aeronautical Charts planning a/o updating
		Procedures Design System	
		Obstacle Assessment	Assistance to the building restriction and obstacle assessment procedure
		Using PBN in Airspace Design	
	ARINC 424 Database coding + Geodesy Module		

ANS/CNS CASI Training Profile Job-Skills

Job Skills		Airspace Inspection International	Systems Pilot/TECH	CNS Equipment Authorization CNS Maintenance Authorization Program
		Ground data networks and applications in aviation		

Manufacturing CASI Training Profile

Job-Skills

Job Skills		NDT	
		Special Manufacturing Processes	Manufacturing Controls Manufacturing Processes
		Avionics Software QA	Software Quality Assurance
		Tools & Gauges Control	Supplier Control
		Calibration Measurement (Instruments & Equipment)	Organizational Management
		Composite Materials	
		SPC-Statistical Process Control	



SMEs



OPS CASI

Foreign Aircraft Surveillance (SAFA)	Inspect Foreign Aircraft
EU Ramp Inspection Programme (SAFA)	Conduct Israeli Ramp Inspection
Dangerous goods CAT 6	
Dangerous Goods ICAO A	

AW CASI

Foreign Aircraft Surveillance (SAFA)	Inspect Foreign Aircraft
EU Ramp Inspection Programme (SAFA)	Conduct Israeli Ramp Inspection
Cabin Safety for Inspectors	Cabin Safety Training AW
	Review Cabin Attendant Manual
	Review Carry-On and Exit Row Seating Programs

Aerodrome CASI

PNB	Airport Environmental Planning	
	Bird Hazard Control & Wild Life Management	Inspection of WLH unit
	Obstacles Evaluation	Inspection and Approval of Obstacle
URH	Annex 14 VOL 2-Heliports	Certification of Heliport
		Inspection of Heliport
OZA	Airport emergency / Crisis Management	Inspection and Approval of Emergency Plan
		Inspection of Emergency Drills



Select Training Category



Complete Formal Course



Complete OJT on Job Tasks



FORMAL TRAINING

Core training

Specialized

Phase 3

OJT

Phase 1

Job skills

Phase 2

Ratings



Recurrent Training




Ensure that CASIs maintain proficiency and keep current on aircraft and equipment, techniques, procedures and new developments in their respective areas of expertise.

Address any policy and/or procedural changes and fine-tune work processes that have deviated from their planned course.

Table 2 - Recurrent Training Intervals

	Recurrent Training category	Interval
All divisions	Core Training	3 years
	Specialized Training (SME)	3 years
	Job Skills	5 years



OPS + PEL CASI Training Profiles



Training Category	Formal Course	Job Tasks
Indoctrination	CAAI Indoctrination	
	WTS and <u>ShareDocs</u>	Computer Systems
	CAAI Conference	
Certification	AOC Certification + Bridging	5-Phase AOC Certification
		Approve New Route
		<u>Evaluate Lease Agreement</u>
		Evaluate Emergency Evac, / Ditching Demo.
		Evaluate Simulator or FTD
		Training Program Approval
		Approve MEL / CDL
	Issue AOC & <u>OpSpecs</u>	
Safety Management System	SMS	

OPS + PEL CASI Training Profiles



Surveillance	AOC Surveillance	Conduct Base Inspection
		Conduct Cabin <u>Enroute</u> Inspection
		Conduct Israeli Ramp Inspection
		Evaluate Pilot / Check-Airman in a Simulator
		Inspect Dispatch Operations
		Inspect Flight Attendant Training
		Inspect Operator Recorders
		Inspect Pilot Training <u>Programme</u>
		Conduct Cockpit <u>Enroute</u> Inspection
	Human Factors for Inspectors and Engineers	
Personnel Licensing	PEL Course	Conduct Airmen license / rating skill test
	GSI PEL Course	ATO Certification (5-Phases)
		Design written examinations
	PEL Initial Course	Review, evaluate and mark written tests
		Conduct Airmen license / rating skill test
Issue License		
		Conduct ATS license rating skill test

OPS + PEL CASI Training Profiles



Investigation & Enforcement	Investigation Enforcement	& Conduct an Enforcement Investigation
	Inspection Authorities	
Job Skills	EFB	Approve EFB (OPS)
	RVSM & MNPS	Approve MNPS (OPS)
		Approve RVSM (OPS)
	ETOPS	Approve ETOPS Program (OPS)
	RNAV / RNP	Approve RNP / RNAV (OPS)
	CAT II/III	Approve CAT II & III (OPS)
	Cabin Safety Training	Review Carry-on and Exit Row Seating Programs
Review Cabin Attendant Manual		
Evaluate Cabin Safety Supervisor		
SME	Foreign Aircraft Surveillance (SAFA)	Inspect Foreign Aircraft
	EU Ramp Inspection Programme (SAFA)	Conduct Israeli Ramp Inspection
	Dangerous goods CAT 6	
	Dangerous Goods ICAO A	
Management	OJT Trainer Qualification	
	Formal Instructor Qualification	

Aerodrome CASI Training Profiles



Training Category	Formal Course	Job Tasks
Indoctrination	CAAI Indoctrination	
	WTS and <u>ShareDocs</u>	Computer Systems
	CAAI Conference	
Certification	Aerodrome Certification;	5-Phase Certification of Aerodrome
	ICAO Annex 14: Runway, Taxiway, Apron Planning and Design	Approval of Exemption/ Risk Assessment/ Aeronautical Study
		Writing and Updating the AIP
		Approval of NOTAM
		Certification of Airstrip
	Safety management Systems	Approval of SMS
Surveillance	Safety Oversight Inspectors	Inspection of Aerodrome
		Inspection of Airstrip
		Inspection of Heliport
		Inspection of RFFS
		Inspection of Obstacle
Investigation & Enforcement	Investigation & Enforcement	Conduct an Investigation

Aerodrome CASI Training Profiles





Training category		Formal course	Job tasks	
Job Skills		Airside Safety and Operations		
	PNB	Basic AIS Course		
		AUTOCAD		
		ArcView10		
		Geodesy Master Class		
SME	PNB	Airport Environmental Planning		
		Bird Hazard Control & Wild Life Management	Inspection of WLH unit	
		Obstacles Evaluation	Inspection and Approval of Obstacle	
	URH	Annex 14 VOL 2-Heliports	Certification of Heliport	
			Inspection of Heliport	
OZA	Airport emergency / Crisis Management	Inspection and Approval of Emergency Plan		
		Inspection of Emergency Drills		



Training Plan for each CASI



- based on the training profile for the position
- Gap analysis for required qualifications / training 
- review of existing ratings and qualifications
- decision on ratings and qualifications to be maintained 
- Appointment of OJT trainer



Training record – Job functions



Inspector Name	[REDACTED]		Code	TIR	
Department	OPS		Branch	Air Carrier	
Job Functions			Updated	01/05/2018	
Function	Specialty	Remarks	A/C Ratings	AMT Ratings	Keep Current?
Certification	Large/Turbine AOC	B777 PM	B744	<input type="text"/>	<input type="checkbox"/> No
Surveillance	Large/Turbine AOC		B742		<input type="checkbox"/> No
Enforcement	Large/Turbine AOC		B777		<input type="checkbox"/> Yes
1 PEL	Large/Turbine AOC		A320		<input type="checkbox"/> Yes
2			CJ-1123		<input type="checkbox"/> No
3			WW-1124		<input type="checkbox"/> No
4 Principal Inspector			CJ-1121		<input type="checkbox"/> No
5					
6					

Training file - Ratings



Inspector Name	[REDACTED]	Code	TIR		
Department	OPS	Branch	Air Carrier		
Ratings		Updated	01/05/2018		
Licence Type	ATPL	Number	527		
A/C Rating	AMT Rating	Keep Current?	Last Training	Current?	Next Training By
B744		No			
B742		No	21/5/2011	No	
B777		Yes	4/8/2016	Yes	4/8/2018
A320		Yes	6/8/2016	Yes	6/8/2018
CJ-1123		No			
WW-1124		No			
CJ-1121		No			

Training file - Formal training



Inspector Name	[REDACTED]			Code		TIR
Department	OPS			Branch		Air Carrier
Formal Training				Updated		22/05/2018
Course Name	Category	Course Number	Recurrent Period	Last Training	date of recurrent	Next Training By
PEL for OPS Inspectors	Personnel Licensing	4/3101	3	04/07/2013	22/05/2018	22/5/2021
Inspection Authorities Investigation and Enforcement	Investigation & Enforcement	5/1103	3	05/12/2011	11/07/2016	11/7/2019
		5/1101		19/09/2011		
Basic Instructor and OJT Trainer Course	Management	8/1102		25/08/2010		
CRM	Job Skills	6/9401		05/10/2010		
Electronic Flight Bag (EFB)	Job Skills	6/1101		04/11/2008	18/05/2014	
Dangerous Goods For OPS	Job Skills	6/1103		21/01/2013	02/01/2007	
CAT II / III for OPS	Job Skills	6/6401		04/11/2008	06/03/2015	
EDTO for OPS	Job Skills	6/4101		04/11/2008	12/02/2015	
MNPS for OPS	Job Skills	6/3201		04/11/2008	23/12/2015	
RNAV / RNP for OPS	Job Skills	6/5401		04/11/2008	04/03/2015	
RVSM for OPS	Job Skills	6/2201		04/11/2008	30/09/2014	
Cabin Safety Training for OPS	Job Skills	6/7101		19/11/2012		

RATINGS



- Maintain currency as CASI, not as active aviation personnel
 - for each OPS/AW CASI - maintain 2 ratings
 - For ATPL pilots – 8 hours of simulator training every year (employing rotation in types)
 - For CPL – 2 flight hours on each type / group per year
 - For AMT – formal course on type every 5 years
 - For ATCOs - 20 hours of simulator training every 2 years (including simulation of a specific airspace in an Israeli aerodrome under radar coverage)

New Ratings



- When:
 - New type of aircraft entered on Israeli registry (ANR. FEES require the operator to pay for 3 ratings (2 AW/ 1 OPS)
 - Missing competencies due to CASI retirement
- Who: license, no. of existing relevant ratings, potential employment span in CAAI, experience & ability
- Pre-requisite: 3 years commitment to serve in CAAI
- Emotions and dynamics:
 - Most CASIs are eager to acquire new ratings (material benefits)
 - Concern from knowledge test / proficiency checks
 - Long stays away from home and family routine

