iSTARS
CAA HR Toolkit

CAA HR Toolkit

Inspector Benchmarking

Compare your number of inspectors with other States

Manpower Planning

Estimate the number of inspectors you need

The CAA HR Toolkit is a set of tools :

- The Inspector Benchmarking tool helps CAAs compare their inspectorate level against other States with similar operating environments;
- The Manpower Planning tool helps States estimate the number of inspections that they need for the effective activity of their operating environment;
- The Guidance Material showcases how States choose to organize their CAAs.

Inspector Benchmarking tool

Inspector Benchmarking

Compare your number of inspectors with other States

This tool enables States to compare their number of safety oversight inspectors with those of other States with similar operating environments.

To be used as starting point.

Select a State Liberia

Operations | Airworthiness | Aerodromes

Select your State

Select your area of interest

Compare your numbers of inspectors with those of States with similar operating environments

Select the range of operators to which you want to compare the State

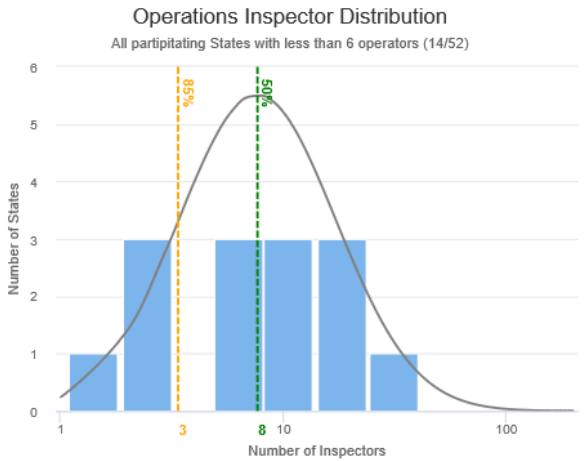
Any | less than 6 * | between 7 and 14 | between 15 and 25 | over 25

* ISTARS records indicate that the selected country is within this range

In the area of Operations, and based on the data gathered in the survey, the results for States overseeing less than 6 operators show that:

- 85% of the States have more than (or at least) 3 inspectors;
- on average, States have 8 inspectors.

Statistically, Liberia would therefor be expected to have a minimum of 3 inspectors - ideally around 8 - in the area of Operations



Select a State Liberia

Operations | Airworthiness | Aerodromes

List of States in the same range of operators

Survey Results

All partipitating States with between 15 and 25 operators (9/52)

Reset filter

Show 10 entries Search:

State	OPS Inspectors	Operators
Belgium	28.2	22
Finland	17	15
Gabon	21	25
Iceland	11.2	16
Ireland	31.5	15
Poland	45.1	25
Romania	18.3	22
Slovakia	13.1	17
Uruguay	13	17

Showing 1 to 9 of 9 entries (filtered from 52 total entries) Previous 1 Next

Select a State Liberia

Operations | Airworthiness | Aerodromes

Select your State

Select your area of interest

Compare your numbers of inspectors with those of States with similar operating environments

Select the range of aircraft models to which you want to compare the State

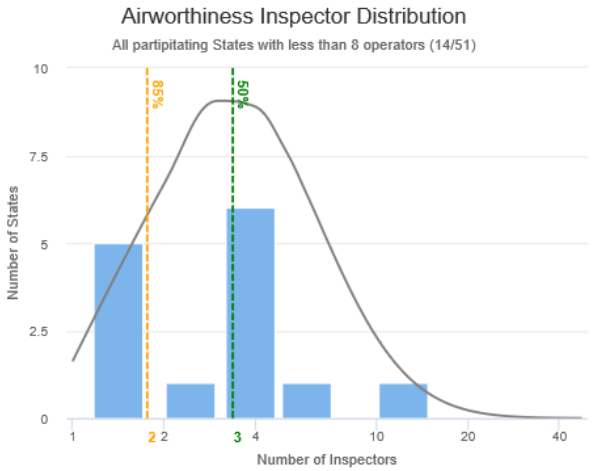
Any | less than 8 * | between 9 and 12 | between 13 and 23 | over 23

* ISTARS records indicate that the selected country is within this range

In the area of Airworthiness, and based on the data gathered in the survey, the results for States overseeing less than 8 aircraft models show that:

- 85% of the States have more than (or at least) 2 inspectors;
- on average, States have 3 inspectors.

Statistically, Liberia would therefor be expected to have a minimum of 2 inspectors - ideally around 3 - in the area of Airworthiness



Select a State Liberia

Operations | Airworthiness | Aerodromes

List of States in the same range of operators

Survey Results

All partipitating States with less than 8 operators (14/51)

Reset filter

Show 10 entries Search:

State	AIR Inspectors	Aircraft Models
Afghanistan	8	9
Al[illegible]ia	5	3
Angola	12	24
Australia	37	55
Austria	8	31
Belarus	7	11
Belgium	6.5	19
Bolivia (Plurinational State of)	11	16
Cabo Verde	5	4
Colombia	42	33

Showing 1 to 10 of 52 entries Previous 1 2 3 4 5 6 Next

Select a State: Liberia

Operations | Airworthiness | Aerodromes

Select your State

Select your area of interest

Compare your numbers of inspectors with those of States with similar operating environments

Select the range of aerodromes to which you want to compare the State

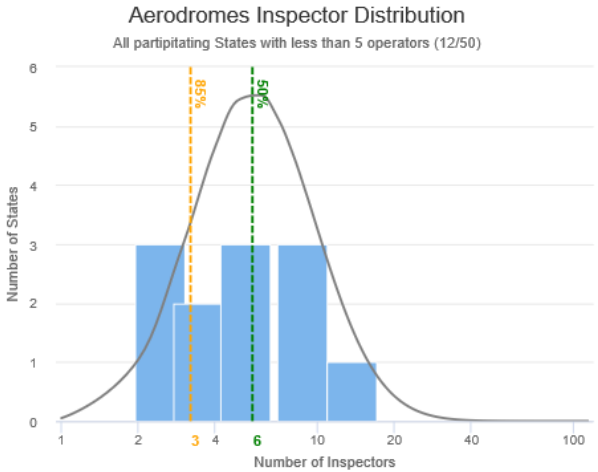
Any | less than 5 * | between 6 and 20 | between 21 and 37 | over 37

* ISTARS records indicate that the selected country is within this range

In the area of Aerodromes, and based on the data gathered in the survey, the results for States overseeing less than 5 aerodromes show that:

- 85% of the States have more than (or at least) 3 inspectors;
- on average, States have 6 inspectors.

Statistically, Liberia would therefor be expected to have a minimum of 3 inspectors - ideally around 6 - in the area of Aerodromes



Select a State Liberia

Operations | Airworthiness | Aerodromes

A way to benchmark with other States

Provides a starting point

Survey Results

All partipitating States with less than 5 operators (12/50)

Reset filter

Show 10 entries Search:

State	AGA Inspectors	Aerodromes
Afghanistan		23
Albania	11	1
Angola	12	9
Australia	18.5	418
Austria	8	51
Belarus	1	6
Belgium	4.2	36
Bolivia (Plurinational State of)	4	41
Cabo Verde	3	8
Colombia	9	100

Showing 1 to 10 of 52 entries Previous 1 2 3 4 5 6 Next

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Organizational Structure of States Library

In order to assist States comply with ICAO Standards and Recommended Practices (SARPs) regarding the establishment and operation of their Civil Aviation Authorities, ICAO is developing guidance material to help States enhance the way they organize their authority commensurate to the size and scope of their aviation industry.

The library showcases how some States organize their CAAs.

Organization Structure of States Library

Name	Country
Agência de Aviação Civil (AAC) NEW	Cape Verde
Dirección General de Aeronáutica Civil (DGAC)	Chile
Federal Office of Civil Aviation (FOCA)	Switzerland

Good representation of different sizes and scope of aviation industry

The selected States have demonstrated sound organizational standards and practices as reflected through their high Effective Implementation scores

The **Safety Division - Aircraft (ST)**, as the name suggests, is responsible for issues related to airworthiness, including for example oversight of approved maintenance organizations, and design production organizations. This Division is also responsible for overseeing organizations carrying out the maintenance management[2], as well as maintenance personnel licensing and maintenance training organizations. Some of these functions require close coordination with other Divisions, such as with the Flight Operations Division in the oversight of air operators.

The **Safety Division - Flight Operations (SB)** is responsible for oversight of air operators and general aviation operations, dangerous goods, training facilities and flight simulation training devices. It is also responsible for flight crew licensing and approval of flight training organizations. The Division has to coordinate closely with the Aircraft Division on the issues that cut across the responsibilities of both Divisions (such as MMEL/MEL approvals).

The **Safety Division - Infrastructure (SI)** is responsible for the oversight of Skyguide, Switzerland's Air Navigation Service Provider as well as of aerodromes in Switzerland. The Airspace Unit looks after matters pertaining to Rules of the Air (Annex 2). This Division is also responsible for the licensing of Air Traffic Controllers as well as the oversight of security matters..

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Manpower Planning Tool

Manpower Planning

Estimate the number of inspectors you need

This tool helps States estimate the number of inspections that they need for the effective activity of their operating environment

This is a planning tool, it is not there to dictate

How to use this tool? On a year to year basis, updating your information to recalculate the surveillance inspection manpower needed

Manpower Planning

Estimate the number of inspectors you need

The Manpower Planning Tool can be used to estimate the number of inspectors that States may need for its safety oversight activities.

This tool provides a basic approach for the calculation of inspector man-hours based on the various types of certification and surveillance activities of a State. It should be used periodically to reflect the evolution of your State's operating environment.

States are free to use other methods for determining their manpower resources as their needs evolve.

Click here to continue

This tool complements the Inspector Benchmarking tool and can be used to determine an appropriate size for your own CAA.

Only inspector resources

Tool designed to calculate the inspector resources a State needs for its oversight activities

- The tool is set up to ask you for information about your industry to understand how you industry is structure
- The tool then uses this information to calculate the number of man-hours needed for the initial grant of approvals or certification for organizations, and also for surveillance activities
- Once the calculations are done, there is a summary of the number of man-hours and the inspector numbers that you need for each area

Setup

Clear Open

Setup | Calculations | Summary

General Setup | Industry Structure | Organization Certification | Organization Surveillance

Information on Number of Working Hours

Number of Working Hours Per week	40	Hours
Number of Working Weeks Per year	46	Weeks
Number of Working hours Per year	1840	Hours

Information on Overheads

Estimated Overhead	12	%

Next Save Session

Put in information about your industry structure

How many hours do your inspectors work?

Clear Open

Setup | Calculations | Summary

General Setup | Industry Structure | Organization Certification | Organization Surveillance

Use this section to set up your industry structure. Your industry structure should contain one or more industry sectors, and one or more organization types for each industry sector.

- Industry Sector: Air Operators
  - Organization Type: Large Air Operators
  - Organization Type: Small air operators
  - Organization Type: Helicopter operators
  - Organization Type: GA/BA operators
  - Add Organizaton Type
- Industry Sector: Maintenance Organizations
  - Organization Type: Aircraft and component maintenance
  - Add Organizaton Type
- Industry Sector: Aerodromes
  - Organization Type: National airports
  - Organization Type: International airports
  - Add Organizaton Type
- Add Industry Sector

Next Save Session

What is your industry structure?

Sector

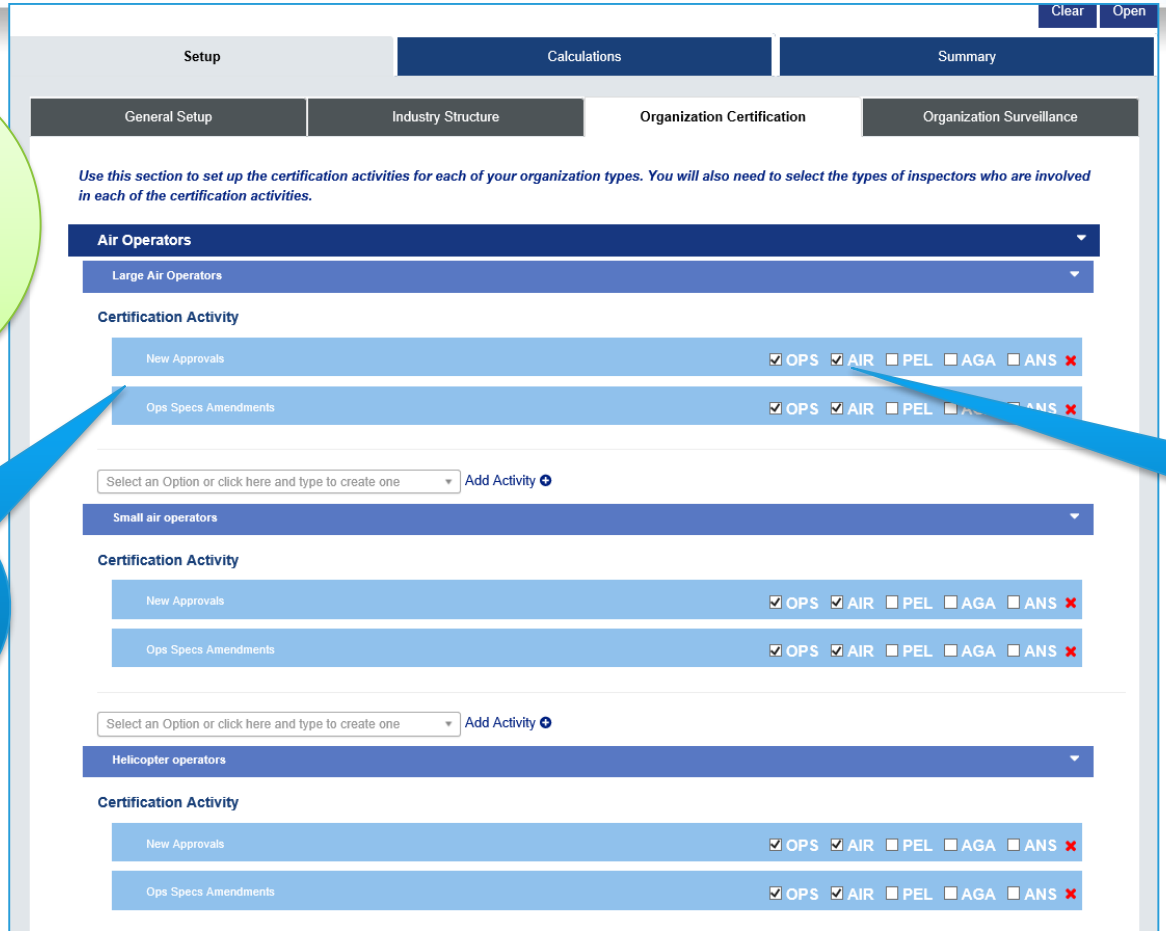
Organization type

What activities are related to each organization type?

Certification activities related to each organization type

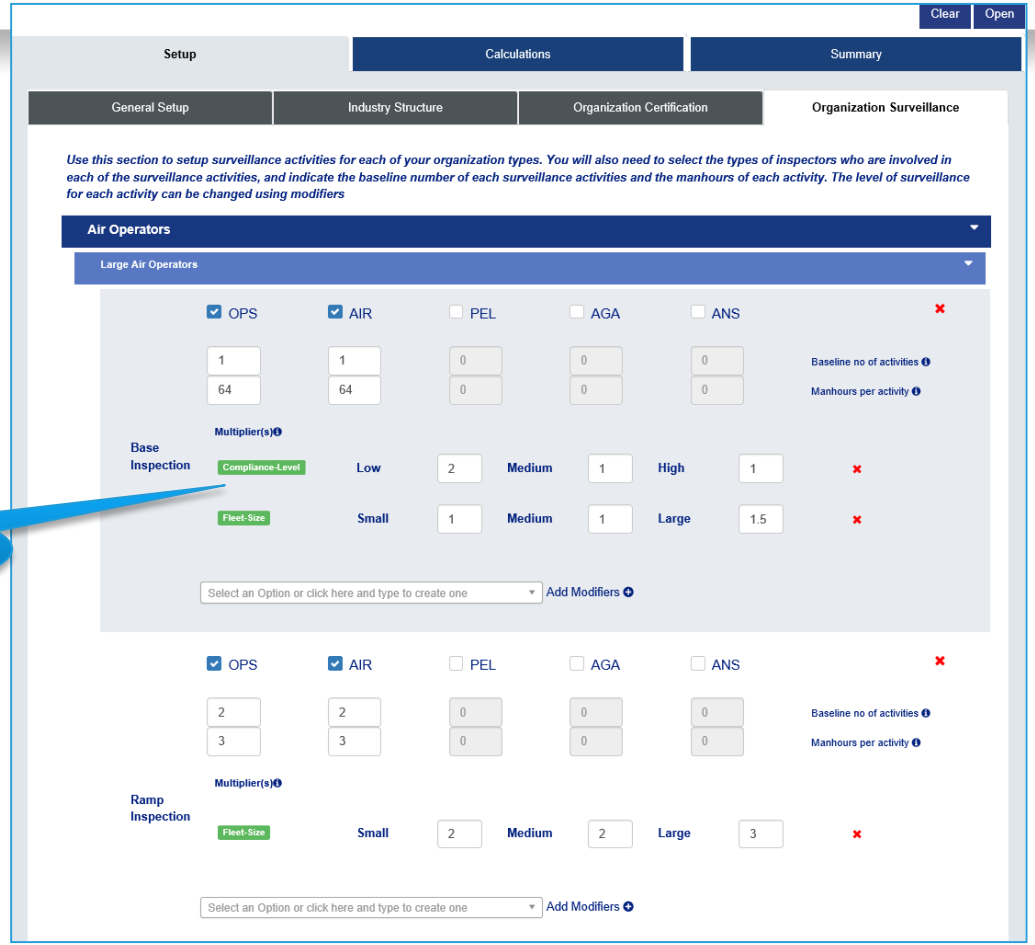
Types of inspectors for each activity

Do not refine too much not to have long list of certification activities



Risk-based approach for organization surveillance: for different types of operators you may carry out a different number of inspections

Multipliers can be defined by the user



The difference with a certification activity is that surveillance is done on an ongoing basis

Calculations

Clear | Open

Setup | Calculations | Summary

Organization Certification | Organization Surveillance | Aircraft Oversight

Use this section to indicate the number of certification activities and the number of manhours needed for each activity.

Air Operators

Large Air Operators

New Approvals	Activites	10	Activites Per year	OPS	276	AIR	252	Manhours per Activity
Ops Specs Amendments	Activites	1	Activites Per year	OPS	272	AIR	248	Manhours per Activity

Small air operators

New Approvals	Activites	8	Activites Per year	OPS	276	AIR	252	Manhours per Activity
Ops Specs Amendments	Activites	1	Activites Per year	OPS	272	AIR	248	Manhours per Activity

Helicopter operators

New Approvals	Activites	3	Activites Per year	OPS	276	AIR	252	Manhours per Activity
Ops Specs Amendments	Activites	1	Activites Per year	OPS	272	AIR	248	Manhours per Activity

GA/BA operators

Ops Specs Amendments — Activites Per year — No inspector types have been chosen for this activity. Please return to Organization Certification and select an inspector type to if you wish to add one. Click here to do so.

Information needed to calculate the number of hours you need for certification, surveillance and aircraft oversight

Estimate the number of activities per year for each approval

Clear Open

Setup | Calculations | Summary

Organization Certification | Organization Surveillance | Aircraft Oversight

Use this section to determine the number of surveillance activity and surveillance manhours needed for each organization.You will need to enter the individual organization name for each organization type, and select the modifier values that apply to that organization

Air Operators

Large Air Operators

ICAO Airline | Compliance-Level: Select an Option | Fleet-Size: Select an Option | Flt crew prof ch: Select an Option

Base Inspection				
OPS:	2.00	Inspections	128.00	manhours
AIR:	2.00	Inspections	128.00	manhours
Ra ection				
	4.00	Inspections	12.00	manhours
AIR:	4.00	Inspections	12.00	
Inspection				
	6.00	Inspections	48.00	manhours
	6.00	Inspections	48.00	manhours
acility Inspection				
OPS:	6.00	Inspections	96.00	manhours
AIR:	6.00	Inspections	96.00	manhours
EnRoute Inspection				
OPS:	4.00	Inspections	32.00	manhours
Flight crew proficiency check				
OPS:	8.00	Inspections	128.00	manhours

Key in the different airlines in your State and key in the modifiers

You already know how many inspections you will do every year and how much time it will take

Clear Open

Setup | Calculations | Summary

Organization Certification | Organization Surveillance | Aircraft Oversight

Use this section to enter the OPS and AIR manhourse needed to oversee various aircraft types.

Aircraft > 5,700 kg

Total OPS Manhours per year for all aircraft in this category

Hours — **Hours**

Please enter a number that is to two decimals or less.

Number of Aircraft 48

Renewal period for Certificate of Airworthiness 2 **Years**

AIR manhours Per Renewal 40 **Hours**

Aircraft < 5,700 kg

Helicopter

Select an Option or click here and type to create one — Create Aircraft Type

Save Session

Man-hours for each aircraft type

Summary of calculations

Manpower Planning Tool

ICAO

North American Central American and Caribbean (NACC) Office
Mexico City

South American (SAM) Office
Lima

ICAO Headquarters
Montréal

Western and Central African (WACAF) Office
Dakar

European and North Atlantic (EUR/NAT) Office
Paris

Middle East (MID) Office
Cairo

Eastern and Southern African (ESAF) Office
Nairobi

Asia and Pacific (APAC) Sub-office
Beijing

Asia and Pacific (APAC) Office
Bangkok

THANK YOU