

# Panel 5: “Technical Cooperation”

EASA ICF/5: Hong Kong, 9-10 December 2015

**Matthias Borgmeier**, International Cooperation Department, EASA

**Rodrigo Brenes**, Safety Coordinator, ACSA

**Betrand de Lacombe**, Director International Cooperation, DGAC France

**Abdulla Mohamed**, Director Airworthiness, Maldives CAA

**Gen. William Hotchkiss**, Director General, Philippines CAA



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European Aviation Safety Agency

# Technical cooperation

 Moderator

 Panellist

## Panel 5

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## “Technical Cooperation” - Panel’s objectives

- Needs of EASA’s partners worldwide with particular focus on developing countries
- The discussion will mainly address these three topics:
  - Interpretation and implementation of EU safety rules
  - Supporting the training needs of ICF partners
  - Supporting and promoting RSOOs



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# EASA - Technical Cooperation activities

Matthias Borgmeier

Acting Head of Technical Cooperation Programmes section

Head of Technical Training section





Agreements and External Representation

Technical Cooperation Programmes

Technical Training

ECQB



# Technical Cooperation Programmes

- Safety does not stop at EU borders
- Need to co-operate with partner authorities
- Promoting EU views and standards

**EASA engages in Technical Cooperation Activities based on requests & available funds**

- EU (Safety and/or other aspects)
- Countries willing to adopt EU regulations or requesting assistance
- EU Industry interests

**The Big Picture**





# Technical Cooperation Projects

## Cross-Regions

International Cooperation Forum  
(ICF)

Targeted Technical Assistance  
missions

## Neighbouring Countries: ENP

Support accession/integration or  
interoperability with EU

- IPA 3
- EUROMED
- TRACECA II (upcoming)

## Latin America

Support EU efforts to develop  
cooperation

## Africa

Assistance to states to meet  
their international obligations

- SIASA – Pan African
- ATA-AC – CEMAC region
- IASOM – Malawi
- ZAMBIA

## Asia-Pacific

Support EU strategic cooperation  
Assistance to states to meet their  
international obligations

- AATIP
- EU-CHINA APP
- EU-SOUTH ASIA (upcoming)



# EASA International Cooperation Activities

<https://www.easa.europa.eu/easa-and-you/international-cooperation/easa-by-country/map>





# Agency objectives – Technical Assistance

- Main goal should be to support safety in civil aviation throughout the world (EU regulations)
- Be a partner for non-EU CAAs for capacity building (EU funded projects)
- Share the experience as an RSOO and promote regional integration
- Implement the established cooperation strategy and the concept for technical assistance
- Provide Technical Training and offer support



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**The floor is open to the  
panelists now !**



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# ACSA

## Central American Agency for Aeronautical Safety

**ICF-5  
Hong Kong  
December 2015**

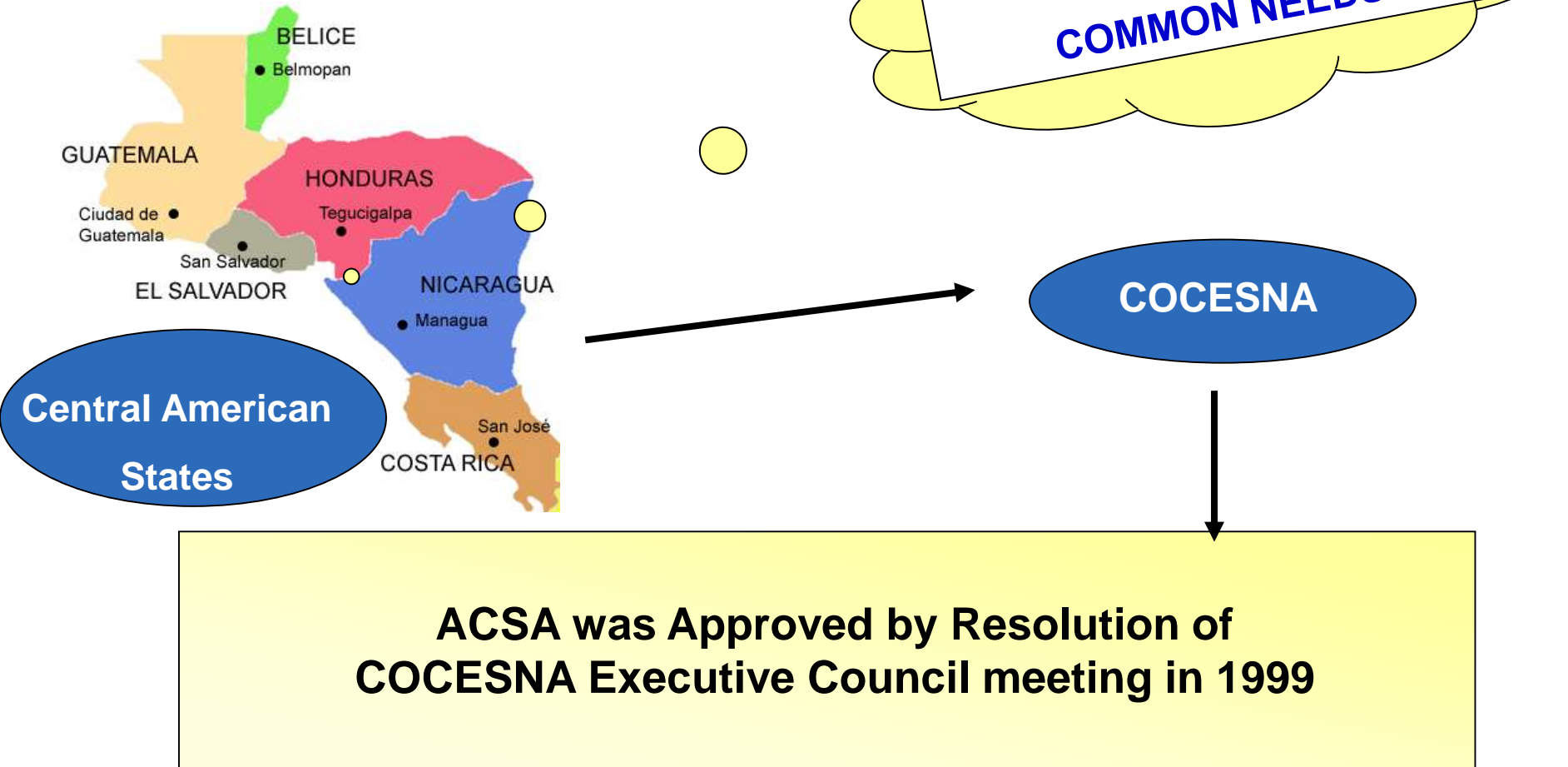


# **LESSONS LEARNED: The ACSA experience**

**Why have the  
Central  
American CAAs  
decided to  
work together?**



# ORIGINS





# **LESSONS LEARNED: The ACSA experience**

**Every State  
(individual)**



**Regional Concept  
(team work)**



# Support from Int'l Community

- Specially during initial start-up the support is fundamental
- Secure donor support for the establishment and implementation



ICAO



AIRBUS



BOEING

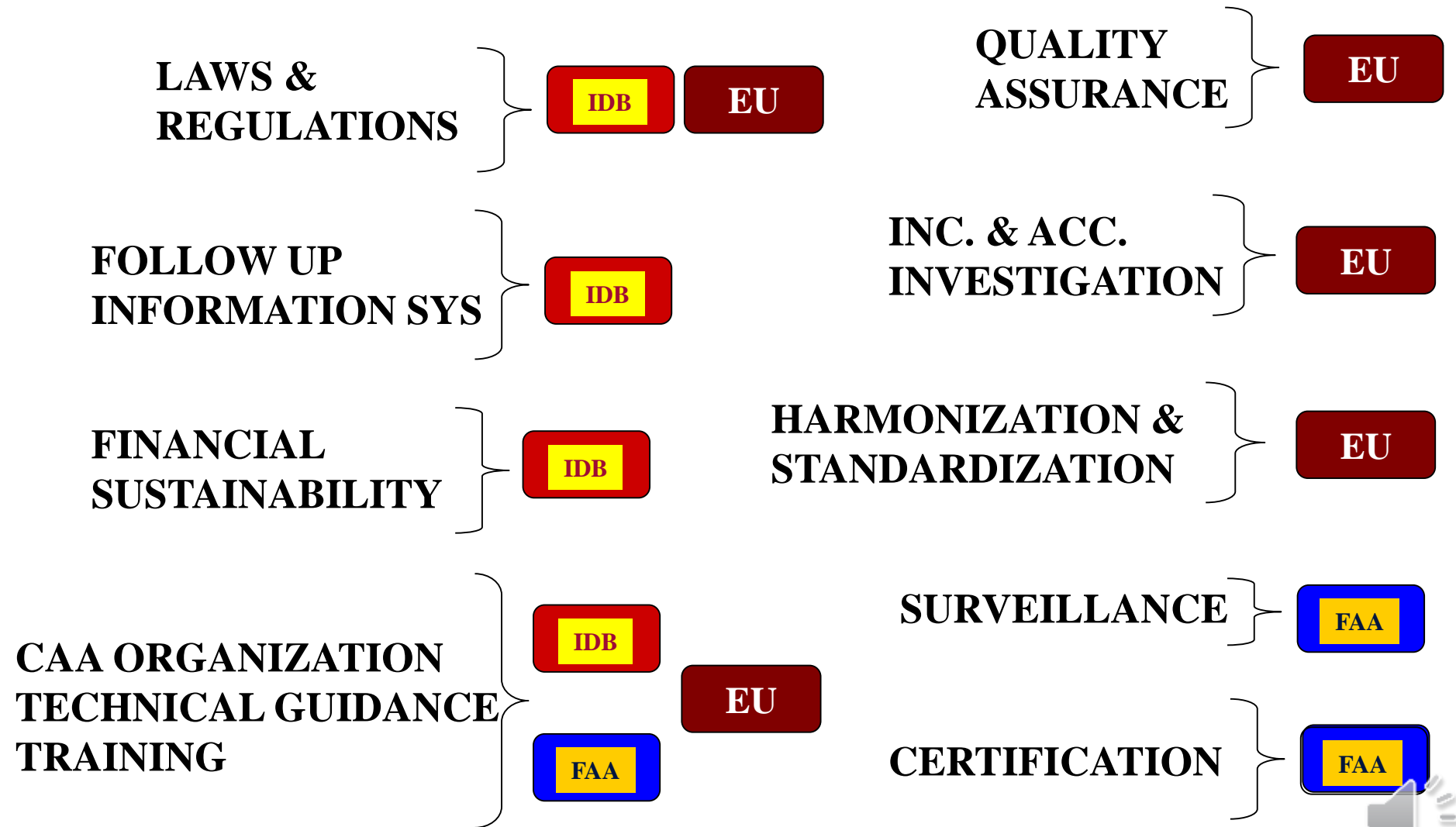


IDB

Inter-American Development Bank



# ACSA received support from Int'l Community



# **LESSONS LEARNED: The ACSA experience**



**What were  
and are  
the main  
obstacles?**



# Key Obstacles for an RS00

- 🏊 Lack of Commitment
- 🏊 Lack of a solid regional framework
- 🏊 Resistance to change
- 🏊 Constant changes of high level authorities
- 🏊 Lack of coordination of the initiatives
- 🏊 Lack of resources



# **LESSONS LEARNED: The ACSA experience**



# THE PRINCIPAL OBJECTIVES

Achieve economies of scale cost effectiveness through the shared use of resources

Promoting regional integration and safety culture

Accelerate the establishment of closer ties among States



# **LESSONS LEARNED: The ACSA experience**



# Some other Benefits

- Eliminate duplication of efforts
- Pooling of resources
- Achieve economies of scale
- Improve regional solidarity
- Facilitate recruitment and retention of personnel





# NEW CHALLENGES

ACSA is expecting to have Regional Licenses for pilots, mechanics and air traffic controllers



ACSA's RSOOs is actively providing an independent Regional Accident and Incident Investigation Organization (RAIO) to the region





# **LESSONS LEARNED: The ACSA experience**

**Supporting  
and  
Promoting**



# Supporting and promoting RSOOs

- It is important to establish synergies while avoiding duplication of work
- ICAO and other organizations must continue to support the RSOOs
- RSOOs are key factor to build foundations for transition into safety management environment

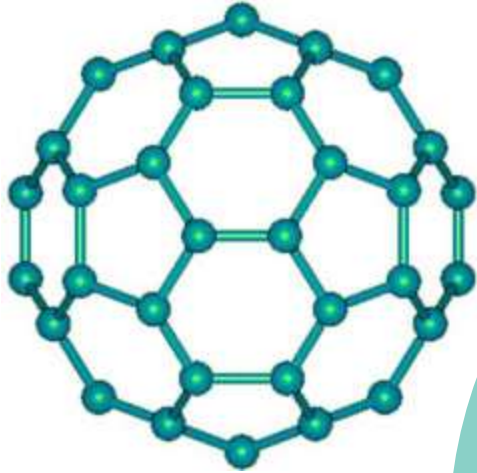


# Supporting and promoting RSOOs

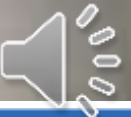
- Objectives should drive the support and not the other way around
- Understand that the Member states follow an uneven pace of progress
- Rapid march of technological advancement in all areas



# LESSONS LEARNED: The ACSA experience



**Systemic  
and  
emerging  
issues**



# RSOOs Systemic Issues



- Resource constraints
- Working with States to address SSPs
- Working with States to foster the implementation of SMS in the industry



# RSOOs Emerging Issues

- Complexity of the system
- Environmental factors
- Regulatory considerations
- Efficient collection, storage, analysis and exchange of safety data and information (SDCPS)



# CONCLUSIONS

- Willingness to implement the system
- Involvement at all levels is imperative
- Support without interfering
- Communication and trust

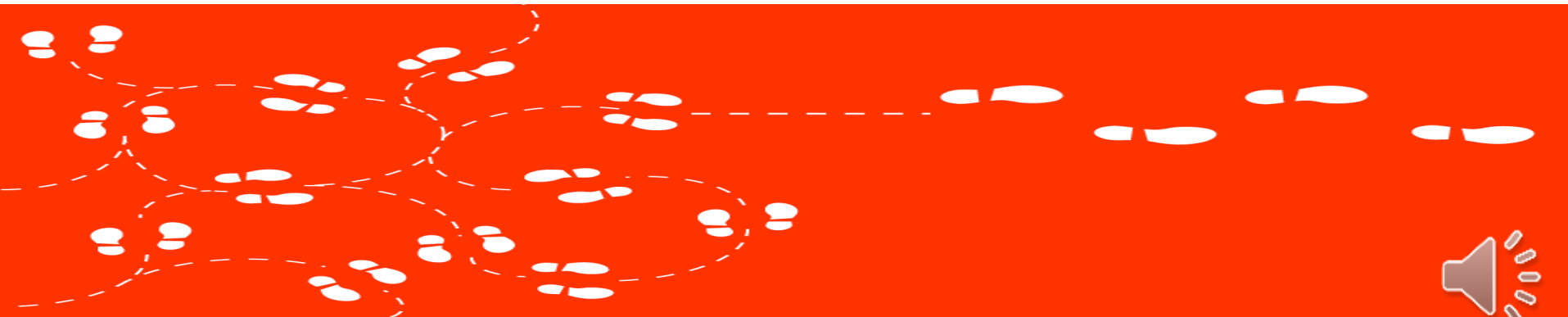
## Trust

Assured reliance  
confidence or faith is pla  
the truth, worth, reliabilit  
dependence on future or  
belief in the honesty, int



# RSOOs are here to stay!!!

- *"A journey of a thousand miles begins with a single step."* – **Confucius**
- *"But it's very important how you choose to take the next step"* – **Rodrigo**





# Thank You



**COCESNA.**

[rodrigo.brenes@cocesna.org](mailto:rodrigo.brenes@cocesna.org)





**EASA**  
European Aviation Safety Agency

# Technical cooperation



Moderator



Panellist

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# French Civil Aviation Authority (DGAC)

## *Supporting the training needs - The French actions -*



5th EASA International Cooperation Forum  
Hong Kong, 9-10 December 2015

Présence, territoires, talents et logement  
Énergie et climat Développement durable  
Prévention des risques Infrastructures, transports et mer  
Présent pour l'avenir



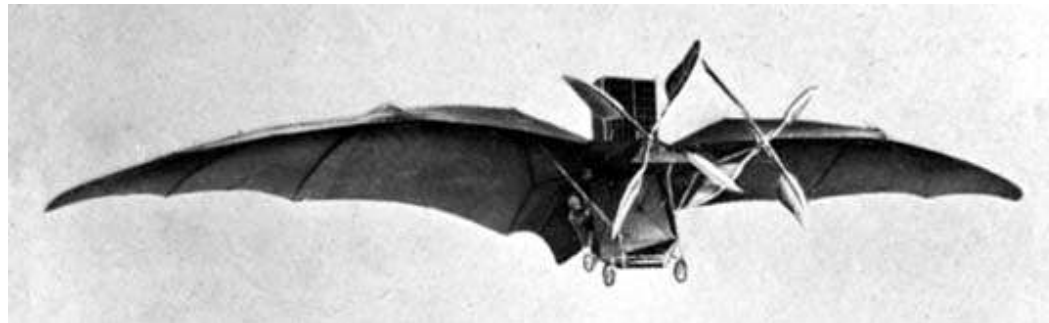
Direction générale de l'Aviation civile

# France, a country of aviation

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## Yesterday ...

- **1783: the Montgolfiers** launched the first free flight with human passengers (with a hot air balloon).
- **On October 9, 1890, Clément Ader** realised the first ever flight (uncontrolled) with its “plane” *Eole* for approximately 50 m.



# *France, a country of aviation*

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## *... and still today*

- **A world-class industry:** Airbus, Thalès, Safran, Dassault, etc., and an extensive network of SME's.
- A total workforce of about **180,000 people**.
- A **strong academic network:** ENAC, ISAE, ENSMA.
- A main « hub » (**Paris-Charles de Gaulle**) and an main airline (**Air France-KLM**).
- The **world's leading touristic destination:** 83.7 million visitors in 2014 (milestone of 100 million for 2020).





# DGAC: who we are

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- The *Direction Générale de l'Aviation Civile* (DGAC) is the French CAA **since 1946**.
- It integrates and **completes all the tasks necessary for the organization of air traffic**: regulation, safety monitoring and air navigation service provider.
- As a partner in the aeronautical sector, DGAC is also in charge of financial **aid for R&D in aeronautical construction and State industrial policy** in this sector.
- Staff: **11.800 people**.



# Our civil aviation academy: ENAC

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- ENAC (*Ecole Nationale de l'Aviation Civile*) was **founded in 1949**, and is located in Toulouse since 1968.
- Aviation-oriented academy, it offers a **wide and complete panel of training programs** and activities.
- Europe's largest aeronautical university, ENAC was awarded in 2014 “**ICAO Regional Training Centre of Excellence**”.
- ENAC signed in 2014 a **partnership agreement with IATA** leading to the joint delivery of an ‘Airlines Operations’ Master program.



# ENAC's figures

- **Training programs:** 30 degree programs, 3,000 students (60% are foreigners, 50 different nationalities), 1000 graduates/year.
- **Continuous training:** 600 internships, 7,500 trainees (15% are foreigners, 40 different nationalities).
- **900 permanent staff** including 400 teachers and instructors; 1,000 part-time teachers.
- **120 aircraft**, flight simulators, air traffic control simulators.
- Aerodynamics, electronics, computing and language laboratories; **4 research labs**, etc....





# *Our cooperation policy*

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- **Organisation:** DGAC has established an International department, which leads and coordinates cooperation and technical assistance with foreign CAAs (non-business approach).
- **Fields:** upon request, we can intervene in all the aviation fields: safety, air navigation, airport development, training and security.
- **Kind of actions:** organisation either on a case-by-case basis, or in the context of technical cooperation arrangements.



# What framework?

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DGAC contributes to several programs, in the context of different frameworks:

- **Bilateral level:** 45 cooperative agreements signed between 1998 and 2015 (*the last one with Colombia, in November*);
- **European level:** 7 twinning partnership programs (Lithuania, Ukraine, Serbia, Kosovo; Albania, Turkey and Tunisia).
- **ICAO level:** participation to COSCAP North-Asia, South-East-Asia and South-Asia); to FPP Asia-Pacific and Africa (based on ASECNA) ; to SAFE fund programmes, to ASIAP programme, etc....



# *What possible kind of trainings ?*

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- ▶ **Theoretical trainings**
  - On-the-shelf trainings
  - customized trainings
  - Train-the-trainers
- ▶ **On-the-job trainings**
  - audits / inspections
  - sharing DGAC's experience through workshops
  - short/long-term experts

*Example: in 2015, training of inspectors of Vietnam in charge of conducting audits of airlines, continuing airworthiness of aircraft and surveillance workshops maintenance.*

# *An exemplary case: Kosovo*

- The beginning of the story: a European **twinning program** led from 2009 to 2012.
  - Step 2: a bilateral **cooperation agreement** (2012).
  - Step 3: **trainings** at ENAC and on-the-job training with French experts in various fields (continuing airworthiness, air navigation services oversight, airport certification, etc.).
- ✚ **A country which is not yet member of ICAO but which is no longer «*left behind*».**
- ✚ **+ a positive regional influence:** cooperation agreement signed with Montenegro (2013), twinning program with Albania (2014-2016), ongoing contacts with Serbia and Macedonia.



# Establishing on-site academic training: the Tianjin Institute

- In 2007, creation of the **SIAE (Sino-European Institute of Aviation Engineering)** of Tianjin, China.
  - School of highly specialized aeronautical engineers, which is the result of an exemplary partnership between the CAUC (*University of Civil Aviation of China*) and French aeronautical schools, ENAC, ISAE and ENSMA, with the support of AIRBUS group, SAFRAN and THALES.
  - Cohort of 120 students each year.



Photos: 2015 ceremony of diplomas, in presence of French PM, Mr. Manuel VALLS.

# Establishing on-site academic training: international masters

- ▶ In 2016, launching of a **joint aeronautical master degree**, between **Hong Kong University of Science and Technology** and ENAC.
  - Location: Hong Kong and Toulouse.
- ▶ In 2015, launching of the **French-Indian master in the field of air navigation**, on the initiative of DGAC, ENAC and the *Airports Authority of India (AAI)*.
  - Location: *Civil Aviation Training College (CATC)* of Hyderabad.
  - Cohort of 50 trainees (25 controllers and 25 technicians) each year.



# *How to establish a training programme ?*

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DGAC is fully committed **to be a partner** for capacity building of other CAAs, which means:

- ▶ **Understanding the partner**, its national and regional context, and define the needs together;
- ▶ Proposing a **long-term cooperation** and confidence relationship, and establish commonly an action plan;
- ▶ Proposing **to accompany but not substitute the partner**, to help him to complete all its missions independently.



# Who are our experts ?

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To answer all the needs, in their diversity, we work with:

- our **own experts** in each related field;
- **young retired** DGAC experts;
- **ENAC** (National Civil Aviation Academy).

+

- **Consultants** and Industry.

*Example : between 2007 and 2012, DGAC has sent retired experts to Cambodia, to assist CAA to implement the regulations on the certification of airports and certify the 3 main airports.*



# *What possible funding ?*

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- ▶ **Direct Partner CAA's contribution.**
- ▶ **EU and ICAO programmes** (twinning, technical assistance programs, TAIX, COSCAP, etc).
- ▶ **DGAC budgetary assistance:**
  - In 2015, nearly 150 ENAC trainees were sponsored by DGAC, for an amount of almost USD 500,000.
  - On 2011-2015, training of some 3,000 African staff in 20 countries *via* the ASACA program (*Support for the Civil Aviation Security in Africa*), at a cost of USD 1.6 million.



# Synthesis

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## France ...

- is very **interested in the expansion of civil aviation** throughout the world,
- considers that **it is an opportunity but also a collective challenge**, in particular for safety,
- is willing to **share its experience** with other countries,
- has developed **an ambitious cooperation policy**, notably for training,
- is **ready to examine new requests** of assistance and partnership.



# *Your contacts*

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Director:

[bertrand.de-lacombe@aviation-civile.gouv.fr](mailto:bertrand.de-lacombe@aviation-civile.gouv.fr)

Africa:

[sophie.germain@aviation-civile.gouv.fr](mailto:sophie.germain@aviation-civile.gouv.fr)

Americas:

[emmanuel.rocque@aviation-civile.gouv.fr](mailto:emmanuel.rocque@aviation-civile.gouv.fr)

Asia-Pacific:

[emanuela.gellini@aviation-civile.gouv.fr](mailto:emanuela.gellini@aviation-civile.gouv.fr)

Europe, CIS, Japan:

[franck.giraud@aviation-civile.gouv.fr](mailto:franck.giraud@aviation-civile.gouv.fr)

Middle East, South Asia:

[philippe.lambert@aviation-civile.gouv.fr](mailto:philippe.lambert@aviation-civile.gouv.fr)





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# Implementation of EASA Parts

## The Maldives Story

ABDULLA MOHAMED, CAA MALDIVES

10 DECEMBER 2015

# Topics

.55

1. Background to Maldives
2. Implementation Summary
3. Lessons Learnt

# 1. Background

# Background – The Maldives (1/3)

.57

## Geography

- ▶ Archipelago of 1192 islands in the Indian Ocean
- ▶ Population – 350K
- ▶ Land area 300 Km<sup>2</sup> (99% water)
- ▶ E.g. comparison (Sri Lanka)
  - ▶ Geographic area – 2x
  - ▶ Land area – 0.005%
  - ▶ Population – 0.02%
- ▶ Serious geographical challenges





# Background – The Maldives (2/3)

.58

## Economy

- ▶ Main economic activity – tourism
- ▶ Tourism – 35% GDP
- ▶ Fishing – second leading sector
- ▶ All tourists arrive by air
- ▶ Tourism + Travel – 54% of GDP
- ▶ High value fish exported by air
- ▶ Aviation critical to Maldivian economy.



# Background – The Maldives (3/3)

.59

## Regulatory Framework

- ▶ Maldives – signatory to the Chicago Convention
- ▶ Obligated to comply with all 19 Annexes
- ▶ A 2005 internal review revealed a “very poor” implementation of ICAO minimum standards



## 2. Implementation Summary

# Implementation Summary (1/5)

.61

## Regulation Change Project

- ▶ Regulation Change Project
  - ▶ Commissioned by DG in August 2005
- ▶ Vision
  - ▶ Supports economic growth
  - ▶ ICAO compliance
  - ▶ Level playing field
- ▶ Survival



# Implementation Summary (2/5)

.62

## Frameworks

- ▶ Shortest path
  - ▶ Considered many frameworks
  - ▶ Language
  - ▶ E.g. UK, FAA, EASA, AU, NZ, Model regulations
- ▶ EASA
  - ▶ British colonial history
  - ▶ Ecosystem, Flexibility, Interoperability

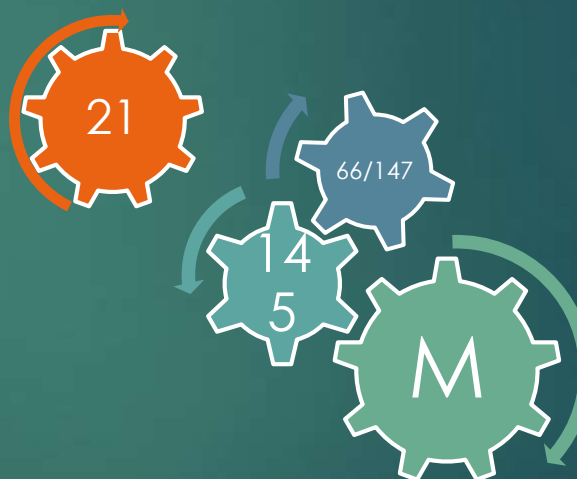


# Implementation Summary (3/5)

.63

## First Package

- ▶ Airworthiness
  - ▶ 21, 66, 145, 147 & M
  - ▶ promulgated in 2007
  - ▶ 2 year implementation period
- ▶ SARI
  - ▶ Beyond the text
  - ▶ Section B – Harmonisation ongoing
  - ▶ Section A – Ahead
- ▶ Results
  - ▶ 93.3% on USOAP for Airworthiness



# Implementation Summary (4/5)

.64

## Second Package

- ▶ Operations
  - ▶ Air Ops and Air Crew
  - ▶ promulgated in late 2014
  - ▶ 2 year implementation period
- ▶ EASA + CAA Maldives
  - ▶ Contract signed 25 Sep 2015
  - ▶ First rulemaking workshop Nov 2015
  - ▶ Approx. USD 225K
- ▶ Participation by regional partners



# Implementation Summary (5/5)

.65

## Future Directions

- ▶ ANS Areas
- ▶ Closer international cooperation
  - ▶ Preliminary work underway to request working arrangements with EASA, FAA and TC
  - ▶ Receive surveillance information on selected organisations
  - ▶ Reduce duplication of effort and economics



### 3. Lessons Learnt

# Lessons Leant (1/5)

.67

## #1 – ICAO Critical Element 3

- ▶ Should be *the* number one critical element for any State
- ▶ Drawing lines in the sand
- ▶ EASA role



# Lessons Leant (2/5)

.68

## #2 – Raison d'etre + vision

- ▶ Regulation change difficult and long
  - ▶ 10 years this year for our regulation change project
- ▶ Need a well accepted reason and vision to keep to the “flight plan”



# Lessons Leant (3/5)

.69

## #3 – Communicate, Communicate!

- ▶ Regulatory changes accepted better
  - ▶ Pre-NPA meeting with 'Accountable Managers'
  - ▶ One-on-one sessions with each Operator
  - ▶ 'CRD meetings'
  - ▶ Joint training sessions
- ▶ Benefit
  - ▶ CAA-CAA-Industry-Industry relationships



# Lessons Leant (4/5)

.70

## #4 – Participate in Regional WGs

- ▶ Competent inspectors who can consistently participate in WGs  
key
- ▶ Concepts
- ▶ Ownership

# Lessons Leant (5/5)

.71

## #5 – Prepare for Mistakes

- ▶ Be prepared to make mistakes
- ▶ A need to be perfect and apprehension
- ▶ The fatal mistake would be not to change



# Thank You!

.72

Questions?

