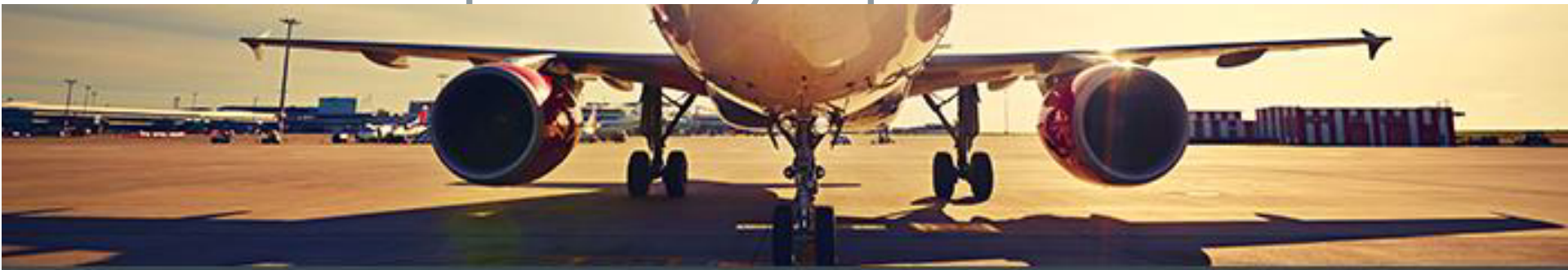
Module 2 – Agenda 2

Economic Impact – why implementation matters?



CONTENTS

01 Air Transport and the Economy

02 Air Connectivity

- *Importance*
- *Definition*
- *Measurement*
- *Indices*
- *5 Drivers, and situation in Africa*

Geography, Airport Infrastructure, Airline Models, Country's economic & regulatory frameworks, Safety standards.

03 Government's and ICAO's Action

Air Transport and the Economy

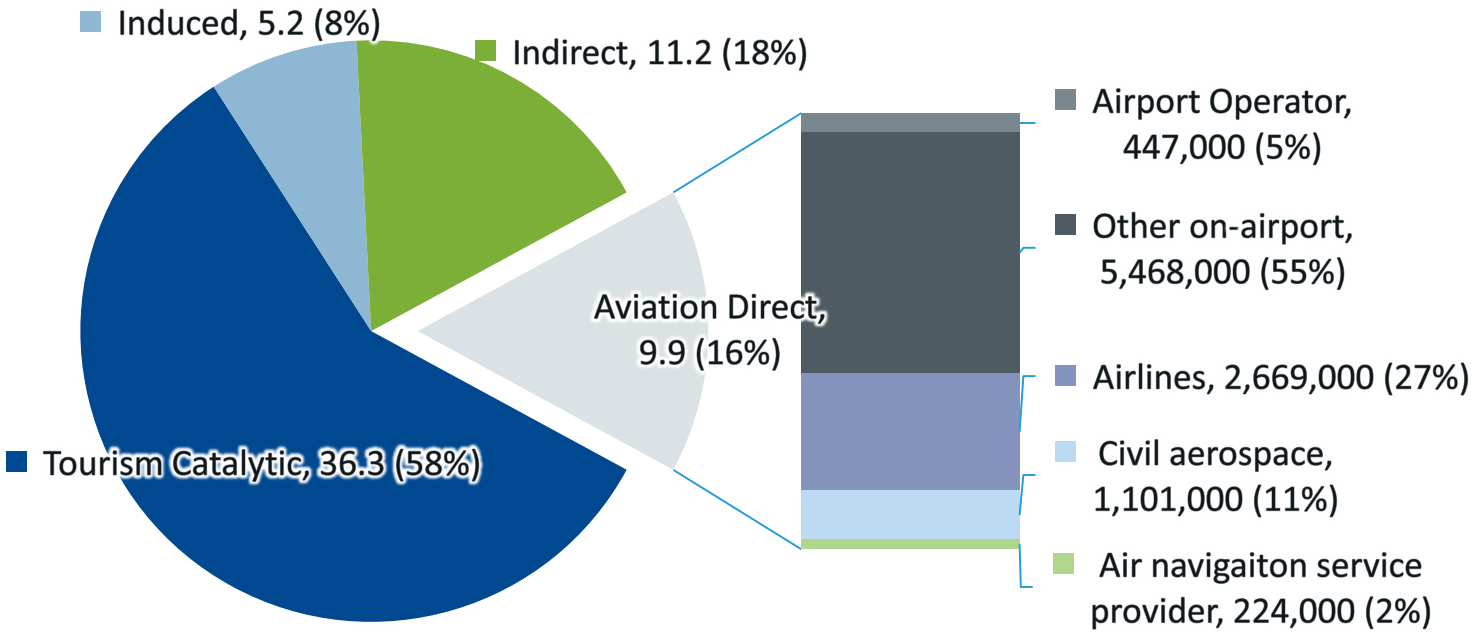
- Air transport plays a major role in supporting **economic** as well as **social development.**
- There are several perspectives to take on the industry's contribution to more **aggregated** notions of **development.**
- The most crucial is air transport's role in connecting countries and economies to **overseas markets.**
- The network of connections between cities represents an **infrastructure asset** as essential to operations of **modern economies** as **well-educated workforce** or **investment in ICT.**

Air Transport and the Economy

- This network enables a **flow of tourists and trade**, but also **flows of skilled labor, ideas, capital and competition**.

- Good air transport connections **underpin and enhance the productive capacity** of an economy, supporting long-term economic growth and development.

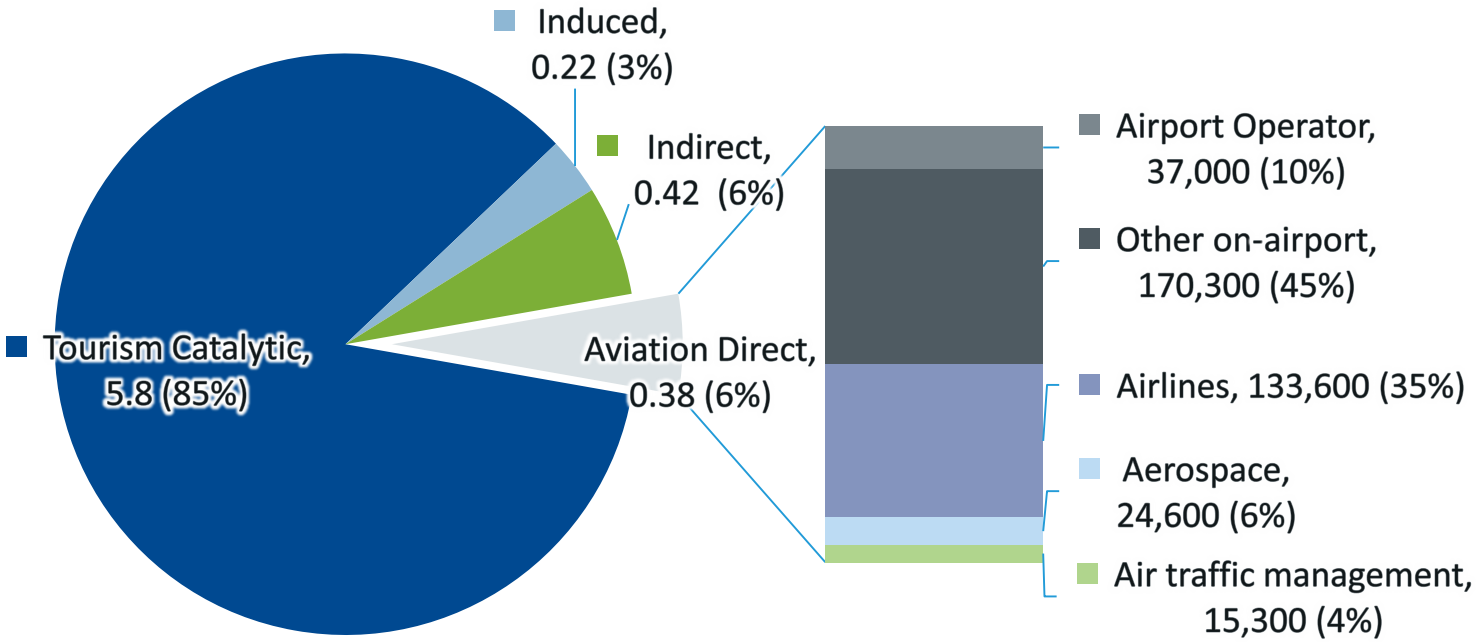
Job Supported by global aviation industry



Total 62.7 million Jobs

Source: AVIATION BENEFITS BEYOND BORDERS

Job Supported by African aviation industry



Total 6.8 million Jobs

Source: AVIATION BENEFITS BEYOND BORDERS

Economic growth and air connectivity

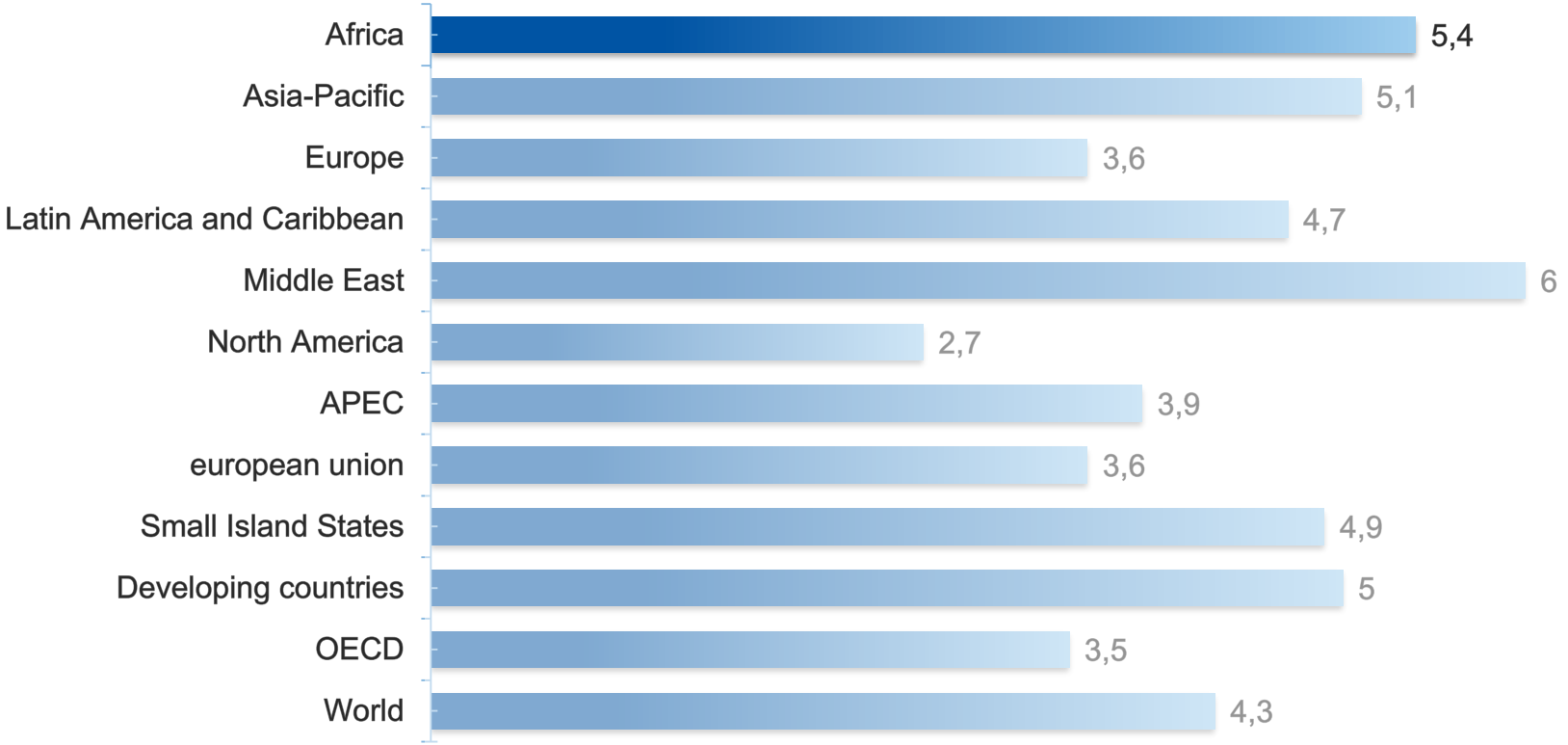
An increased air connectivity enables, for example:

- **Investment and human capital** to flow more freely across borders.
- Shorter air travel times, giving **businesses access to a wider marketplace.**
- Easier for managers and executives to oversee far flung operations, which infuses efficiency into those operations.

Source: AVIATION BENEFITS BEYOND BORDERS

Economic growth and air connectivity

Projected annual growth rate for international trafic by region 2014-2034



Source: AVIATION BENEFITS BEYOND BORDERS

Economic growth and air connectivity

- Therefore, we can see how improved air connectivity plays a large role in creating such **economic value**.
- It benefits travelers by giving them access to a **wider network** as well as **more frequent and better connected services**.
- It also can **strengthen a country's economy** over the long haul, **boosting productivity** through its positive impact on businesses.

The Importance of Air Connectivity

- Because of its perceived economic value, there is an **increased focus in policy circles** on connectivity.

- By understanding *how air connectivity is measured*, *how it has changed*, *how it relates to economic growth*, and *what drives it*,
key aviation stakeholders *(i.e. States, Airports, Airlines)* can make **strategic decisions** on how to unlock the connectivity potential of a country and enable economic growth.

- **Various instruments** are available to governments that can potentially be used to influence connectivity outcomes

Official definitions of Air Connectivity

Universal Definition

"extent to which nodes in a network are connected to each other"

ICAO Definition

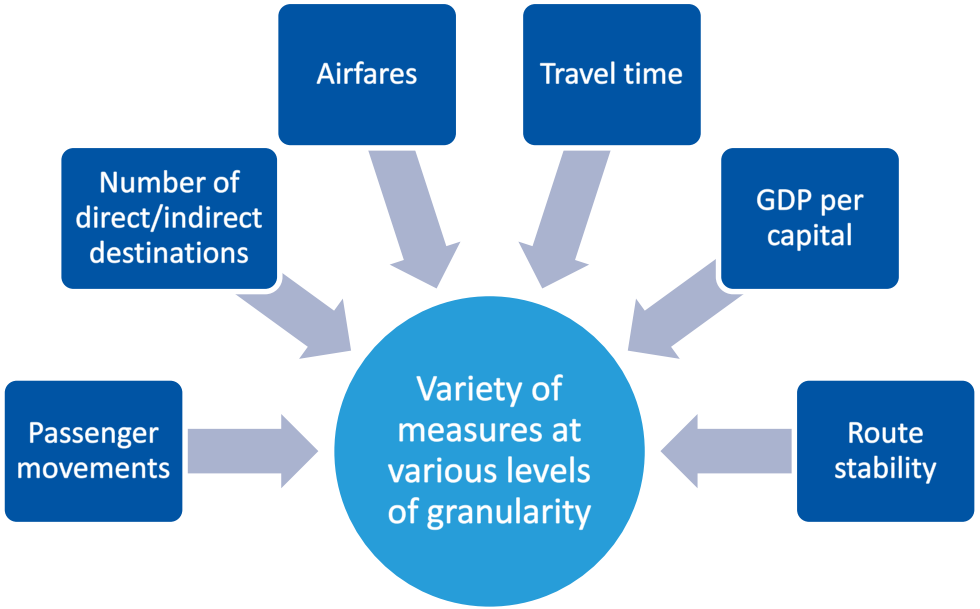
"an indicator of a network's concentration and its ability to move passengers from their origin to their destination seamlessly"

Chicago Convention

Civil Aviation may be developed in a safe and orderly manner and that international air transport services may be established on the basis of equality of opportunity and operated soundly and economically;

d) Meet the needs of the peoples of the world for safe, regular, efficient and economical air transport

How is connectivity measured?



- These can serve as **standalone proxies** or may be **combined** to create a measure capturing different features of the air transport market.
- Development of a number of **indices in aviation economics literature**
- Each measure aims to capture a **range of factors influencing connectivity**

How is connectivity measured?

- The importance of air connectivity has led to the development of a number of **indices in aviation economics literature**.

- Each measure aims to **capture a range of factors** influencing connectivity.

- Aviation stakeholders looking to understand the integration of a country (city) within the global air network can tailor their choice of air connectivity to sustain their needs by identifying the criteria most important to the country (or city) they're interested in and by developing an index which takes multiple variables into account

Two models to measure connectivity

Physical connectivity models are nothing more than counting connections

- How many times can we get from **point A to point B directly**
- How many times can we get from **point A to point C passing through point B**
- Some of the models attach weight to measure **the quality of the connection** *(for example, transfer time)*

- Fairly **simple to explain** to policy makers, they are also **useful for benchmarking** an airport against its competitors
- However, they **do not reflect passenger behavior** as they do not include important values such as price

Two models to measure connectivity

Travel cost models

- **Measures inconveniences** air transport users face when travelling from point A to point B.
- **Converts inconveniences** (in-flight time, transfer time, airport access, ticket price) in to monetary terms.
- Although these models **better reflect passenger behavior**,
  they are much **more difficult to explain** to policy-makers and to the general audience.

Air connectivity indices

Measure	Description
World Bank Air Connectivity Index	Weighs the value of a route based on the number of onward connections available reflecting benefits of hubs
IATA Connectivity Index	Captures the importance of destinations based on the size of the final destination airport
World Economic Forum Connectivity Index	Presents data on scheduled available seat kilometres per week in 2012 for a sample of 144 countries
York Aviation Business Connectivity Index	Captures economic importance of destinations, measures value of connectivity to businesses

Good air connectivity?

- Many direct destinations
- High frequencies
- Availability of direct travel options for small communities to the rest of the world
- Short transfer times
- Low prices
- Consumer protection

What else?

Aircraft departure
1 million

Passengers carried
74 million

Revenue Passenger-Kilometers
142,9 billion

Freight Tonne-Kilometers
3,3 billion

Source: ICAO

What drives air connectivity

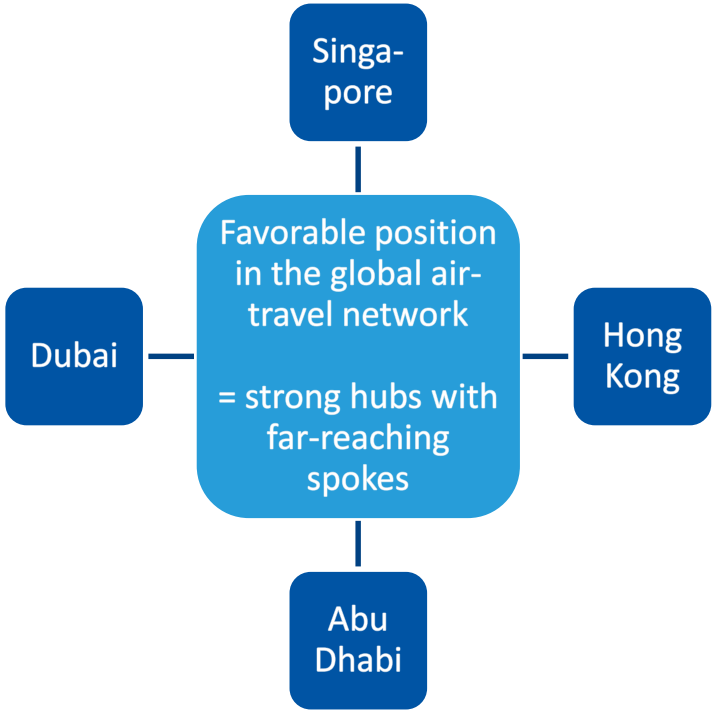
These enablers all play an important role in ensuring that a country can cement or expand its global air network to enhance

Geography

Geography

- Air connectivity is especially important to countries with **isolated air-travel markets** (such as islands and large geographical areas) where passengers have few viable alternatives to air travel.

- However, a country's geographical location can enhance its ability to develop **well-connected network**.



Geography

Geography dictates features of a country's air travel market:

- domestic market or transit point for global traffic flows?
- attractiveness of the market (tourism, business)
- population affects the size of the potential market

Airport infrastructure

Airport infrastructure

- Airports provide the **connectivity access** required for a modern economy, enabling businesses to capture overseas opportunities and facilitating the coming and going of tourists – all of which fuel economic growth.
- Transport infrastructure **facilitates growth and unlocks latent demand**
- A good transport infrastructure combined with the development of an extensive network can **decrease general travel costs** for passengers and goods – low fares, shorter time travel and seamless connections

Airport infrastructure: Africa

- Infrastructure lagging behind the rest of the world, with a few exceptions *(Abidjan, Cote d'Ivoire, Casablanca)*
- Outdated infrastructure **unable to accommodate** present day passenger traffic
- **<u>The biggest challenge in Africa is also the biggest opportunity:</u>**
  - Number of mega-cities are going to emerge in the continent
  - Emergence of a middle class leading to an increase in demand for aviation services

    big cities with a concentration of knowledge workers who will need to use their skills beyond the cities they live in

Airline models

Airline models

- Airlines' business models can directly affect air connectivity.
- Over the past decade, carriers adopted new models to survive in the face of often unfavorable market conditions.
- 2 main models: **low-cost carrier** and **network carrier**
  - **LLCs** traditionally provided a service that can create demand by offering very low fares as well as by serving destinations that were previously not served or only connected via a hub The availability of low fares has opened the market to a wider group of consumers and as enhanced connectivity by establishing services to and from secondary airports
  - **Network carriers** operate radial networks centered on their main base or hubs. Their networks provide a wide range of destinations and frequent and flexible services that meet the needs of both business and leisure travelers.

Airline models: Africa

- The skies in Africa are dominated by international carriers
  (Emirates, Air France, KLM, British Airways, etc.)
- There are very few African carriers
  (Ethiopian, Kenyan, Royal Air Maroc, South African, Egypt Air, etc.)
- There are almost no low-cost carriers
- Ticket prices are extremely high, so you don't get as many travelers as you would like, and because of that, there is very poor connectivity
- For example, if you want to travel from Abidjan, which is one of the hubs of West Africa, to a hub in East Africa, there are no direct flights, you have to fly to a second or third country before you reach your final destination

Country's economic & regulatory frameworks

Country's economic & regulatory frameworks

- **Public policy and regulation** can powerfully facilitate air connectivity – or hinder it by constraining development of a country's air transport network.
- Since the 1940s international air services have been governed by a complex web of **bilateral air service agreements (ASAs)** between States
- Such agreements determine the **number of airlines** that may compete in any given market, **the routes** that airlines may operate, **capacity** (in terms of frequency) that airlines may provide, and **airfares**.
- Recently, States have moved towards **liberalization of agreements**, for example through **open skies agreements.**

Country's economic & regulatory frameworks: Africa

- Countries that are doing well in delivering aviation think about their aviation sector as part of an overall economic strategy
- When we look at countries like Ethiopia, Kenya and Morocco, it's very clear that the aviation sector is linked to other sectors that are driving growth *(tourism, trade, exports)*
- Also, the fragmentation and disparity of Africa create a number of barriers, some policy decisions that were supposed to make it possible for exchange and flying to be easier were adopted in theory, but not implemented
- There is a need for political integration

Safety

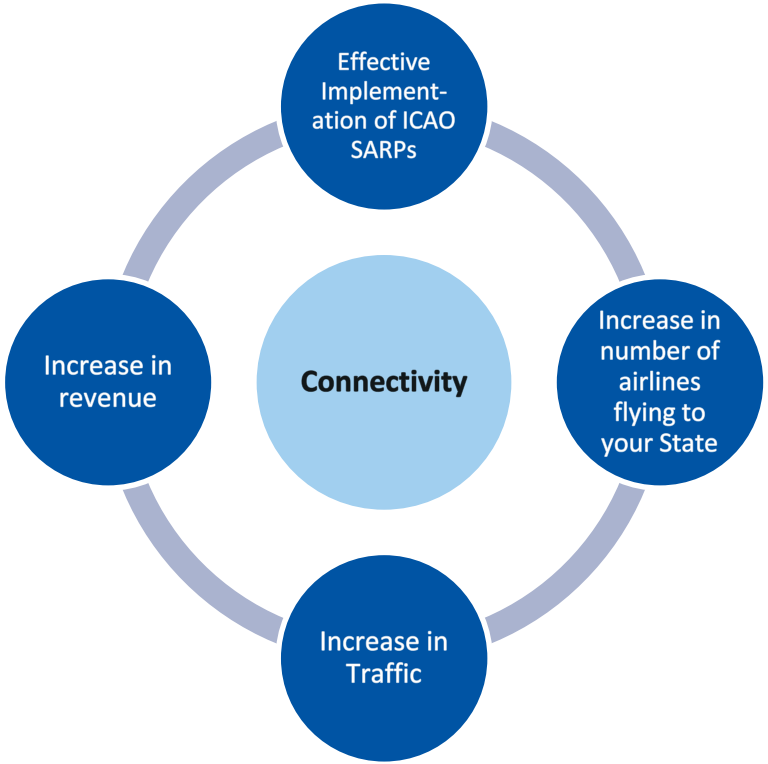
ICAO's perspective: SARPs and Connectivity

- Compliance with ICAO SARPs enables States to access the international civil aviation network and unlock the socio-economic developmental benefits of air services

Safety standards: Africa

- Poor records of safety stems largely from inconsistency in the implementation and enforcement of internationally accepted **safety standards and practices**
- **Increasing the level of safety** should be a key priority for the development of the African aviation industry
- In Africa, a lot of carriers start very well-off, but they cut corners when it comes to safety, security and quality, resulting in an incident
- They get barred from flying into Europe or the Middle East and they have to stop or discontinue some of their profitable routes
- This impact the financials and the company is forced to shut down

Safety and economic growth



How can governments potentially influence connectivity outcomes?

Size and strength of the local market

- Investments in landside accessibility
- Remove barriers to entry to allow for (low-cost) airline competition/entry

Airport and airspace capacity/efficiency

- Allow for availability of sufficient airport capacity to accommodate foreseen traffic growth through planning permissions, investments etc.
- Regulate restrictions on infrastructure use (night bans, noise quota) and type of infrastructure (runway length and facilities)
- Ensure efficiently organized airspace

How can governments potentially influence connectivity outcomes?

Airport visit costs

- Regulation of airport charges/ensure competitive constraints on airport pricing behavior
- Government related taxes (air travel taxes and charges (security fees))
- Benchmarking of visit cost
- Liberalization of certain airport markets (ground handling)
- Start-up and incentives
- Covenant with airport operator for coordinated tariff strategy in multi-airport system

How can governments potentially influence connectivity outcomes?

Airport service levels and quality

- Maybe influenced via regulatory framework on airport services levels
- Ensure capacity and efficiency of border control and customs

Market access

- Air transport liberalization with the negotiation of traffic rights under bilateral air service agreements
- Impose public service obligations to guarantee air services to peripheral regions
- Impose traffic distribution rules
- Introduce local rules in the slot allocation
- Facilitate more efficient use of scarce capacity, example by facilitating secondary trading of slots

ICAO activities supporting connectivity

- **Market access liberalization:** international agreements
- **Air carrier ownership and control:** international agreements to liberalize the current restrictions
- **Aviation safety block upgrades(ASBUs):** improved access, better utilization of available capacity, reduced fuel burn
- **Facilitation:** need smooth transit through air transport system for passengers and cargo
- **Consumer protection**: ICAO to foster regulatory convergence through core principles (including price transparency)
- **Fair competition**: ICAO to facilitate exchange of best practices
- **User charges key principles**: cost-relatedness transparency, consultation with users, non-discrimination

Taxation in line with ICAO policies

Conclusions

How to improve connectivity?

- Focusing on the development of aviation infrastructure (such as airports) – attracting new investors and ensuring that enough capacity is created to accommodate demand
- Airlines need to continue establishing and building up their networks to support the linkages a country has with the rest of the world
- Developing regulatory and economic frameworks which reflect the characteristics and needs of the country, whilst at the same time, fostering safety

iMPLEMENT

Economic Impact

- Socio-economic benefits

Current Situation

- General Assessment

Solving the Puzzle

- Deficiencies identification
- Problem prioritization
- Solution identification

Getting Help

- Needs evaluation
- Resource identification

Report

"Enhancing implementation by prioritizing improvement activities based on data."

Economic Impact

Now, it is time to start writing your report. To do so, the first step will be to:

- Determine the current **connectivity** levels of your State
- Identify **opportunities** for development

Steps & Related Apps

- ✓ Determine the revenues related to your air transport sector (Economic Development Indicators)
- ✓ Determining the current connectivity levels of your State (Air Transport Accessibility; Connections; State Traffic)
- ✓ Identify opportunities for development (Air Transport Accessibility; Connections; State Traffic)

ICAO

THANK YOU

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