A blueprint for maximizing the social and economic value of aviation

Foreword

The Caribbean is heavily reliant on tourism for its economic health. The vast majority of tourists arriving in the region travel by air. Supporting air connectivity is therefore a vote for a prosperous future.

But this is not a textbook exercise. The impact of a new air service is grounded in reality. It gives small businesses—bars, restaurants, shops, and family-run hotels—the tools to thrive. It gives individuals a job and the means to pay their bills.

And it's not just about money either. In an increasingly globalized world, air connectivity enables friends and family to hug each other; it enables ideas and understanding to be exchanged between cultures. It is a social glue.

Caribbean States should not be limiting the potential of air connectivity. Rather, they should be providing a regulatory environment, nationally and regionally, that allows airlines to unlock the true potential of the region, and of the people living in it.

This study provides clear guidelines on how to achieve such a robust platform for growth. It explains why this is desirable, backed up by figures and analysis.

Air connectivity is an enabler. It can enrich the future for a government or an individual.

The value of air connectivity in the Caribbean

Connectivity

26.0 million
Number of departing passengers from Caribbean airports in 2015

1,545 Daily
Number of commercial flights departing from Caribbean airports

101
Number of airlines operating commercial services (Dec 2016)

881
Total destinations served from Caribbean islands

721
International destinations

91
Number of airports offering commercial service

Facilitating Tourism

50%
Percentage of tourists arriving at their destination by air in 2015 (Global average: 54%)

GDP
$10.9 billion
(4% of Caribbean GDP)

Jobs
490,000
(4% of Caribbean employment)

Aviation contribution to direct tourism activity

$27 billion
Total tourist spending in the Caribbean supported by air travel

GDP
$35.9 billion
(14% of Caribbean GDP)

Jobs
1.6 million
(13% of Caribbean employment)

Aviation total economic impact in the Caribbean

$24.3 billion
Leisure spending

$2.7 billion
Business spending

$18.3 billion
Aviation contribution to visitor exports (24% of total exports)

All figures are in US$ unless otherwise stated

How air connectivity supports economic and social development

Aviation generates $2.7 trillion in gross domestic product (GDP) worldwide and supports 62.7 million jobs, equivalent to one and a half times the population of the entire Caribbean region. It enables quick and convenient travel—even to remote areas not covered by other modes of transport—and facilitates economic activity, such as tourism, trade, and investment.

In short, aviation is the business of freedom. The connectivity that air transport provides brings people and businesses together, enables global supply chains, and connects families and loved ones. The world is a better place for it.

Air travel is particularly crucial to the Caribbean, a small region geographically but comprising numerous island States, diverse in size and culture. In total, aviation supports more than $35.9 billion in GDP and over 1.6 million jobs, equivalent to 14% of the total Caribbean economy.

Air connectivity

Air connectivity is a measure of economic potential and opportunity. The better connected a country is by air, the greater its ability to unlock the economic and social benefits that air transport can deliver.

Air connectivity has many dimensions; the number of routes, the range of destinations served, the frequency of services and the number of seats available to and from a country. And it isn't just about the people on planes; benefits also accrue to those who don't set foot in an airport. In island economies, this can mean being able to buy imported medicines and other perishable goods; the ability to bring in expertise to start or expand businesses; and catering to the region's massive tourist industry.

In the Caribbean, international routes are most important, especially from the eastern United States and Europe, the key origin markets for the tourists that help power Caribbean economies.

In contrast, intra-Carribean air connectivity is much more limited. Only three markets (Cuba, Bahamas and the US

Virgin Islands, which includes routes to the rest of the United States) have significant domestic route networks. Intra-Caribbean connectivity is heavily concentrated on a relatively small number of airports. Only 19 airports have more than 10 daily departures to other points in the Caribbean.
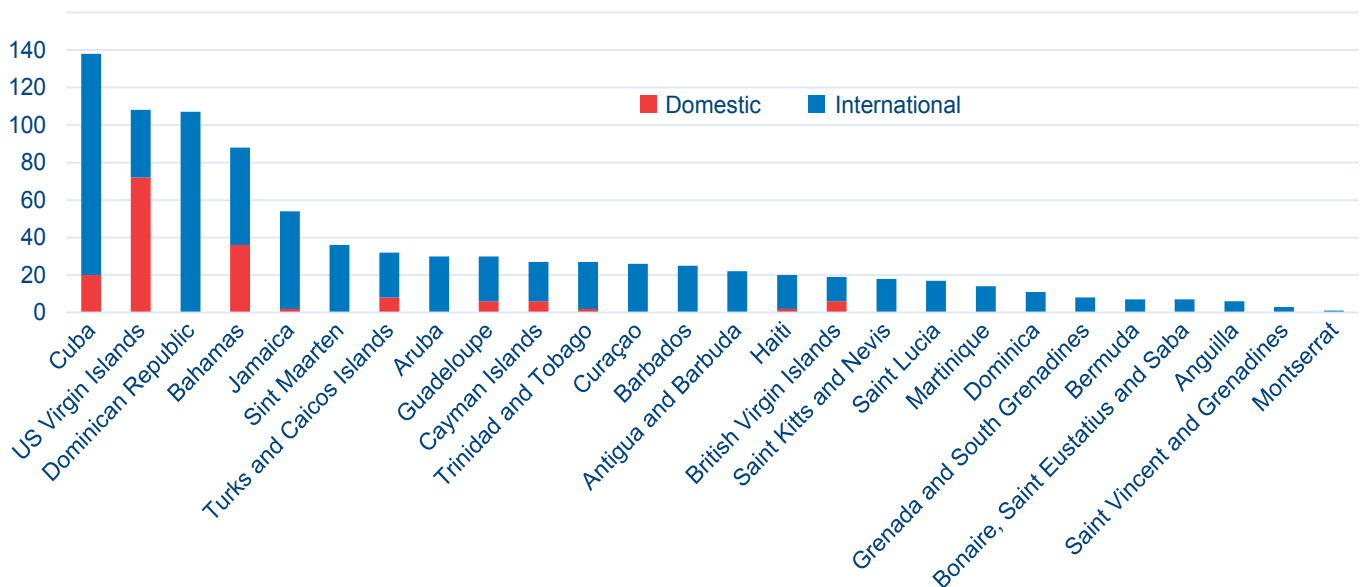
Caribbean air connectivity   Source: SRS Analyzer
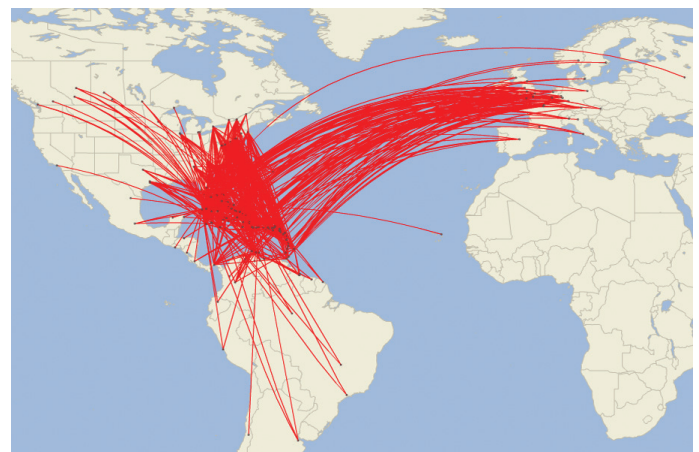
Domestic and International routes served (December 2016 schedules)   Source: SRS Analyzer

How air connectivity supports economic and social development

Facilitating tourism

Aviation is indispensable to Caribbean tourism. Half of all tourists who travel to the Caribbean arrive by air. In many markets (Cuba, Guyana, Martinique, St Lucia, Trinidad and Tobago, and the Dominican Republic) over 90% of tourists arrive by air.

For some, such as the Cayman Islands, the share of arrivals by air is much lower. This does not necessarily mean that air transport is less important. Rather, it can be explained by the importance of the cruise industry and limited direct international air connectivity. So, visitors make the bulk of their trip by air to a neighbouring island with a major airport, taking to the seas only for the final leg.

In 2014, aviation supported $27 billion in tourist spending across the region, of which $24.3 billion was leisure tourism and $2.7 billion was business tourism. This amount would be sufficient to cover public spending on healthcare and education in the region combined.

In short, without air connectivity, many national economies in the region would be devastated, many businesses would no longer be viable, and many people's livelihoods would simply disappear.

Tourist Arrivals by Air (%)

Source: UNWTO
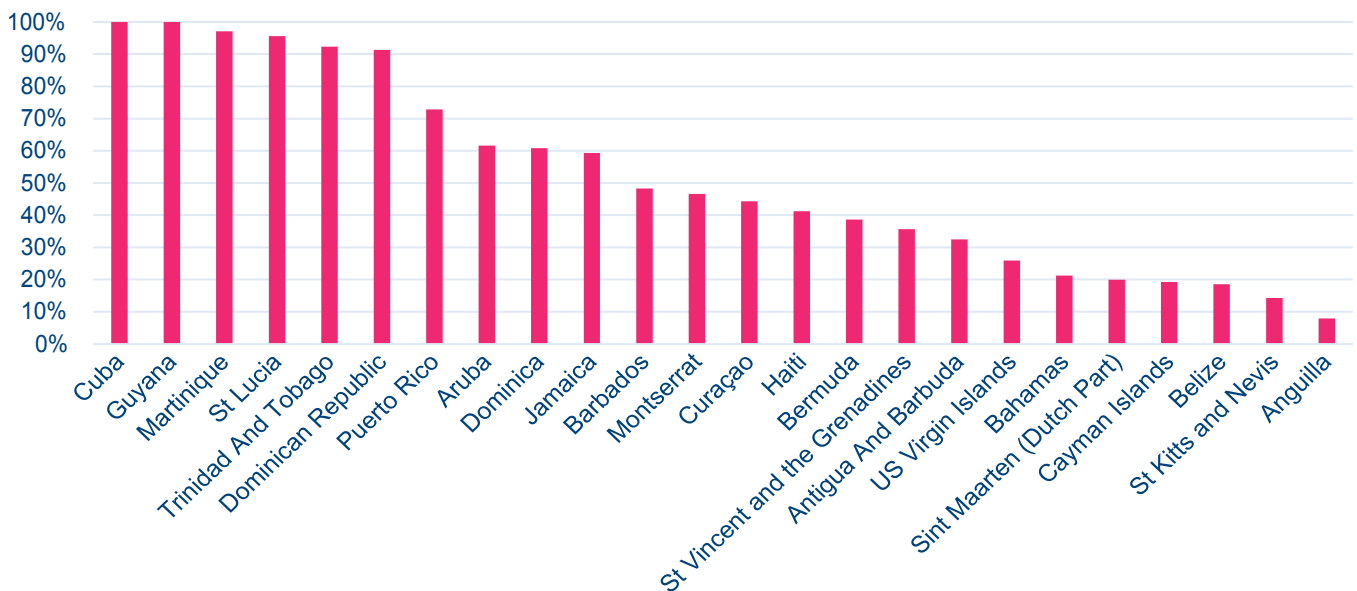
Social benefits of aviation

Aviation and the Sustainable Development Goals

Some of the ways in which aviation helps achieve the Sustainable Development Goals

1. NO POVERTY

Aviation directly creates jobs in the industry, as well as other sectors indirectly, providing 62.7 million people worldwide with their livelihoods.

2. ZERO HUNGER

Aviation supports the delivery of vital humanitarian aid to areas devastated by natural disasters and war, both through the World Food Programme and other charities. In 2014, more than 70,000 tonnes of food and commodities were delivered by air to relieve victims of floods, conflict and disease.

3. GOOD HEALTH AND WELL-BEING

Aviation assists with providing vital medical care through the use of air ambulances in remote communities and transporting time-sensitive medical supplies, such as vaccines. Aviation also plays a major role in disaster relief.

4. QUALITY EDUCATION

Aviation enables the movement of students worldwide, providing access to educational opportunities. The industry itself also champions quality education for its own employees in areas such as engineering, air traffic management and pilot training. The manufacturing sector, in particular is also working hard to promote education in science, technology, engineering and maths.

5. GENDER EQUALITY

Aviation is working to achieve gender balance in all sectors. In Europe, aviation is the most gender-balanced of all transport sectors. Work is still needed to encourage balance in technical areas such as engineering and flight crew.

7. AFFORDABLE AND CLEAN ENERGY

The aviation industry is working to develop cleaner sustainable alternative fuels, as well as deploying renewable energy at airports. By the end of 2016, it is expected that 5,500 flights will have taken place using sustainable alternative fuels.

8. DECENT WORK AND ECONOMIC GROWTH

As well as providing employment opportunities, aviation contributes $2.7 trillion to global GDP, 3.5% of the global total. In 2014, $6.4 trillion worth of cargo was transported by air.

9. INDUSTRY, INNOVATION AND INFRASTRUCTURE

Aviation is one of the most innovative industries in the world. The manufacturing sector is continually developing new technology and creates significant urban infrastructure through the building of airports, as well as navigational infrastructure. In 2014, airports invested $37 billion in construction projects, creating jobs and building new infrastructure.

10. REDUCED INEQUALITIES

The connectivity provided by air transport reduces inequality by creating trade links and providing access to goods and services for those in remote communities. The democratisation of air travel has also meant air services are available to more people than ever. Since 1970, the real cost of air travel has been reduced by over 60%.

11. SUSTAINABLE CITIES AND COMMUNITIES

Aviation-related infrastructure is a major part of urban and rural communities worldwide and contributes to the connectivity of populations through integrated transport links. More work is needed on multimodal transport development.

12. RESPONSIBLE CONSUMPTION AND PRODUCTION

Airlines and manufacturers work closely together to dispose of aircraft at their end-of-life responsibly. In recent years, the industry has also been working to develop sustainable alternative fuel feedstocks that avoid some of the issues present in previous bioenergy projects.

13. CLIMATE ACTION

All sectors of the aviation industry have agreed on a four-pillar strategy for reducing CO_2 emissions and are making excellent progress working towards three global climate goals.

15. LIFE ON LAND

Aviation is working with partners in government and conservation organisations to combat the illegal wildlife trade.

17. PARTNERSHIPS FOR THE GOALS

Partnerships between all sectors of the aviation industry enable the global air transport industry to operate: airports, airlines, air traffic management, manufacturers and suppliers. The industry also partners with the United Nations (mainly through the International Civil Aviation Organization) and governments to cooperate on climate action.

To find out more about the Sustainable Development Goals, visit: sustainabledevelopment.un.org
The SDGs listed above are those that are pertinent to aviation.

Case study: The Carribean public health agency

The Caribbean Public Health Agency (CARPHA) is the embodiment of Caribbean Cooperation in Health (CCH) and tackles health issues across 26 English, Dutch, and French-speaking nations. The 17 million people covered by CARPHA range from Bermuda in the North to Belize in Central America, and Guyana and Suriname on the South American continent.

The critical nature of the services provided by CARPHA was highlighted by the Caribbean Community (CARICOM) Heads of Government in November 2014 when they expressed considerable concern about the possible health impact of the Ebola virus and the disruption a single case would cause to the economic and social life in the Caribbean.

As the premier public health agency in the Caribbean, CARPHA's key services include providing on-the-ground technical assistance and capacity building for strengthening national health systems, and the delivery of laboratory services.

The latter relies on moving clinical samples quickly and efficiently to help identify the cause of outbreaks and monitor communicable diseases. Commercial couriers and regional airlines, such as FedEx, DHL, LIAT and Caribbean Airlines, help transfer these clinical samples (considered dangerous goods) to CARPHA's laboratory based in Port of Spain, Trinidad and Tobago.

Since its inception, the CARPHA laboratory has diagnosed the first cases of Chikungunya (2013) and Zika (2015) in its Member States, and continues to provide support while remaining prepared to respond to outbreaks or other public health emergencies.

CARPHA maintains the quality of its services using international standards. In March 2016, CARPHA engaged IATA to train 20 persons from 14 Member States and CARPHA, to become certified trainers for Infectious Substances Shipping. This assisted in the creation of a sustainable model for the maintenance of applicable standards and the availability of properly trained health professionals. Commercial couriers can be assured that the packages of dangerous goods have been prepared in accordance with all relevant regulations.

If CARPHA didn't have access to air travel, the consequences for public health would be significant. The Caribbean health sector would be unable to readily identify those communicable diseases that are in circulation, leading to mismanagement and poor outcomes for patients. This would negatively affect the delivery and scope of disease prevention and control programs.

Aviation also allows CARPHA to deliver equipment and supplies and facilitates the movement of health professionals across the Caribbean. It could cost lives, for example, if airlines were unable to assist in the rapid deployment of personnel teams in case of natural disasters and public health emergencies.

"Without air connectivity, the public health work of CARPHA's service to its Member States and people of the Caribbean would simply not be possible," said CARPHA Executive Director, Dr. C. James Hospedales. He explained that with increasing numbers of epidemics and threats to the region, an even deeper partnership is required with regional airlines and port authorities to prevent disease, and promote and protect health.

"Without air connectivity, the public health work of CARPHA's service to its Member States and people of the Caribbean would simply not be possible."

Dr. C. James Hospedales
Executive Director, Caribbean Public Health Agency

A recipe for maximizing aviation's benefits

As the previous pages have shown, the prize awaiting those Caribbean States that prioritize and nurture air connectivity is enormous. But to take full advantage they must ensure an operating environment that is specifically designed to allow airlines to fully deliver their social and economic benefits.

This environment should be founded on [1] globally accepted smarter regulation principles, including a national or regional policy framework consistent and, where appropriate, harmonized with international practices, and [2] the proactive removal of financial and operational costs that hinder aviation's efforts to deliver its full value.

What does smarter regulation mean in practice?

Smarter regulations are consistent with existing (and planned) rules and practices so that there are no overlaps or contradictions, nationally or internationally. They are used only when needed and proportionate to the problems they are designed to address. And they are targeted and clear to make compliance easy.

There are principles to follow in the implementation process too. For example, the objective of any piece of proposed regulation should be identified clearly at the outset, should be based on sound evidence, and all available alternatives should be considered. There should be an assessment of the regulation's impact, the parties subject to the regulation should be consulted during its drafting, and the whole decision-making process should be transparent and impartial.

In addition, the compliance burden should be minimized and there should be clear procedures for review, appeals, and revisions.

Global standards for a global industry

Treaties agreed under the auspices of the International Civil Aviation Organization (ICAO) are examples of smarter regulations at the international level. They represent best practice designed to provide uniformity and certainty, which are critical for airlines that operate across multiple jurisdictions.

Two examples of international treaties that deliver significant benefits to States are the Montreal Convention 1999 (MC99) and the Montreal Protocol 2014 (MP14).

Protecting passengers and encouraging trade (MC99)

MC99 governs airline liability during international carriage and sets out fairer compensation limits for death, injury or delay to passengers or loss, damage or delay to baggage and cargo.

ICAO is urging all member States to ratify MC99 but 72 have yet to do so, including seven Caribbean States. Those nations are missing out on legal certainty. The air shipment of high-value, time-sensitive items is a case in point. Signing up to MC99 would enable airlines operating in those markets to do away with outdated paper-based tracking systems and replace them with electronic air waybills (eAWB). Because this a far more efficient process, businesses and individuals would benefit from speedier shipments and greater transparency.

MC99 is a win-win for all stakeholders and those States that are not yet signatories should note ICAO Assembly Resolution A39-9 and ratify MC99 as soon as possible.

An even safer, more pleasant and respectful flying experience (MP14)

Unruly and disruptive passenger behavior on flights includes verbal abuse, the failure to follow crew instructions, and various other forms of anti-social conduct.

Although unruly passengers are rare, they do have a disproportionate impact on safety and security and can negatively affect the flight for other passengers. They can cause delays and incur significant costs for airlines.

MP14 gives governments the legal tools to ensure that if a foreign-registered aircraft lands in their territory, police and prosecutors can deal with an unruly passenger in line with national laws.

But MP14 needs 22 States signed up to come into force. So far, only eight countries worldwide have ratified MP14, including the Dominican Republic. The recent ICAO Assembly resolution urged States to ratify MP14 to provide international uniformity and a strong deterrent. The treaty would make flying even safer and more enjoyable for passengers flying from, to or within the Caribbean.

A recipe for maximizing aviation's benefits

Ensuring choice and value for consumers

When it comes to consumer protection regulation, it is easy to forget that airlines, governments, and consumers all want travel to be safe, reliable and punctual. Regulations should therefore be framed as a partnership between consumers and the airline industry and not risk harming the very consumers they aim to protect.

For example, ICAO and IATA agree that consumer protection should be consistent with MC99 and acknowledge the preeminence of safety and security. Consumer protection regimes inconsistent with MC99 create confusion and legal uncertainty for airlines and passengers. And regimes which penalize carriers for safety-related delays or cancellations risk undermining the safety culture on which aviation is founded.

Equally important is the regulatory flexibility to account for a country's individual characteristics. Extraterritorial measures—where States seek to impose their own rules on flights arriving from other countries—counter that ability and contravene Articles 1 and 11 of the Chicago Convention.

Transparency is key. It is agreed that consumers should have access to clearly communicated complaint-handling procedures; that they should be aware of the total price of the ticket, including taxes and charges, prior to purchase; and that they should know the airline operating a flight in a codeshare service.

Tackling cost competitiveness

Ticket taxes can be excessive in the Caribbean, making the region relatively less competitive compared with alternative destinations. This hurts the local tourism industry and other sectors that rely on air connectivity.

In one Caribbean State, almost 70% of the average one-way fare is made up of taxes and charges. There are 10 other Caribbean markets for which taxes and charges represent more than 30% of the ticket price.

According to SEO Economics, if taxes were removed and charges reduced across the region, lower travel costs and greater connectivity would generate $67 per passenger in consumer benefits across the Caribbean region (i.e. savings in time and money). In the Dominican Republic, it could be as high as $155.

In addition, SEO Economics estimates that the Caribbean would get an additional 4.9 million passengers by 2020, an increase of 14% compared with the baseline level of demand.

In this preferred regulatory environment, the macro-economic benefits for the region are significant, amounting to $4.9 billion. An additional 85,000 jobs would be supported with 34,000 of these jobs located in the Dominican Republic and a further 33,000 in Haiti and the French West Indies.

Infrastructure planning

The key to success will be for airports and ANSPs, governments, and airlines to jointly develop a plan for the future infrastructure requirements. The Caribbean region is large, diverse, and includes very differing asset life cycles. However, what we can expect is that by 2035, many airports and ANSPs will need significant investment to handle anticipated demand. As such, it is critical to prepare for the future. For this, it is important for airports and ANSPs to hold meaningful consultations with their corresponding governments and airlines. Specifically, IATA recommends that in consultation, each airport and ANSP develop a Master Plan. Furthermore, each item in the Master Plan should be again consulted prior to execution, in order to assure that it reflects market conditions and is achieved at optimal cost.
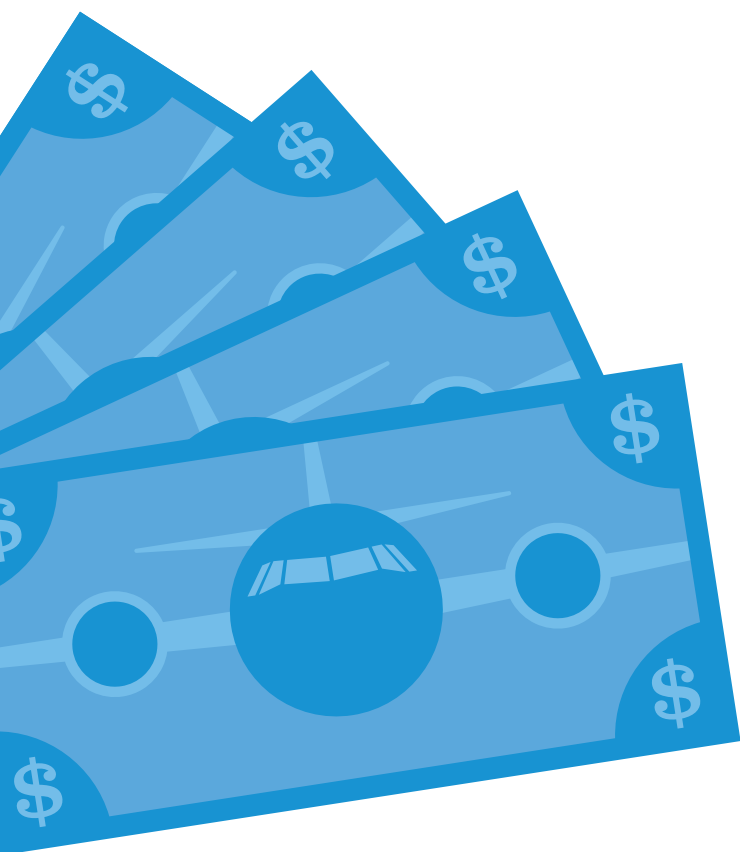
Case study: The Trinidad and Tobago carnival

Colour, music, creativity, and revelry; Trinidad and Tobago's Carnival is a stunning spectacle, an outburst of joy to rival anything in the world. With its massive masquerade bands, spectacular costumes, pulsating music, and unparalleled stamina for partying, the celebrations have been described as the greatest show on earth.

Officially celebrated annually on the Monday and Tuesday before Ash Wednesday (27-28 February, 2017), Carnival festivities usually start just after Christmas.

An estimated 500,000 individuals take part in the fun, equivalent to almost 40% of the country's population. The average length of stay by visitors during the Carnival season is 14 days and roughly 10% of total annual tourist expenditure in Trinidad and Tobago occurs during this time.

Trinidad experiences its largest influx of tourists during Carnival season, with hotel and accommodation providers reporting 95% occupancy rates in Trinidad's capital, Port of Spain. Carnival 2016, which was celebrated on 8-9 February, saw a 94.6% load factor for flights originating from North America and Western Europe while the load factor from neighbouring Caribbean islands averaged 88%.

Loaded with dozens of high energy parties and premier cultural competitions, Trinidad and Tobago's Carnival activities include Panorama, an annual music competition of steel bands; J'ouvert, a large street party that marks the official start of the two-day celebrations; Parade of the Bands, an assortment of individuals in beautiful costumes parading on the streets; music competitions, featuring Soca, Chutney and Calypso music; and such other cultural displays as Canboulay, a precursor to the Carnival.

The post-Carnival season is growing too. Tourists and Caribbean residents seek to recuperate from the hectic party season by booking months in advance to capitalize on the amazing opportunities available on the twin islands. A natural and cultural paradise, Trinidad and Tobago offers pristine beaches, thrilling nightlife, and lush rainforests inhabited by a rich variety of flora and fauna, including rare species found nowhere else in the world.

"With Carnival being Trinidad & Tobago's signature event on its annual calendar, it is crucial that we have the right mix of aviation support," says Warren Solomon, Acting CEO of the Tourism Development Company. "With anywhere between 30,000 to 40,000 international visitors joining in this celebration, it is imperative that our airline partners ensure that their services are fully operational with enough capacity to handle this influx of visitor traffic from our various source markets. If that were not the case, service providers from the accommodation, ground transportation, restaurant and entertainment sectors would be adversely affected."

Air travel demand in the Caribbean in 2035

Demand for air travel to and from the Caribbean is forecast to double over the next 20 years, with the market growing from 43 million passengers per annum in 2015 to 86 million passengers per annum by 2035.

The biggest Caribbean markets are expected to maintain their relative importance over the next 20 years, with just a few countries swapping positions within the Top 10. The Dominican Republic, Jamaica, and Cuba are expected to be the top three markets.

The current major source markets—the eastern United States and Europe—will grow over the 20-year period, but at a moderate rate as these are already mature aviation markets. The fastest growth will be from Asia-Pacific, which is currently not a major contributor to Caribbean tourism.
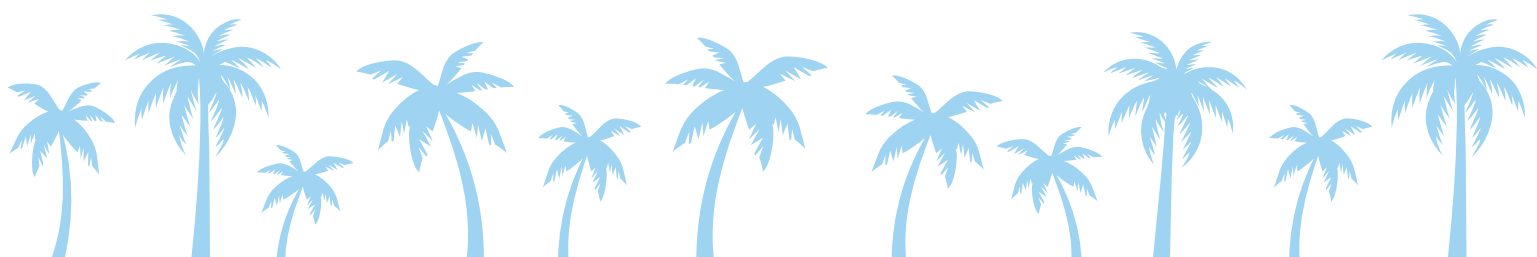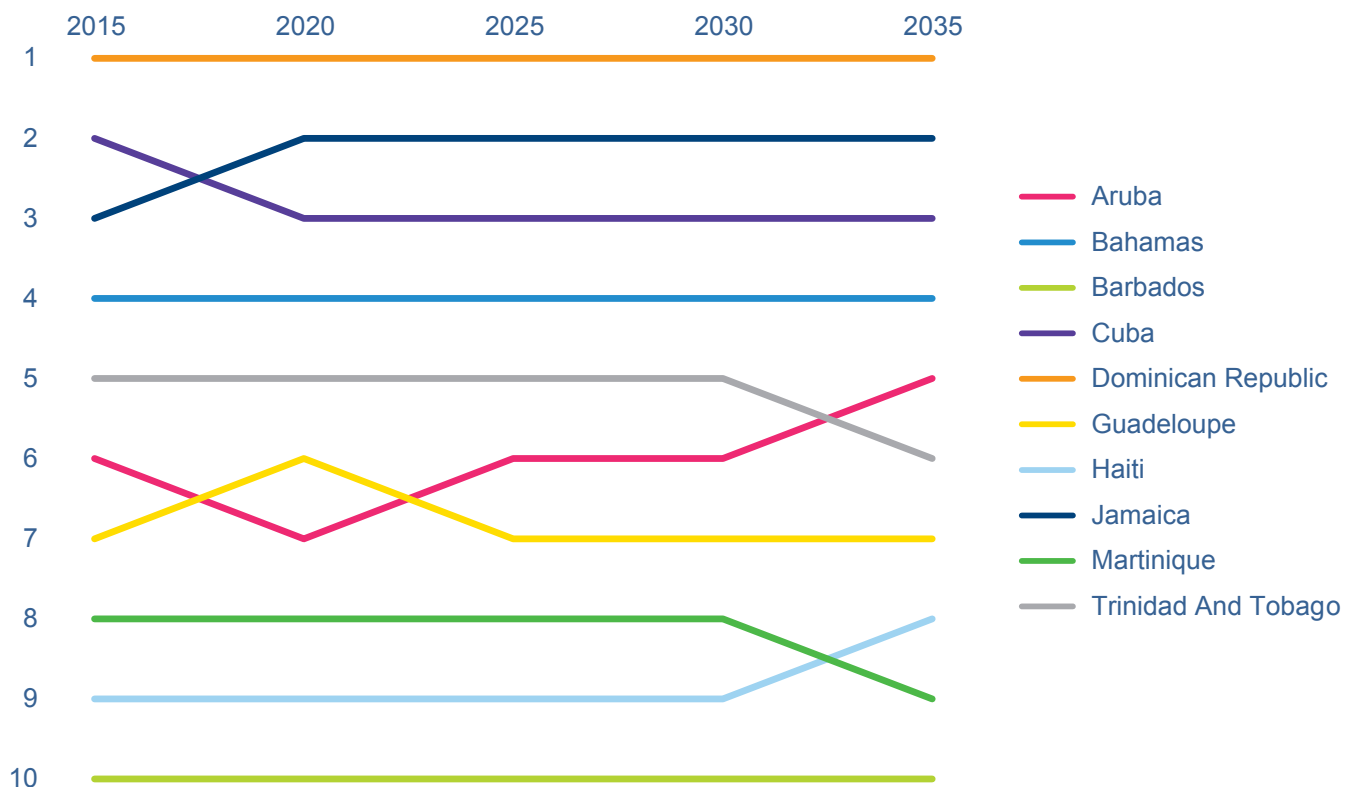
In turn, aviation's role as an economic driver in the Caribbean will grow over time, with aviation's contribution to tourism-related GDP forecast to grow to over $70 billion by 2035, with more than 3 million tourism jobs supported.

Air connectivity already generates significant economic benefits to the Caribbean region. But these figures show clearly that the potential scope of additional benefits that could be enjoyed by States, businesses, and individuals is immense.

So, it may be prudent for Caribbean governments and businesses to start thinking about the specific services and experiences that customers from new markets, like Asia-Pacific, might require so that they are ready to take full advantage of this new demand when it appears.

Top 10 origin and destination air markets in Caribbean, 2015-35

Sources: IATA / Tourism Economics 20 year passenger forecast

Legend:
- Aruba
- Bahamas
- Barbados
- Cuba
- Dominican Republic
- Guadeloupe
- Haiti
- Jamaica
- Martinique
- Trinidad And Tobago

Conclusion

That aviation brings value is obvious. Money and jobs are one side of the coin; uniting friends and families, bringing aid, and connecting remote communities are the other.

These economic and social benefits will be achieved sustainably too. Recently, 192 countries agreed to a global carbon offsetting scheme for aviation. It means airlines are heading for carbon-neutral growth. And by 2050 the industry has targeted a 50% reduction in emissions compared with 2005. So, even as air travel grows, its carbon footprint will reduce.

That means tourists flocking to enjoy the Caribbean's natural splendour and power the local economies would not be adding to the greenhouse gases that endanger that environment.

For the region to reap the enormous gains aviation brings does require change, however. Taxes on air travel need to come down, new infrastructure needs to go up. And governments need to facilitate the whole process by adhering to global best practise, global standards, and smarter regulation.

Nobody can do it alone. Collaboration is fundamental to the success of any aviation project and in a region as diverse as the Caribbean that is especially true. IATA stands ready to help.

Above all, it should be remembered that air travel is fun. People want to travel to the Caribbean, they want to enjoy the beaches, the local shops and restaurants. They want an enriching cultural experience. Most likely, joining the dancing at the Trinidad and Tobago Carnival wouldn't go amiss either!

Aviation is the business of freedom. Allowing the industry to do its job should be a priority.

Blueprint for maximizing the social and economic value of aviation

To take full advantage of the benefits that aviation brings, Caribbean States should ensure that they create a regulatory and operating environment to allow airlines to deliver maximum social and economic benefits. They can do this by:

1   **Recognizing that aviation is a sector of strategic importance that supports a broad set of economic and social development objectives and should be placed at the heart of Government policy;**

2   **Implementing a smarter regulation approach for aviation including:**

a. Regulating only where there is a clearly identified need to do so;

b. When assessing that regulation is required, ensuring that it is proportional and targeted;

c. Consulting with industry and other stakeholders to ensure that proposals are workable in practice and don't have unintended consequences;

d. Implementing policies consistent with international best practices.

Specific examples of smarter regulation initiatives in the Caribbean would be:

- Ensuring that there is a coherent national or regional policy framework in place that supports sustainable development of aviation;

- Becoming parties to key international treaties such as MC99 and MP14;

- Using ICAO high-level guidance on consumer protection to ensure the right balance between the need to protect consumers and airline sustainability;

- Developing masterplans for infrastructure development, with consultation between the Government and airlines, airports and ANSPs.

3   **Removing or reducing financial and operational costs that hinder the development of air connectivity, by ensuring that taxes and charges are applied in line with ICAO, OECD and UN guidance.**