 AIRPORTS AUTHORITY

INTERMEDIATE INFRASTRUCTURE BUSINESS CASE FOR THE REDEVELOPMENT OF THE HOWARD HAMILTON INTERNATIONAL AIRPORT

ANNEX 1. DUE DILIGENCE REPORT
ANNEX 1.1. MARKET AND TRAFFIC

THE
GOVERNMENT OF THE TURKS \& CAICOS ISLANDS

## PROVIDENCIALES INT'L AIRPORT (PLS) <br> REDEVELOPMENT PROJECT <br> TECHNICAL, FINANCIAL AND LEGAL CONSULTANT

Due Diligence Report
29th August 2022


Gide
GIDE LOYRETTE NOUEL

QUALIFICATIONS, ASSUMPTIONS AND LIMITING CONDITIONS

All the data and information included in this document are considered as illustrative and are subject to modifications, corrections and updates.
The document has been performed based partly on the information published by the Client and partly on other information gathered by the consultant team from external sources or independent analyses, at the time of the elaboration of the document.

This document contains or may contain forward-looking statements regarding the development or the economic performance of a business or a market, and including, but not limited to, projections of future traffic forecasts, financial statements, business strategies, management plans and objectives of future operations. All such statements, projections and estimates have been either provided by the Client or are based on our best estimates working from information obtained by us from the sources described in the document. No representation or warranty, expressed or implied, is or will be made and, save in the case of fraud, no responsibility or liability is or will be accepted by $A L G$ as to or in relation to the accuracy or completeness of the information forming the basis of this document or for any errors, inaccuracies or omissions resulting from inaccurate, out-of-date or incomplete information used in preparing the document.
This document has been prepared exclusively for use by the Client and interested parties with the Client's approval in relation to our analysis of the proposed areas of collaboration and should not be used for any other purpose or distributed to third parties. The document cannot be referred to or included, in part or in full, in any registered document, proposal, public offer, loan, or any other type of agreement or document without our express written consent. ALG expressly denies any responsibility to any third parties other than the addressees who may gain access to the document. ALG shall not be held liable before the Client or any other potential recipients for any damage or loss of use of the deliverables. In addition, ALG will not be responsible for any damage or loss that may arise as a result of the supply of false or incomplete information or documentation from persons outside ALG.
Finally, under no circumstances shall ALG be held responsible for any loss of profit, anticipated savings, waste of management time or image, nor for any indirect incident, relevant loss or damage that may be suffered or incurred by the Client or any other potential recipients.

## Table of Contents

MARKET AND TRAFFIC
INDICATIVE DEVELOPMENT PLAN \& INVESTMENT PROGRAM
ENVIRONMENTAL \& SOCIAL ASSESSMENT
FEES \& CHARGES
BUSINESS PLAN
LEGAL AND CONTRACTUAL FRAMEWORK
TRANSACTION STRUCTURE

## MARKET AND TRAFFIC

## Summary of the traffic forecast

- TCI is positioned as a Caribbean niche tourist destination, with a traffic mainly composed of high-yield North American inbound tourists, and has still room to increase its touristic hotel offer density, main driver for air traffic development
- PLS handled 1.2 Mpax in 2019 - ~2.2 Max could be expected in PLS considering a sustainable touristic development.
- 1.7 Mpax int'l traffic in the long term (1.4\% CAGR) (7\% Caribbean, 93\% North America \& others) $\rightarrow$ Int'l traffic development will mainly result from the organic growth of US market. PLS will be the gateway of the passengers going to the new touristic areas developed in the rest of the islands outside Providenciales
- $\sim 400$ kpax domestic traffic in the long term (5.1\% CAGR) $\rightarrow$ represents the $\sim 25 \%$ of travelers arriving to PLS as international passengers that will fly to other TCI islands where accommodation is expected to increase faster
- $\quad$ 30 kpax FBO traffic in the long term ( $1.2 \%$ CAGR) $\rightarrow$ corresponds to passengers arriving in private flights mainly from the US, represents $\sim 2 \%$ of total international travelers, assuming TCI will be able to keep the same share of high-class accommodation offering
- PLS handled 32,000 ATM in $2019 \rightarrow$ the airports is expected to handle 54,000 ATM in the long term, with a significant presence of FBO operations ( $\sim 13,000$ operations of code $B$ jets)
- PLS shows high seasonality and pronounced peaks on Saturdays. Design parameters have been projected and will serve to define the infrastructure needs in the airport in the long term:
- $\quad 2,200$ PHP suggest that the new terminal should be 20,000-25,000 sqm
- 25 ATM /h confirm the need to increase airfield capacity (currently set at 7 ATM /h). Possible solutions imply air navigation systems and infrastructure solutions (parallel taxiway)
- 21 stands ( 9 domestic $+12 \mathrm{int}^{\prime}$ ) define the need to expand the apron to handle the expected demand

Tourism inputs considered in this report have been share by TCl tourism representatives and commented during initial meetings. However, it must be kept in mind that a Tourism Development Strategy is currently under development (expected to be completed by the end of the year). Consequently, based on final Strategy fine-tunings on these results may be necessary

## CONTENT

Market \& Traffic characterization
Traffic forecast

## CHAPTER

Market \& Traffic characterization
Caribbean environment
Turks \& Caicos market
Traffic forecast

## Market \& Traffic - Regional Environment

Turks \& Caicos islands are located in the Caribbean region, more specifically in Lucayan Archipelago

## Caribbean Region - Geographical Location



[^0]Turks \& Caicos ranked 17 th in 2019 in terms of seat supply within the Caribbean region but registered high growth rates during the last decade (5.4\% CAGR)

Caribbean Region seat supply - (Mseats 2019)


- The largest Caribbean markets are the largest islands of the Greater Antilles (more than $60 \%$ of the total Caribbean air market).
- Dominican Republic. Puerto Rico and Cuba are all of them above 10 Meats.
- With 1.6 million seats, Turks \& Caicos is ranked $17^{\text {th }}$ considering seat supply volume.
- Turks \& Calicos registered the third highest INT and Total growth in the last decade (+2 pp above the regional average).
- Turks \& Caicos DOM \& IntraCaribbean CAGR is among the 6 unique countries with positive CAGR in the 2010-2019 period.

[^1]
## During the last decade, the Caribbean region has experienced a moderate supply growth ( $3.4 \%$ vs. $4.1 \%$ CAGR in LatAm). 2020 ended with a supply reduction of almost 50\% due to COVID-19 crisis

Seat supply evolution in the Caribbean Market (Mseats, 2010-2022)


- Domestic \& Intra-Caribbean markets have experienced constant seat supply reductions, as the region economy is not growing substantially and the air offering is not well structured (market is very atomized with small airlines using aircraft with low capacity). COVID-19 accelerated this trend, confirmed by the poor post-pandemic recovery ( $-34 \%$ and $-26 \%$ in 2022 respectively, compared to 2019).
- Inter-regional markets (LatAm, North America, Europe \& Others) have had a positive trend but with moderate growth rates, mainly due to the moderate economic growth of the main inbound markets (North America and Europe) and the high maturity of the market (margin to decrease air fares and further stimulate traffic is very limited). Despite being significantly impacted by COVID-19, the market partially recovered in 2022 ( $-5 \%$ for North America and -3\% for Europe in 2022 compared to 2019).

[^2]The impact of COVID in the Caribbean seat supply was actually lower than in other regions as leisure traffic was more resilient than business traffic COVID-19 effect in the world


Air transport was one of the most affected sectors due to restrictions and travel bans

Higher impact of COVID is observed in the countries that are exposed to long haul markets and/or with more bans and restrictions (Cuba vs. Puerto Rico)


[^3]
## Air transport was one of the most affected sectors, but COVID outbreak also

 affected economy, which experienced a 7\% reduction in 2020 (LatAm \& Caribb.)GDP Growth by World Region (\%, 2001-2021)


GDP Growth in Latin America \& Caribbean (\%, 2020-2024E)
———Oxford Economics (May-22) - © - IMF (May-22)


Source : Oxford Economics, IMF, ALG Analysis

- COVID-19 outbreak has had, and will continue to have, a substantial impact on the global economy; worse than in previous outbreaks
- The lack on travel confidence of passengers and a weak economy converge for the 1st time
- Real GDP growth in 2020 proved to be worse than that of the 2009 crisis
- Latin America \& The Caribbean GDP had a negative year-on-year growth in 2020 due to the pandemic, although a positive growth should be expected from 2021 onwards

For the first time since 2008, global GDP shrank in 2020, with positive rebound in 2021

USA \& European markets are recovering faster than Domestic, LatAm, Canada and IntraCaribbean segments, where airlines are facing bigger financial issues Supply evolution to/from Caribbean vs. 2019


Domestic (5\% of total 2019 supply)


Canada (9\% of total 2019 supply)


IntraCaribbean (10\% of total 2019 supply)


Europe \& others (15\% of total 2019 supply)



Air traffic demand to/from the Caribbean region is expected to maintain the trend of moderate growth (forecast in the range of 2\%-3.5\%)

Airbus Traffic Forecast: Caribbean Average Annual Growth Rates (RPKs ${ }^{[1]} ; 2019-2040$ )


## AIRBUS

11] RPK= Revenue Passenger Kilometre
Source: 2021 Airbus, ALG analysis

## CHAPTER

Market \& Traffic characterization Caribbean environment
Turks \& Caicos market
Traffic forecast

Among the Caribbean destinations, Turks \& Caicos is positioned as a "niche market" for high-yield travelers (top country in terms of accommodation rates)

Caribbean Countries Positioning Analysis


Turks \& Caicos Islands, with an economy primarily based on tourism, has an airport network which eases the connectivity between the main tourist areas

## Geographical and Socioeconomic Figures of Turks \& Caicos Islands



[^4]Providenciales airport is the gateway to the country and registered a $5.8 \%$ CAGR during the last decade (pre-COVID)

Turks \& Caicos Airports Commercial Seats Offer (Meats) Turks \& Caicos Airports Commercial ATM ('000)


Note: Supply decrease on 2012-2013 problems and restructuring process
mainly due to American Airlines financial

Grand Turk (GDT)




## A part from commercial aircraft, there is a significant volume of executive

 aviation in PLS, the airport has 3 FBO companies to handle this traffic segmentPLS FBO annual ATMs ('000)


PLS FBO monthly ATMs (\#)


- Turks \& Caicos is positioned as a "niche market". There are exclusive accommodation services in the islands that attract high-yield travelers. Part of this travelers arrive to PLS in private jets and use the FBO services in the airport. Most of these flights arrive from the US.
- FBO registered 12,800 operations in PLS in 2021 ( $\sim 39 \%$ of traffic), higher share than before COVID outbreak, given that some commercial flights were still to be resumed.
- There are 4 FBO in the airports: Blue Heron Aviation, Provo Air, Business Aviation and Cairsea. These FBO have separate terminals and offer exclusive additional services as they coordinate with local businesses.

Example of jets arrived at PLS in Sat $11^{\text {th }}$ June 2022


[^5]The country had almost 1.6 M visitors in 2019: $\sim 1.1 \mathrm{M}$ arrived in cruises and $\sim 490 \mathrm{k}$ travelling by air ( $>90 \%$ originating in North America)

Visitor Arrivals Evolution \& 2019 Monthly Seasonality
Arrivals ('000)


Arrivals (000; 2019)


Air Visitors by Country of Origin (2019)


- Turks and Caicos islands registered almost 1.6 M arrivals in 2019, of which 487k were stayover visitors travelling by air.
- Air visitors arrivals have experienced a moderate growth in the recent years (4.1\% CAGR 2011-2019). Due to the COVID19 pandemic the arrivals to the islands dropped $77 \%$.
- The arrival of air visitors is not particularly seasonal through most part of the year (average of 45,000 arrivals) with the exception of September and October that are negatively affected by the hurricanes peak season.
- $91 \%$ of the air travelers are originated in the USA and Canada, with Europe accounting for less than $5 \%$ of the visitors.

[^6]PLS has a moderate monthly seasonality (low season in Sep-Oct due to hurricanes season), and high demand peaks at the weekend

Providenciales Seasonality Analysis \& Benchmarking

Monthly and weekly seasonality (2019)

MONTHLY AND WEEKLY PROFILES ARE ALIGNED WITH COMPARABLE DESTINATIONS


Note: The different monthly traffic distribution at Bermuda is due to is different weather
conditions (much Northern geographical position compared to the other islands)


Air traffic development at TCI will be strongly correlated with the capability to accommodate the tourists, the country has $\sim 4,650$ rooms officially registered

Tourist Capacity Distribution


## Providenciales island has a hotel density comparable to other mature markets, but other islands in TCl seem to have room for a sustainable development

# Hotel Rooms per Square Kilometer at Touristic Regions 



- The benchmarking analysis reveals that at regions that start to saturate such as Ibiza or Cancun-Riviera Maya the hotel densities lie between 80 and 100 rooms per square kilometre, considerably higher than that of Turks and Caicos and that of Providenciales
- Providenciales rooms density is $\sim 60$ rooms $/ \mathrm{km}^{2}$, but in other islands rooms density is still low given that tourism accommodations are small in capacity but use large areas to provide clients with a nature-rich experience
- As the tourism sector grows, a density of up to 65 rooms $/ \mathrm{km}^{2}$ could be reached in Providenciales. Higher values would mean building large resorts as other mass touristic regions have done. Other island should keep values below 20 rooms $/ \mathrm{km}^{2}$ to maintain the "exclusivity" experience, typical of high-yield tourism

[^7]

Source: Google Earth, SEDETUR Mexico, ONE República Dominicana, JTB Jamaica, INE España, C9hotelworks, Gov. Madeira, OneCaribbean, The Workd Bank data, ALG Analysis

Providenciales area could reach $\sim 4,900$ rooms and there is room for a significant hotel offer increase in the rest of the islands (up to $\sim 3,500$ rooms)

Land Available for Development


Source: Gooogle earth, National Parks Order Maps, 2020 Tourism Report, ALG Analssis
Domestic air transport must play a key role in the development of the tourism in the archipelago, facilitating the connectivity from Providenciales to the rest of the the islands

## With a sustainable hotel developments, TCI could reach $\sim 1 \mathrm{M}$ tourists annually, implying a traffic of $\sim 2.2 \mathrm{Mpax}$ in PLS (gateway to the country)

## Traffic cap in Providenciales

(Mpax)

- It is estimated that PLS could reach ~2.2 Mpax with a sustainable development of accommodation services in the other islands
- Hotel development estimations are preliminary and must be confirmed with the tourism stakeholders
- Maximum development would bring the traffic up to 3 Mpax but it is not foreseen in TCl as high-class offering could be compromised with higher room density. Also, domestic market would need higher maturity to handle demand among the archipelago islands.
3.1


Hotel development opportunities TCI

| Providenciales development | Current | Moderate | Maximum |
| :--- | :---: | :---: | :---: |
| Area (km²) | 75 | 75 | 75 |
| Density (rooms/km²) | 55 | 60 | 65 |
| Rooms (\#) | 4,116 | 4,500 | 4,875 |
| Average stay (days) | 5.4 | 5.4 | 5.4 |
| Beds per room | 2.3 | 2.3 | 2.3 |
| Occupancy factor (\%) | $85 \%$ | $85 \%$ | $85 \%$ |
| Annual tourists (million) | 0.56 | 0.61 | 0.66 |
| Airport traffic (million) | 1.11 | 1.21 | 1.32 |
| Other islands development | Current | Moderate | Maximum |
| Area (km²) | 175 | 175 | 175 |
| Density (rooms/km²) | 3.1 | 10.0 | 20.0 |
| Rooms (\#) | 533 | 1,750 | 3,500 |
| Average stay (days) | 5.4 | 5.4 | 5.4 |
| Beds per room | 2.3 | 2.3 | 2.3 |
| Occupancy factor (\%) | $80 \%$ | $80 \%$ | $80 \%$ |
| Annual tourists (million) | 0.07 | 0.22 | 0.44 |
| Airport traffic (million) | 0.14 | 0.45 | 0.89 |

[^8]Seat supply from PLS airport to North America has already surpassed significantly 2019 volume, Caribbean and Dom also recovered

PLS airport monthly supply by segment vs. 2019

## Domestic

(9\% of total 2019 supply)


Caribbean
(13\% of total 2019 supply)


International (99\% North America) (78\% of total 2019 supply)


The soft entry restrictions for foreign arrivals boosted the popularity of TCl within the Caribbean region (supply to North America $+126 \%$ in 2022 Vs. 2019)

Supply to North America from Caribbean countries - IATA summer season 2022 Vs 2019


[^9]Providenciales is well connected to the main North American airports (East Coast and Central) and to some of its neighbour Caribbean countries

## Providenciales Route Network



Source: OAG, CAPA, ALG Analysis

## Route network in PLS is following different COVID-19 recovering profiles depending on the market and airlines network restructuring strategies

Providenciales Route Network - COVID-19 Impact ('000 seats, 2019-2021)



Source: OAG, ALG Analysis

## Local airlines (InterCaribbean and Caicos Express Airways) have maintained the control of the Domestic and the Caribbean markets

## Airlines Operating in Providenciales International Airport (PLS) (1/2)

Note: supply offer published in OAG for May-Dec 2022 is expected to be progressively updated as airlines are continuously adjusting supply to demand

Domestic market seats supply in 2022


Caribbean market seats supply in 2022


InterCaribbean Airways is a national airline offering domestic services in TCI and 7 regional routes from PLS, it operates with aircraft ranging from 11 to 50 seats

InterCaribbean route network and key facts (2022)


| Fleet 2022 |  | Aircraft size (\#) | Number of aircraft (\#) |
| :---: | :---: | :---: | :---: |
|  | BN-2A-27LN | 11 | 2 |
|  | Beech B99 | 17 | 1 |
|  | EMB-120ER | 30 | 8 |
|  | EMB-120RT | Cargo | 2 |
|  | EMB-145LR | 50 | 1 |
|  | Twin Otther | n/a | n/a |
|  | TOTAL | 24 | 14 |

## Number of airports served

|  | Airport | Code | ATM (June <br> week) |
| :---: | :--- | :---: | :---: |
| Main airports | Providenciales | PLS | 130 |
| (TOP 5) | Bridgetown | BGI | 78 |
|  | Beef Island | EIS | 72 |
|  | Grand Turk | GDT | 56 |
|  | South Caicos | XSC | 40 |
|  | Based at Providenciales International |  |  |
|  | Airport, InterCaribbean Airways is a |  |  |
| Strategy and | regional airline that provides connectivity |  |  |
| in the Caribbean region. Operating a |  |  |  |
| other facts/ | fleet of 14 regional aircraft, the carrier |  |  |
| findings | mainly operates on domestic routes of |  |  |
|  | Turks and Caicos |  |  |

[^10]
## Caicos Express is a national airline offering domestic services in TCl and 2 regional routes from PLS, operates with 19 seaters

Caicos Express route network and key facts (2022)


Seat offer ('000 seats) Offer share (June week)


| Fleet 2022 |  | Aircraft size (\#) | Number of aircraft (\#) |
| :---: | :---: | :---: | :---: |
|  | Beech 1900C-1 | 19 | 2 |
|  | Cessna Light | 8 | 3 |
| Number of airports served | $\begin{aligned} & 3 \mathrm{TCI} \\ & 2 \text { Other countries } \end{aligned}$ |  |  |


|  | Airport | Code | ATM (June <br> week) |
| :---: | :--- | :---: | :---: |
| Main airports | Providenciales | PLS | 82 |
| (TOP 5) | Grand Turk | GDT | 78 |
|  | Cap-Haitien | CAP | 14 |
|  | South Caicos | XSC | 14 |
|  | Santiago Cibao | STI | 10 |

Caicos Express Airways started operation from Providenciales International Airport in 2011. The carrier offers seasonal and charter flights, operating a fleet of 2 small regional aircraft, Beech 1900C-1. In 2022 the carrier operated scheduled services on mainly 4 routes. From July 2022 onwards, Caicos Express Airways does not fully publish data on OAG, despite having scheduled flights on the company's official website

[^11]Int'I market is dominated by US traditional carriers, with increasing presence of LCCs jetBlue and Southwest

Airlines Operating in Providenciales International Airport (PLS) (2/2)
Note: supply offer published in OAG for May-Dec 2022 is expected to be progressively updated as airlines are continuously adjusting supply to demand


Source: OAG, ALG Analysis
International market reduced significantly the supply during 2020, but 2021 show a very impressive recovery due to the supply increase of American carriers in some routes

Most of Dom \& Caribbean routes of Intercaribbean remained opened in 2020, whereas Caicos Express and American carriers have reactivated 2nd half of 2020

Providenciales Route Network - Reopening Dates


## Providenciales airport is already connected to most of the destinations in North America typically operated from the Caribbean islands

Caribbean - North America Connectivity Benchmarking


Therefore, future development in the North American market will be concentrated in the organic growth of the current destinations with limited new opportunities (Orlando, Texas, Washington)

Caribbean countries are mostly connected with neighbour peers (Intra-regional), only Panama offers connectivity with LatAm, EU connectivity limited to UK

Caribbean - Latin America, Europe and Internal Connectivity Benchmarking


Only Panama and London, but in the long term, are the new destinations likely to be developed from/to PLS

European connectivity from the Caribbean is mostly concentrated on flights from England, France and the Netherlands to their former colonial territories

## British Airways Connectivity to the Caribbean



Source: OAG

| Origin | Destination | Direct? | Weekly freq. |
| :---: | :---: | :---: | :---: |
| Point-a-Pitre | Paris | Yes | 39 |
| Fort de France | Paris | Yes | 34 |
| Barbados | London | Yes | 19 |
|  | Manchester | Yes | 4-5 |
|  | Birmingham | Yes | 1-2 |
|  | Frankfurt | Yes | 2-3 |
| Curaçao | Amsterdam | Yes | 17 |
| Hewanorra | London | Yes | 12 |
| Antigua | London | Yes | 10 |
| Bonaire | Amsterdam | Yes | 8 |
| Bermuda | London | Yes | 6 |
| St Marteen | Paris | Yes | 6 |
|  | Amsterdam | No - via Curaçao | 2 |
| Nassau | London | Yes | 4 |
| Aruba | Amsterdam | Yes | 2 |
|  | Amsterdam | No - via Bonaire | 7 |
| Trinidad and 23 London |  | No - via Hew. \& Antigua | 8-9 |
| Tobago | Frankfurt | No - via Barbados | 1 |
| Grenada | London | No - via Hewanorra | 4 |
| Cayman Islands | London | No - via Nassau | 4 |
| St. Kitts Nevis | London | No - via Antigua | 2 |
| Turks \& Caicos | London | No - via Antigua | 2 |

Turks \& Caicos opportunity in the European market is limited to strengthen its link with London, increasing the weekly frequencies via Antigua and eventually (long term) launching a direct link

TCl may need to fine tune the strategy to distribute tourists along the islands, with a consensus between tourism/land transport/air transport stakeholders

Turks and Caicos Airport Network Characterization

[^12]Primary AirportSecondary AirportPrivate Airport
$\qquad$ North-Middle Caicos road $\qquad$ Commercial air routes


[^13]
## Market highlights

- Turks \& Caicos is positioned as a Caribbean niche tourist destination, with a traffic mainly composed of high-yield North American inbound tourists (highest accommodation rate in the Caribbean region).
- Turks \& Caicos has a network of 7 airports: Providenciales as the int'l gateway, 4 secondary aerodromes and 2 others privately owned. PLS concentrates $90 \%$ of total seat supply.
- Preliminary, traffic growth rates expected are 2-3.5\% based on historical trend in the Caribbean and Airbus GMF forecast.
- Seat supply from PLS airport has already recovered from COVID impact and shows higher volumes than in 2019. Since COVID outbreak, the soft entry restrictions for foreign arrivals have boosted the popularity of TCl within the Caribbean region, gaining market share compared to other destinations (e.g. Cuba, Bahamas, Barbados). However, traffic is still below 2019 volumes due to lower load factors.
- Also, there is a significant presence of FBO in PLS. FBO segment represented historically a $\sim 2 \%$ of traffic in PLS before COVID outbreak. During the pandemic, private aviation actually increased and represented $\sim 5 \%$ of traffic in 2021 (13,000 operations), given that commercial flights were cut. It should be expected that FBO decrease as commercial flights resume.
- In the medium and long term, air traffic development at TCI will be strongly correlated with the archipelago's land availability to develop new touristic high-class offer. Initial estimates suggest $\sim 2.2$ Mpax could be expected in PLS in the long term, equivalent to $\sim 1 \mathrm{M}$ tourists, ensuring a sustainable development of accommodation offer in the islands.
- Providenciales' has already a remarkable density of hotels: $55 \mathrm{rooms} / \mathrm{km}^{2}$, comparable to other mature references. There are on-going hotels planned suggesting a density of $6000 \mathrm{~ms} / \mathrm{km}^{2}$ will be reached in the short term and higher development may increase the ratio up to up to 65 rooms $/ \mathrm{km}^{2}$, summing $\sim 4,900$ rooms*.
- Other islands in Turks and Caicos have more land availability to develop new accommodation offer, up to a density of 20 rooms $/ \mathrm{km}^{2}$ to ensure high-class offering ( $\sim 3,500$ rooms)*. Domestic market could accelerate benefiting from new touristic developments outside Providenciales.

[^14]
## CHAPTER

Market \& Traffic characterization

## Traffic forecast

## Annual traffic and ATM

Design parameters

## Different data sources provided have been used as the basis for the traffic forecast

| Source | Source type | Database name |  | Available data | Available period |
| :--- | :--- | :--- | :--- | :--- | :--- |

TCIAA has provided historical traffic data which is taken as the initial point for the traffic forecast

PLS traffic (Mpax)


PLS ATMs ('000)


PLS traffic splits used (Mpax)


- TCIAA provided 6 years of historical data for domestic and international traffic (2016-2021) with the split Domestic vs. International.
- The split between Caribbean vs. International Non-Caribbean traffic is only available from Apr-19 to Mar-22 (different database).
- FBO data only available for 2018-2021.


## Main opportunities identified for passengers traffic development in Turks \& Caicos archipelago

## Domestic market

- Domestic supply suffered few cuts due to COVID outbreak, as Intercaribbean Airways covered the supply cuts of Caicos Express. Domestic market offering in 2022 is almost the same as in 2019. However, lower recovery rates are expected in terms of traffic.
- As derived from the hotel infrastructure analysis, domestic traffic may have additional growth as it will be key to enhance mobility of tourists around the archipelago. Hotel growth in Providenciales island could reach some limitations in the mid-term, but there is land availability for further touristic development in the other islands.


## International market

- International market, dominated by American carriers suffered -50\% supply cuts in 2020 vs 2019. However, the market is recovering fast thanks to the soft country restrictions for foreign arrivals. In fact, some American carriers opened routes and increased supply (vs 2019). Supply in summer season 2022 surpasses 2019 levels by ~20\%.
- Development of new routes post-COVID 19 to North America is limited to a few airports and most of the traffic increase is expected to be generated by the organic growth of the main current destinations.
- European market seems limited to the UK market with the organic growth of the London route via Antigua. The penetration of the Latin American market is reduced. The high accommodation rates at TCl difficult the arrival of tourists from this region.


## Caribbean market

- Caribbean market is led by InterCaribbean. The market is limited to few routes to the neighbor countries that would keep growing organically after COVID-19 (purchase power at those countries does not envisage the arrival of additional tourists).
- The Caribbean segment reduced capacity by -20\% in 2020 vs 2019 due to COVID-19, but supply is mostly recovered in summer season 2022 ( $\sim 100 \%$ of 2019 seat supply volumes). However, lower recovery rates are expected in terms of traffic.


## FBO market

- FBO traffic actually increased during COVID outbreak ( $\sim 13,000$ operations in 2021 vs. an average of $\sim 7,000$ in the previous years). It should be expected that FBO decreases in the short term (as commercial flights resume). Afterwards, this segment is expected to increase organically, always assuming that TCl will be able to offer a high-class touristic offering.


## The traffic forecast is done in three steps: a bottom-up model for the short term, an econometric model for the medium term and a market cap

## Methodology



## Short term

 Bottom-up (schedules)A bottom-up model is done for 2022 and 2023 based on seat supply schedules.
Traffic monthly data is available until Mar22.

Published supply for commercial flights (OAG database) is available until Dec-22, considered reliable until Oct-22.
The bottom-up model is done at a market level on a monthly basis and assumes a progressive recovery of load factors after COVID outbreak.


## Medium \& long term

## Top-down (econometric)

An econometric model is used to capture the growth rates of the different traffic segments in the medium and long term.
For each segment a variable is selected and a correlation analysis is used with statistical tools to validate the results.
The model requires the projection of selected descriptive variables, so robust projections are needed. Source used for variable projections is Oxford Economics (Jun 16, 2022 series).

Market cap

## Accommodation capabilities

The traffic at PLS needs to have a market cap based on accommodation capabilities in the islands.
Based on the market analysis, Turks and Caicos could reach 1 M tourists annually, implying a traffic of $\sim 2$ Mpax in PLS (gateway to the country).

Domestic market could accelerate benefiting from new touristic developments outside Providenciales.

## A bottom-up model has been prepared for 2022 and 2023 based on supply schedules to outline the recovery of air traffic

Bottom-up Methodology

## TC|AA



International traffic already recovered 2019 levels in Q3 2021; with positive growth in 2022 compared to 2019

International Traffic Short-Term Recovery (Monthly Passengers, 2019-2023)


IntI No Caribbean traffic short-term results


[^15]The North American market (mostly served by American carriers) shows high recovery rates, the network is more extensive (less connections in US hubs)

International (Monthly ATM in OAG, 2019-2022)

- Miami International Apt
- Toronto Lester B Pearson Int|
- Charlotte

■ Fort Lauderdale/Hollywood IntI Apt
$\square$ New York J F Kennedy International Apt ■ Newark Liberty International Apt $■$ Atlanta Hartsfield-jackson IntI Apt ■ Others


- US carriers (American Airlines, Delta, United, Jet Blue, etc.) fly most of the int'l routes from PLS. Most of these airlines seem to have already recovered the same operation levels as they had in 2019 (per OAG schedules)
- Typically O\&D routes are showing between 200\%-300\% increases with respect to 2019's operations, like Washington (United Airlines), Dallas (American Airlines) and Chicago O'hare (United Airlines taking share from American); airlines added frequencies in 2021 and 2022
- Routes to US hubs like Miami and Fort Lauderdale are still not recovered, probably due to more O\&D traffic vs. connecting traffic in US hubs.

[^16]Caribbean traffic is not expected to reach 2019 levels in 2023; traffic will still be $\sim 90 \%$ of 2019 volume

Caribbean Traffic Short-Term Recovery (Monthly Passengers, 2019-2023)


Caribbean traffic short-term results


[^17]
## Intercaribbean and Caicos Express compete in most of Caribbean routes;

 frequencies still have to recover to 2019 levels, but Seats/ATM increased in '22Caribbean (Monthly ATM in OAG, 2019-2022)


- Flights to Caribbean destinations are operated mainly by Intercaribbean Airways, followed by Caicos Express which whom it competes in most of these routes. The principal routes are to Cap Haitien, Nassau, Santiago, Santa Domingo and Norman Manley
- Intercaribbean is the major player in these top 5 routes (Caicos is only close in Cap Haitian) and it maintains a constant offer throughout the months (almost no seasonality) with the exception of Cap Haitien
- Aircraft size has significantly increased by $17 \%$ in 2022, as InterCaribbean was using the Twin Otter (19 seats) and is currently using the EMB 120 (30 seats).

[^18]Traffic forecast - Short term bottom-up
Domestic traffic is at $\sim 75 \%$ recovery compared to 2019 levels, probably due to tourists staying in Provo given higher room availability and shorter stays

Domestic Traffic Short-Term Recovery (Monthly Passengers, 2019-2023)
Pax


International traffic short-term results


Routes to South Caicos (Intercaribbean) and Grand Turk (Intercaribbean \& Caicos Express) have low seasonality and are recovering 2019 frequencies

Domestic ATM (Monthly ATM in OAG, 2019-2022)


- The domestic market is served by Intercaribbean (flying to Grand Turk \& South Caicos) and Caicos Express (flying only to Grand Turk). As per OAG schedules, monthly frequencies are still below 2019 levels
- Intercaribbean shows almost no seasonality in their operations, while Caicos Express seems to provide more capacity during the winter months. Both of them operate a similar number of flights to Grand Turk
- Aircraft size has increased, as InterCaribbean was using the Twin Otter (19 seats) and has introduced the EMB 120 (30 seats) in the domestic market.

[^19]FBO traffic significantly surpassed 2019 levels in Q4 2021; this traffic is expected to decrease by $\sim 20 \%$ in ' 22 and by $\sim 10 \%$ in ' 23 (with respect to ' 21 )

FBO Traffic Short-Term Recovery (Monthly Passengers, 2019-2023)


International traffic short-term results


## International traffic (North America): a correlation of historical seats from PLS to North America is used to extract the expected growth rate of the market

Econometric model (1/4)
Traffic (MPax)


Caribbean traffic: a correlation of historical seat supply in all the Caribbean market is used to extract the expected growth rate of the market

Econometric model (2/4)
Traffic (MPax)


## Selected driver

Caribbean Blended GDP


Regression formula
Caribbean seat supply vs. blended GDP


## Additional adjustments

Elasticity reduction in the long term
A blended GDP is used for the analysis (Caribbean countries).
The Caribbean can be considered a mature market as the regression formula shows elasticities of 1.4 decreasing to 1.2 in the long term.
Thus, no further adjustments are considered necessary.


## Traffic segmentation

by market
Source: TCIAA, Oxford Economics, ALG analysis

Domestic traffic: the ratio of international passengers using domestic flights is projected to double based on tourism diversification expectations in TCl

Econometric model (3/4)

by market

FBO traffic: the ratio of international passengers using private flights (FBO) is projected to decrease to pre-pandemic levels (2\%) and be kept flat

## Econometric model (4/4)

Traffic (MPax)

| 1.13 | FBO |
| :---: | :---: |
| 0.12 |  |
| 0.11 | Caribbean |
| 0.87 |  |
| International |  |

## Selected driver

## Ratio FBO vs. int'l

> Share of FBO pax
> Vs. INT'L pax

Projected ratio
Ratio FBO vs. int'|


## Additional adjustments

Increase of share

FBO passengers correspond to inbound int'I tourists that arrive to TCI in private flights. In 2018-2019 period $\sim 2 \%$ of int'l passengers used private flights. During COVID, this percentage doubled and reached almost $5 \%$ given that there were no commercial flights.
Share of FBO. vs Int traffic is expected to decrease to historical values $\sim 2 \%$ in the long term, given that TCl is expected to maintain the same share of high-class offer in their touristic offer.

Resulting growth rate
PLS FBO traffic


## Traffic segmentation

by market

## The econometric forecast needs to be limited in the long term given hotel capabilities in Providenciales and in the other islands

## Hotel development in TCI and Traffic cap in Providenciales

| Providenciales hotel development | Current | Moderate | Maximum |
| :---: | :---: | :---: | :---: |
| Area (km²) | 75 | 75 | 75 |
| Density (rooms/km²) | 55 | 60 | 65 |
| Rooms (\#) | 4,116 | 4,500 | 4,875 |
| Average stay (days) | 5.4 | 5.4 | 5.4 |
| Beds per room | 2.3 | 2.3 | 2.3 |
| Occupancy factor (\%) | 85\% | 85\% | 85\% |
| Annual tourists (million) | 0.56 | 0.61 | 0.66 |
| Airport traffic (million) | 1.11 | 1.21 | 1.32 |
| Other islands development | Current | Moderate | Maximum |
| Area (km²) | 175 | 175 | 175 |
| Density (rooms/km²) | 3.1 | 10.0 | 20.0 |
| Rooms (\#) | 533 | 1,750 | 3,500 |
| Average stay (days) | 5.4 | 5.4 | 5.4 |
| Beds per room | 2.3 | 2.3 | 2.3 |
| Occupancy factor (\%) | 80\% | 80\% | 80\% |
| Annual tourists (million) | 0.07 | 0.22 | 0.44 |
| Airport traffic (million) | 0.14 | 0.45 | 0.89 |
| MAX PLS int'l (Mpax) | 1.25 | 1.77 (1.32+0.45) |  |
| MAX PLS domestic (Mpax) | 0.14 | 0.45 |  |

## Hotel development assumptions

- It is assumed that Providenciales can reach 4,875 rooms based on the maximum hotel development in the area, with 65 rooms $/ \mathrm{km}^{2} \rightarrow$ These rooms can host 660,000 tourists annually.
- For the other islands, a more conservative approach is taken and it is considered that the other islands can develop up to 1,750 rooms, implying a density of $10 \mathrm{rooms} / \mathrm{km}^{2} \rightarrow$ These rooms can host 220,000 tourists annually.


## Traffic development in PLS

- It is assumed that PLS will continue to be the main international gateway to the country, so all tourists will arrive by international flights $\rightarrow$ International traffic could reach 1.77 Mpax. This figure is the sum of tourists in PLS multiplied by 2 (airport traffic).
- The tourists that are actually traveling to other islands will be domestic passengers in PLS. $\rightarrow$ Domestic traffic could reach 0.45 Mpax (25\% of int'l). Not all this traffic segment should be captured by air transport, as tourism stakeholders may develop other options to move around the islands (by land or sea).

[^20]PLS passenger traffic: 1.8\% CAGR for the concession period ('23-'53), reaching the market cap of 2.2 Mpax in the long term

PLS Traffic forecast (Mpax)

|  | CAGR | CAGR | CAGR | CAGR |
| :--- | :---: | :---: | :---: | :---: |
|  | CAGR |  |  |  |
|  | '19-'23 | '23-'30 | '30-'40 | '40-'53 | '23-'53

Market cap

Historical \& Bottom-up


[^21][^22]Pax/ATM ratios have been projected based on the expected fleets in each market in PLS

Domestic Pax/ATM ratio projections

International Pax/ATM ratio projections


Caribbean Pax/ATM ratio projections


PLS ATM: 1.5\% CAGR for the concession period ('23-'53), reaching ~54,000 operations in the long term

PLS ATM forecast ('000)

|  | CAGR | CAGR | CAGR | CAGR | CAGR |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | '19-'23 | '23-'30 | '30-'40 | '40-'53 | '23-'53 |
| Dom | $-5.8 \%$ | $8.3 \%$ | $1.4 \%$ | $0.2 \%$ | $2.4 \%$ |
| Caribbean | $-3.8 \%$ | $3.1 \%$ | $0.1 \%$ | $0.0 \%$ | $0.7 \%$ |
| International | $-9.1 \%$ | $3.3 \%$ | $0.3 \%$ | $0.2 \%$ | $1.0 \%$ |
| FBO | $3.2 \%$ | $1.6 \%$ | $1.0 \%$ | $0.9 \%$ | $1.1 \%$ |
| Total | $\mathbf{- 1 . 9 \%}$ | $\mathbf{4 . 7 \%}$ | $\mathbf{0 . 9 \%}$ | $\mathbf{0 . 3 \%}$ | $\mathbf{1 . 5 \%}$ |



[^23]
## CHAPTER

Market \& Traffic characterization

## Traffic forecast

## Annual traffic and ATM

Design parameters

## Design parameters are the key parameters when sizing airports' infrastructure: Peak Hour Pax (PHP), peak hour ATM (ATM/h) and stand demand <br> Design parameters

Annual Traffic
(Pax \& ATM)

[^24]
## The forecasted ATMs/h maintains the current profile of the airport with a peak behaviour above the international benchmark ( 26 ATM/h)

## ATMs/h - Design day 2022 and forecast



- The analysis is based on the information provided by TCIAA and FBO flights have been added based on Flighradar24 data
- The design day is the day with the largest ATMs demand, as the level of service cannot be reduced - the infrastructure needs to provide the exact ATM/h and stands capacity that is demanded
- In PLS, Saturdays are the day of the week with more demand, and the peak hours are concentrated in the mid-day. In 2022, the day with the largest number of ATMs/h was the $\mathbf{8}^{\text {th }}$ January

- The forecast of ATMs/s is based on benchmark trends
- Total and INT ATMs/h are above benchmark due to the peaky profile of ATMs along the day
- ATMs/h are forecasted assuming that the operational strategy will be maintained, with ATMs concentrated in the peak hour
- From 19 ATMs/h in the initial point to 26 ATMs/h in the long term (including FBOs)


## The projection of stand demand shows a substantial increase in DOM stands

 (9 DOM +12 INT) given the annual traffic increases expected in this segment
## Stands demand - Design day 2022 and forecast




Source: TCIAA VDR, ALG analysis

- The analysis is based on the information provided by TCIAA
- The design day is the day with the largest number of ATM $/ \mathrm{h}$, as considered in the ATMs/h analysis
- DOM and INT peaks are independent considering that stands are not shared
- In the design day, the max INT stands demand was 11 (Code C) and the max DOM stands demand was 4 (Code B)


## The forecast of PHPs maintains the current profile of the airport with a peak behaviour above the international benchmark

## PHPs - Initial point and forecast




- All hours of 2022 are ordered to determine the $30^{\text {th }}$ busiest hour of PHPs of the year (using OAG schedules data)
- The 30th busiest hour is selected as initial point for each segment (Domestic, International, Arrivals, Departures)
- A load factor is considered for the analysis: 70\% for DOM pax and $80 \%$ for INT pax
- The forecast of PHPs is based on annual Mpax benchmarks
- The PHPs are forecasted assuming that the operational strategy will be maintained in PLS, with pax concentrated in the peak hours
- From 1,837 total PHPs to 2,168 total PHPs in the long term

With the updated traffic forecast it is expected to reach 2,168 PHPs, 26 ATMs/h and 21 Stands by 2055

Key design drivers
$\left.\begin{array}{c}\text { Annual traffic } \\ \text { (Mpax \& '000 } \\ \text { ATMs) }\end{array}\right)$

[^25]
[^0]:    Source: ALG analysis

[^1]:    Source: OAG, ALG analysis

[^2]:    Source: OAG, ALG analysis

[^3]:    Source: OAG, ALG analysis

[^4]:    Source: Statistics Department of the Government of the Turks and Caicos Islands, World Bank, CIA, ALG analysis

[^5]:    Source: TCIAA, Flightradar24, Jetphotos

[^6]:    Source: Turks \& Caicos Islands Tourist Board

[^7]:    Note: The area considers the total area of the island except protected areas

[^8]:    Source: Survey of Departing Visitors TCI, ALG Analysis

[^9]:    Source: ALG analysis

[^10]:    Source: OAG \& ALG Analysis

[^11]:    Source: OAG \& ALG Analysis

[^12]:    *Middle Caicos Airport is currently closed since the construction
    of the North-Middle Caicos causeway (highlighted on the map)

[^13]:    Source: OAG, TCIAA, ALG analysis

[^14]:    * To be reviewed based on final results achieved on the Tourism Development Strategy (study on-going)

[^15]:    Source: OAG, TCIAA, ALG Analysis

[^16]:    Source: OAG

[^17]:    Source: OAG, TCIAA, ALG Analysis

[^18]:    Source: OAG

[^19]:    Source: OAG

[^20]:    Source: Survey of Departing Visitors TCI, ALG Analysis

[^21]:    201820192020202120222023202420252026202720282029203020312032203320342035203620372038203920402041204220432044204520462047204820492050205120522053

[^22]:    Source: ALG analysis

[^23]:    Source: ALG analysis

[^24]:    Source: IATA ADRM 10th edition; ICAO Airport Planning Doc

[^25]:    source: TCIAA VDR, OAG, ALG analysis

