TURKS AND CAICOS ISLANDS AIRPORTS AUTHORITY

STRATEGIC MASTER PLAN FOR THE TCIAA

Conceptual Master Plan – Salt Cay (SLX)

October 2024

ALG

Contents

Index of figures

Glossary of terms and abbreviations

ADRM	Airport Development Reference Manual
ARFF	Aircraft Rescue and Fire Fighting
ASK	Available Seat per Kilometers
ATC	Air Traffic Control
ATM	Air Traffic Movement
ATR	Avions de Transport Régional
Avg	Average
B737	Boeing 737
CAGR	Compound Annual Growth Rate
CapEx	Capital Expenditure
DOM	Domestic
EMB	Embraer
FBO	Fixed Base Operator
FOD	Foreign Object Debris
GA	General Aviation
GDP	Gross Domestic Product
GSE	Ground Support Equipment
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IFP	Instrument Flight Procedure
ILS	Instrument Landing System
INT	International
LF	Load Factor
MUSD	Million United States dollars
NB	Narrow Body Aircraft
NEO	New Engine Option
NM	Nautical Miles
PAX	Passengers
PHP	Peak Hour Passengers
POS	Point of Sale
PPP	Public-Private Partnership
RepEx	Replacement Expenditure
RESA	Runway End Safety Area
RET	Rapid-Exit-Taxiway
RPK	Revenue Passenger per kilometers
RWY	Runway
SQM	Square Meter
TCI	Turks and Caicos Islands
TCIAA	Turks and Caicos Islands Airports Authority
TORA	Take-off Runway Available
TWY	Taxiway
USA	United States of America
USD	United States Dollar
VFR	Visiting Friends and Relatives
WB	Wide Body Aircraft

List of airport codes

Turks and Caicos Islands airports

GDT	JAGS McCartney International Airport
MDS	Middle Caicos Airport
NCA	North Caicos Airport
PLS	Providenciales International Airport
SLX	Salt Cay Airport
XSC	South Caicos International Airport

International airports

ATL	Hartsfield-Jackson Atlanta International Airport
AZS	El Catey International Airport
BIM	South Bimini Airport
BOS	Logan International Airport
BQN	Rafael Hernández International Airport
CAP	Cap Haitien International Airport
CCC	Jardines del Rey Airport
CCZ	Chub Cay Airport
CFG	Jaime González International Airport
CLT	Charlotte Douglas International Airport
CMW	Ignacio Agramonte International Airport
CXY	Cat Cay Airport
CYB	Sir Captain Charles Kirkconnell International Airport
CYO	Vilo Acuña Airport
DEN	Denver International Airport
ELH	North Eleuthera Airport
EWR	Newark Liberty International Airport
FLL	Fort Lauderdale–Hollywood International Airport
FPO	Grand Bahama International Airport
FXE	Fort Lauderdale Executive Airport
GGT	Exuma International Airport
GHB	Governor's Harbour Airport
GHC	Great Harbour Cay Airport
HOG	Frank País Airport
IAH	George Bush Intercontinental Airport
JFK	John F. Kennedy International Airport
KIN	Norman Manley International Airport
LAX	Los Angeles International Airport
LRM	La Romana Casa De Campo International Airport
MCO	Orlando International Airport
MHH	Marsh Harbour International Airport
MIA	Miami International Airport
MZO	Sierra Maestra Airport
NBW	Guantanamo Bay Naval Base Airport
NSB	North Bimini Airport

ORD	Chicago O'Hare International Airport
PBI	Palm Beach International Airport
PHL	Philadelphia International Airport
POP	Gregorio Luperón International Airport
PSE	Mercedita International Airport
RDU	Raleigh–Durham International Airport
RIH	Scarlett Martínez International Airport
RSD	Rock Sound International Airport
RTB	Juan Manuel Gálvez International Airport
SAQ	San Andros Airport
SCU	Antonio Maceo Airport
SEA	Seattle-Tacoma International Airport
SNU	Abel Santamaría Airport
STX	Henry E. Rohlsen Airport
TAB	Crown Point International Airport
TCB	Treasure Cay Airport
TPA	Tampa International Airport
VIJ	Virgin Gorda Airport
VRA	Juan Gualberto Gómez Airport
YHM	Munro Hamilton International Airport
YHZ	Halifax Stanfield International Airport
YOW	Ottawa Macdonald-cartier International Airport
YQB	Québec City Jean Lesage International Airport
YQG	Quaqtaq Airport
YQM	Greater Moncton International Airport
YUL	Montréal–Trudeau International Airport
YWG	Winnipeg James Armstrong Richardson International Airport
YYC	Calgary International Airport
YYZ	Toronto Pearson International Airport
ZSA	San Salvador Airport

1 Introduction

The airport network of the Turks and Caicos Islands is composed of 8 different airports, 6 of them public and 2 private airports. The public airports are under the scope of the Turks and Caicos Islands Airports Authority (TCIAA), which is a corporate body created under the Turks and Caicos Islands Airports Authority Ordinance and is responsible for the control, management, operation and development of all Turks and Caicos Islands' public airports.

Out of these 6 airports, Providenciales Howard Hamilton International Airport (PLS) is the country's gateway and concentrates more than 90% of country's total traffic, while the other 5 airports only operate domestic scheduled flights and general aviation operations. These 5 airports are Grand Turk JAGS McCartney International Airport (GDT), South Caicos Norman B. Saunders Sr. International Airport (XSC), Salt Cay Henry Leon Wilson Airport (SLX), North Caicos Clifford Gardiner International Airport (NCA) and Middle Caicos Eric Arthur Airport (MDS). The two airports under private management within the Turks and Caicos Islands are Pine Cay and Ambergris Cay.

Providenciales Airport is currently undergoing a restructuring process with the intention of being granted to a private operator through a PPP (Public-Private Partnership) contract. Once this process is completed, the TCIAA will concentrate its efforts in developing the secondary airports of its network, allowing for significant developing opportunities.

Particularly at Salt Cay Airport, there are currently no scheduled international flights. There are few weekly frequencies connecting Grand Turk and Salt Cay, as unique scheduled route to/from Salt Cay Airport, so the international passengers who arrive to the island do it via domestic flights from Grand Turk, who arrived at this island from a cruise ship or another domestic flight from Providenciales. By October 2020, the airport was re-opened after being closed for more than a year due to repairs and upgrades to its facilities.

The potential of the island resides in augmenting the frequencies with Grand Turk, as the main entrance and connection with Providenciales. Achieving this positioning of the airport and the development of its air traffic is in line with the objectives of the Government of the Turks and Caicos Islands for the modernization of its airports. This would have an impact on the improvement of the country's connectivity and, in turn, on boosting its tourism, economic and social growth. And this traffic development is only possible if it is accompanied by a process of renovation and expansion of the current infrastructure.

In this context of airport development and changing environment, the TCIAA has decided to carry out a Strategic Master Plan for the entire organization, which includes de development of an individual Master Plan for each airport within its network.

Creating a Master Plan becomes an essential process to ensure coherent planning. The Master Plan is the main strategic tool to ensure the expansion of highly complex and constantly evolving infrastructures such as airports. The International Civil Aviation Organization (ICAO, Doc. 9184) agrees on the need for a Master Plan as guide for short-, medium- and long-term planning of airports that identifies expansion and investment needs.

Therefore, the main objective of the present document is to become the reference for the planning of Salt Cay Airport for a 30-year time horizon. To this end, the Master Plan includes the following sections:

- **Current situation of the airport**: this section contains a detailed description and characterization of the current infrastructure, including the evaluation of the airport's main assets, the analysis of their compliance with the aeronautical regulations, as well as the determination of the maximum capacity of the existing infrastructure.
- **Market analysis and traffic projections**: this chapter includes a detailed market study reviewing the evolution of air traffic at the airport, its positioning within the country, and identification of the levers for growth in the coming years. Based on this market study, traffic projections are developed for the airport for the next 30 years, evaluating both the annual traffic growth potential and peak hour design parameters, which are key to the subsequent definition of investment needs.
- **Infrastructure requirements and investment plan**: this section comprises a detailed capacity-demand analysis to identify the expansion needs in the different airport subsystems to be able to meet the expected traffic demand. It also includes the associated investment plan, not only the expansion projects identified, but also the replacement investments or major maintenance of the infrastructure.
- **Long-term development and land reservation**: this section shows the very long-term development potential of the airport, identifying the main areas that may be subject to expansion in the future and therefore should be reserved to ensure the airport's growth.

- **Collection of Drawings**: the last section includes the main drawings of the airport, both for its current situation as well as for the airport's future development.

2 Current situation of the airport

The objective of this section is to perform a detailed characterization of the current infrastructure existing at the airport, to know the starting point for the subsequent definition of the airport's infrastructure development plan. To this end, it includes:

- General description of the airport and its main subsystems, including airfield, aircraft parking apron, passenger terminal and other facilities.
- Evaluation of the current conditions of these facilities and their compliance with the regulatory reference framework, as well as the general environmental conditions at the airport.
- Definition of the estimated capacity of the main airport subsystems.

To facilitate its understanding, the chapter is structured by airport subsystem, so that all the analyses referring to the same subsystem are included in the same subchapter.

2.1 General considerations

2.1.1 Airport location

Salt Cay Henry Leon Wilson Airport (IATA code: SLX; ICAO code: MBSY) is located in the north of the island. Salt Cay Island is known for its salt industry ruins around Balfour Town and the Deane's Dock area, including the Harriot White House. Its scuba diving offering, which is very popular due to its sheer walls and its beaches such as North, Long and South Bay, generates a variety of options in the island. There is no transport available for rent at the airport. For transportation it is necessary to reserve a rental golf cart or bicycle for pickup upon arrival.

Figure 1. Salt Cay Airport location

Source: Google Earth, ALG Analysis

2.1.2 Airport general design

The Salt Cay Airport is a one-runway (RWY 08 and RWY 26) airport with a declared ICAO aerodrome category 1A/B. The preferential configuration is runway 08. All buildings and facilities are located in the north part of the airport, such as the ARFF building, the commercial apron, the commercial terminal, the vehicle parking and road accesses.

The commercial apron, with 1,700 $m^{2,}$ counts with 2 code-A autonomous stands available. The commercial terminal counts with 80 m^2.

The airport almost borders in the north with the Caribbean Sea, whereas in the east and west it borders with salinas. There are no constructions or obstacles in the southern part.

The aerodrome reference temperature is 32 Celsius degrees, with an elevation of 12 feet (3.65 meters) above mean sea level. The airport operates between 10:00 UTC (6:00 local time) and 22:00 UTC (18:00 local time). Regarding flight operations, flights are operated with non-precision visual flight rules (VFR).

Figure 2. General view of Salt Cay Airport

Source: Google Earth, TCI AIP, ALG Analysis

2.2 Airfield and apron

2.2.1 General description

The airfield is composed by a unique asphalt runway (11/29) with the following dimensions:

- Runway 08: 799m x 18m (TORA, TODA, ASDA, LDA). Preferential runway configuration.
- Runway 26: 799m x 18m (TORA, TODA, ASDA, LDA).

Besides, the airport has a strip of 859m x 60m (AIP data), and there are not declared RESAs at any threshold. The airfield has one taxiway connecting the apron with the runway.

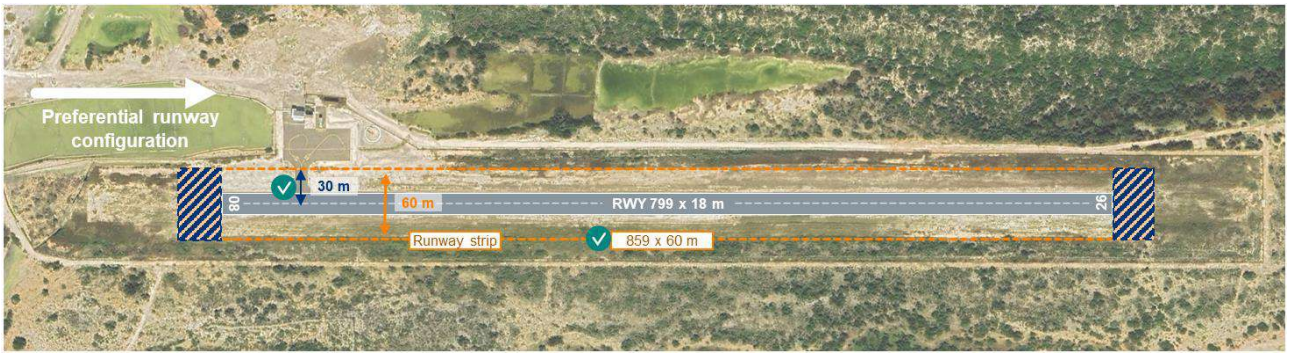


Figure 3. Airfield dimensions

Source: Google Earth, ICAO Annex 14, TCI AIP, ALG Analysis

2.2.2 Current runway, taxiway, and apron conditions

Runway and taxiway conditions were analyzed considering AIP data and the observations made by the project team during the site visit in March 2024. The conclusions about the runway are mostly positive: the runway, taxiway and apron were repaved less than 5 years ago, and therefore are in good state. Besides, the runway and taxiway are lighted, although only emergency flights are allowed after sunset. While the runway has a relatively good draining system, heavy rain may flood it, along with the taxiway and apron, given the proximity of the airport to the salt ponds. Regarding the apron, it allows 2 light aircraft to park simultaneously.

Runway 08-24 was repaved less than 5 years ago, along with the single taxiway and apron


The apron has 2 loop stands, being able to accommodate a maximum of 2 aircraft simultaneously (or several additional lighter aircraft)

The runway is in a good state with no visible defects, and it is lighted


A C402 (most frequent aircraft at SLX) sits on the apron waiting for passengers to board

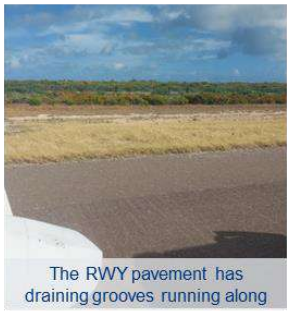

The RWY pavement has draining grooves running along

Figure 4. Runway, taxiway and apron images obtained during the site visit

Source: TCIAA, TCI AIP, ALG Analysis

2.2.3 Compliance with ICAO regulations

The airfield infrastructure compliance with ICAO requirements is key to guarantee operational safety within the airport. For this analysis, both the observations obtained during the site visit and the ICAO Annex 14 rule were considered.

	Annex 14 ICAO
RWY width & shoulders	Width 18m without shoulders for code 1A/B
RWY strip length RWY strip width	30m before THR and beyond the end of RWY for code 1; 30m on each side of RWY centerline for non-instrument code 1
RESAs length RESAs width	RESA not required for non-instrument code 1
TWY width & shoulders	Width 10m and no shoulders required for code 1A/B
Holding bays	30m between runway center line and holding bay for non-instrument code 1

Figure 5. Analysis of airfield compliance

Source: ICAO Annex 14, ALG Analysis

As the analysis shows, all airfield subsystems comply with ICAO requirements for the current Salt Cay airport category, since no larger aircraft are expected in the coming years.

2.2.4 Airfield operations

Salt Cay Airport has a single runway, so both take-offs and landings are carried out on the same one. The RWY 08 is the preferential configuration. The aircraft landing must taxi the entire runway to the apron, while the take offs are only required to taxi to the runway 08 headland, which is directly connected to the commercial apron.

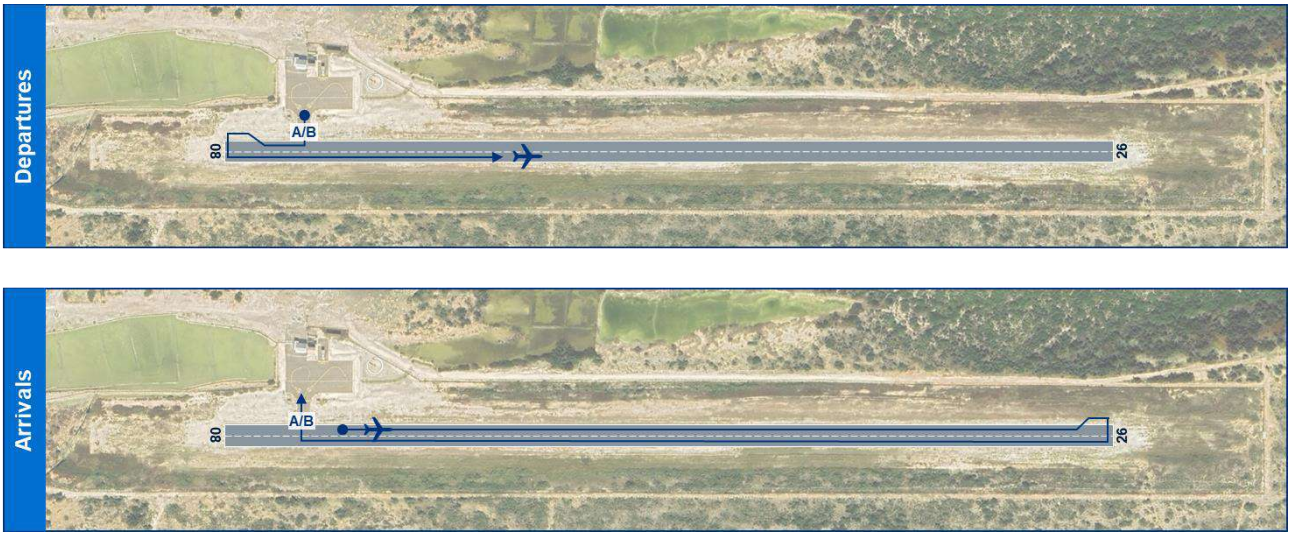


Figure 6. Take-off and landing routes in RWY 08 configuration

Source: Google Earth, ALG Analysis

2.3 Terminal building and other areas

2.3.1 General description of the terminal building

The current terminal has 80 m^2. For both departures and arrivals, the same entrance/exit of the apron, as well as the same exit/entrance of the terminal building is used.

The building was refurbished in 2020, showing lack of maintenance, both on the interior and exterior. Security screening is performed by a guard, although no scanners or security equipment are installed.

2.3.2 Current conditions and operations of the terminal building

The analysis of current terminal conditions has been carried out based on the information obtained during the visit to the airport.

The following was observed during the site visit:

- The seating area inside the terminal can accommodate 12 seats in total, and there is no specified area for luggage carts.
- Regarding design values, they fall within or even surpass the ranges, with approximately 16,000 m^2/Mpax. Overall, the terminal is appropriately designed for the traffic currently handled at the airport.
- Even though the building was refurbished in 2020, it shows clear signs of rust and lack of maintenance. The lock of the main door of the terminal is currently not working, which poses a security threat to the airport.

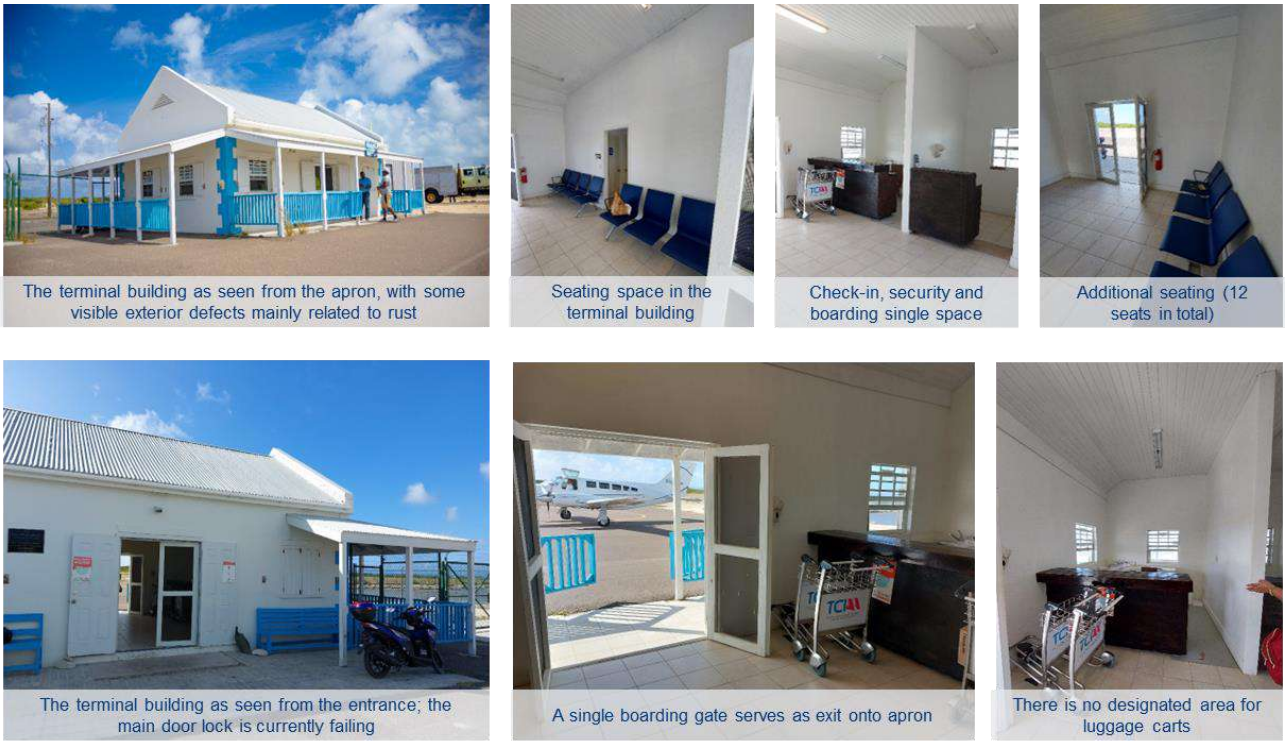


Figure 7. Terminal images

Source: ALG Analysis

2.3.3 Access and vehicle parking areas

The access to the terminal building is performed from the north part of the airport, coming from Balfour Town. The current parking capacity is sufficient to meet both present and future passenger demand (maximum of one light aircraft), although there are not official parking lots.

2.3.4 Other areas

The 70 m^2 ARFF facility is located within a container, which is clearly outworn and lacks proper maintenance. Besides, there is a single 2007-vintage Rosenbauer fire truck (757 liters water, 94 liters foam, 227 dry chemical), which often has mechanical problems and shows signs of rust.

The airport generator is housed within a container that seems to be in a good state, but begins to show signs of lack of maintenance.

Figure 8. Current state of ARFF and other facilities

Source: ALG Analysis

2.4 Current environmental situation

During the site visit, the project team observed multiple areas with abandoned machinery and equipment around the airport. All this due to poor waste disposal practices following the construction, in addition to dangerous materials not properly stored:

- The most critical building is the ARFF station, whose outworn state presents a hazard for the firemen (no air conditioning, leaks, etc.).
- The terminal building also has numerous defects, particularly regarding one of its bathrooms, which is currently unusable.
- The septic tank lacks proper maintenance, posing an environmental hazard.
- SLX has surrounding saline ponds, which may flood the airport during heavy rains.

Figure 9. Current situation of machinery and equipment

Source: ALG Analysis

3 Market analysis and traffic projections

The objective of this chapter is to analyze the current situation of the air transport market and the tourism sector in Turks and Caicos and the region influenced by Salt Cay Airport (SLX), in order to establish the necessary basis for determining the expected air traffic (demand) at the airport over the next 30 years. Thus, it includes:

- The current context of the air transport market in Turks and Caicos in general and Salt Cay Airport in particular.
- The characterization of tourism in the country and its impact on the airport to define its strategy and development potential.
- Passenger traffic forecasts and annual aircraft movements for the next 30 years.
- Projections of peak hour design parameters, key for the subsequent definition of the infrastructure development plan.

3.1 Air transport market and tourism

3.1.1 Air transport market in Turks and Caicos

Turks and Caicos is located in the Caribbean region, specifically in the Lucayan Archipelago. Within the Caribbean, it ranks in the mid-low range of the top 20 destinations with 1.8 million seats, with an increase of +11% compared to 2019. The majority of its traffic is international, primarily from North America and the Caribbean, with relatively low domestic traffic.

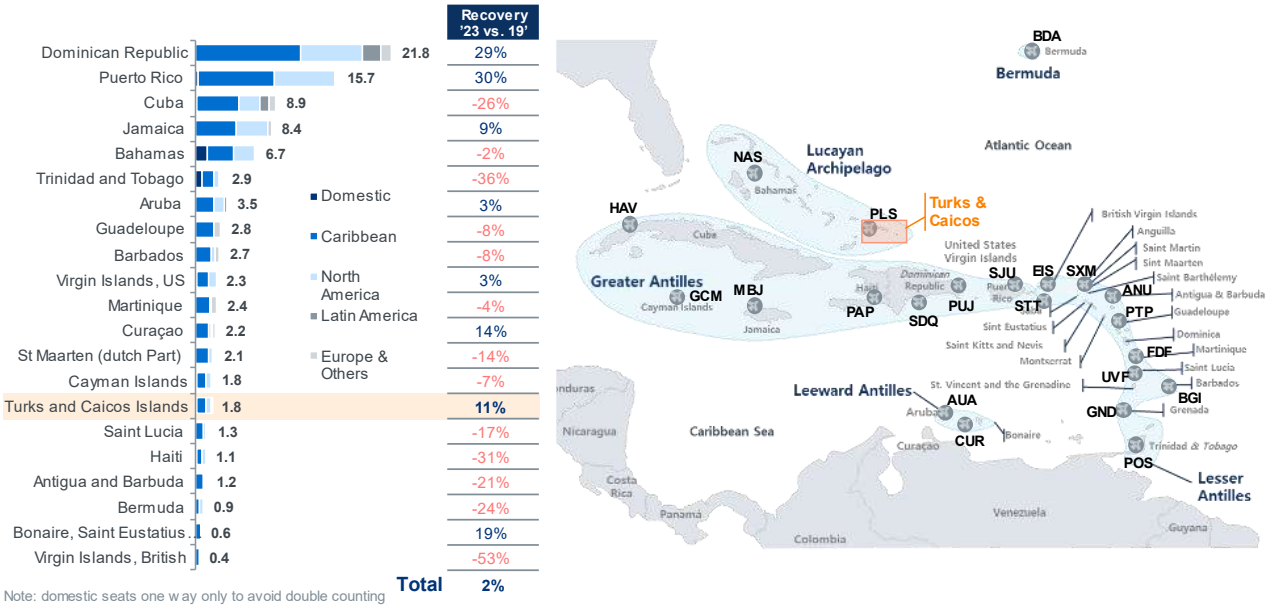


Figure 10. Air traffic of the Caribbean region by country (Mseats, 2023)

Source: OAG, ALG Analysis

The Caribbean region surpassed pre-COVID capacity levels in 2023, with an increase of +3.9%, led by the Dominican Republic and Puerto Rico. Turks and Caicos was among the top five countries with the most significant growth compared to 2019. This capacity recovery in the Caribbean was driven by traffic from North America and Latin America, where the market is predominantly controlled by foreign carriers, especially full-service carriers.

In contrast, the intra-Caribbean and domestic markets remain below 2019 levels, following a consistent trend over the past decade, with a -0.8% CAGR from 2013-2019. Factors contributing to this trend include the economic weakness of certain countries in the region, the absence of low-cost carriers, lack of competition, high fees and charges, and the use of turboprops with higher unit costs than larger aircraft.

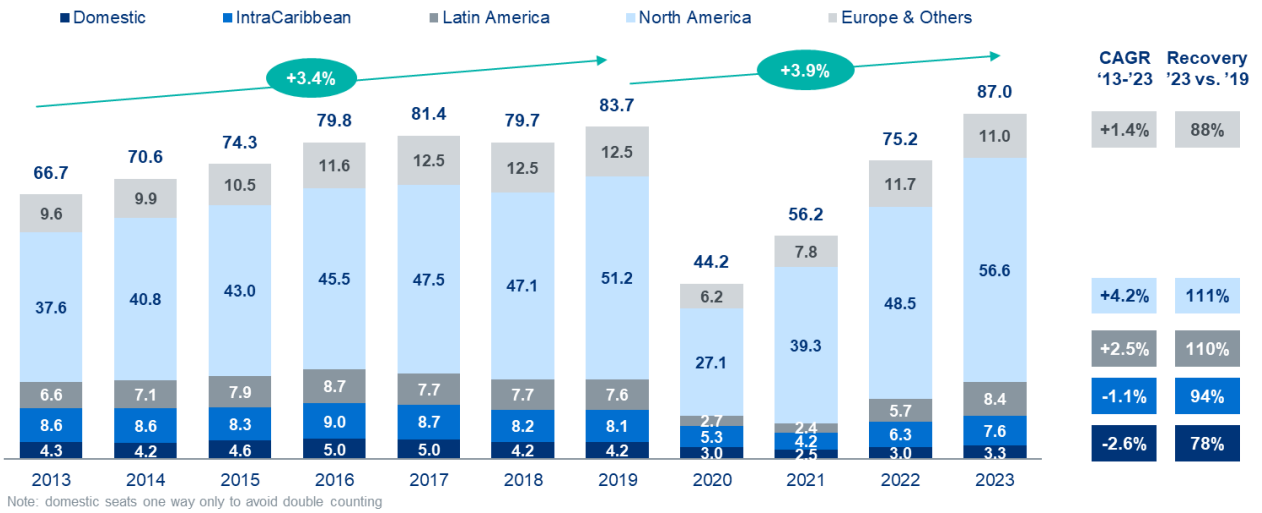


Figure 11. Historical Caribbean seat capacity evolution (Mseats, 2013-2023)

Source: OAG, ALG Analysis

The Turks and Caicos Islands Airports Authority (TCIAA) manages 6 of the country's 8 airports, including five secondary airports and Providenciales International Airport (PLS). Providenciales serves as the primary gateway and is the only airport with scheduled international commercial services, currently undergoing a PPP process.

- **Providenciales (PLS):** Located on Providenciales Island, it is the primary international gateway and the busiest airport in Turks and Caicos, accommodating a wide range of direct flights from various cities across North America and connection with Europe. Providenciales airport handled over 90% of the total passenger traffic in Turks and Caicos in 2023.
- **Grand Turk (GDT):** As the second largest airport in the territory, it is located 1.6 km south of Cockburn Town and handled over 90k scheduled passengers in 2023.
- **South Caicos (XSC)**: This airport, featuring a 1,829-meter asphalt runway, handled over 23k passengers in 2023, with scheduled flights from Providenciales and Grand Turk. Its terminal was inaugurated in Aug-23.
- **Salt Cay (SLX):** Serving Salt Cay Island, this airport is the 4th busiest in the country, handling approximately 900 passengers in 2023. It primarily connects to Grand Turk.
- **North Caicos (NCA):** Located adjacent to Major Hill Settlement and Bottle Creek Village, North Caicos airport caters to domestic charters and private flights, with plans for a boutique terminal but no commercial scheduled traffic as of today.
- **Middle Caicos (MDC):** This airport has been inactive since the construction of the North Caicos – Middle Caicos causeway, which began in 2007. It features a small terminal building and a 750-meter paved runway.

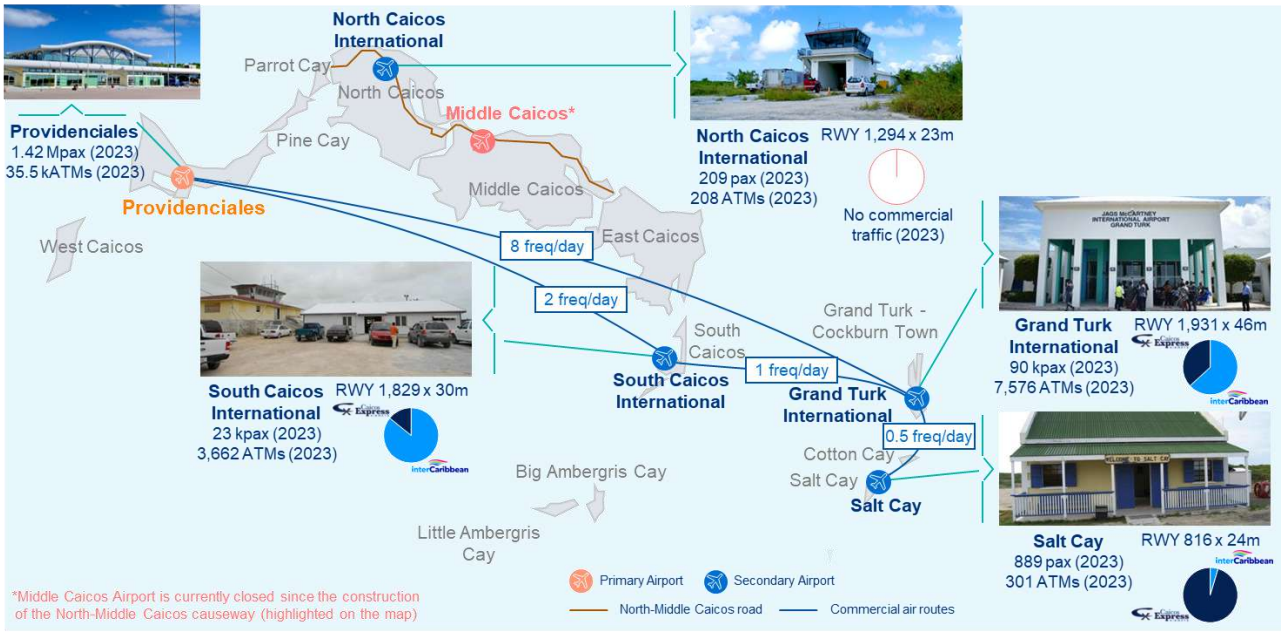


Figure 12. Turks and Caicos airport network characterization

Source: TCIAA, CAPA, OAG, ALG Analysis

In 2023, Providenciales International Airport flew to up to 45 destinations, making it the only airport in Turks and Caicos with international connections, as mentioned earlier. This includes 16 routes to North America and 23 routes to the Caribbean, giving the country the best intra-Caribbean connectivity in the region. The airport also operates three domestic routes to Grand Turk, South Caicos, and occasionally to Salt Cay. While international connectivity relies on foreign airlines, particularly USA carriers and InterCaribbean Airways, domestic connectivity is maintained by InterCaribbean Airways and Caicos Express.

Of the other TCIAA 5 airports, only South Caicos, Grand Turk, and Salt Cay operate scheduled domestic flights, while Middle Caicos remains closed. These domestic flights connect with Providenciales and include a few cross-island routes, such as Grand Turk to South Caicos and Grand Turk to Salt Cay.

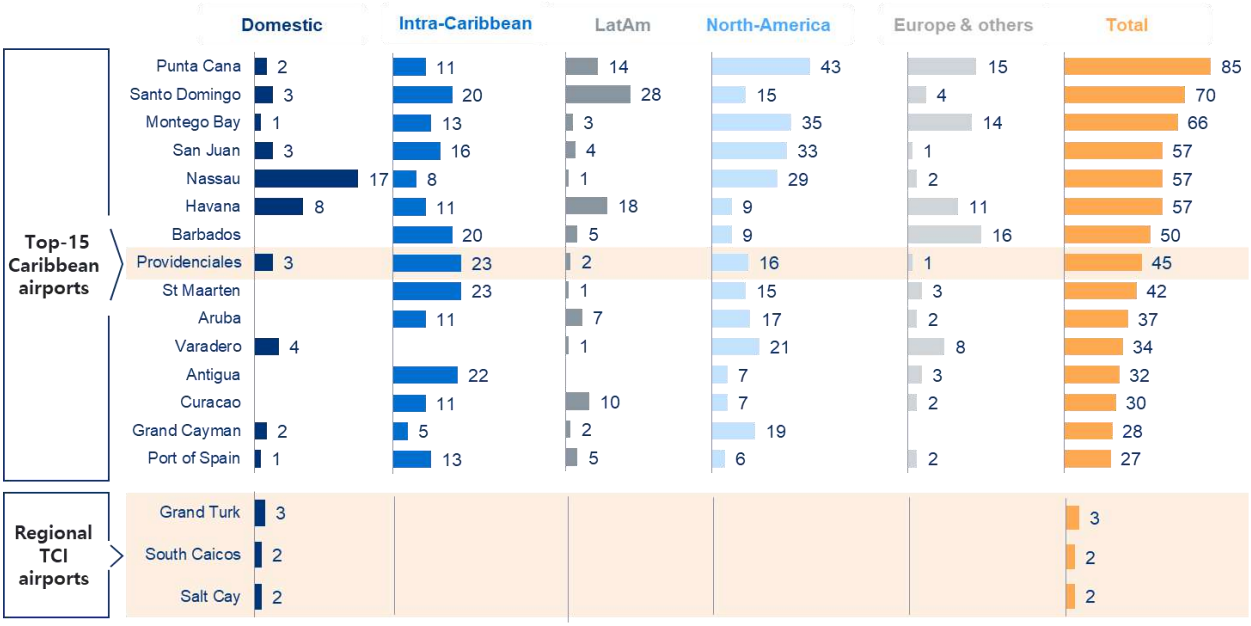


Figure 13. Connectivity at the Caribbean airports (# destinations, 2023)

Source: OAG, ALG Analysis

Turks and Caicos has demonstrated a strong post-pandemic recovery in seat capacity, surpassing 2019 traffic levels and reaching 1.93 million seats. From 2013 to 2023, the compound annual growth rate (CAGR) was 5.5%, driven mainly by international traffic, which has nearly doubled, and Caribbean traffic, which has almost tripled.

Figure 14. Evolution of seat capacity in Turks and Caicos (Mseats, 2013-2023)

Source: OAG, ALG Analysis

In terms of passenger traffic, it has grown at a slightly higher rate than seat capacity, with a CAGR of 6.0% from 2013 to 2023, reaching a peak of 1.54 million passengers in 2023. More than 90% of these passengers are handled at Providenciales, which saw almost 1.42 million passengers, followed by Grand Turk (90k pax) and South Caicos (23k pax). The other two airports with passenger traffic, Salt Cay and North Caicos, handled fewer than a thousand passengers each one.

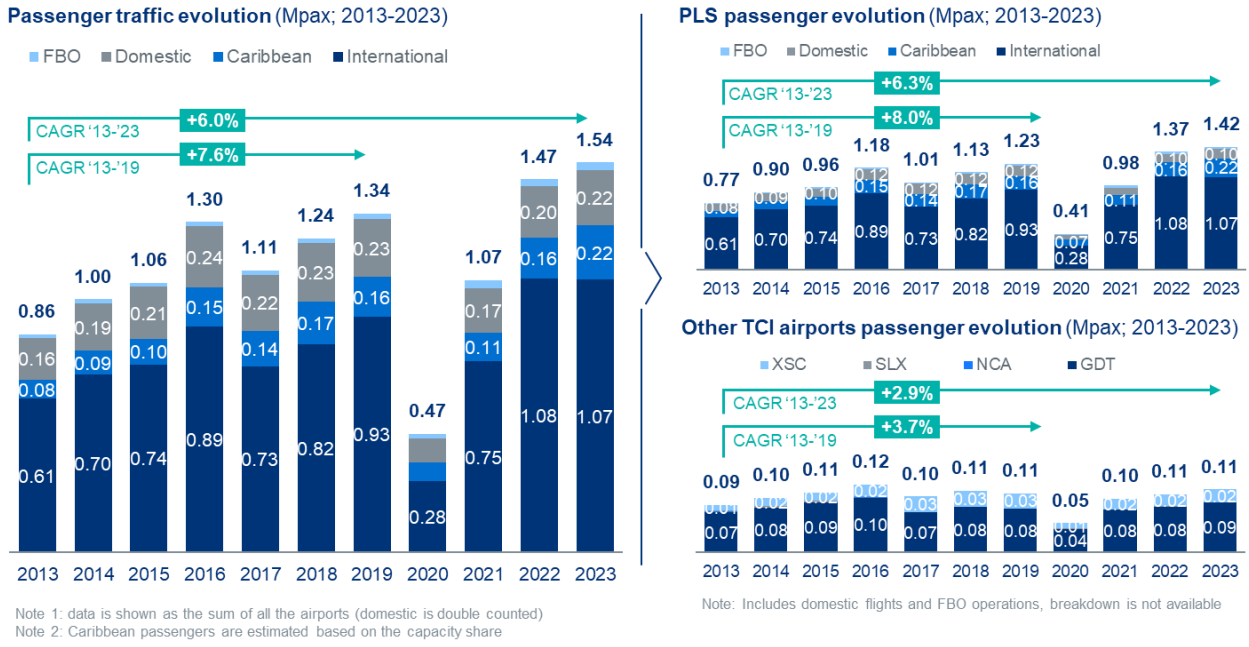


Figure 15. Evolution of passenger traffic in Turks and Caicos (Mpax, 2013-2023)

Source: TCIAA, OAG, ALG Analysis

This slightly higher growth rate in passenger traffic compared to seat capacity in recent years has enabled Turks and Caicos to recover and even surpass pre-pandemic load factors. In 2023, the overall load factor reached 78%, higher than the 76% in 2019. This improvement was driven primarily by international routes, which achieved an 80% load factor, while domestic routes had a load factor of 69%.

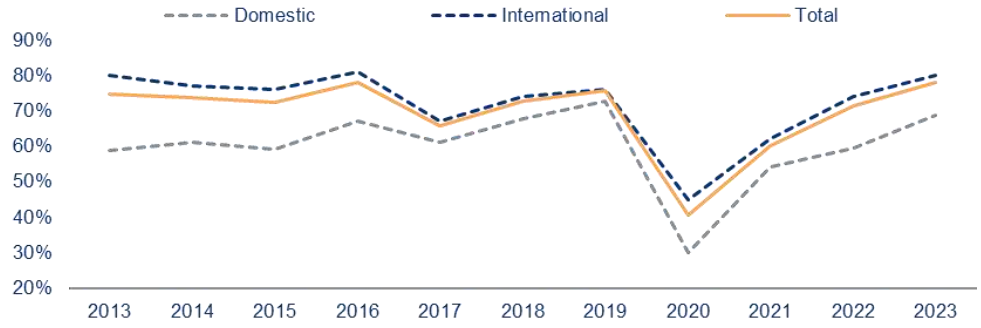


Figure 16. Evolution of load factor in Turks and Caicos (percentage, 2013-2023)

Source: TCIAA, OAG, ALG Analysis

3.1.2 Tourism in Turks and Caicos

International traffic is mainly driven by tourism, with approximately 49 million international tourists visiting the Caribbean region in 2019, of which Turks and Caicos accounted for around 3.3%.

Regarding tourism, the Caribbean has become a top destination, benefiting from its favorable climate and beaches. Turks and Caicos received 1.60 million visitors in 2019, reflecting an increase in its market share over the past few years. This growth underscores the rising popularity of Turks and Caicos as a preferred travel destination.

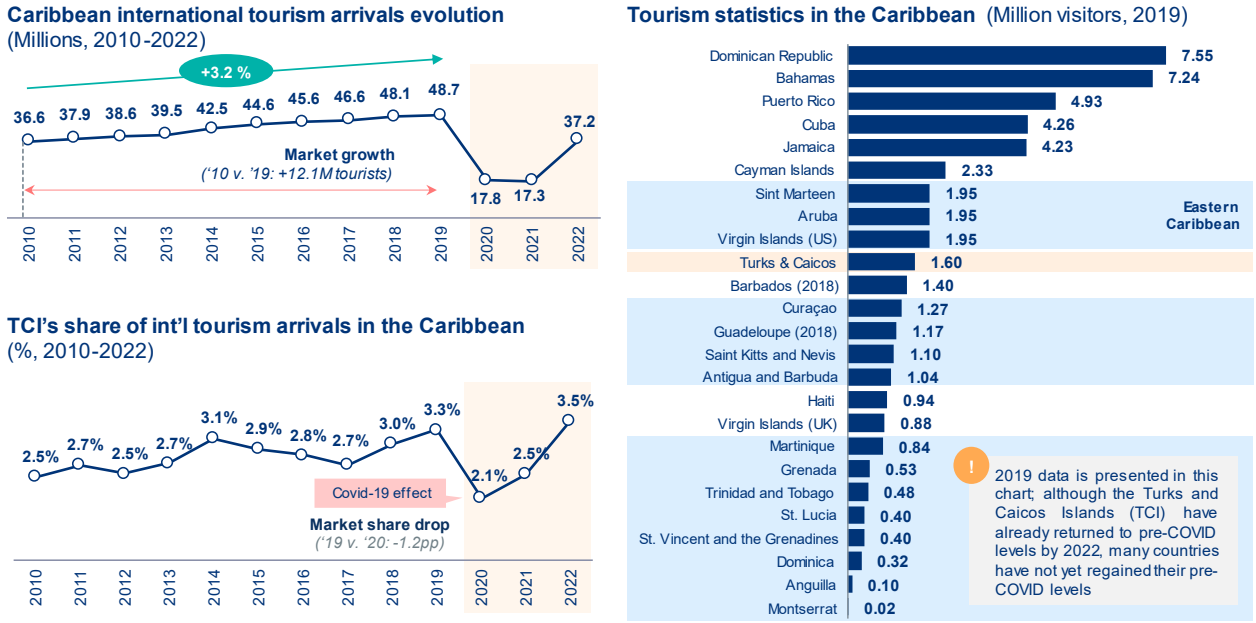


Figure 17. Caribbean Tourism sector

Source: World Tourism Organization (2023), World Bank, ALG Analysis

Turks & Caicos, with an area of 430 km² and a population of 49,300, is a constituent country of the British Overseas Territory located in the Caribbean Sea. The economy is primarily based on tourism, positioning Turks & Caicos as a high-yield tourist market among Caribbean destinations. In 2023, the GDP per capita was 23.9 kUSD, with over 90% of the GDP generated by the services sector. The islands attract almost 550,000 overnight visitors annually, highlighting their growing popularity as a premier travel destination.

Country	Surface (km²)	Population ('000)	GDP/ capita	Overnight visitors	Rooms	Tourism Expenditure (MUSD)	Diaspora ('000)	Top 3 Airlines	Positioning
Dominican Rep.	48,670	11,333	8,884	7,163,400	83,557	8,406	604	jetBlue, Delta, American Airlines	Mass tourism, VFR
Puerto Rico	8,870	3,260	28,976	3,273,100	14,488(*)	3,330	247	jetBlue, spirit, Frontier	Mass tourism, VFR
Jamaica	10,990	2,826	5,359	2,478,400	28,955	3,621	24	jetBlue, Delta, American Airlines	Mass tourism, VFR
Cuba	109,880	11,194	7,544	1,613,400	75,044	1,037	3	sunwing, Air transat, American Airlines	Mass tourism, VFR
Bahamas	13,880	413	31,002	1,452,400	15,724	3,515	64	jetBlue, bahamasair, American Airlines	Mid-range tourism, Niche, high-yield
Aruba	180	106	33,103	1,101,000	11,929(*)	2,303	54	jetBlue, United, American Airlines	Mid-range tourism
Virgin Isl. (U.S.)	346	106	38,454	684,800(*)	2,994(*)	-	-	spirit, Delta, American Airlines	Niche, high-yield
Guadeloupe	1,628	396	27,115	650,000(*)	5,443(*)	-	90	Air France, Corsair, Air Caraïbes	Mid-range tourism
Martinique	1,128	367	25,279	556,000	4,200	-	68	Air France, Corsair, Air Caraïbes	Mid-range tourism
Barbados	430	282	17,004	539,700	6,564(*)	929	35	Virgin Atlantic, Caribbean Airlines, InterCaribbean	Mid-range tourism
Curacao	444	192	13,771	489,600	11,000	988	57	KLM, TUI fly, American Airlines	Mid-range tourism
Turks & Caicos	**430**	**49**	**23,935**	**549,161(*)**	**4,647**	**877**	**26**	United, InterCaribbean, American Airlines	Niche, high-yield
Sint Marteen	34	44	35,873	373,000	3,368	957	29	Delta, Winair, American Airlines	Niche, high-yield
St. Lucia	620	180.25	10,734	356,000	4,767	1,080	8	British Airways, jetBlue, American Airlines	Mid-range tourism
Cayman	260	69	77,974	284,300	7,263(*)	39(*)	29	United, Cayman Airways, American Airlines	Niche, high-yield
Antigua Barbuda	440	94	15,702	265,100	3,816(*)	773	29	British Airways, InterCaribbean, American Airlines	Mid-range tourism
Trinidad Tobago	5,130	1,535	14,742	226,500	7,731	324	78	Caribbean Airlines, British Airways, jetBlue	Mid-range tourism, VFR
Virgin Isl. (UK)	153	31	31,738(*)	173,000	2,240(*)	-	-	Silver Airways, Cape Air, InterCaribbean	Niche, high-yield
Haiti	27,750	11,725	1,152	148,000(*)	1,814(*)	73	19	jetBlue, spirit	VFR
Bermuda	53	64	111,865	145,900	1,720	143(*)	-	jetBlue, British Airways, American Airlines	Niche, high-yield

(*) Last available year

Visitors Profile: Mass tourism; Mid-range tourism; Niche, high-yield; VFR

Figure 18. Caribbean Countries Positioning Analysis (2023)

Source: UNWTO, Oxford Economics, World Bank, ALG Analysis

Turks and Caicos Islands saw an estimated 1.46 million arrivals in 2023, with 520,000 of these being stayover visitors traveling by air. Air visitor arrivals have experienced moderate growth in recent years, with a compound annual growth rate (CAGR) of 4.1% from 2011 to 2019. Although the COVID-19 pandemic caused a significant drop of 77% in arrivals, the subsequent years saw a remarkable recovery of 82% in 2022. Most air travelers, over 90%, originate from the USA and Canada, while Europe accounts for less than 5% of visitors.

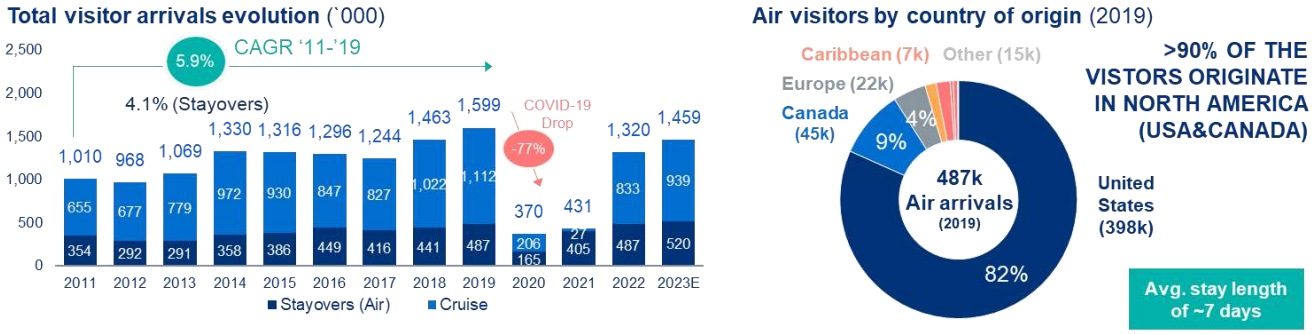


Figure 19. Visitor arrivals to Turks and Caicos

Source: Turks & Caicos Islands Tourist Board, TCIAA Brochure Investment Opportunities 2022-23, National tourism strategy and implementation plan for Turks & Caicos, ALG Analysis

Regarding the seasonality of visitors, September and October are the low season due to hurricanes. Air visitor numbers peak in December and from March to July, while cruise visitors see their highest numbers in December. Cruise arrivals, concentrated in Grand Turk, exhibited a stable monthly pattern before COVID-19, and it is expected to reach 1.1 million cruise passengers in 2024.

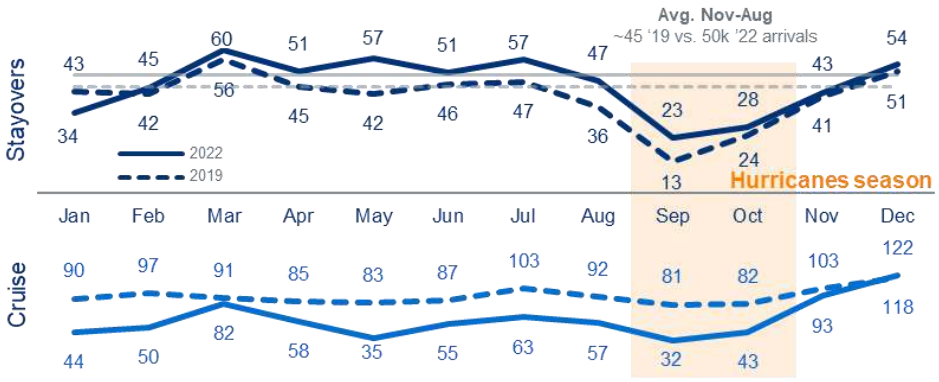


Figure 20. Monthly visitor arrivals evolution (thousands)

Source: Turks & Caicos Islands Tourist Board, TCIAA Brochure Investment Opportunities 2022-23, National tourism strategy and implementation plan for Turks & Caicos, ALG Analysis

The destination appeals to high-yield, high-end luxury markets, as well as significant mid-range and niche markets, attracting a diverse range of travelers. Business class travelers also contribute to the high yield. Visitors from the USA and Canada typically stay for an average of 7 days, those from Latin and South America for 6 days, and tourists from the UK and Europe for around 10 days. The main reasons for travel include business investment, beach experiences, diving, water sports, honeymoons or romantic getaways, attending festivals, golfing, and ecotourism. Visitor arrivals have been relatively consistent since 2018, with the exception of a decline in September and October due to the peak hurricane season. The destination is gaining significant popularity, establishing itself as a top destination in the Caribbean, with 98% of visitors likely to recommend it.

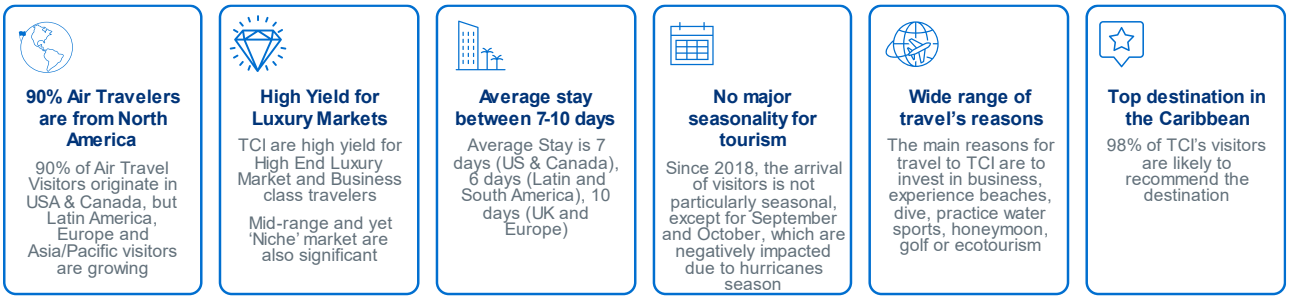


Figure 21. Turks and Caicos passenger profile

Source: National tourism strategy and implementation plan for Turks & Caicos, ALG Analysis

Each island in Turks and Caicos boasts a unique tourist profile, offering a variety of experiences that cater to diverse preferences:

- Providenciales serves as the gateway, renowned for its premium Grace Bay Beach and luxury accommodations, capturing the majority of international arrivals by air. This island is the hub of tourist activity, offering high-end resorts, fine dining, and various water sports.
- Grand Turk captivates visitors with its rich history and top-tier scuba diving opportunities. As the sole cruise port in the archipelago, it attracts significant cruise traffic, showcasing colonial architecture, historical landmarks, and vibrant marine life.
- South Caicos is known for its vibrant marine ecosystem and traditional fishing communities. This island presents a strategic opportunity for sustainable tourism, emphasizing eco-friendly practices and preserving local traditions, making it an ideal destination for environmentally conscious travelers.
- The quieter islands like North and Middle Caicos offer unique attractions for those seeking serene beauty, rich marine life, and authentic local experiences. These islands provide a tranquil escape with stunning landscapes, hidden beaches, and opportunities to explore the local culture and nature.

This diverse destination caters to luxury seekers, adventure enthusiasts, and cultural explorers alike, making Turks and Caicos a unique jewel in the Caribbean.

Compared to more developed tourist regions like Cancun or Montego Bay, Turks and Caicos has a lower overall hotel density. The country has a hotel density of 19 rooms per km², with nearly 87% of the hotel capacity concentrated in Providenciales. This brings Providenciales closer to typical values seen in other established regions, which range between 60-80 rooms/km².

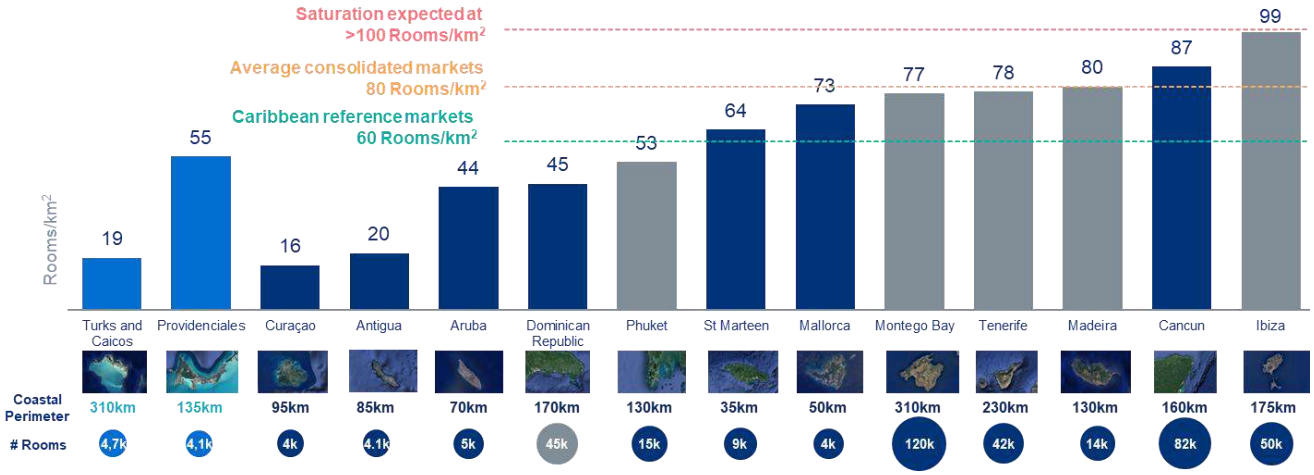


Figure 22. Hotel rooms per square kilometer at touristic destinations

Source: National tourism strategy and implementation plan for Turks & Caicos, ALG Analysis

This disparity highlights the potential for further tourism infrastructure development in Turks and Caicos. To foster balanced growth, it is essential to focus on developing infrastructure in islands other than Providenciales. This strategy will not only support the expansion of hotel capacity but also drive the development of airports and other essential facilities across the archipelago.

Given the current state of the tourism ecosystem in Turks and Caicos Islands (TCI), the National Tourism Development Strategy seeks to establish quantitative objectives for up to 2032, focusing on four key aspects: increasing the number of visitors and tourism revenue, enhancing the visitor experience, and expanding hotel capacity. The anticipated increase in hotel capacity is based on information gathered from on-site visits in the country.

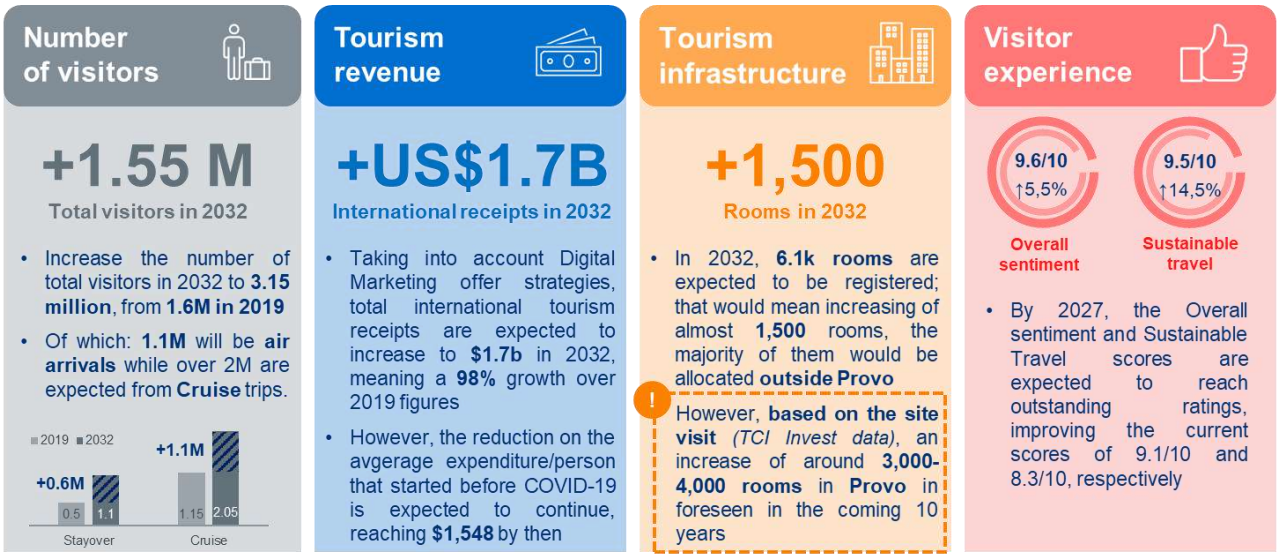


Figure 23. Objectives of the National Tourism Development Strategy (2032)

Source: Turks & Caicos Islands Tourist Board, National tourism strategy and implementation plan for Turks & Caicos, ALG Analysis

Additionally, the tourism development strategy also aims to achieve the following objectives:

- Enhance connectivity from Providenciales to all other tourism destinations in the country, with a particular focus on improving air connectivity.
- Diversify the current range of tourism products and strengthen existing offerings to attract a broader range of tourism segments and markets.
- Consolidate the primary source markets for tourism demand, namely the USA, Canada, and the UK, while expanding market share in new potential markets across Europe (Germany, Italy, France, Spain, Benelux, etc.), Latin America (Brazil, Colombia, Chile, Argentina, etc.), and the Caribbean region.
- Improve the quality of working conditions and increase job opportunities for the TCI population.

3.1.3 Salt Cay Airport - air transport market and tourism

Salt Cay is the southernmost island within the country, and one of the smallest islands, characterized by its salinas, near the airport. It is in the north of the island. There is not public transportation nor taxi stand at the airport. The primary form of transport for visitors to Salt Cay is by renting a golf cart or bicycle for pickup upon arrival.

The airport counts with 3 weekly frequencies to Grand Turk, all of them operated with small turboprops. In 2023, Salt Cay reached 900 domestic passengers, not surpassing pre-pandemic levels and below the peak of 2014 (2,900 passengers).

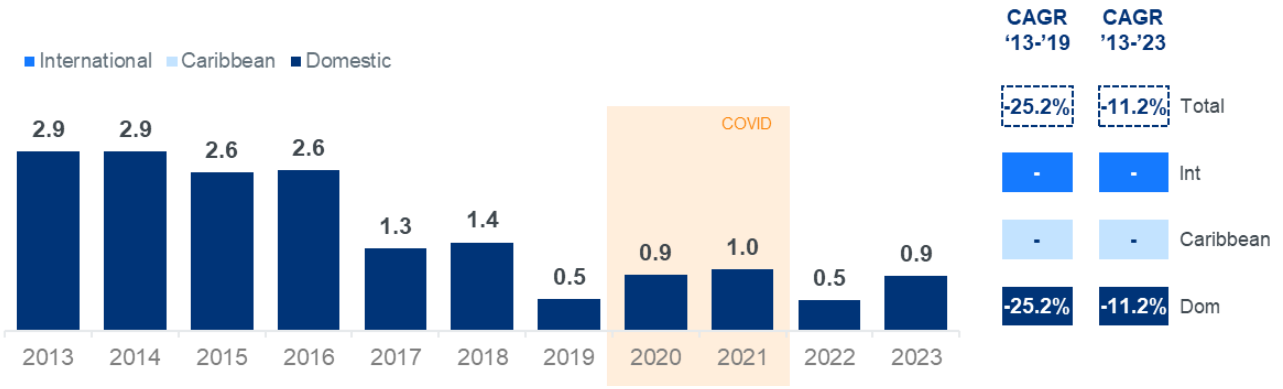


Figure 24. Evolution of passenger traffic in Salt Cay (kpax, 2013-2023)

Source: TCIAA, OAG, ALG Analysis

The airport's scheduled commercial flights are operated by InterCaribbean Airways and Caicos Express. InterCaribbean primarily operates with a fleet consisting of Havilland Canada - Bombardier DHC6 Twin Otters (19 seats). Meanwhile, Caicos Express uses Cessna Light Aircraft Twin Turboprops (8 seats).

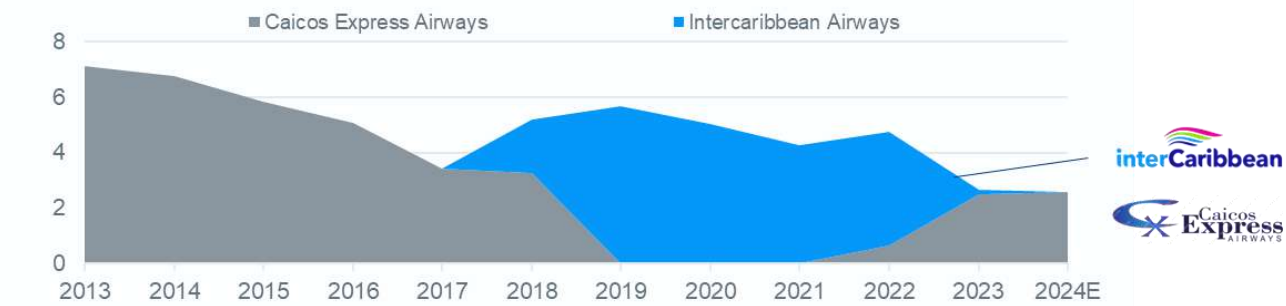


Figure 25. Evolution of seat capacity by airline in Salt Cay (kSeats; 2013-2024E)

Source: OAG, ALG Analysis

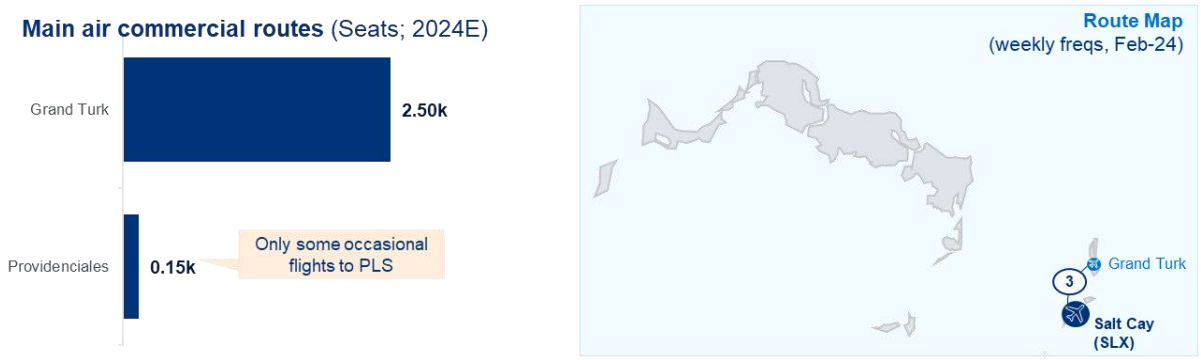


Figure 26. Commercial scheduled routes in Salt Cay (2024E)

Source: OAG, ALG Analysis

Furthermore, Salt Cay offers a variety of tourist attractions:

- Beaches and scuba diving: Several spectacular beaches are found on Salt Cay. North Bay has the best swimming and snorkeling conditions; Long Bay and South Bay are great for beachcombing. Exceptional scuba diving is also very popular due to its sheer walls, where the barrier reef drops from 12 m into the thousands.
- Salt industry: Much of the old colonial architecture and remnants of the salt salinas remain around Balfour Town and the Deane's Dock area, including the Harriott White House, which is one of the island's icons. Also, donkeys, the ancestors of which used to pull carts, now roam freely all over the island.

Quick Facts	
Population	<100 (2023 est.)
Hotel rooms	Only rental villas
Best Beach	North Bay Beach
Highest Point	Taylor Hill (17 m)
Most popular attraction	Harriott White House
Natural Hotspot	South Creek

Figure 27. Main tourist facts in Salt Cay (2024)

Source: Visit Turks & Caicos Islands, TCIAA, ALG Analysis

Based on the performance of other domestic secondary airports within the Caribbean region, Salt Cay shows certain potential to improve its connectivity within the country, specially strengthening the connection to Grand Turk.

Country	Airport	Seat Capacity (kseats, 2023)	Destinations (# destinations, 2023)						Other		
			Domestic	Intra - Caribbean	Latin America	North America	Europe & Others	Total	Island Population (k, 2023)	#rooms	Main Airlines
Belize	INB	45.9	4	-	-	-	-	4	4.0	224	MAYA
Bahamas	TBI	27.8	2	-	-	-	-	2	1.5	176	bahamasair
Bahamas	CRI	15.9	4	-	-	-	-	4	0.3	37	bahamasair
Bahamas	IGA	15.7	3	1	-	-	-	4	0.9	30	bahamasair
Bahamas	AXP	14.3	2	-	-	-	-	2	0.7	37	bahamasair
Bahamas	MYG	12.8	2	-	-	-	-	2	0.3	13	bahamasair
Turks & Caicos	SLX	2.6 Room for growth	2	-	-	-	-	2	0.1	-	InterCaribbean
Bahamas	TCB	2.3	1	-	-	1	-	2	1.2	1,818	bahamasair
Belize	CYD	1.0 DOM INT	1	-	-	-	-	1	17.9	262	TROPIC AIR

Figure 28. Benchmark of Salt Cay vs. domestic secondary airports

Source: OAG, Oxford Economics, UNWTO, ALG Analysis

Currently, the main obstacle for SLX growth in both population and tourism is the low connectivity with Grand Turk. Should Grand Turk receive more tourists via more connections with Providenciales, the international passengers arriving to GDT or augmenting the number of cruise ships making a stop of their itinerary at Grand Turk, Salt Cay will benefit from more interconnection via increasing frequencies between these two islands.

3.2 Traffic forecast for Salt Cay Airport

3.2.1 Traffic forecast methodology

The methodology for passenger traffic projection is based on a combination of a long-term macroeconomic top-down projection and short to mid-term adjustments made at an airline-route level (bottom-up projection). This approach considers the development of new routes at the airport in accordance with the previously defined strategy.

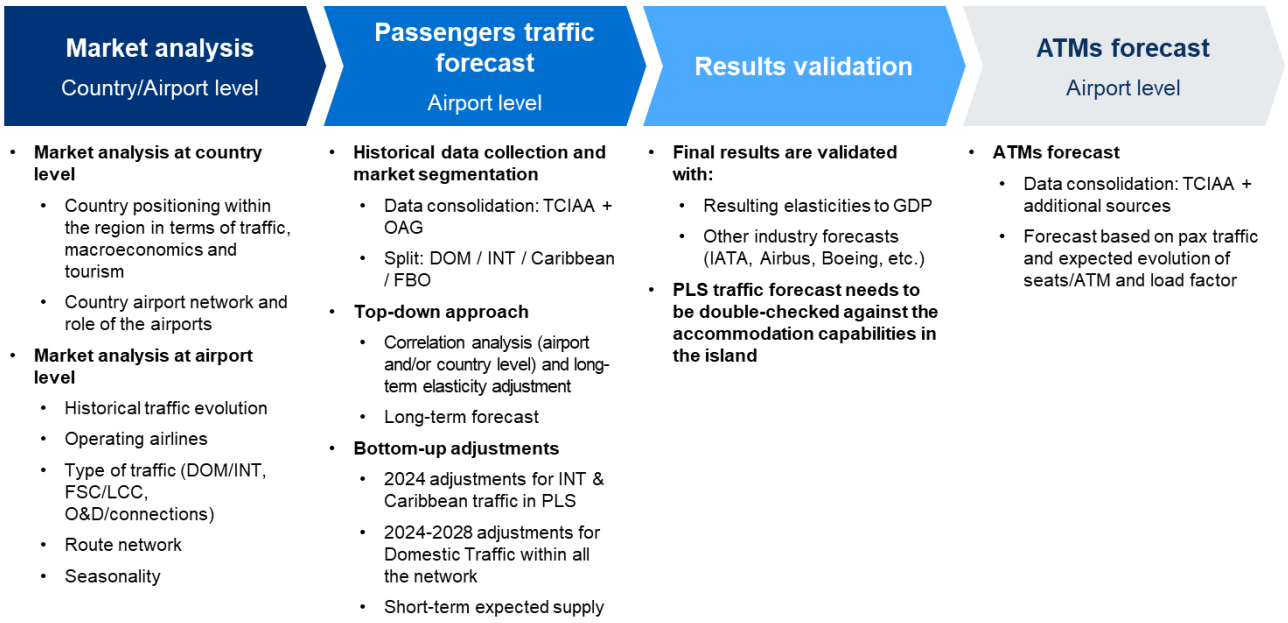


Figure 29. Traffic forecast methodology

Source: ALG Analysis

3.2.2 Macroeconomic projection (top-down approach)

The conclusions drawn from the market analysis serve as the foundational framework for the traffic projections. These insights guide the methodology application based on relevant market segmentation and the historical period for regression analysis. In this context, it is identified that the optimal approach for forecasting medium and long-term traffic at Turks and Caicos airports entails establishing growth rates through an econometric model.

Considering the econometric trend of the model, the Top-down approach emerges as the most suitable methodology consisting of:

- A multivariable linear regression based on macroeconomic variables is used to generate air traffic projections. The robustness and significance of these projections are determined by evaluating the correlation factor (R^2) and employing various statistical tools.
- When statistical significance is not achieved with the aforementioned methodology, an elasticity-based model is used. This econometric approach is based on assessing the impact of economic growth on air traffic growth. A coefficient of elasticity is derived and applied to the macroeconomic growth to calculate the air traffic growth.

Both methodologies are widely used in the market, preferring multiple linear regression whenever R^2>85%. While achieving higher correlation factors (R^2) is desirable, it does not always equate to the most accurate traffic projections. Conclusions identified on the market analysis are key, being used to select the adequate methodology and to address results validation. Also, by employing a range of additional statistical tools, the model aims to approach a more robust and reliable result.

Multivariable linear regression model

$$Pax = m_1 \cdot V_1 + m_2 \cdot V_2 + \ldots + m_n \cdot V_n + b$$

- V: Descriptive variables
- m: Coefficients of the regression
- b: Intercept

Key issues — Preferred model

- Regression is validated with statistical parameters:

Parameter	Validity	Meaning
R^2	> 85%	Quality of the model to replicate the results
Adjusted R^2	> 75%	Measures the same as R^2, taking into account the number of variables included in the model
P-value	< 0.05	Checks the contribution of each variable to the model

- Coefficients are estimated and variables are projected to obtain the passenger forecast. If no combination of variables is identified as significant, an elasticity-based model is then applied

Empirical elasticity model

$$\Delta Pax = \varepsilon_1 \cdot \Delta V_1 + \varepsilon_2 \cdot \Delta V_2 + \ldots + \varepsilon_n \cdot \Delta V_n$$

- V: Descriptive variables
- ε: Empirical elasticities

Key issues — Elasticities used for validation

- Growth in passenger traffic is explained by the variation of selected variables and empirical elasticities
- Normally applied to GDP for the specific market, elasticity relates GDP growth with traffic growth
- Historical values are used to validate future projections, as well as empirical values based on different sources (market, ICAO, etc.)

Figure 30. Top-down forecasting model selection

Source: ALG Analysis

Given the model's considerable sensitivity to macroeconomic assumptions over extended periods, the reliability of econometric variables becomes crucial to ensure a stable and robust traffic forecast. This involves a range of factors, highlighting the necessity for thorough accuracy and precision in the projection, such as national and regional GDP projections, GDP/capita, inflation and exchange rates, international trade (imports / exports), foreign direct investment, middle class size, average household income and other macro variables.

	TCI & Inbound countries GDP	GDP TCI	Population of TCI	ForEx (non-USD markets)	Oil price	Yields	Tourism
Relation with air traffic	GDP evolution reflects the economic development of the country and the wealth level of its citizens and economic sectors	Regional GDP reflects the particular economic development of the state and the wealth level of the citizens	Population reflects the development of the country and represents the volume of people which have access to air transport	As local currency devaluates, foreign currencies become stronger and inbound traffic is stimulated because travel becomes cheaper	Fuel usually represents the largest OpEx for airlines. Air fares are directly correlated with Brent price (lower yields, higher traffic)	The offer of airlines affects yields and stimulates short-term demand. Yields represent the accessibility to air transport	Tourism is one of the main sources of air traffic, and therefore airport traffic is directly correlated
Pros & Cons for air traffic forecast	**Pros** • Robust projections are available • Normally correlates extremely well **Cons** • May have limitations for very small markets	**Pros** • Normally correlates extremely well **Cons** • Does not take into account inbound traffic (the most important one within TCI)	**Pros** • Projections available **Cons** • Does not take into account inbound traffic (the most important one within TCI) • Might show dependence with GPD per capita	**Pros** • Projections available • Tends to correlate well with int'l traffic **Cons** • Volatile projections • Different impact for outbound and inbound • Non representative for TCI (USD-based)	**Pros** • Tends to correlate well with traffic **Cons** • Volatile projections, only for short-term • Difficult to find a good correlation	**Pros** • Good correlation with short-haul and long-haul markets **Cons** • No robust projections available	**Pros** • Exceptional correlation factors with traffic **Cons** • No robust projections available; usually projections are too optimistic (targets) • May inter-correlate with GDPs
Elasticity	+	+	+	+ −	−	−	+

Main descriptive variable

Figure 31. Top-down variable selection

Source: ALG Analysis

It is important to emphasize that GDP tends to be the most relevant and reliable macroeconomic variable to describe the evolution of air traffic demand, since it is the variable with more available projections from reliable sources. Besides, if the real origin of the passengers of a particular market is known, a blended GDP compounded by each GDP of each origin country tends to provide with greater correlation factors and better results.

Due to the low volumes of traffic within the secondary airports network, aggregate traffic for the country has been used in order to find suitable correlations for the macroeconomic forecast. By using a top-down approach, the traffic forecast for the medium to long-term is developed based on the relationship between GDP per point-of-sale and airport traffic for each market segment, using point-of-sale data from airline tickets.

While Caribbean and International traffic at Providenciales, show a strong correlation with the blended GDPs of each market (R^2 87-92%), the Domestic market does not correlate with GDP. Therefore, the projection methodology involves forecasting Caribbean and International traffic for PLS and projecting domestic and FBO traffic at PLS as a percentage of international traffic, based on the insights from the market analysis. This domestic traffic mainly consists of inbound international tourists who travel to other areas of TCI, such as Grand Turk, while FBO traffic corresponds to inbound international tourists arriving in TCI on private flights.

Domestic traffic for Salt Cay and the rest of the network heavily depends on projections for PLS, with only minor transversal routes between secondary airports. Providenciales' domestic traffic has been forecasted using a bottom-up approach for 2024-2028 by analyzing each route individually *(see details below)*, while for 2029-2055, it is projected as a percentage of the airport's international traffic.

3.2.3 Bottom-up adjustments

Top-down traffic projections are complemented by a micro bottom-up analysis at the route level, where the vast majority operate to/from PLS, except for cross-island routes such as Grand Turk to Salt Cay and Grand Turk to South Caicos.

For the 2024-2028 period, bottom-up adjustments were applied to project a more reliable traffic, based on OAG published schedules, airline interviews and empirical insights from air traffic trends, enabling the prediction of traffic volume based on operational variables like routes, frequency, and seats offered. The methodology encompasses an analysis of passenger, airline companies, existing frequencies, and routes, projecting the future evolution of traffic and capacity, considering factors like potential new routes at the airports, tourism strategy and infrastructure projects.

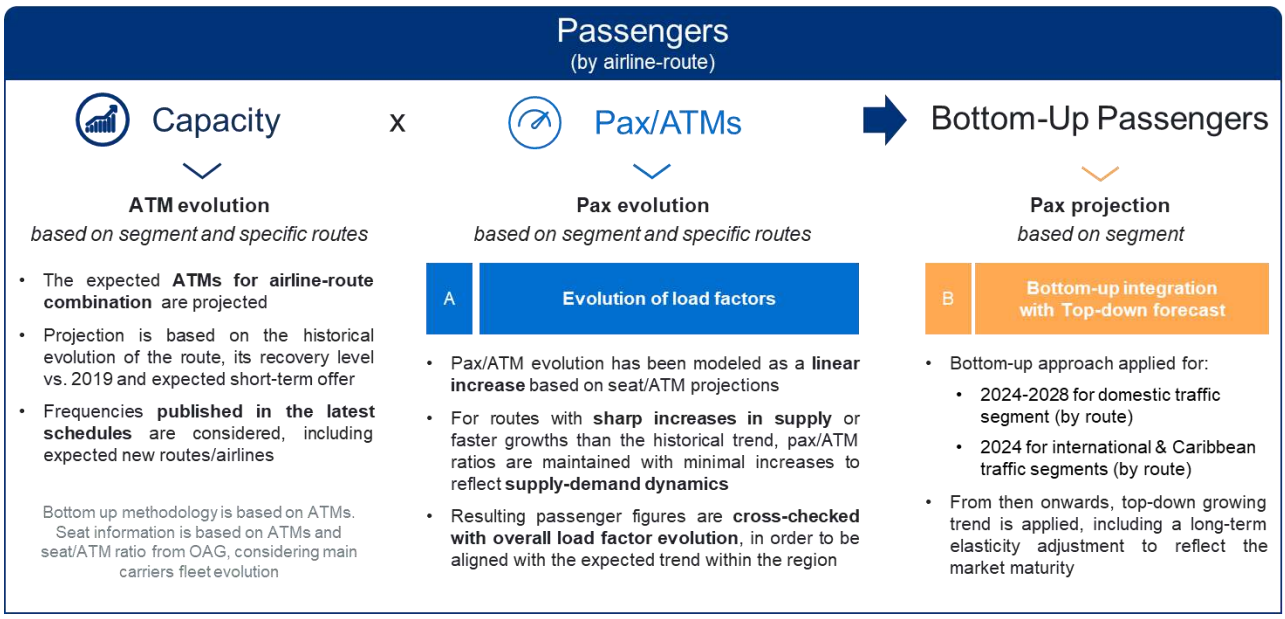


Figure 32. Bottom-up approach

Source: ALG Analysis

The objective is to provide a more empirical perspective on demand within the 2024-2028 timeframe that can be integrated into the top-down model from 2029 onwards, enhancing the accuracy of the model for the short/mid-term period. This approach involves a thorough analysis of airline activity and specific routes, considering new routes, tourism product, infrastructure changes, global economic drivers or any other phenomenon that might halt, accelerate, or disrupt traffic recovery or growth. The ultimate objective of this approach is to introduce essential refinements to the forecast, enabling it to account for nonlinear elements in the short-term that cannot be adequately addressed by the top-down analysis.

Domestic traffic is expected to continue growing at a stable pace due to additional frequencies scheduled on some existing routes, reflecting the expansion plans of InterCaribbean and Caicos Express. Salt Cay is only connected with Grand Turk by air. This route is expected to reach one daily frequency in the short-term.

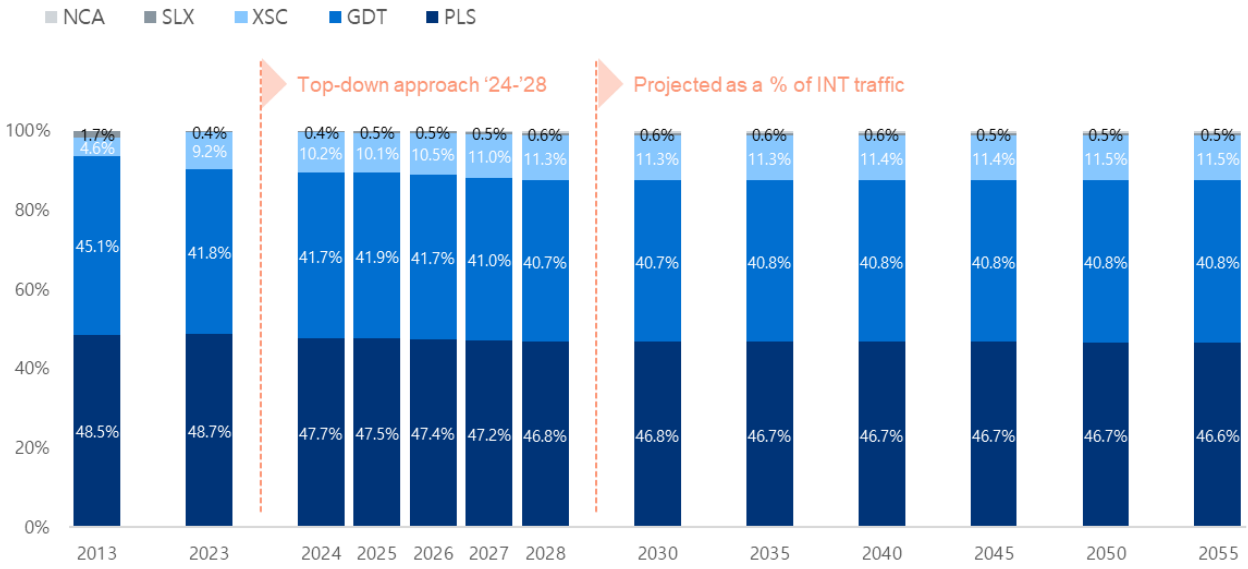


Figure 33. Domestic traffic projection: Distribution by airport (Mpax)

Source: ALG Analysis

The current number of passengers per ATM is 3. It is estimated to grow up to 5 pax/ATM in 2055, normally operated by 8-seats capacity aircraft.

3.2.4 Consolidated traffic forecast results

By integrating the top-down and bottom-up results, the forecast predicts that Salt Cay Airport will reach a volume of 5,000 passengers in 2055, with a CAGR of 5.5% for the period 2023-2055. Domestic traffic is expected to grow at 5.6%, and FBO traffic at 3.2%.

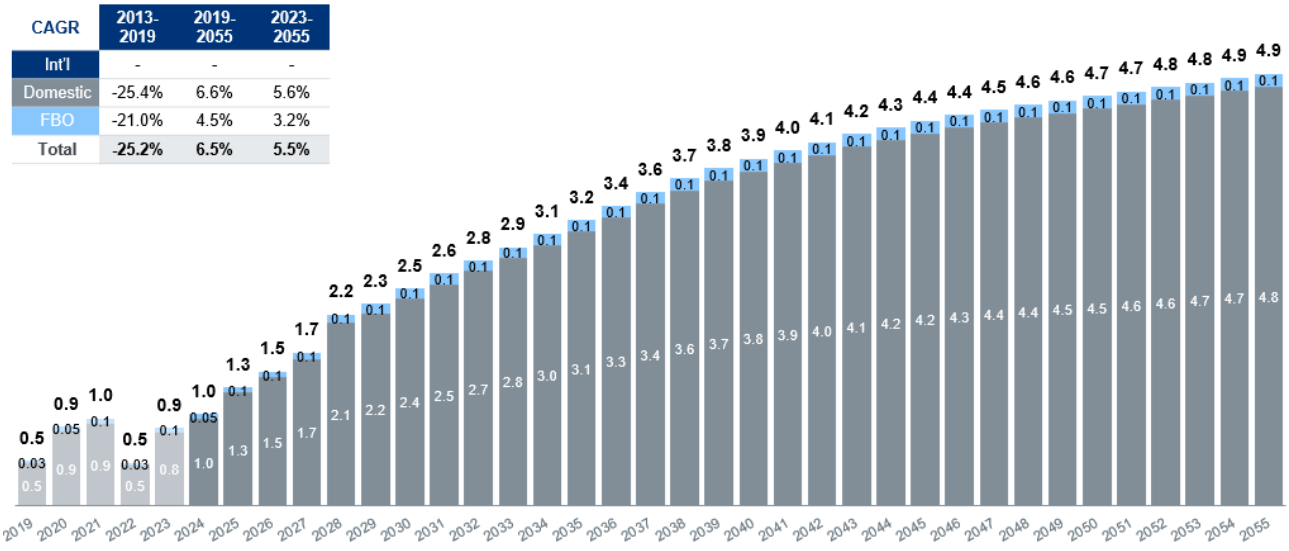


Figure 34. Salt Cay passenger traffic forecast (kpax)

Source: OAG, TCIAA, CAPA, ALG Analysis

Regarding the projection of aircraft movements, Salt Cay is expected to reach almost 1,100 operations in total by 2055, with a CAGR of 3.9% for the period 2023-2055.

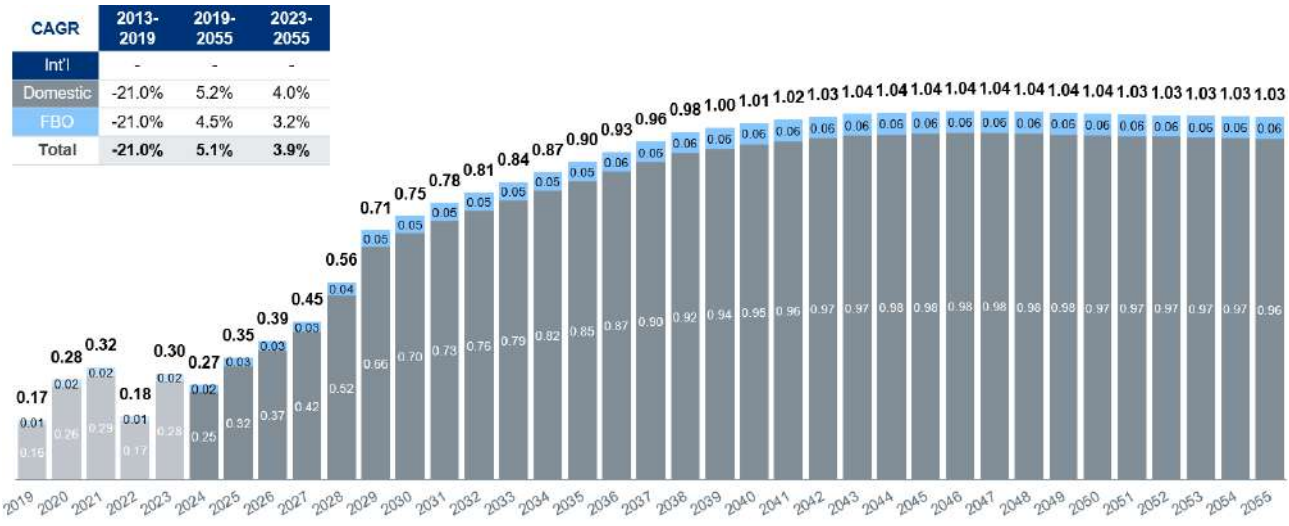


Figure 35. Salt Cay operations forecast (kATM)

Source: OAG, TCIAA, CAPA, ALG Analysis

3.2.5 Design parameters forecast

For the subsequent sizing of the infrastructure, it is not enough to simply have annual forecasts of passenger traffic and operations. It is also important to have certain parameters that indicate the infrastructure

requirements during peak operation periods. In this regard, it is crucial to know the expected volume of passengers and operations that the airport will need to process in an hour (passengers at peak hour or PHPs, and operations at peak hour or ATM/h, respectively), as well as the maximum expected demand for aircraft parking positions or stands.

The ATM/h and PHPs are projected using benchmarks from similar airports, which relate annual figures (ATMs and Mpax) to these peak hour parameters. These benchmarks consider the progressive reduction in the ratio between peak values and annual values as airport traffic grows due to the gradual flattening of the profile.

To select the design day for starting the projection, following the methodology recommended by IATA, the 30th hour criterion is used for PHPs (the day that contains the thirtieth busiest hour of the year). For selecting the design day for ATM/h, the peak hour criterion is used (the day that contains the busiest hour of the year), a more restrictive criterion to ensure capacity for the planned flight operations within the airfield.

The stands projection is based on the forecast of ATM/h, considering a progressive reduction due to the optimization of ground operations and turnaround times (taking into account the specific performance of the airport).

At Salt Cay Airport, the peak of operations in 2023 occurred between 9:20-10:20 and 14:20-15:20 on the design day, totaling 2 ATM/h, with 1 arrival and 1 departure, meaning 1 code A/B stand used simultaneously.

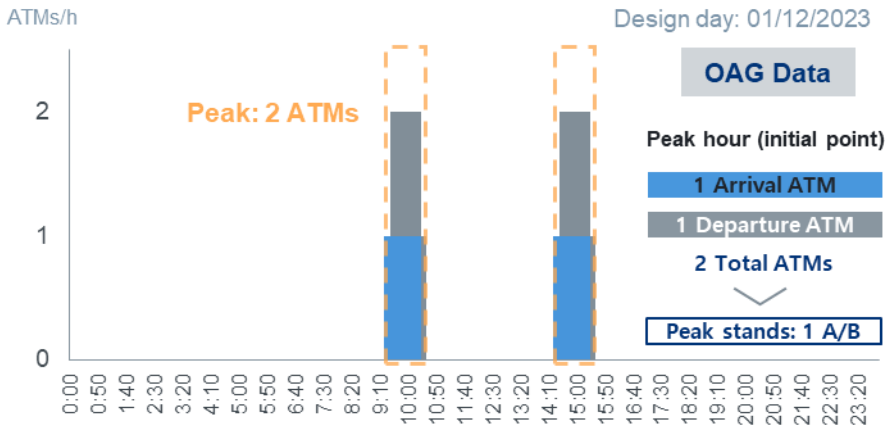


Figure 36. Daily profile of hourly operations at Salt Cay on the design day (2023)

Source: TCIAA, ALG Analysis

Projecting ATM/h using the benchmark, it is anticipated that the peak of commercial operations will stay at 2 ATM/h in 2055. This projection assumes that the rest of the hours on the design day will grow in proportion to the annual operations.

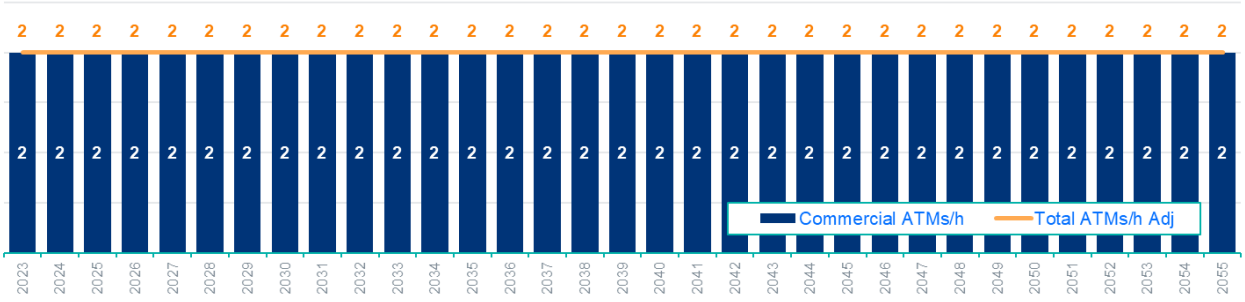


Figure 37. Projection of peak ATM/h at Salt Cay (2023-2055)

Source: TCIAA, ALG Analysis

Based on this projection and the maximum stand demand in 2023 (1 code A/B aircraft), it is estimated that the peak number of stands in 2055 will be steady, with 1 code A/B stand demand.

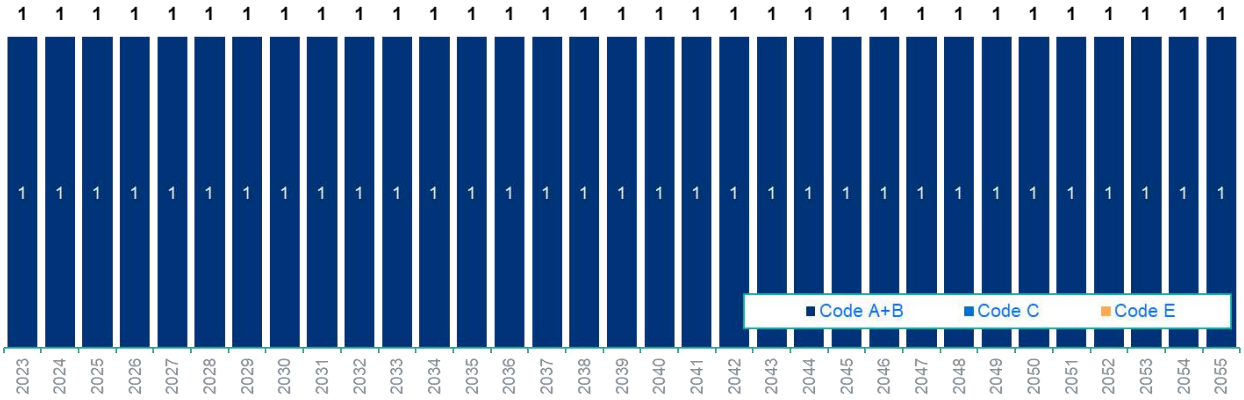


Figure 38. Projection of stand demand at Salt Cay (2023-2055)

Source: TCIAA, ALG Analysis

The design day for PHPs at SLX is the same as the one used for ATMs/h, which shows same peaks throughout the day. Regarding passengers, the design day in 2023 had its PHP peak between 9:20-10:20 and 14:20-15:20, as for ATMs, with a total value of 16 (8 arrivals and 8 departures).

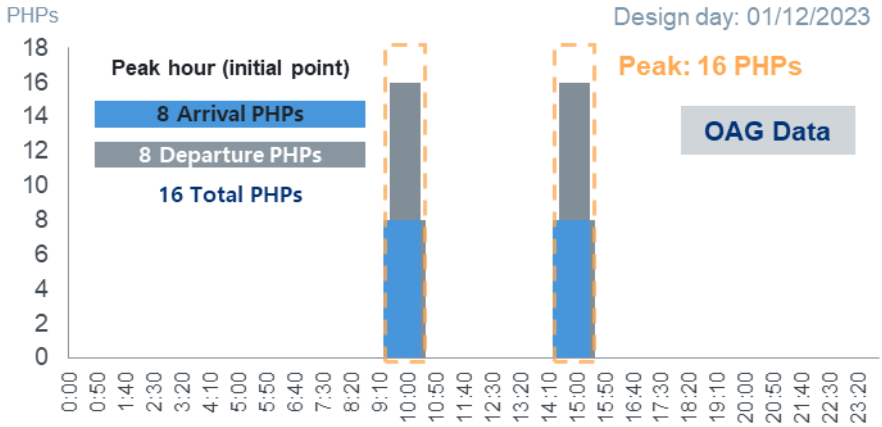


Figure 39. Daily profile of hourly passengers at Salt Cay on the design day (2023)

Source: TCIAA, ALG Analysis

For the projection of PHPs, a benchmark that relates annual traffic to peak hour traffic is also used. It is estimated that by 2055, the total volume will reach 19 PHPs (10 for arrivals and 12 for departures).

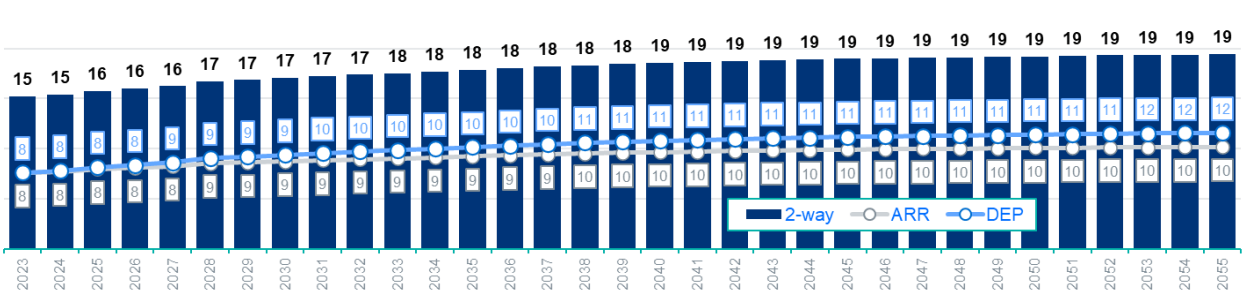


Figure 40. Projection of PHPs during peak hour at Salt Cay (2023-2055)

Source: TCIAA, ALG Analysis

4 Infrastructure requirements and investment plan

The objective of this section is to provide a detailed assessment of the airport's development requirements for each subsystem, in order to obtain the proposed airport development plan for the coming 30 years and its associated investment plan. To this end, this section includes:

- Capacity-demand analysis for each of the main subsystems (airfield, apron, passenger terminal and vehicle parking) to determine the infrastructure needs.
- General review of development alternatives for each of the subsystems requiring them.
- Recommended development plan for each subsystem, as a final alternative, and its investment plan.

4.1 Capacity-demand analysis

The different subsystems to be evaluated for Salt Cay Airport are presented below. For each subsystem, a different design parameter is selected to perform the corresponding analysis. This approach helps to obtain information on the possible saturation of the subsystem under study and the time horizon to reach saturation.

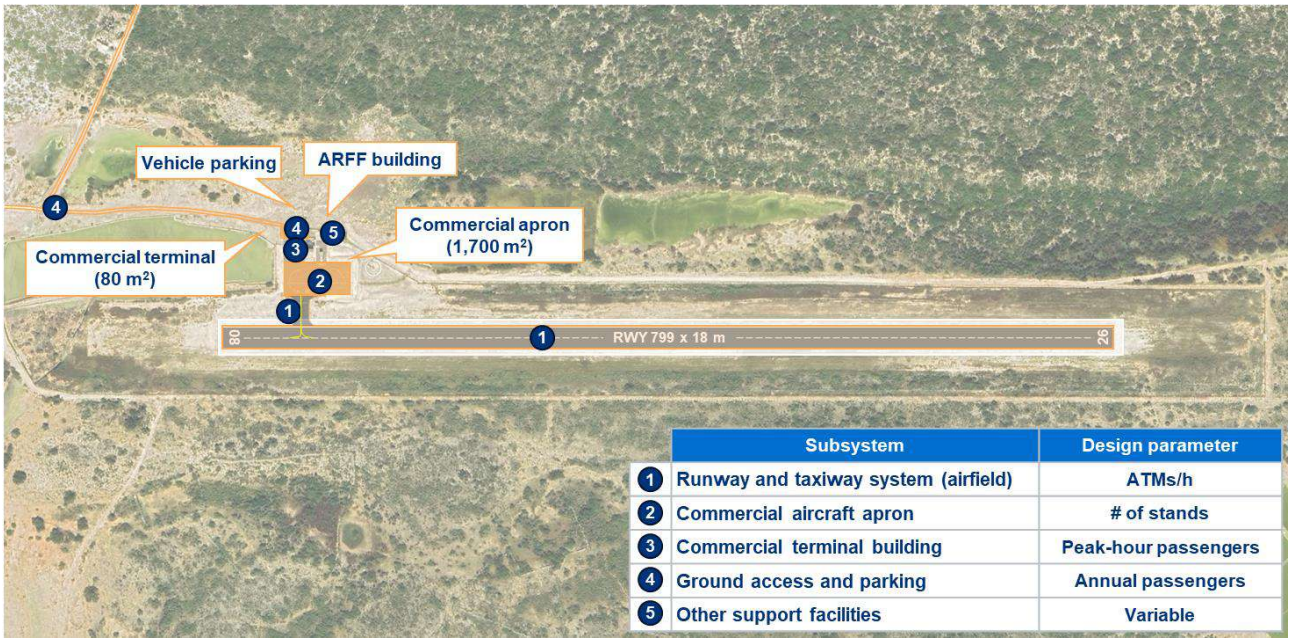


Figure 41. Subsystems to be assessed & design parameters

Source: Google Earth, TCI AIP, ALG Analysis

4.1.1 Airfield

The airfield study is split into two sections: one about the range analysis, and another one about the runway capacity in terms of ATMs per hour.

With a runway of 800 meters, SLX would satisfy the range needs for light aircraft types (Cessna 406 and similar) to reach all domestic and regional airports. Given that Salt Cay is expected to remain a domestic airport for local connectivity, it will not be necessary to extend the runway since no larger aircraft are expected at the airport.

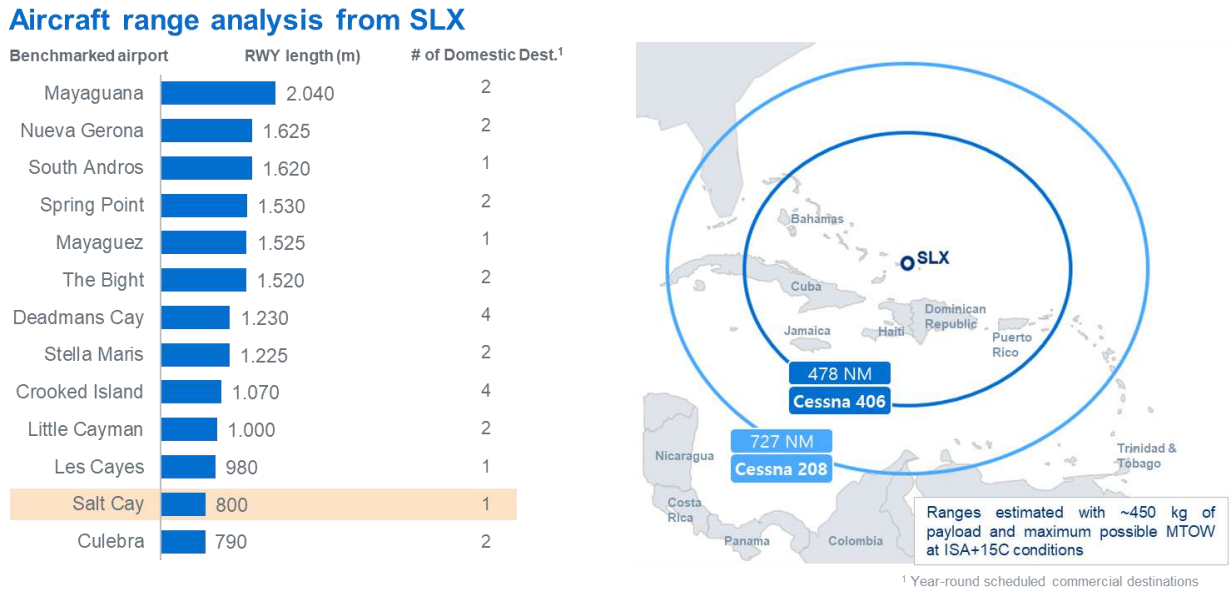


Figure 42. Aircraft range analysis from SLX

Source: Aircraft ACAPs, OAG, ALG Analysis

After the analysis of Salt Cay Airport, it is concluded that there is no need of further expansions, as there are not growth expectations in terms of ATMs/h. The existing infrastructure can absorb current and future estimated 2 ATMs/h in 2055 (see subchapter 3.2.5).

4.1.2 Apron

The apron capacity-demand analysis is based on the peak demand for aircraft parking positions (stands), in other words, the total number of aircraft on the ground at the airport at any given time. As evaluated in subchapter 2.2, the current stand configuration allows 2 code A/B aircraft parked simultaneously. Nevertheless, there are not designated overnight stands, and although this is not essential now given the current peak demand, general aviation aircrafts could be forced to park at the edge of the apron.

Figure 43. Current apron capacity

Source: Google Earth, TCIAA, TCI AIP, ALG Analysis

As for the airfield capacity, it is not expected having to expand the apron; the in-use infrastructure can respond to present and future demand of 1 stand at peak times (see subchapter 3.2.5).

4.1.3 Terminal building

As described above, the airport has an 80 m^2 terminal building with a common area for both arrivals and departures. When looking at the terminal traffic vs. area ratios, they fall within typical design ratios for this type of airports, with approximately 16,000 m^2/Mpax and 5 m^2/PHP.

Since peak hour traffic demand is not expected to significantly grow in the coming years, it can be concluded that the terminal is appropriately designed to handle expected traffic demand; during these peaks, there will be 1 aircraft at the airport with 8-10 pax/ATM (see subchapter 3.2.3).

Although there is no need for expansion, the terminal should undergo more maintenance and adequation of security standards.

4.1.4 Vehicle parking

There are not parking lots. Due to the airport access reality, it is not needed. The future arriving passengers could rent a bike or a golf cart, as it is done nowadays.

4.2 Development plan

For carrying out the development for the airport, two analyses were considered: the capacity-demand analysis shown in the previous section (see 4.1), and the current situation of the infrastructure (see chapter 2), along with the strategic and market vision of the airport.

By taking this into consideration, it can be concluded that:

- The airfield does not require any further expansion since the current infrastructure can accommodate the future demand. However, two turn pads at both runway ends would enhance safety and optimization for the aircraft operating at the airport.
- No additional expansion works are required in other airport subsystems such as the apron or the passenger terminal.

4.2.1 Airfield development

The previously commented turn pads will allow the aircraft to make the 180 degrees turn more safely.

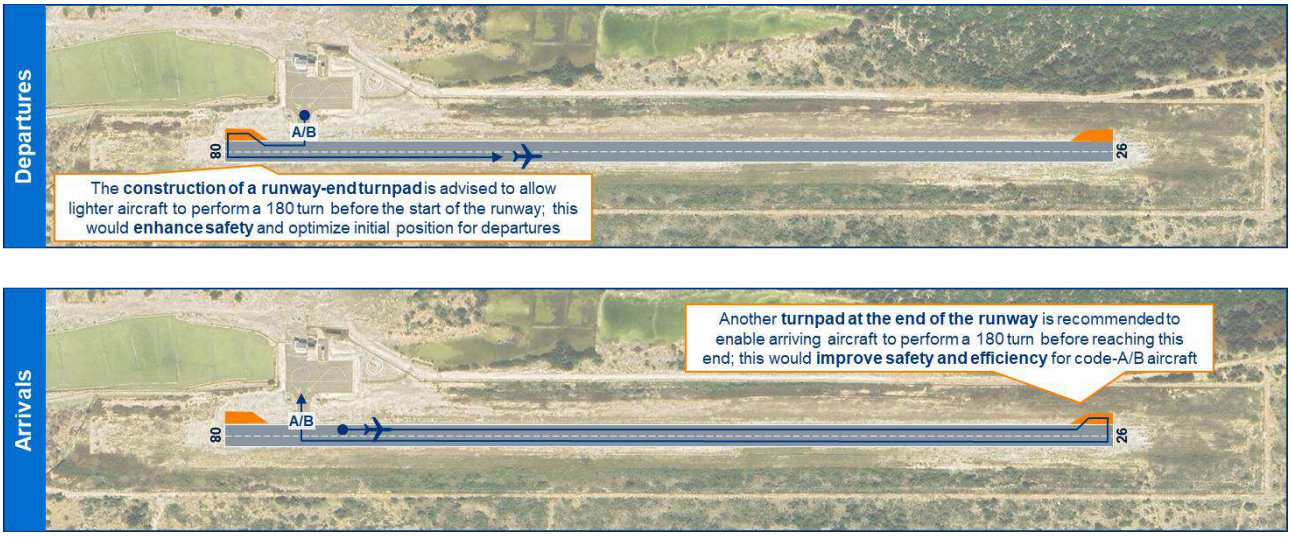


Figure 44. Turn pad development SLX

Source: Google Earth, TCIAA, TCI AIP, ALG Analysis

4.2.2 Development of other airport facilities

In the mid-term, certain actions should be performed to ensure that airport facilities comply with expect standards. For instance, the construction of a new ARFF station facility is a must, as the current one is clearly outworn and lacks proper maintenance. The fire truck maintenance often has mechanical issues and shows

signs of rust; adding a sheltered area for the fire truck will help reduce corrosion. Finally, the airport generator shows signs of lack of maintenance too.

4.2.3 Environmental development plan

The key for a successful environmental development of Salt Cay is considering external factors beyond the airport perimeter. E&S management programs should begin immediately, particularly considering coastal management outside the perimeter fence. Implementing sustainable construction criteria for new developments would also improve efficiency in operational management.

Here below, the main environmental-related proposed developments are presented:

1. Improvement of the water cycle from supply to water recirculation, especially drainage and sewage management.
2. Implementation of renewable energy infrastructure (ex. Photovoltaic plant for self-consumption in the terminal roof).
3. Designation of a waste and hazardous materials management center.
4. Incorporate materials resistant to salt erosion in existing infrastructure to improve the sustainability of buildings.

Figure 45. Main environmental-related proposed developments

Source: Google Earth, TCIAA, ALG Analysis

4.3 Investment plan

The purpose of the investment plan is to set out the costs associated with each stage of recommended development above by subsystem, in a chronological context. To do this, each proposed development is integrated into an overall development plan, the cost of each proposed action will be calculated, and finally ordered chronologically from today to 2055. In addition, a projection of major maintenance costs (RepEx, replacement costs) is made for each subsystem, both for the existing infrastructure and for the proposed new one, to obtain the total of annual long-term investments.

4.3.1 General development plan

Each subsystem development plan has been detailed in the last subchapter. In summary, the main works to be performed are the construction of the two runway-end turn pads:

1. Runway-start turn pad: Constructing a turn pad at the beginning of the runway to facilitate 180-degree turns for light aircraft before runway entry, enhancing safety and optimizing initial departure positioning.
2. Runway-end turn pad: Constructing a turn pad at the end of the runway to allow arriving aircraft to perform a 180-degree turn before reaching this end, improving safety and efficiency for code-A/B aircraft.
3. ARFF building: construction of an ARFF building of 50 m^2 along with a sheltered area for the fire truck.

Figure 46. Infrastructure development plan

Source: Google Earth, TCIAA, TCI AIP, ALG Analysis

4.3.2 Costs of planned actions

The approximate cost of each action to be carried out has been calculated, based on estimated dimensions (as detailed above in the development proposal) and unit costs from similar projects or, if applicable, benchmarks with historical data from various projects in the country adjusted for inflation and geographical area.

System	Item	USD 2022	Unit	Total surface	Total Cost[1] (MUSD)
Airfield	RWY turnpad construction	550	USD/sqm	1,000	0.4
Terminal	Terminal equipment - Security RX	125,000	USD/unit	1	0.1
Support and E&S Facilities	Waste storage facility	250,000	USD/unit	1	0.3
	ARFF Station	770	USD/sqm	50	<0.1
	RFFS Truck Sheltered	370	USD/sqm	125	<0.1
	Other additional costs[2]	-	-	-	<0.1
				Total Expansion CapEx	0.9

[1] Total Cost updated in real values including additional contingencies
[2] Contingency costs (5%), Preliminary costs (5%)

Figure 47. Estimated CapEx for Salt Cay development actions

Source: ALG Analysis

As presented before, there is a 10% additional cost assuming contingency and preliminary costs (5% each). The total estimated cost reaches 0.9 MUSD (real values 2024). This amount does not include maintenance CapEx costs, which will be detailed in the next subchapter.

As it can be seen in the figure below, all expansion works are scheduled to be completed entirely in the short/mid-term, between 2025 and 2027. These works include the turn pads construction, where the largest investment is allocated with ~0.4 MUSD, the waste storage and ARFF facilities, with ~0.3 MUSD and ~0.1 MUSD designated for the purchase of security RX terminal equipment.

Expansion CapEx	Total (MUSD)	%
RWY and TWYs	0.4	41%
Terminal	0.1	13%
Support and E&S	0.3	36%
Other	<0.1	9%
Total	0.9	

Figure 48. Required investment projection for new infrastructure development (CapEx)

Source: ALG Analysis

4.3.3 Maintenance CapEx forecast

On the other hand, the major maintenance investment plan is based on the life cycle of each existing and future infrastructure, and depends on the type of facilities, materials used to be built, year of construction or historical repair data, among others. It is important to emphasize that major maintenance does not include day-to-day repair costs, as these are operational costs; major maintenance only includes periodic and major maintenance costs. Unit costs are also calculated using data from similar projects and neighbouring countries adjusted for inflation and geographic area. Maintenance CapEx considers a percentage of reinvestment by the end of the lifecycle of each asset.

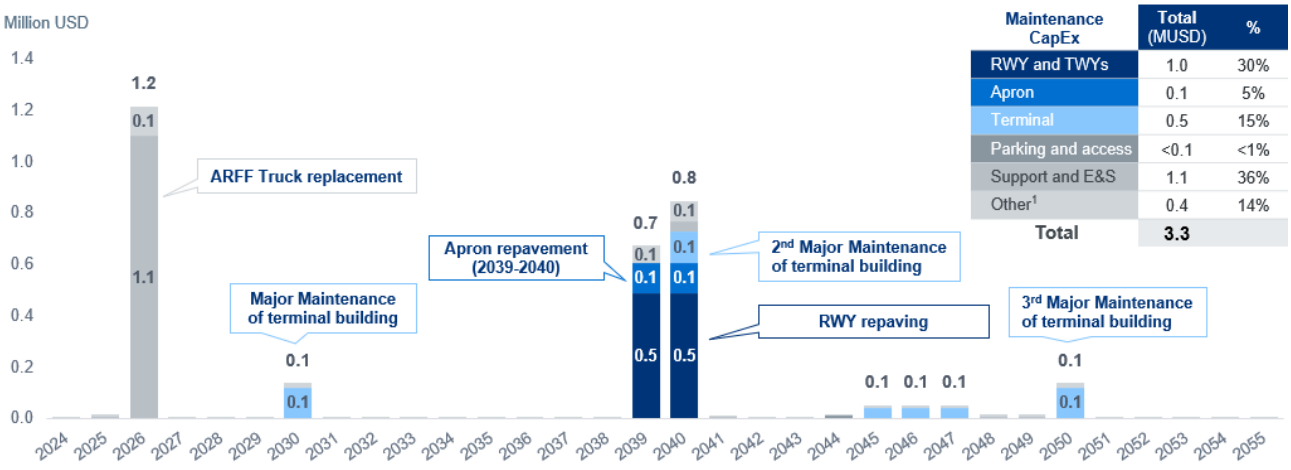
Item	USD 2022	Unit	Life cycle (year)	% Reinvest. /cycle
RWY and TWYs				
RWY repavement	66	USD/sqm	20	60%
TWY repavement	80	USD/sqm	20	80%
RWY turnpad repavement	100	USD/sqm	50	100%
Apron				
Commercial Apron repavement	114	USD/sqm	22	60%
Terminal				
Terminal reconfiguration	1,500	USD/sqm	10	100%
Terminal equipment - Security RX	125,000	USD/unit	20	100%

Item	USD 2022	Unit	Life cycle (year)	% Reinvest. /cycle
Parking and access				
Parking repavement	80	USD/sqm	20	100%
Support and E&S facilities				
Perimeter fence	16	USD/m	20	20%
RFSS Facility	185	USD/sqm	23	50%
ARFF Station	37	USD/sqm	15	10%
ARFF Trucks	1,090,000	USD/unit	30	100%
Waste storage	55,000	USD/unit	30	100%

Figure 49. Unit costs for Maintenance CapEx estimation

Source: ALG Analysis

As the previous CapEx investment projections, the following figure is the major maintenance investment plan for the period 2024 to 2055:



Maintenance CapEx	Total (MUSD)	%
RWY and TWYs	1.0	30%
Apron	0.1	5%
Terminal	0.5	15%
Parking and access	<0.1	<1%
Support and E&S	1.1	36%
Other[1]	0.4	14%
Total	3.3	

Figure 50. Maintenance CapEx plan (2024-2055)

Source: ALG Analysis

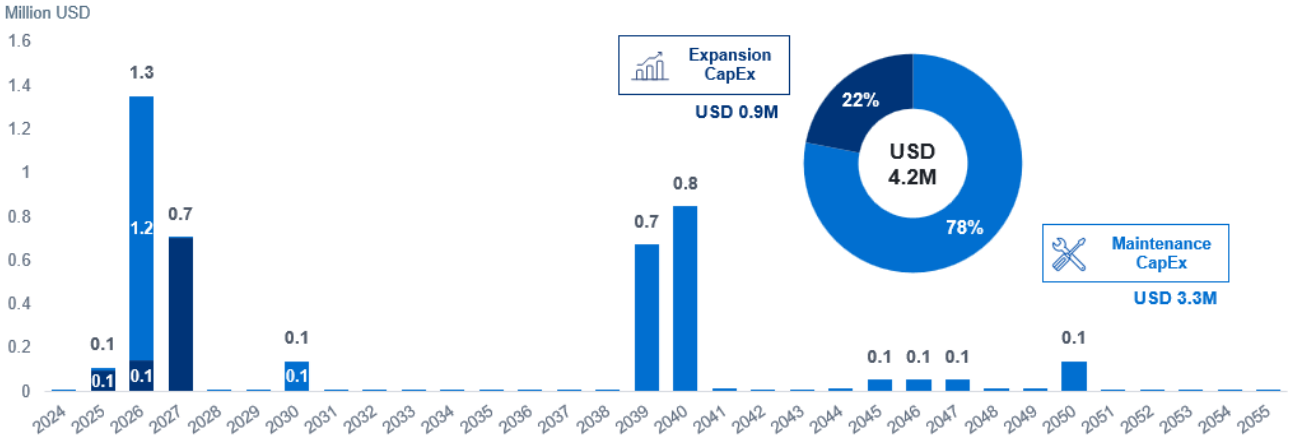
Major maintenance at SLX is expected in the mid-long term, even though in the short-term the ARFF truck would need to be replaced, and environmental and social management works are foreseen (2026-2030, ~1.1 MUSD). In the mid/long-term, the largest RepEx is demanded by the airfield, with the RWY and apron expected to undergo repavement works, along with maintenance of terminal building (2039-2040, ~1.5 MUSD), with additional ~0.4 MUSD investment foreseen between 2045 and 2050 for terminal building maintenance.

4.3.4 Airport investment plan

In conclusion, as shown in figure below, it is anticipated that a total of 4.2 MUSD will be required between 2024 and 2055 at Salt Cay Airport to:

I. adapt the infrastructure to the expected growth in demand to provide an adequate level of service for airport users (0.9 MUSD for expansion CapEx), and

II. maintain the infrastructure in optimal condition to ensure adequate levels of safety and passenger satisfaction (3.3 MUSD for maintenance CapEx).



	2024-2025	2026-2029	2030-2055	Total 2024-2055
Expansion CapEx	0.1 MUSD	0.8 MUSD	-	0.9 MUSD
Maintenance CapEx	<0.1 MUSD	1.2 MUSD	2.1 MUSD	3.3 MUSD
Total	**0.1 MUSD**	**2.0 MUSD**	**2.1 MUSD**	**4.2 MUSD**

Figure 51. Salt Cay Integrated Investment Plan (2024-2055)

Source: ALG Analysis

5 Long-term development plan and land reservation

This Master Plan is focused on the development of Salt Cay Airport for the next 30 years. Thus, this document contains all needed development proposals to process, with an adequate level of service, the forecasted air traffic at the end of this period, which amounts up to 5,000 passengers in 2055.

However, a key issue when developing a Master Plan is to assess the potential development of the airport beyond the studied period. This is important with the objective to ensure land reservation within the airport perimeter in case that it is required in the future for further areas or facilities developments, avoiding less relevant constructions be undertaken on those terrains.

In this sense, as shown in earlier chapters, the investment plan for the next 30 years mainly contemplates the runway turn pad construction to guarantee a safer 180 degrees turn for the aircrafts operating at the airport, as well as certain environmental and social management works.

In the further long-term, if needed, the expansion of the commercial apron, the terminal building, the construction of parking lots and the expansion of the existing runway could be performed. All these potential developments are subjected to long-term passengers' estimation and ATMs increase beyond the estimated in 2055, in case general aviation boost on the island.

The following figure shows a high-level proposal for this potential very long-term airport development, also showing the land that should be set aside for future developments, ensuring that it has no impact on the natural growth of Salt Cay Airport.

Figure 52. Future potential developments and land reservation

Source: ALG Analysis

6 Drawings

This chapter contains the main drawings carried out during the development of this Conceptual Master Plan. The following drawings are included:

- Airport general layout – Current situation
- Terminal area detail – Current situation
- Airport general layout – Development proposal
- Terminal area detail – Development proposal

CLIENT:	CONSULTANT:	PROJECT:	SCALE:	DATE:	DRAWING NAME:	DRAWING NUMBER:
TCIAA TURKS AND CAICOS ISLANDS AIRPORTS AUTHORITY	ALG	STRATEGIC MASTER PLAN FOR THE TCIAA	1: 2.500 0 25 50m ORIGINAL A3 GRAPH	AUGUST 2024	SALT CAY AIRPORT CURRENT SITUATION GENERAL LAYOUT	4.1.1 PAGE 1 OF 1

CLIENT:	CONSULTANT:	PROJECT:	SCALE:	DATE:	DRAWING NAME:	DRAWING NUMBER:
TCIAA TURKS AND CAICOS ISLANDS AIRPORTS AUTHORITY	ALG	STRATEGIC MASTER PLAN FOR THE TCIAA	1: 500 ORIGINAL A3 — 0 5 10m GRAPH	AUGUST 2024	SALT CAY AIRPORT CURRENT SITUATION TERMINAL AREA	4.1.2 PAGE 1 OF 1

CLIENT:	CONSULTANT:	PROJECT:	SCALE:	DATE:	DRAWING NAME:	DRAWING NUMBER:
TCIAA TURKS AND CAICOS ISLANDS AIRPORTS AUTHORITY	ALG	STRATEGIC MASTER PLAN FOR THE TCIAA	1: 2.500 25 50m ORIGINAL A3 GRAPH	AUGUST 2024	SALT CAY AIRPORT DEVELOPMENT PROPOSAL GENERAL LAYOUT	4.2.1 PAGE 1 OF 1

CLIENT:	CONSULTANT:	PROJECT:	SCALE:	DATE:	DRAWING NAME:	DRAWING NUMBER:
TCIAA TURKS AND CAICOS ISLANDS AIRPORTS AUTHORITY	ALG	STRATEGIC MASTER PLAN FOR THE TCIAA	1: 500 ORIGINAL A3 · 0 5 10m GRAPH	AUGUST 2024	SALT CAY AIRPORT DEVELOPMENT PROPOSAL TERMINAL AREA	4.2.2 PAGE 1 OF 1

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