strategy&

12/09/2018 Final report Guernsey Air Links

Guernsey Air Links

Strategic options review
Part A: Final report

pwc

Contents

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Introduction

Background and scope

The States of Guernsey (SoG) has set out its objectives for Air Transport as follows:

- Maintain and expand its air links so that Guernsey is well connected with the UK, other Channel Islands and Europe.
  - Provide guaranteed connectivity to lifeline and strategic routes to the Island.
  - Encourage air traffic from all other routes when this generates a significant net economic or social benefit to the Island.
  - Stimulate incremental local air passenger traffic (resident and business), and visitor passenger traffic (leisure and business) to support the achievement of visitor growth objectives.
- Ensure that these air links are reliable, sustainable and affordable to all parts of the Island's population and the visitor market
- Ensure that air links enable existing business to function appropriately and support the expansion of all types of economic activity

Determining the most cost-effective way to achieve these goals is complex, not least because it requires the consideration of a number of inter-related factors including:

- The airport and its infrastructure
- Route licencing
- The role and objectives of Aurigny
- Interplay between other modes of transport (in particular sea links)
- Underlying demand for travel, including the different requirements and expectations of residents, tourists and business travellers

In order to assist the States of Guernsey in its discussions and decision-making, PricewaterhouseCoopers CI LLP ('PwC') has been engaged to consider the options relating to the airport and its infrastructure.

This report is our draft report on Part A of our assistance. The proposed scope for work in Part B is set in the Executive Summary.

The scope of this phase of our work was as follows:

- Review all relevant and available studies, agreements or other literature that the SoG and/or key stakeholders have access to. Identify any areas where there are gaps, and any areas where lack of quality means we don't have sufficient confidence in the conclusions.
- Conduct an initial round of stakeholder engagement to seek out different opinions, perspectives and any other information that would be relevant.
- Conclude, based on the work available and the initial stakeholder engagement, on the list of feasible options and give a preliminary evaluation of their relative pros and cons.
- Lead a workshop with the SoG steering group to feed back our findings and discuss the best way forward
- Provide a written report outlining our findings, conclusions and recommendations
- Co-develop, with the SoG, a more detailed, focused and efficient programme of work and stakeholder engagement that would enable SoG to determine the most suitable option(s).

We have consulted with key stakeholders and reviewed a range of existing studies

States of Guernsey

- *Guernsey Air Links Steerco* – Gareth Jones, Mike Hopkins, Guillaume Saunal, Lily Prus
- *States of Guernsey Deputies* – Gavin St Pier, Lyndon Trott, Charles Parkinson, Jan Kuttelwascher
- Colin Le Ray – General Manager, Ports
- Simon McPhail – Deputy Director, Civil Aviation Authority

Airlines

- Mark Darby – CEO, Aurigny
- Vincent Hodder – CSO, Flybe
- Tom Barrasin – CCO, Blue Islands
- Nick Magliochetti – CEO, Waves
- Ali Gayward – UK Country Manager, easyJet
- Martin Mares – Airport Development & Procurement Manager, easyJet
- Richard Smiles – Flight Operations Technical Specialist, easyJet
- David Buckley – Flight Operations Engineer, easyJet
- Alan Campbell – Group International Relations Manager, IAG (British Airways)
- *Pilots* – Jerry Girard, Tim Robins

Other stakeholder groups

- Andrew Muter – Chief Executive, States of Alderney
- Barrie Baxter – President, Chamber of Commerce, Karel Harris (Chair Tourism Sub-Group), Ian Walker (Tourism), Ian Burdekin (Chair Retail sub group)
- Linda Johnson, James Ede-Golightly – Institute of Directors
- Tony Mancini – Deputy Chairman, Guernsey International Business Association (GIBA)
- Paul Smith – Chairman, Guernsey Investment Fund Association (GIFA)
- Michael Byrne – CEO, CICRA
- Robert Mackenzie – Tour Operator, C. I. Travel Group
- Klaus Bühring – Head of Product Management, TUI Group

Scheduled consultations

- *Attractions Engagement Group*
- *Hotel Engagement Group*
- *Self-catering Engagement Group*
- Clive McMinn – Chairman, Confederation of Guernsey Industry (CGI)

Sourced used for this report

- ASM Phase 1 Guernsey Market Review 2015
- ASM Phase 2 UK and Europe Review 2016
- ASM Phase 3 Dublin, Luton, Gatwick and Europe Review 2016
- ASM Phase 4 Air Service Development Opportunities at Guernsey Airport 2016
- GCI York Aviation Economic Assessment 2009
- Guernsey Airport Business Plan 2018-2022
- Guernsey Airport Annual Reports
- States of Guernsey Aurigny Strategic Review 2017
- States of Guernsey Review of Air Transport Licensing 2018
- States of Guernsey Economic Development Strategy, 2018
- States of Guernsey Facts & Figures, 2017
- States of Guernsey Scrutiny Review: Security of Strategic Air Links, 2015
- States of Guernsey & States of Alderney Extended Runway For Alderney Economic And Financial Analyses, 2017
- States of Guernsey Travel Surveys
- States of Jersey Tourism Statistics
- States of Jersey Transport Statistics
- Visit Jersey Business Plan 2017
- Guernsey Tourism Strategic Plan 2015 -2025

Executive summary

The air links ‘trilemma’

Guernsey’s air links strategy will need to make trade-offs between connectivity, reliability and affordability

Air links are recognised as key to the economic and social wellbeing of island communities. States of Guernsey (SoG) faces the challenge of maintaining and growing its air links to support economic development as well as providing essential transport services to its community.

The total number of passengers flying to/from Guernsey has been declining at 1.3% p.a. from c. 900k in 2008 to c. 815k in 2017. This is in contrast to growth in total EU air transport of c. 1.2% p.a. and growth in Jersey passenger movements of 2.3% p.a. Guernsey’s leisure and business travel have been declining most strongly.

There are three main attributes that define the quality of air links: **connectivity**, **reliability** and **affordability**.

1. **Connectivity** represents how easy it is to get to the destination of your choice. It includes:
    - The number of destinations served directly
    - The quality of those destinations in terms of their onward connections. For example, flights to a major hub such as Heathrow provides onward flights to anywhere in the world.
    - The frequency and convenience of flight schedules.
2. **Reliability** represents how often flights leave/arrive on time. It includes:
    - Resilience to bad weather conditions
    - Maintenance of the existing fleet
    - Availability of contingency aircraft if needed
3. **Affordability** refers to the cost of tickets, both in absolute terms and relative to similar routes from comparable destinations

These three attributes are often competing. For example increasing the frequency of flights to a major hub will often imply higher fares.

Furthermore, the relative importance of each attribute varies for different passenger groups

- Business travellers tend to prioritise connectivity and reliability over price given time constraints and the value on punctuality and predictability of services
- In-bound leisure travellers tend to prioritise affordability and a range of access points, but are more flexible on flight schedules and timing
- Residents and VFR (Visiting friends and relatives) travellers tend to prioritise both affordability and reliability of services, and in the case of Guernsey and Alderney, seek lifeline services to both London (Gatwick) and Southampton

On the next page we set out what each group has told us specifically on Guernsey, and how Guernsey’s current air links perform against each metric.

We note that the decline in passenger numbers is not solely due to factors relating to the air transport service, e.g. SoG consideration of its Tourism Strategy highlighted a need to invest in Guernsey’s product offering (e.g. hotels, attractions and marketing) in order to compete with other holiday destinations. This was reinforced by the findings and recommendations of the Strategic Review of Guernsey’s Tourism Product Offering completed by PwC for the C*f*ED in November 2017

Nonetheless, Guernsey’s air links need to support and enable Guernsey’s aspirations for economic growth as well as provide a critical service for residents on the island.

Current performance and perceptions

Guernsey has a high value economy but a small population; expectations for air links are high and there is a strong feeling that aspirations for that service are not being met

1. Connectivity

What the data says…

- Guernsey currently serves 16 routes but does not have direct access to a global connecting hub e.g. Heathrow, Schiphol.[(1)]
- Guernsey is relatively well connected for an island of its size, e.g. scoring higher on connectivity than the Isle of Man, but performs lower than Jersey through serving fewer destinations and with less seat capacity.

What we heard from stakeholders…

- Business and tourism hold the view that lack of connectivity is harming Guernsey's competitiveness as a destination both in the eyes of travelling executives and the recruitment of employees.
- Business travellers value connectivity and frequency highly, and in particular value reliable early morning/late evening flights to enable day trips and efficient use of time.
- Business stakeholders highlighted the shortcomings of Gatwick as a connecting hub.

2. Reliability

What the data says…

- Bad weather delays have been more frequent since 2015.
- Delays often occur in the morning, disproportionately affecting business travellers and impacting through the rest of the day.

What we heard from stakeholders…

- Both businesses and residents are incurring additional costs from disruption e.g. travelling the day before critical meetings or flight connections to ensure punctuality.
- Stakeholders were more accepting of weather delays than delays due to maintenance or aircraft availability issues.

3. Affordability

What the data says…

- Fares from Guernsey to Gatwick are typically more expensive than fares from Jersey, and have risen since Flybe ceased its service in 2014.
- Respondents noted that self-connecting flights were subject to 'double APD' as single-ticket options were limited.[2]

What we heard from stakeholders…

- Air fares are a particular concern for residents, for whom they pose a barrier to social inclusion and essential services.
- There is a fear that the high cost of air travel to and from Guernsey is deterring new business and tourism, and even driving some businesses and residents to leave the island.

A word on Jersey

- While comparisons with Jersey are inevitable, it should be noted that Jersey has 70% more residents and over twice as many visitors. However, it does currently have competition on its key air routes e.g. Gatwick, and has capacity to UK destinations which are unavailable or infrequently served from Guernsey.
- Though we believe that Guernsey has relatively good air connectivity given its size, it clearly has some deficiencies in terms of infrastructure, competition and market reach.
- Resident expectations will always be formed in comparison to Jersey and some of the above differences could be overcome through both market-based and / or infrastructure options.

Note: (1) A 'Connecting hub' is the centre of a hub-and-spoke network for a base carrier with a business model centred around transfer passengers.
(2) Air Passenger Duty (APD). Given Aurigny is not a member of any alliance nor code-shares, passengers pay APD multiple times e.g. on connecting flights from Gatwick.

Industry context

Understanding the features of the airline market is key when considering air access options for Guernsey

Current aircraft that access the existing Guernsey runway

- There are currently c.680 aircraft in service in Western Europe that could land on Guernsey, with a further 50 currently on order.
- The majority of these are flown by regional carriers, including Flybe, BMI and KLM. Nearly half of these aircraft are in operation in the UK, Ireland, France and Benelux.
- Regional aviation is a recognised segment of the aviation industry, with regional airlines playing a key role in connecting communities and feeding major hubs.
- In recognition, regional jets and turboprops are a key market segment for manufacturers such as Embraer, Bombardier and ATR, all of whom are investing in their portfolio and introducing new aircraft.

Features of Low Cost Carriers (LCCs)

- While average fares are lower, the LCC business model implies a number of factors that should be considered
  - LCCs are not 'connecting' airlines, in that they fly point-to-point, do not normally serve hub airports, and do not typically sell connecting flight tickets.
  - LCCs are more likely to adapt capacity to seasonal demand, adding in extra capacity during peak summer months but reducing capacity during winter.

Features of Low Cost Carriers (LCCs) (cont.)

  - LCCs price dynamically; headline pricing may be attractive but last-minute prices can be as (or more) expensive than network carriers.
  - LCCs may operate a lower frequency on any given route due to the larger size of their average aircraft. Scheduling of flights is often a function of aircraft availability rather than traveller requirements.
  - LCCs manage their route network actively, meaning that they can shut down routes at short notice if they don't meet the required commercial thresholds.
  - LCCs expect significant market support in order to base aircraft and grow route networks. However, they have the fleet and scale to expand quickly and develop new markets and routes.
- LCC behaviour can be managed through commercial agreements but requires clear goals and objectives in order to maintain a long-term relationship.
- Examples of the possible fragility can be seen with Ryanair's relationship with Stansted Airport, among others
- Additionally, the Isle of Man is an example of an airport where the introduction of an LCC, in this case easyJet, has had negative impacts on scheduling.

Airline context

The airlines that have been in discussion with States of Guernsey prior to and during the initial consultation

Airline	Business model	Hubs	Channel island operator		Main priority	Fleet (see following pages)	
			Guernsey	Jersey		Aircraft type	#
flybe	Regional airline	BHX MAN	✓	✓	Serving business and VFR travel in/out of regional UK airports	ATR72 Bombardier Dash 8 Embraer 175/195	5 54 17
easyJet	Low-cost carrier (LCC)	LTN LGW	✗	✓	High load factor point-to-point flights in UK and Europe	A319/320	314
British Airways	Network carrier	LHR LGW	✗	✓	Feeding international travel globally through LHR	A319/320/321	134
Eurowings	Regional airline / LCC	DUS	✓	✓	Low-cost airline from the Lufthansa Group, specialising in direct flights within Europe from Germany	A319/320 Bombardier Dash 8 B737	78 20 7
Ryanair	Low-cost carrier (LCC)	STN DUB	✗	✗	High load factor point-to-point flights in UK and Europe	B737	444
BA CityFlyer	Regional airline	LCY EDI	✗	✗	Serving business and VFR travel in/out of regional UK airports	Embraer 170/190	22
KLM (Incl. Cityhopper)	Network carrier	AMS	✗	✗	Feeding international travel globally through AMS	Embraer 175/190 A330 B737	49 13 50
CityJet	AMI leasing provider (formerly regional airline)	n/a	✗	✗	Focus on wet leasing from October 2018	AVRO RJ85 Bombardier CRJ900	14 24
Loganair Scotland's Airline	Regional airline	GLA	✓	✓	Serving travel to/from Scotland	Dornier 328 Saab 340/2000	2 17
flybmi	Regional airline	EMA	✗	✗	Formerly BMI regional	Embraer 135/145	19

Source: Desktop research, PwC analysis

Aircraft context

The aircraft used by relevant airlines

Manufacturer	Aircraft	Airlines	Jet / Turboprop	Description	Able to land on current Guernsey runway?
ATR	ATR 72 	Aurigny, Blue Islands, Flybe, HOP!, Eastern Airways	Turboprop	Slower than jet aircraft but cheap to operate	Yes
Bombardier	Dash 8 – Q400 	Flybe, Eurowings	Turboprop	Jet-like performance, longer range and faster than ATR	Yes
	CS100 / Airbus A220 	Swiss International, airBaltic, Odyssey (on order)	Jet	Narrow-body, twin engine, medium range jet-aircraft	Yes
Airbus	319 	British Airways, easyJet, Eurowings	Jet	Short-medium range narrow-body, commercial aircraft	No
	320 	British Airways, easyJet, Eurowings	Jet		No
Embraer	190 	KLM	Jet	Note 195 has larger engines than the 190 meaning can take off shorter runways	No
	195 	Aurigny, Flybe	Jet		Yes
Boeing	737 	Ryanair, Eurowings	Jet	Requires longer runway	No

Jet vs. Turboprop: *Historically jet aircraft have had a better safety record than propeller aircraft, while customer feedback is that propellers are slower, noisier and have less capability for hand baggage*

Note: (1) Total for manufacturer

From priorities to runways

For each connectivity priority, the table shows the airlines and aircraft that could provide it; a runway extension is not necessarily required to achieve most priorities

Priorities	Why connect here?	Which airlines serve this airport?	Which aircrafts do they use?	What runway length is required?(1)
London Heathrow New route	• Fastest connections into London • Highest connectivity of all London airports and potential hubs	• British Airways • Flybe	Airbus A319/320	**1,700m (BA)** (2)
			Bombardier Dash 8 Q400	1,463m (Flybe)
London Gatwick Maintain route	• Second best connections into London • Second highest connectivity of all London airports, especially good for leisure	• Aurigny • British Airways • easyJet • Flybe	ATR-72	1,463m (Aurigny)
			Airbus A319/320	**1,570m (EZY)**(3) **1,700m (BA)**
			Bombardier Dash 8 Q400	1,463m (Flybe)
			Embraer 195	1,463m (Aurigny)
UK regional New direct routes	• Most popular destinations for Guernsey residents' onward travel • Allow access into regional carrier networks	• Aurigny • easyJet • Flybe	Airbus A319/320	**1,570m (EZY)**
			Bombardier Dash 8 Q400	1,463m (Flybe)
			Embraer 195	1,463m (Aurigny)
Other connecting hubs New routes	• Provide largest increase in connectivity, second only to Heathrow • Allow access into LCC networks	• KLM (AMS) • Flybe (CDG)	Airbus A319/320	**1,570m - 1,700m**
			Bombardier Dash 8 Q40	1,463m (Flybe)
Wider leisure and business destinations New routes	• Grant business access to wider market • Improve social inclusion on Guernsey and leisure travel options for residents	• All of the above	General A319/320 operations	**1,570m - 1,700m**

Key
Existing length
Requires extension

Note: (1) Indicative only, precise length requirement depends on payload specifications; (2) Per communication with British Airways; (3) Per correspondence with easyJet, allowing for potential payload restrictions on A320 in certain weather conditions; (4) See map for easyJet on next slide.

Option set

The option set is therefore quite broad; runway extensions are only one subset of the options open to the States of Guernsey

The following list of initiatives is non-exclusive, with the likely most acceptable solution being a combination of both infrastructure and market-based options.

We note that the expenditure profile of these options varies.

- Infrastructure options, such as extending the runway, have significant upfront sunk costs but may be considered an investment for the future. These options will require long-term business case analysis and accurate construction costings so that the 'best' option for Guernsey can be identified. The potential costs of infrastructure projects are not simply financial, but given, the nature of Guernsey, can be environmental and social. Therefore, such infrastructure options will be politically sensitive and impact both direct users and other stakeholder groups.

- Market-based options (e.g. route support or regulatory change) will require ongoing expenditure and may bring increased connectivity by changing the basis of investment decisions by airlines. These options can target particular outcomes, but need to be carefully considered in order to provide lasting legacy.

- Finally, it should be noted that any infrastructure option will require some form of market-based solution in order to attract and maintain new aviation services. This means that any set of solutions will have both ongoing capital investment (apex) and operational investment (opex) in some combination.

The timing of impact of any solution set will be a critical factor in States of Guernsey decision-making criteria. The ability to provide short term impact may outweigh longer term solutions which will face greater risk of obsolescence or market change.

The focus of this report is primarily around infrastructure and market-based options. We have not been asked to review Aurigny's strategy or operating model, nor the current air licensing framework, both of which would constitute significant market-based strategic mix of options.

Initiatives considered by our review and consultation

Runway extension options

1. 1,570m (max within current airport perimeter)
2. 1,700m (same as Jersey)
3. 1,800m (original Easyjet request)
4. 2,000m (Ryanair)

Other infrastructure options

5. ILS and navigation improvements

Market-based options

6. Route support and development to acquire a new connecting hub e.g. London Heathrow
7. Route development support and incentivisation for both existing and future operators to provide improved connectivity and destination range
8. Potential use of Public Service Obligations (PSOs)[1] structures
9. Liberalisation of the Guernsey aviation market

Airline options (identified but not considered in this report)

9. Aurigny fleet review
10. Aurigny interlining / codesharing options
11. Virtual airline [2]

Note: (1) Public Service Obligations (PSOs) are obligations imposed on an organisation by legislation or contract to provide a service of general interest.
(2) Provision of wet-lease services under an Aurigny AOC.

Infrastructure options (1/2)

What are the considerations

The current runway length does not allow for the commercial operation of the Airbus A319/A320 family or Boeing B737 family of aircraft, which together represent the short-haul 'workhorses' for both low cost carriers (LCCs) and network carriers in Europe.

One benefit of a runway extension would be to make the airport accessible to these aircraft and airlines, in particular LCCs such as easyJet (which operates from Jersey). It is hoped that this increase in capacity and potential competition would lead to a reduction in airfares.

Each incrementally larger runway extension brings additional optionality to Guernsey in terms of the aircraft it would enable to land, and hence the number and type of airlines that could (in theory) operate into Guernsey. An extension beyond the current airport boundary is also necessary for the implementation of a ILS CAT 3 solution to improve poor weather access to the airport.

However, any option that extends the runway beyond the current airport boundary will entail additional financial, environmental and social costs. This will include land purchases and building and community relocations.

Whilst the provision of a longer runway will provide sufficient infrastructure for expanded airline operations, there is no guarantee that airlines will provide any additional capacity without significant financial and commercial support. Airline fleets are finite, and airports and communities compete for routes. Airlines select routes based on perceived profitability and commercial risk considerations.

What the airlines have told us

1. <u>1,570m extension</u>

- We are told that this is the longest runway possible within the existing airport boundary. It would avoid a requirement to purchase land or undertake major earthworks and is potentially the lowest cost, quickest and most politically sensitive runway extension option.
- easyJet, which operates an Airbus fleet, has confirmed in writing that it would be technically possible for them to land an A319 on a 1,570 runway and an A320 with some payload restrictions.

2. <u>1,700m - 1,800m extension</u>

- This would bring Guernsey into line with Jersey's runway length but would require expanding the airport's current footprint. It would however allow for improvement to the existing ILS.
- British Airways operates to a c.1,700m runway on Jersey using A319 aircraft. We have spoken to IAG and they have confirmed that such a runway length would be necessary for operations.
- 1,700m would also enable direct flights to a greater range fo destinations by easyJet, including southern Spain and Italy that would not be possible with a 1,570m runway.
- Many European narrow body jet charters / carriers can also operate on this length of runway and do so in Jersey (e.g. Eurowings, Globalis, Dertours)

Infrastructure options (2/2)

What the airlines have told us (cont.)

3. <u>2,000m extension</u>

- This is the runway length required to attract the full range of low-cost carriers for aircraft such as the Boeing B737-800, as operated by Ryanair. Ryanair has informed SoG officers verbally in meetings that it would likely require this length of runway. An extension to this length would incur significant additional capex cost and create greater environmental and social impact.

<u>Investment in landing systems</u>

- The majority of stakeholders believe that fog delays are damaging perceptions of reliability, impacting return travel and deterring businesses from setting up in Guernsey.
- There are both land-based and aircraft-based technological solutions to bad weather delays.
- Access to A319/A320 aircraft will increase reliability as these aircraft have better weather capabilities than the aircraft currently flying to Guernsey.
- It is possible to have future aircraft equipped with on-aircraft technology, such as Aurigny's ATR 72-600s with ClearVision, however this would be restricted to a limited fleet.

Cost implications of a runway extension

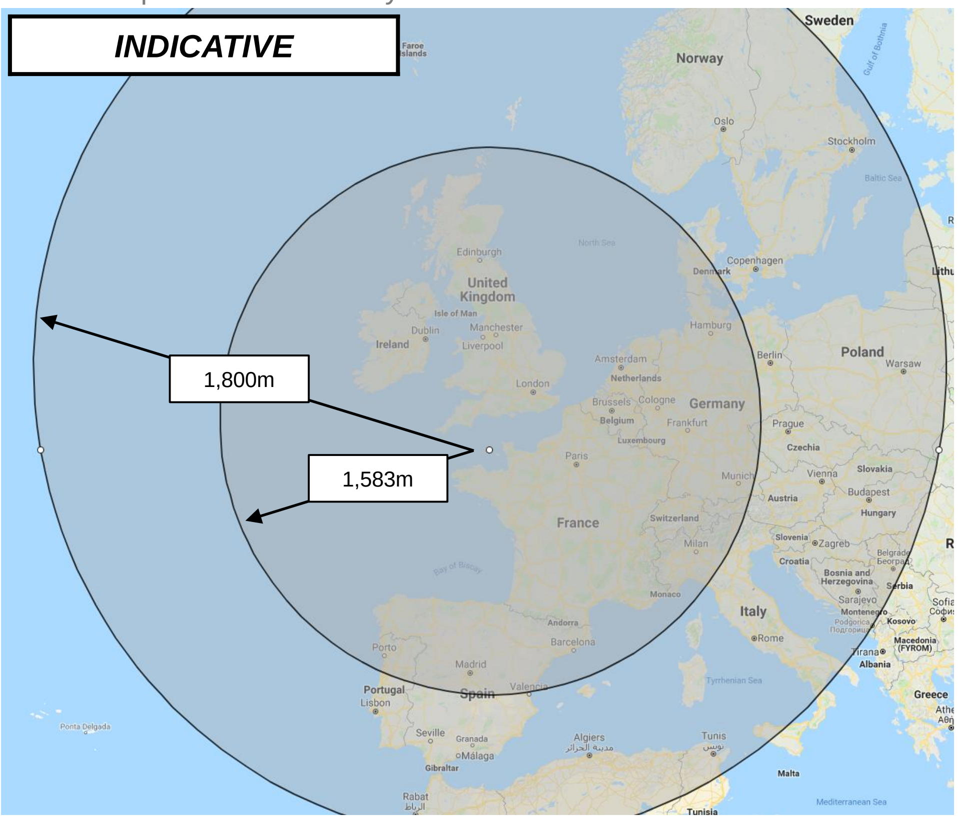
- A previous study by York Aviation in 2009 commissioned by SoG provided some indicative cost estimates for runway extensions in Guernsey. The basis of these cost estimates is unclear, and given the time that has elapsed, it will be necessary to reassess the costs of the various options presented.
- There are high level industry benchmarks for the cost of building a runway. In the most simple conditions, with flat or unobstructed terrain, a rough rule of thumb is a capital cost of c.$100m per 1,000m of runway.
- However, the situation in Guernsey is not comparable with standard benchmarks for a number of reasons:
  - An extension beyond the boundaries of the existing airport requires significant earthworks to level the land required for the extension.
  - Most of the materials, labour and equipment required for the construction work would need to be imported, including much of the aggregates required for the earthworks.
- These factors make costing the runway options highly bespoke to Guernsey. It is possible that they could represent a further 2-3x the base cost of building the runway, which could be confirmed by a consultant engineering firm.
- A full, detailed costing of the selected runway options is recommended as part of future work.

A longer runway extension would extend the flying range for airlines operating out of Guernsey

Indicative information provided by easyJet

Estimated flying range with runway extensions(1)

Per correspondence with easyJet



- easyJet have estimated their flying range from Guernsey based on generic Airbus A319/320 assumptions (below)
- This suggests a short extension to c.1,580m would allow direct A319/320 flights to regional UK and high density western Europe destinations
- A longer extension to 1,800m would give direct access to southern Spain, Portugal and most of Europe

Assumptions

RWY 1583m	RTOW	Range	Rwy 1800m	RTOW	Range
A319	62000kg	650 nm	A319	63400 kg	950 nm
A320	66000kg	600 nm	A320	69000 kg	1000 nm

Note: (1) Indicative only, route specific analysis including payload, fuel and wind data will need to be undertaken to provide a more accurate evaluation

Some market-based option considerations

Heathrow

- By far the greatest impact on connectivity would come from re-establishing services into Heathrow.
  - Heathrow provides far greater air connectivity than all other London airports being a global connecting hub. Heathrow supports business, leisure and VFR segments.
  - With the provision of Crossrail and HS2, the airport will also act as a significant surface transport hub providing high-speed access to both the City of London and Canary Wharf, as well as the Midlands and northern England through HS2.
- Heathrow has traditionally been viewed as unavailable due to capacity constraints but recent changes now make Heathrow a viable option both in the short and long term.
  - In the short term, there may be “remedy slots” available due to the BA acquisition of BMI, with 7 slots being reserved for services within the British Isles. This may include Flybe Q400 operations currently under consideration for Guernsey.
  - In the longer term, the third runway at Heathrow will provide greater airport capacity and there is an expectation that regional communities will be provided with slots to support local services and communities.

Other hubs

- Amsterdam Schiphol has previously been connected to Guernsey. Our consultations have reiterated the potential for Amsterdam connections. However, slots are limited and only KLM has the capacity to provide access and connectivity through the airport.
- Flybe has indicated that Paris Charles de Gaulle is its fastest growing hub connection and that its code-share with Air France would make this a consideration for Guernsey connectivity.

Other routes

- UK regional routes that are currently underserved when compared to Jersey include Scotland and Northern Ireland. Given the distance of these routes they would require either fast turboprop (e.g. Q400) or jet services to be attractive. Our analysis of final destination of Guernsey VFR and leisure traffic suggests that Scotland could be a major source of passenger growth.
- Increased connectivity may be available through Flybe hubs at Southampton, Birmingham and Manchester, given Flybe is now integrated into major airline booking systems (GDSs) and is extending its code-shares with major carriers.
- While Guernsey residents seek improved leisure destinations, this could be achieved through either better connectivity and reliability of services via other airports e.g. Gatwick, or through direct charters during summer and winter seasons, which could become more viable with provision of larger aircraft.
- Incentivisation of airlines to provide greater route choice could be provided through
  1. Commercial discount packages and market support via the airport, and / or
  2. Government provision of Public Sector Obligation (PSO) routes supported directly by government

Initial evaluation matrix (options considered) (1 of 2)

We have mapped each potential option against their ability to meet the connectivity requirements, based on our current understanding and airline feedback

	Option	Connectivity priorities: Heathrow	Gatwick	UK regional	Other hubs	Wider leisure	Initial view on attractiveness
Infrastructure	Existing runway	• Flybe Q400 with LHR remedy slot	• Aurigny E195	• Aurigny ATR • Flybe Q400 incl. Birmingham, Manchester	• Flybe Paris & Dublin Q400	• Eurowings – Dusseldorf	
Infrastructure	1,570m extension	• Flybe E190 with LHR remedy slot	• EZY A319/A320	• EZY A319/A320 incl. Scotland, N. Ireland • Flybe E190(?)	• EZY A319 - Amsterdam & Paris	• EZY - Barcelona, France and Switzerland	✓
Infrastructure	1,700-1,800m extension	• BA A319 (potential LHR 3rd runway option)	• EZY A319/A320 • BA A319	AS ABOVE	• Air France & Lufthansa A319/A320 - Paris / Amsterdam / Frankfurt	• EZY - Western Europe (see map)	✓
Infrastructure	2,000m extension	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	
Market-based	Connecting hub acquisition	✓			✓		✓
Market-based	Route support required	Required	Required	Required	Required	Required	✓
Market-based	Public Service Obligation (PSO) option	✓	✓	✓			
Market-based	Liberalisation benefit		✓	✓	✓		✓

Note these options are subject to change through further consultation. Options are technically feasible but may not be economically viable

Initial evaluation matrix (options considered) (2 of 2)

We have mapped each potential option against their ability to meet the reliability and affordability requirements, based on our current understanding and airline feedback

	Option	Reliability priorities		Air fare priorities	Initial view on attractiveness
		Weather resilience	Fleet applicable	Affordability	
Infrastructure	Existing runway	STATUS QUO	STATUS QUO	STATUS QUO	
Infrastructure	1,570m extension	• Improved aircraft capability with EZY A319 / A320 operations	• EZY A319/A320	• Introduction of LCC capacity via EZY should reduce average fares	✓
Infrastructure	1,700-1,800m extension	• Potential for ILS CAT 3[1] as part of runway improvements	• BA A319/A320	• Potential competition with EZY and BA as well as Aurigny should reduce average fares	✓
Infrastructure	2,000m extension	AS ABOVE	• Ryanair 737/800	• Addition of 737/800 operators incl. Ryanair	

Note these options are subject to change through further consultation. Options are technically feasible but may not be economically viable

Initial Strategy& observations
Infrastructure options

The 1,570m extension appears to be the best runway option if it is feasible from a commercial and operational perspective for more than one airline.

- The 1,570m runway does not break the boundary of the airport; if it allows an A319 aircraft to land then it would represent a relatively low cost and potentially high benefit solution that should be relatively quick to deliver. It should be taken forwards for further analysis.
- We have received written confirmation from easyJet that it can operate commercially at this runway length.
- Initial feedback from British Airways is that they would require a 1,700m runway similar to Jersey, although discussions are in progress. Flybe has repeated their willingness to operate off the current runway length and are exploring any benefits that could accrue from a 1,570m runway. Clearly, the ability to attract multiple airlines would significantly de-risk this option.

A 1,700-1,800m extension should be taken forward as the primary alternative to the 1,570m option. There are clear additional benefits and it is lower risk in the longer term, although there may be a substantial cost difference.

- A 1,700-1,800m runway would be likely to provide benefits in terms of opening up Guernsey to a wider range of fleet and airline options, including British Airways and European charter operations.
- However, a 1,700-1,800m runway breaks the existing airport boundary and therefore increases substantially the financial, environmental and political hurdles and the time needed to deliver it.
- We recommend that this is taken forward as the other runway reference case and subjected to detailed cost-benefit analysis to determine if the greater cost of this option justifies the tangible benefits.

We do not believe that the additional benefit of a 2,000m+ runway would justify the extra cost and time required.

- Our initial observation it that there are more than enough A320 family operators (LCC and network carriers) to provide airline optionality on a 1,700-1,800m runway. The additional marginal benefit of being able to attract B737-800 operators as well (specifically Ryanair) is, in our view, unlikely to outweigh the additional cost of this option. On that basis we do not recommend this option being taken forward at this point.

There are land-based and on-aircraft solutions for mitigating the impact of bad weather on Guernsey. ILS upgrades are the most robust approach, although they will require a runway extension to at least 1,700m.

- The main technological solution, an upgrade of Guernsey's ILS systems to CAT II or CAT III, will require a full runway extension (at least 1,700m) to take place in order to be implemented. It is understood that the cost difference between installing CAT II and CAT III, given Guernsey's specific circumstances, is minimal, suggesting CAT III is the most sensible land-based option.
- It is possible to have future aircraft equipped with on-aircraft technology, such as Aurigny's ATR600s with ClearVision. However, not all aircraft are suitably equipped. It will take time for aircraft equipage to catch up to allow tangible improvements for Guernsey. On-aircraft solutions should be considered in the event that the States decide not to pursue a land-based solution.

Initial Strategy& observations
Market-based options

Non-runway options should be taken forwards and developed as part of a holistic response strategy that is not solely dependent on runway extensions.

- These options are lower risk because they do not involve up-front capital cost and can be terminated or modified if they are not working.
- They also offer a more immediate response than runway extensions, which may take 5 years+ before they are operational.
- They can be developed as part of a holistic air links strategy that involves infrastructure, operational and regulatory improvements.

There are significant connectivity benefits to Guernsey that would arise through connecting to a base carrier hub. Of these, Heathrow is by far the most beneficial and all Heathrow options should be strongly considered.

- Amsterdam would be an attractive connecting hub which has previously been connected with Guernsey. However, only KLM would have the capacity to provide access to the airport. This would be the most attractive potential European connecting hub due to its connectivity with regional UK airports. An Amsterdam route would not necessarily require a runway extension and already operates regional jet services.
- The States of Guernsey has since been offered a connection into Paris Charles de Gaulle by Flybe, which has indicated this is fastest growing hub connection. The code-share with Air France would make this a consideration for Guernsey connectivity.

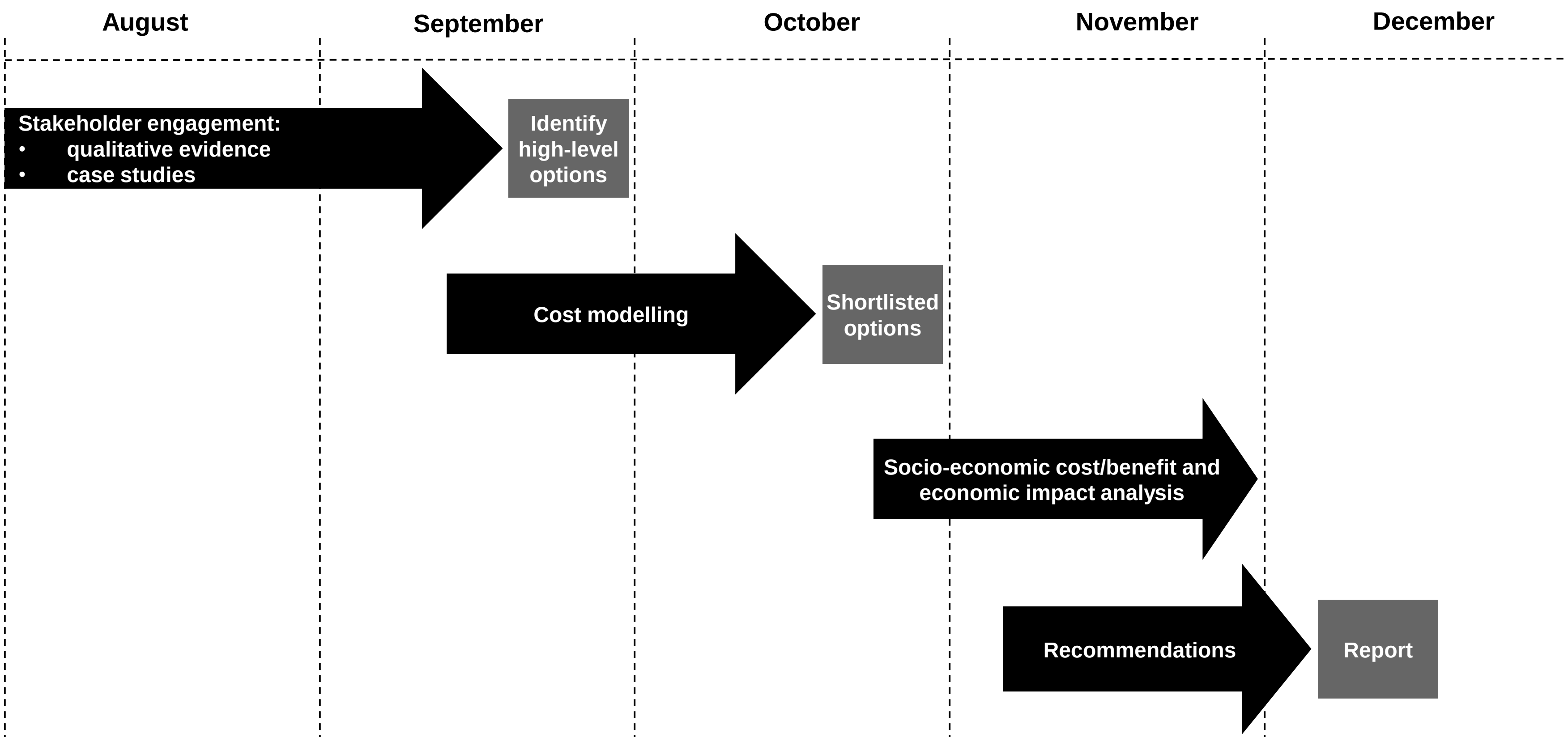
PSO routes to Gatwick and Alderney should be considered as a non-runway method of improving affordability.

- A PSO would allow The States to focus on Guernsey's lifeline routes and dictate the exact service levels provided, including schedule and air fares.

Aurigny strategy

- Whilst outside the scope of our study, the States of Guernsey have the ability to utilise Aurigny to provide fleet and capacity on any of the routes discussed. Clearly any infrastructure and market-based solutions should be considered with Aurigny's future strategy in mind.

Part B scope outline



Objectives of the review

Air and Sea links are a key priority for Guernsey and form part of the States' Policy and Resource Plan

Guernsey's Policy & Resource Plan is focused on a 20-year vision for the States

- The Policy & Resource Plan determines which policy initiatives should be prioritised by the States of Guernsey, and how this work will be resourced
- The Plan centres around four themes:

Quality of life	Community	Place in the world
• Safe and secure place to live • Healthy community	• One community: inclusive and committed to social justice • Lifelong learning	• Centre of excellence and innovation • Mature international identity

Economy
• Strong, sustainable and growing • Sustainable public finances

Air & sea links are a priority and are complementary to targets such as economic development & digital connectivity

- Maintenance and investigation of options for the expansion of air and sea links, so that **Guernsey is well connected with the UK, other Channel Islands and Europe**
- Essential for the island to have **robust, sustainable, reliable and affordable air and sea links** to deliver a dynamic and growing economy
  - This incorporates business, VFR[1] and residents' travel, both to and from the island, as well as freight
- **Connectivity to major UK and international airport hubs** is also a key requirement
- **A reliable schedule and frequency of air and sea services is vital** if Guernsey is to facilitate and develop its economic development opportunities

Note: (1) Visiting friends and relatives
Source: States of Guernsey Policy & Resource Plan, November 2017

Strengthening air and sea links is a key action within the States' Economic Strategy, and an enabler of other priorities

States of Guernsey Economic Strategy – actions to promote stronger growth

Strengthen air and sea links	Enable finance sector growth and diversification	Support innovative businesses and products	Prioritise Seafront Enhancement Area work
Develop a plan for investing in Guernsey's tourism business	Updated retail strategy	Establish a pipeline of construction opportunities and develop construction skills	Implement a long-term skills development plan
Ensure the population management policy is flexible and supports skills needs	Put in place a framework to foster entrepreneurialism	Ensure the Open Market is attractive to HNWIs	Continue to develop and implement the digital framework
Establish an international university presence in Guernsey	Develop plans for the blue economy	Develop plans for renewable energy as part of energy policy	Develop a clinical and medical services 'medtech' plan
Implement the telecommunications sector strategy	Identify and remove red tape to boost competitiveness and reduce the cost of doing business in Guernsey	Develop a clear jurisdiction-wide economic risk appetite	Work to develop new markets and consolidate existing markets

Source: Guernsey Economic Development Strategy

Our work has identified a range of possible options that may address key issues with Guernsey's air links

1. ***Reviewed previous States of Guernsey publications and commissioned reports on the issue of air connectivity***

2. ***Conducted interviews with key stakeholders, including the Airport, airlines and business groups***

3. ***Prepared an overview of the key issues and outlined the available options***

Future work will focus on an assessment of the options identified in this report

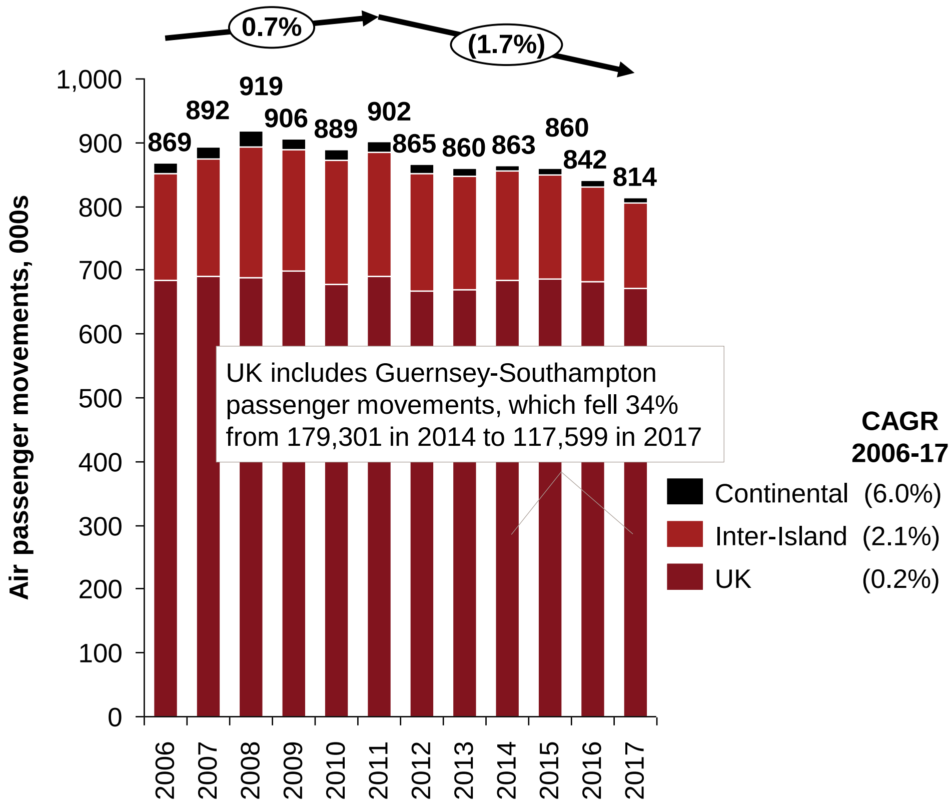
Current perceptions and actual performance

Solutions are sought to halt the evident decline in air traffic on Guernsey

Here's what the data says…

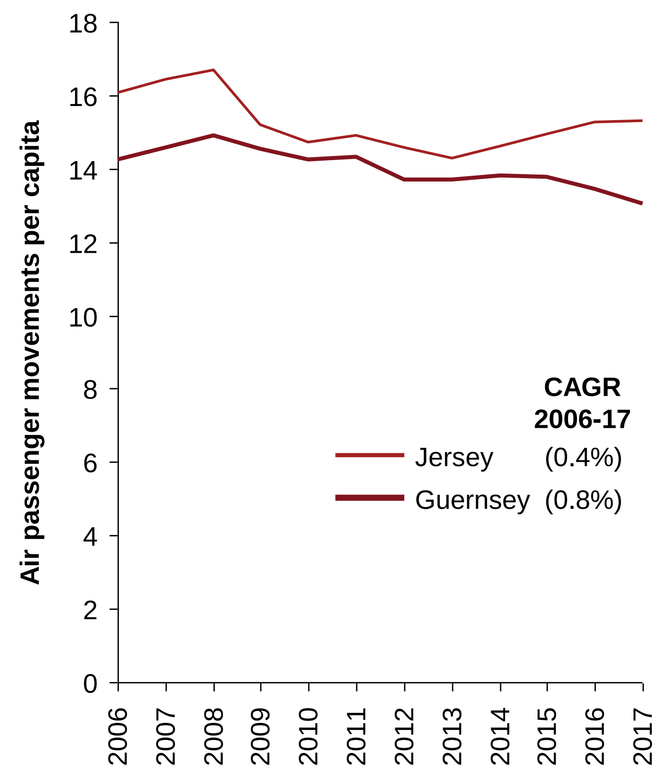
Guernsey air passengers by destination

Total air passenger movements, 2006-17



Guernsey vs. Jersey per capita pax movements

Air passenger movements per capita, 2006-17



Source: Guernsey Travel Surveys 2011-2017, Guernsey Airport, Guernsey Facts & Figures 2017, Jersey Airport, Jersey in Figures 2017

The urgency of the situation was raised by numerous stakeholders during our consultation process

Here's what people are telling us…

"The cost has become prohibitive for the man in the street. What can we do about it?"

- Deputy Jan Kuttelwascher, States of Guernsey

"The priority is fixing the view that we're a declining market and declining economy. For our members, it's about growing traffic and confidence in the economy. We know for a fact that when we lost the City route, some businesses dropped off, others went to Jersey"

- Institute of Directors

"We are at a 30-year low in terms of passenger numbers. There are c.100k fewer passengers than at the peak in 2004"

- Colin Le Ray, General Manager Ports

"The highest priority for the Chamber of Commerce is the travel issue. Flight connectivity permeates into every level of business. Hotels are not as full as they used to be, especially in winter months. We're struggling with recruitment too.

The bigger deterioration has been in the last few years, this year in particular. Everything in Guernsey is in decline. Whereas our neighbours are improving everything. Whatever we're doing today, the output is negative, so we have to change"

- Chamber of Commerce

"Transport is one of the biggest issues facing Guernsey's business sector. It's primarily air transport that's the issue - both outgoing and incoming. There's a consensus view at GIBA that the government should do something to address this immediately"

- Tony Mancini, Deputy Chairman GIBA

Source: Stakeholder interviews

Connectivity, reliability and air fares are identified as key indicators that underpin the States' strategic aviation goals

<table>
<tr><th rowspan="2"></th><th colspan="2">1. Connectivity</th><th rowspan="2">2. Reliability</th><th rowspan="2">3. Affordability</th></tr>
<tr><th>Routes</th><th>Schedule & capacity</th></tr>
<tr><td>Definition</td><td>• An indicator of a network's concentration and its ability to move passengers from their origin to their destination seamlessly (ICAO)
• Number of destinations that Guernsey flies to directly, as well as ease of connecting to additional destinations via a hub
• Access to lifeline route</td><td>• Flight times – Key times differ between business and leisure traffic (i.e. early morning, noon, evening flights)
• Daily frequency of flights to each destination
• Total number of seats offered</td><td>• 1) Resilience to weather delays
• 2) Maintenance and access to contingent fleet
• Incidence of delays and cancellations resulting from:
• Weather (fog, wind)
• Mechanical issues
• Lack of contingency options in the event of delays for the above reasons
• Lack of alternative travel options (e.g. inter-island ferry)</td><td>• Cost of tickets for specific routes, both in absolute terms and relative to comparable routes for comparable islands
• Availability of low-cost alternatives
• Competitive air fares are important to maintain Guernsey's "open for business" position</td></tr>
<tr><td>Impact on economic growth</td><td>• Gives businesses access to a wider marketplace
• Hub access reduces cost and time of reaching destinations through more complicated connections</td><td>• Improves access to the island and perception of Guernsey's connectivity
• Enhances managers' ability to oversee off-island operations
• Increased human and capital flows can improve returns on investment</td><td>• Perception of unreliable transport can deter visitors and businesses from visiting or using Guernsey as a base, or in some cases may lead to relocation</td><td>• Easier to attract visitors and for business travel to be justified in an age of corporate cost-cutting
• Improves Guernsey's competitiveness as a tourist destination</td></tr>
<tr><td>Social impact</td><td>• Increases the level of social inclusion for Guernsey residents and VFR travel</td><td>• Improves perception of Guernsey being connected to the rest of the world
• More choice for travellers to plan a holiday with dates and times that suit their needs</td><td>• Less uncertainty for inbound and outbound traffic
• Residents often incur extra cost by travelling to the UK and staying overnight when connecting in order to avoid fog-related delays</td><td>• More affordable for inbound and outbound VFR traffic
• Inbound traffic saving on travel can in theory spend more money with local businesses once on the island</td></tr>
</table>

Source: PwC analysis

There are three key traveller segments, all with differing opinions and requirements for air links

Business	Leisure	Visiting friends and relatives (VFR)
• Travelling for professional purposes including attending meetings • Tend to be time sensitive and relatively indifferent to fare levels • Usually prioritise frequent and flexible service that enables passengers to quickly change flights to a more convenient time, coupled with easy surface accessibility • Measure connectivity by frequency of service, convenience of schedule, trade time, number of direct routes available, proximity to city centre	• Travelling for holidays • Tend to care more about fares, with cost effectiveness often the most important factor in decisions about whether to travel and where • Unacceptably high fares could cause them to change their mind about their destination • Measure of connectivity includes fares	• Travel primarily to see loved ones • Tend to see fares as a major factor in determining how frequently they travel • However, unlike leisure travellers, they don't have the option of changing their travel destinations if fares are too high • Measure connectivity in terms of fares but less concerned with accessing additional destinations

Connectivity, reliability and affordability mean different things to different passengers; their needs vary

Overview of passenger group requirements

	Business	Leisure	Visiting friends and relatives (VFR)
Connectivity	• Access to London • Inter-island • Connectivity to Europe and USA – Ideally direct, otherwise one connection through a hub • Schedule: Early morning flights to get to meetings. Evening flights to allow day trips	• Ability to reach a range of destinations with at most one connection. Gatwick is a good hub for leisure connectivity • Schedule is less important, with day-time flights preferred	• Vital lifeline links and ability to get off the island to visit or be visited by family and friends, often in Scotland and the south of England
Reliability	• Fog: Predictability of conditions and confidence that meetings won't be missed	• Bad weather, or fear of bad weather, can add significant cost as residents often travel a day early when connecting to avoid missing connecting flights	• Bad weather, or fear of bad weather, can add significant cost as residents often travel a day early when connecting to avoid missing connecting flights
Affordability	• Arguably less sensitive to cost than other passenger groups • Can be a significant deterrent to businesses setting up on the island, especially in industries where costs will be compared directly with Jersey • Can also be damaging for SMEs looking to make sales trips or travel for meetings	• Air fares are a key concern and directly impact flight frequency for leisure passengers • Passengers will often compare prices with similar routes to and from Jersey	• Cost of travel to and from the island impacts residents' perception of connectivity / isolation and frequency with which they can see friends and relatives

Our research and stakeholder consultation has highlighted the importance of these indicators

Key issues identified relating to indicators of air links quality

	1. Connectivity	2. Reliability	3. Affordability
Government	• Security of lifeline routes to Gatwick & Alderney • Untapped enabler for growth	• Unreliability may harm competitive open for business position • Disruption increasing issue	• Lack of competition potentially driving up prices
Airlines	• Untapped opportunities from onwards travel	• Additional costs due to delayed and cancelled flights	• Low route profitability due to subscale market • Limits interest in expanding routes
Tourism	• Low number of destinations • Poor connections	• Risk and cost of flights getting delayed/cancelled • May discourage tourist arrivals	• Perceived high headline fare vs Jersey may reduce competitiveness as tourist destination
Business	• Low flight frequency and capacity at certain times on key routes • Limited direct routes and lack of hub	• Increases costs of travel and reduces ease of doing business and attractiveness as destination	• High perceived fares may harm competitiveness relative to other jurisdictions
Residents	• Limited direct routes and poor onwards connections • Lower social inclusion	• Bad weather delays and disruption • Incur cost of extra night's travel when connecting to avoid delays	• Perceived increase in fares affects ability to travel or visit friends/family • Less attractive for re-location

Key criteria driving decision-making

The importance of each indicator varies by passenger group. Reliability is a key issue for all passengers

Initial views on relative priorities of passenger groups

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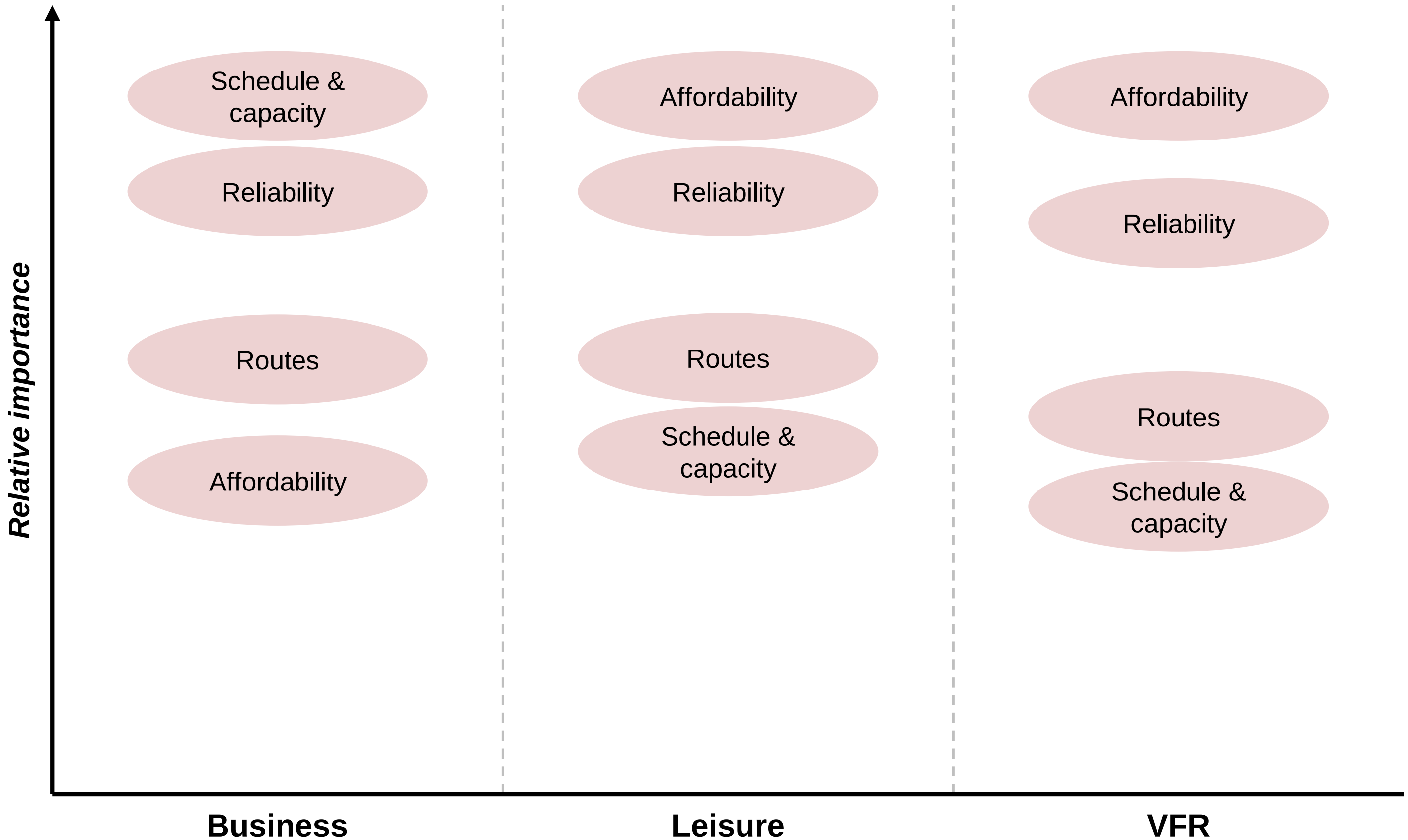


Note

These priorities are our initial views based on stakeholder feedback. Future work will test this in more detail

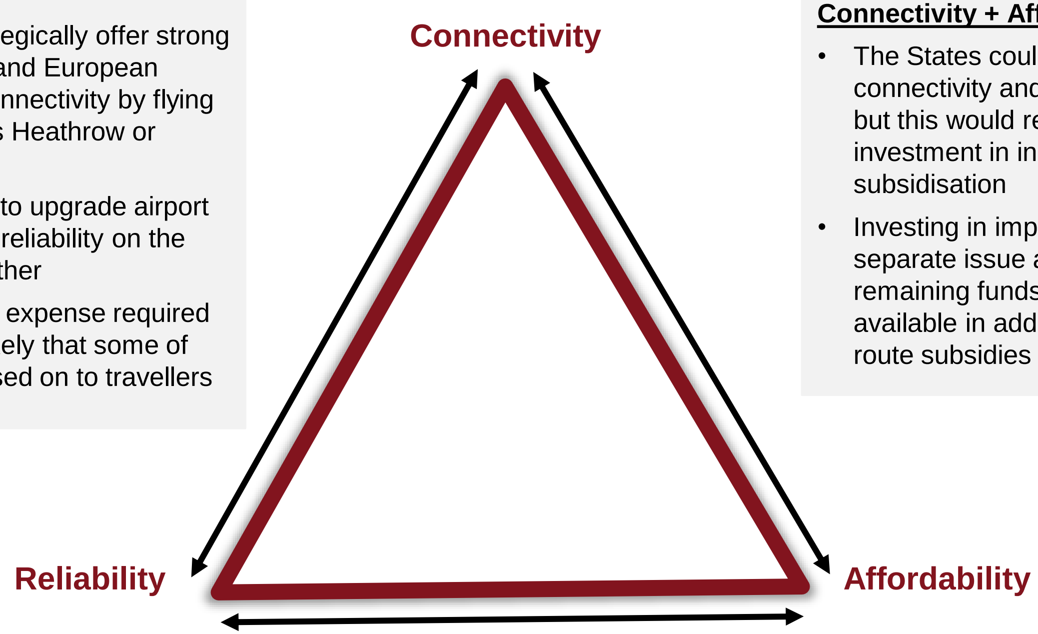
Source: PwC experience, Stakeholder interviews

There is often a trade-off between connectivity, reliability and affordability

The air links 'trilemma'

Reliability + Connectivity

- Guernsey could in theory strategically offer strong connectivity to a range of UK and European airports, as well as broader connectivity by flying to a major hub airport, such as Heathrow or Amsterdam
- Similarly, it would be possible to upgrade airport or fleet technology to improve reliability on the island in response to bad weather
- However, given the significant expense required to deliver both of these, it is likely that some of the cost will ultimately be passed on to travellers in the form of higher air fares



Connectivity + Affordability

- The States could achieve good connectivity and reduced air fares, but this would require significant investment in incentives / subsidisation
- Investing in improving reliability is a separate issue and it is unclear if the remaining funds required would be available in addition to these various route subsidies

Reliability + Affordability

- It is possible to deliver reliable, affordable travel but this would likely have to be focused around specific, lifeline routes
- Keeping air fares low would either require route subsidies, or could possibly open up a situation where private airlines will only run on the most profitable routes. This could have a negative impact on connectivity

Source: Stakeholder interviews

1. Connectivity

Views on connectivity vary by passenger group. Schedule and capacity are the most consistently discussed issues

Views of key passenger groups regarding connectivity

Passenger group	Comments	
	Routes	*Schedule & capacity*
Business	• Businesses prioritise direct access into London and to the other Channel Islands • Connectivity to Europe and USA through a hub would reduce cost and time for business to access a wider marketplace • Improved route connectivity has a multiplier effect – increased human flows and increased capital flows from expanded routes can lead to increased returns on some investments • Businesses currently prefer London City for travel into London and Heathrow as a hub for onwards travel • However, Gatwick may become increasingly attractive for business travel as major carriers expand their Gatwick routes	• Business travellers want early morning flights in order to attend morning meetings and late evening flights for convenient day trips. This is especially important for Inter-Island travel • Adoption of larger aircraft has meant rationing of flight times, which affects business travellers who tend to be particularly sensitive to convenience of flight times • Limited capacity at key flight times for business has also driven up cost of travel for business, which is cited as a growing issue
Leisure	• Leisure travellers want access to a range of destinations, either directly or through (at most) one connection via a hub • Gatwick is viewed as a good hub for leisure routes • Currently, the most popular destinations for outbound leisure appear to be Spain, the USA and Portugal • Expanded routes would give more choice in planning holidays	• Leisure travellers prefer day-time travel • However, leisure travellers tend to be more sensitive to price than schedule, and so would benefit from a reduced schedule with larger aircraft if this allowed for cheaper fares
VFR	• VFR travellers prioritise direct routes into London, the South of England and Scotland	• Improved connectivity can enhance social inclusion among residents by guaranteeing vital lifeline links off Guernsey

Given air connectivity's impact on economic and social measures, stakeholders identified it as a priority

Here's what people are telling us…

Government

*"The goals of the CfED for air transport include **maintaining and expanding air links** so that Guernsey is well connected with the UK, the other Channel Islands and Europe"*
- Air and Sea Links Review ToR 2018

Industry

*"**Gatwick is not the right airport.** It's not great for London and it's not great for connectivity. Gatwick is not bad for leisure but **Heathrow is the business airport**"*
- Vincent Hodder, Flybe CSO

Tourism

*"Guernsey is missing out hugely. Dutch, Germans, French think **it's desirable but difficult to get to and expensive**. You want **ease of access from the continent**"*
- Guernsey Chamber of Commerce

Business

*"I can tell you multiple examples of **people deciding against building businesses in Guernsey because of the lack of connectivity.** There's a lack of trust in where we're going"*
- Guernsey Chamber of Commerce

Residents

***"Islanders want to go places, we want to connect to places**. Is the onward journey being considered?"*
- Customer feedback

- Guernsey's current connection into **Gatwick has limited connectivity value as a hub, given the high concentration of LCCs relative to major hub carriers, a network which is predominantly Europe-focussed and its location relative to London**
  - Gatwick's value as a hub is improving as airlines such as BA and Emirates begin services and with the introduction of self-connecting services for many passengers
- Guernsey's lack of connectivity to a hub may mean **Guernsey's airlines are failing to leverage potential latent demand and constraining business opportunities**
  - However, it is difficult to understand the effect of connectivity on the Guernsey market due to the **limited available data on onward travel from Guernsey**

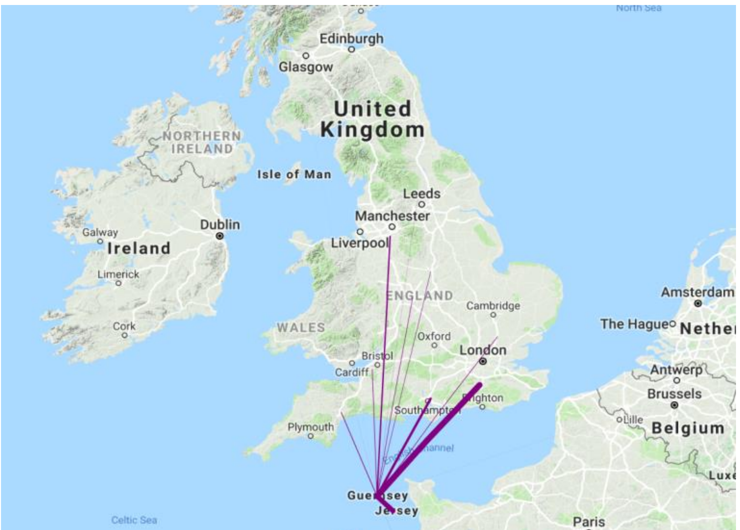
Source: Stakeholder interviews

Guernsey currently serves 16 direct routes, with the most popular being Gatwick, Jersey and Southampton

Here's what the data says…

Guernsey Airport route network

Routes served, 2018(1)

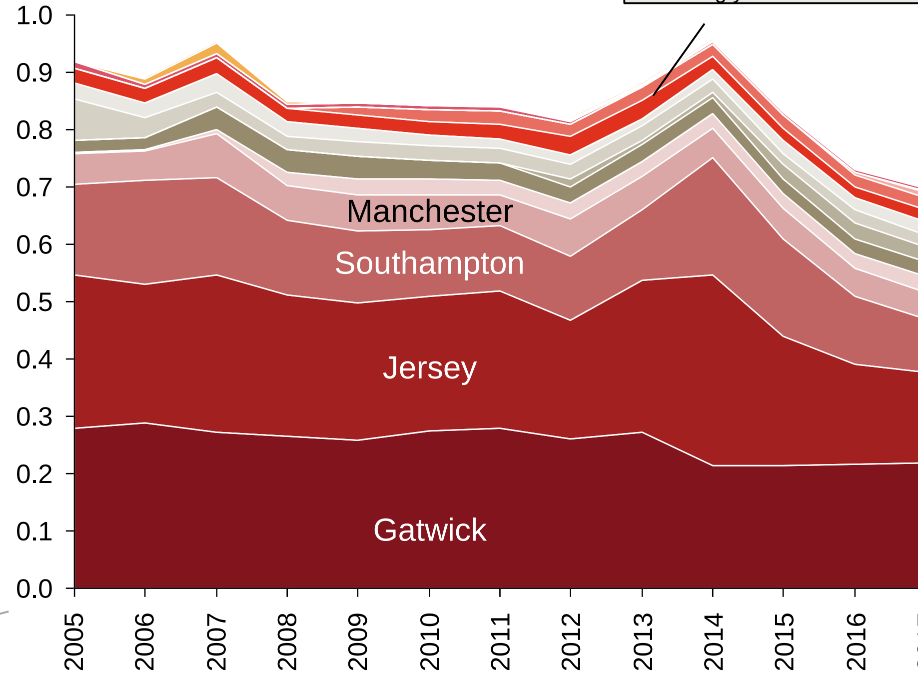


Guernsey has 16 direct routes and a seat capacity of >700k (one way)

Seat capacity on routes from Guernsey

Millions of seats, one-way, 2005-2017

The spike in seat capacity in 2014 appears to have been driven by an increase in seats offered by Blue Islands to SOU and JER. Capacity was then adjusted in the following years to tailor to demand



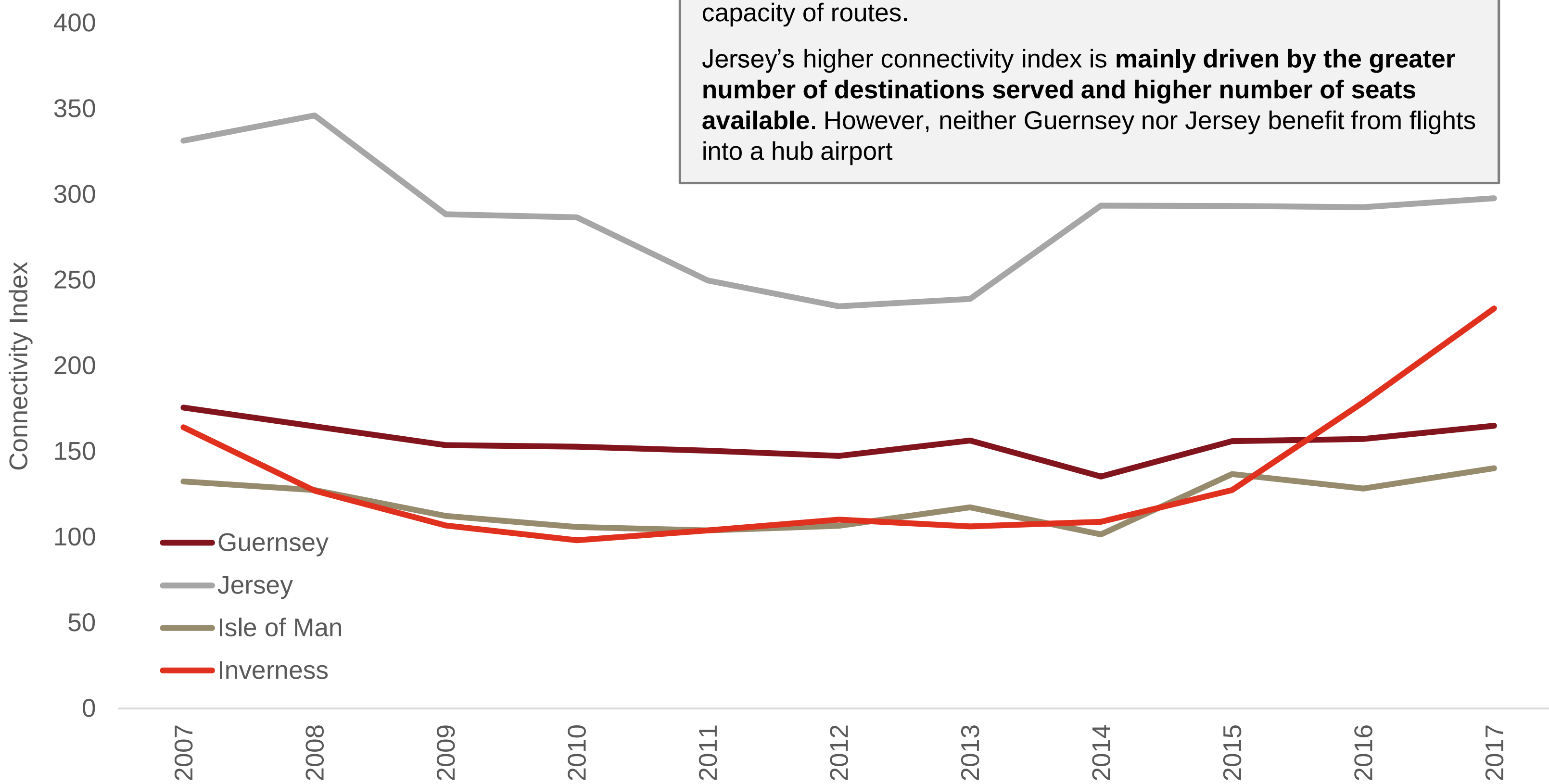
Despite a diversification in the route network from Guernsey, the number of seats offered from the island has been decreasing in recent years. Gatwick, Jersey and Southampton continue to represent the key routes from Guernsey with a market share of over 65% (in terms of seats offered) in 2017. The number of seats offered on these routes, however, has decreased significantly since 2005, from c.700,000 seats to about 470,000 in 2017. This trend is in line with passenger demand which has also been decreasing.

Note: (1) Thickness of line indicates seat capacity distribution by route; (2) London City airport is no longer served from Guernsey; * BHX & EXT are triangular routes (i.e. services are in conjunction with Jersey); Source: Planetoptim Milanamos, PwC analysis

Guernsey is relatively well-connected for an island of its size, but not was well served as Jersey

Jersey vs Guernsey connectivity index

2007-2017 (2)



The connectivity index uses measures airports' connectivity in terms of: 1) number of destinations served, 2) importance of destinations based on size of final destination airport and 3) frequency and seat capacity of routes.

Jersey's higher connectivity index is **mainly driven by the greater number of destinations served and higher number of seats available**. However, neither Guernsey nor Jersey benefit from flights into a hub airport

The States have identified securing the lifeline routes to Gatwick and Alderney as the priority for Guernsey's air links

Here's what people are telling us…

*"**Lifeline routes** are those which are **critical for the economy, residents' health and/or residents' social welfare**. Due to the size of the Bailiwick's market, these routes **must be protected** and **provided by a single operator**, for a defined period and at an agreed service level"*

- Guernsey Economic Vision 2017

*"**All other routes** add a level of **additional choice and connectivity** for residents. In order to encourage new route development and innovation… these routes should be made **exempt from air transport licensing**"*

- Guernsey Review of Air Transport Licensing 2018

"The Committee's priorities are:

- *Establishing additional connectivity into London which would enable **enhanced access to a global hub;***
- *Moving to a **quasi-open skies policy** which enables competition on non-lifeline routes; and*
- *Continuing to actively engage with a range of airlines to **seek opportunities for the development of new routes**"*

- Guernsey Economic Development Strategy 2018

Lifeline route 1: Guernsey-Gatwick

- As Guernsey's primary link into London, Gatwick supports significant resident and business travel and is the main connecting airport
- Travel to Gatwick currently accounts for c.37% of Guernsey's total passenger movements

Lifeline route 2: Guernsey-Alderney

- Alderney's route to Guernsey is essential to Alderney residents, including for accessing medical services
- The route is currently loss-making for Aurigny, requiring support to maintain the level of service

Following the 2018 review of Air Transport Licensing (ATL), lifeline routes may in future be protected with Public Service Obligations (PSOs)[1]

All other routes: Quasi open-skies

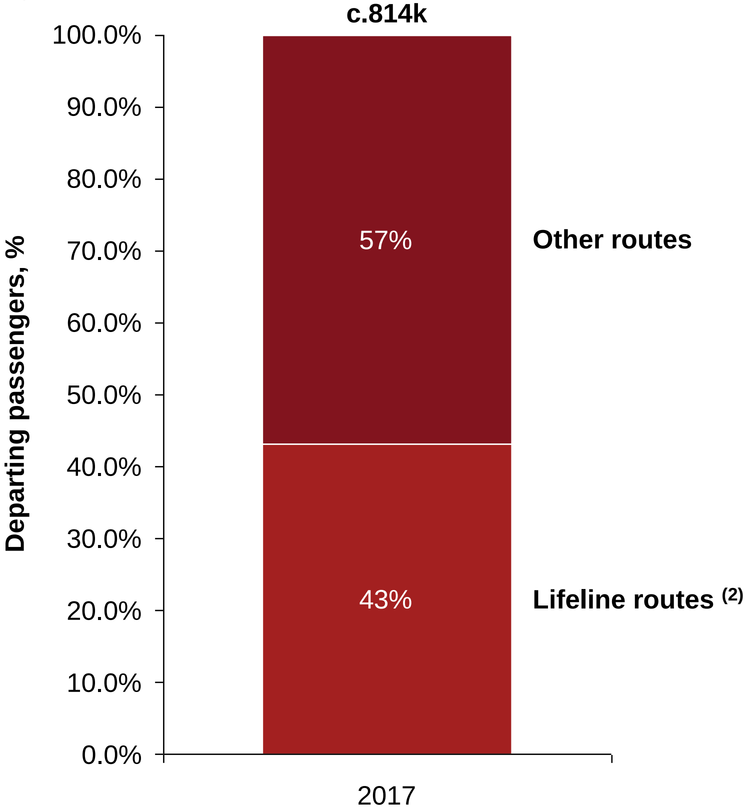
- Despite being the second most-travelled route, Southampton is not a lifeline route because 1) Southampton airport is not slot constrained and 2) it does not appear commercially unviable
- All remaining routes are expected to be provided by commercial operators

Note: (1) Public Service Obligations (PSOs) are obligations imposed on an organisation by legislation or contract to provide a service of general interest.
Source: Guernsey Economic Vision 2017, Guernsey Review of Air Transport Licensing 2018, Guernsey Economic Development Strategy 2018

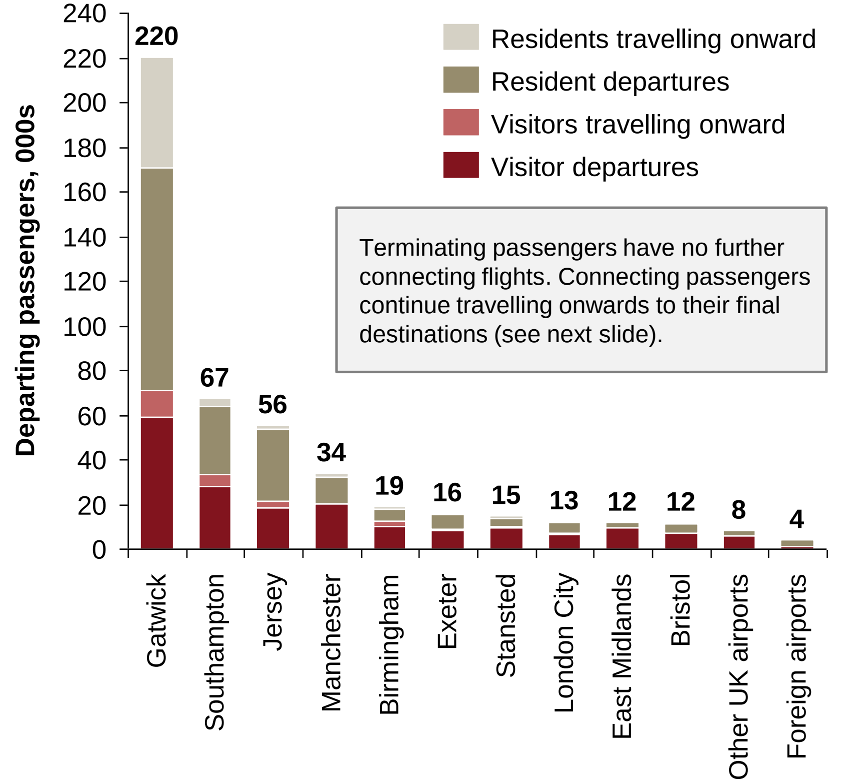
Gatwick is Guernsey's most-travelled route, with 46% of all departing passengers and 71% of those travelling onward

Here's what the data says…

Passenger movements at Guernsey by route type
2017 (1)



Terminating & connecting pax from Guernsey by airport
2017 (3)

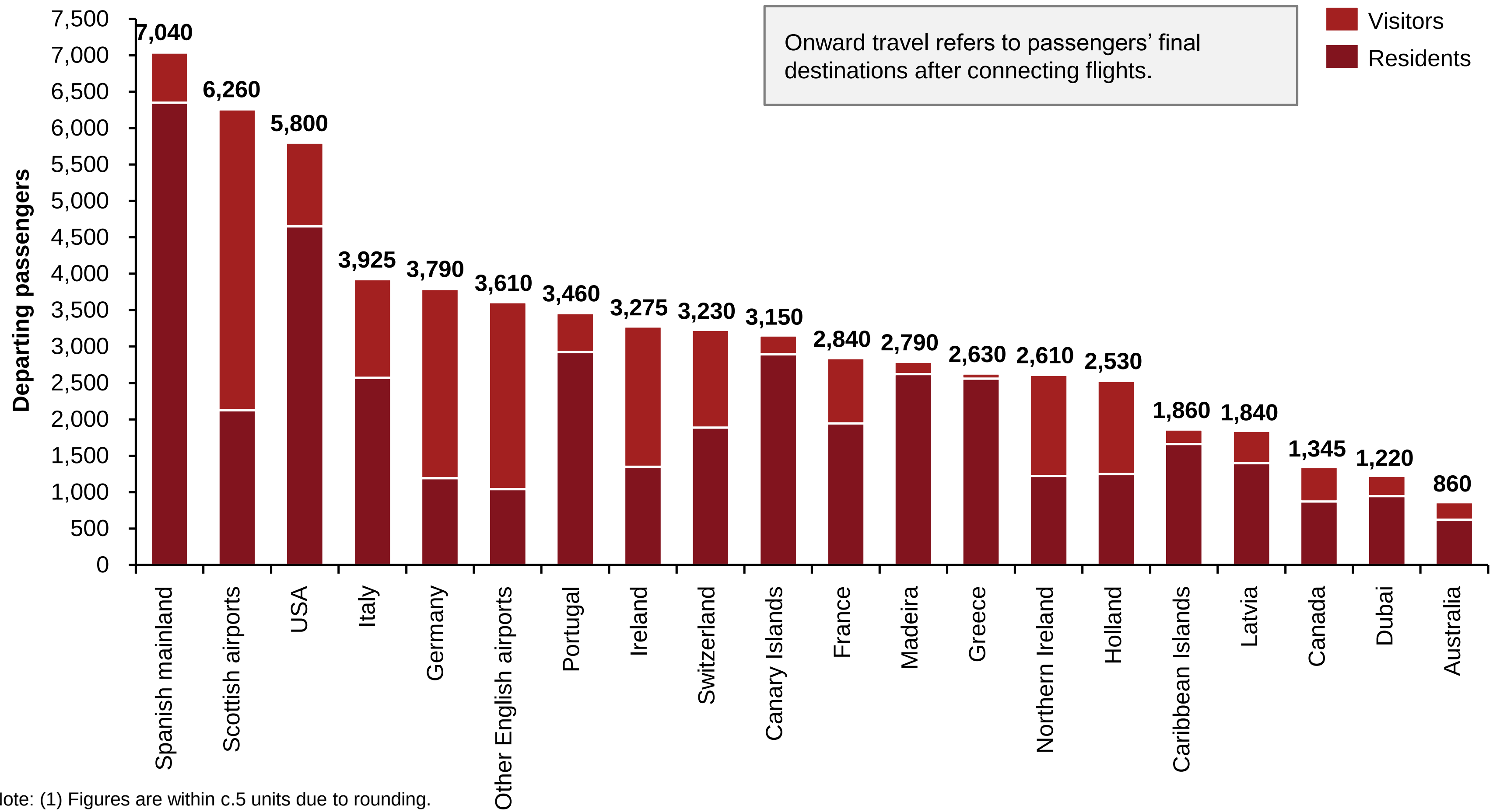


Note: (1) Include both arrivals to and departures from Guernsey Airport; (2) Lifeline routes are Gatwick and Alderney; (3) Includes departures only.
Source: Guernsey Airport Passenger Movements 2017; Guernsey Travel Survey 2017

Overall, the most popular destinations for onward travel from Guernsey in 2017 were Spain, Scotland, and the USA

Most popular destinations for onward travel from Guernsey

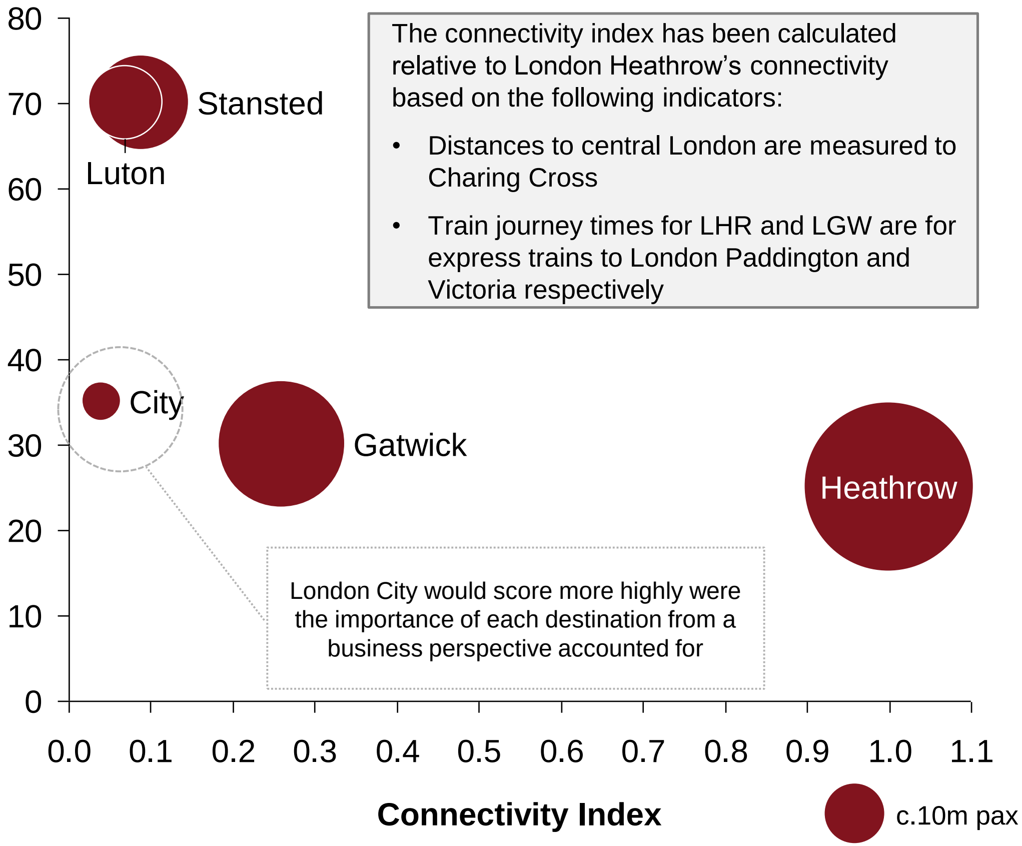
2017 (1)



Note: (1) Figures are within c.5 units due to rounding.
Source: Guernsey Travel Survey 2017

However, Heathrow is the key hub of the London airport system…

Travel time into central London
Minutes



The connectivity index has been calculated relative to London Heathrow's connectivity based on the following indicators:

- Distances to central London are measured to Charing Cross
- Train journey times for LHR and LGW are for express trains to London Paddington and Victoria respectively

London City would score more highly were the importance of each destination from a business perspective accounted for

Accessibility	
Heathrow	• 14 miles from central London • 1 hour drive to central London • 25 minute train journey to central London (express) • CrossRail should also significantly improve access to London
Gatwick	• 25 miles from central London • 1 hour 30 minute drive to central London • 30 minute train journey to central London (express)
City	• 8 miles from central London • 50 minute drive to central London • 35 minute train journey to central London
Stansted	• 31 miles from central London • 1 hour 20 minute drive to central London • 1 hour 10 minute train journey to central London
Luton	• 28 miles from central London • 1 hour 10 minute drive to central London • 1 hour 10 minute train journey to central London • The DART and M1 improvements should also improve access and lead to an increase in catchment

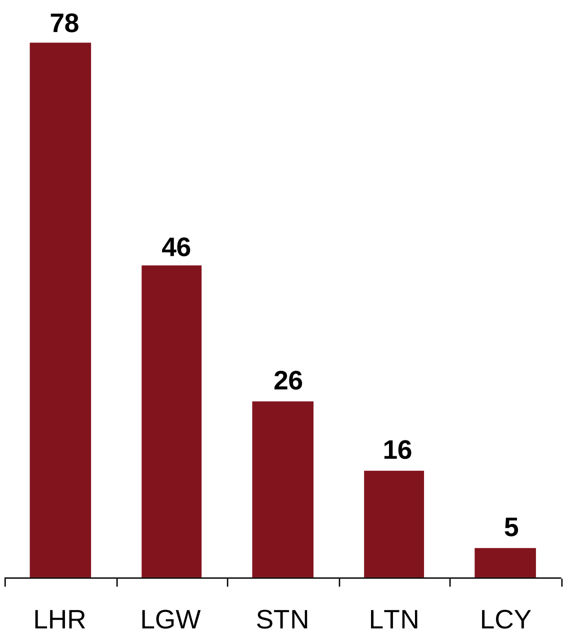
Sources: Planetoptim Milanamos, UK CAA, Google Maps, PwC analysis

…as such it could represent a better option than Gatwick for onward connections to and from Europe and the rest of the world

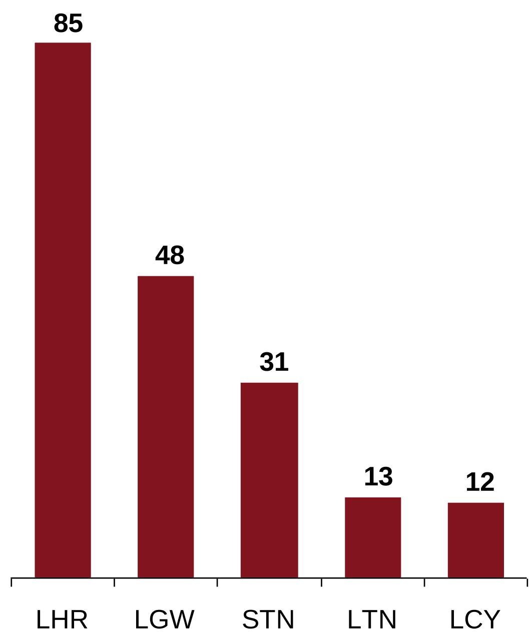
Heathrow has significantly more passengers and airlines…

…and also offers greater connectivity to non-European destinations

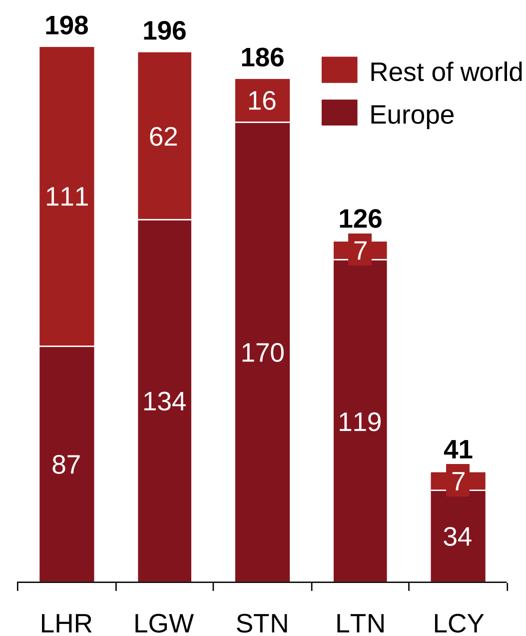
Traffic for London airports
Annual pax, 2017



Airlines operating from London airports
Airlines, 2018



Destinations served by London airports
Destinations, 2018



Source: UK CAA, CAPA (as per week of 9 July 2018)

Guernsey and Jersey can, to some extent, be expected to have different levels of service given differing market conditions…

Here's what people are telling us…

*"The comparison to Jersey is one that **causes us no end of grief from the public**. I understand why you might look at neighbours, but **they're 60% larger, in a different place in population growth and have a higher mix of non-residents** who therefore travel more"*

- Tom Barrasin, Blue Islands CEO

"People who we want to hire can connect more easily from Jersey so they'd rather work in Jersey. Everyone is asking, how come I can get to Jersey direct, or through one airport, but to get to Guernsey it's not even in the same system? People feel they are being had over because it's much more expensive to travel from Guernsey"

- Chamber of Commerce

*"Jersey is taking market share in the finance sector from Guernsey. The bigger issue is not necessarily the issues that we have, it's **the direct comparison with Jersey. Clients can choose between us**"*

- Tony Mancini, Deputy Chairman GIBA

- Passengers appear to expect Guernsey to provide the same level of services as Jersey in areas that are not necessarily comparable
  - **Guernsey's population is only c.60%** of the size of Jersey's population and **GDP is c.70%** of Jersey's
  - Jersey's financial sector and other travel-intensive business is more developed than Guernsey
  - This helps Jersey to reach **critical mass for airport profitability** and sustainably serve a wider route network
- Previous research by ASM suggested new routes from Guernsey have had c.60% of the number of passengers flying those routes from Jersey, **in line with the difference in population**
- **However, demographic trends in Jersey are different to Guernsey,** with greater population growth and higher proportion of non-residents in Jersey, suggesting Jersey has greater potential for growth in passenger numbers
- There is a need for **clearer communication on the differences** between the two markets to address resident expectations

Source: Stakeholder interviews

…as well as other factors

Variables	Guernsey	Jersey	Guernsey % of Jersey
Population	62k	106k	59%
Runway Length (LDA)(1)	1,463m	1,706m	-
Airport pax (2017) (2)	c.0.8m	c.1.6m	50%
Visitors (2017) (3)	423k	728k	58%
Number of routes (2018)	16	34	47%
Connections to Major Hubs	None	None	-
Legacy Airlines	None	BA	-
Seat Capacity (one way)	c.0.7m	c.1.2m	57%
GDP	£2.9bn	£4.1bn	71%
Financial Services' Share of GDP	c.33%	c.41%	-

These factors suggest Guernsey does not perform on par with Jersey

- Based on the **difference in population size, Guernsey performs on par with Jersey in terms of visitor numbers and seat capacity**
  - Guernsey has 59% of Jersey's population, 58% of its visitors and 57% of its seat capacity
  - However, on this basis, **Guernsey underperforms relative to Jersey on passenger movements** (50%) **and number of routes** (47%)
- If considered **in terms of the difference in GDP (71% of Jersey), Guernsey performs significantly below Jersey** on these metrics

Note: (1) Landing Distance Available; (2) Passenger movements; (3) Includes departing visitors, returning visitors, cruise arrivals and visiting yachtsmen.
Source: Guernsey Facts & Figures 2017, Guernsey Travel Surveys, Jersey in Figures 2017, Visit Jersey Annual Report 2017, PwC analysis

2. Reliability

Reliability is important for all three core traveller segments and appears to impact all areas of life in Guernsey

Views of key passenger groups regarding reliability

Passenger group	Comments
Business	• Businesses prioritise predictable travel conditions in order to have confidence that scheduled business activities and meetings will not be delayed • Delays can be costly and build a perception of unreliability, which can deter business travellers and ultimately undermine confidence in Guernsey as a business destination • Bad weather delays have disproportionately affected business travellers due to higher incidence of morning fog • Reduced inbound travel due to bad weather or fear of bad weather has knock-on effects for local businesses on Guernsey
Leisure	• Perceived unreliability of air travel leads some residents to choose next day connections and stay overnight in London, incurring significant additional cost to avoid bad weather disruption • Outbound leisure travellers are often required to take an extra day of holiday to accommodate this
VFR	• Lack of contingency options during aircraft maintenance has contributed to perceived degradation of service and decrease in capacity • Weather delays during the festive period have particularly affected VFR travellers

Bad weather delays are costly to airlines and passengers, and harm perceptions of airline service reliability

Here's what people are telling us…

Government

*"Aurigny has a deserved reputation for good customer service and for friendliness… but **complaints are regularly received from customers in respect of reliability of service**"*
- Aurigny Strategic Review 2017

Industry

"Fog can disrupt the whole day, it doesn't just start up again. Last year we had 47 days with visibility delays, which cost us c.£850k"
- Mark Darby, Aurigny CEO

Tourism

*"**Reliability is a big thing for us because we can't re-sell rooms**, so we either lose good corporate customers or we refund and lose the fee. This has been the worst year for fog and reliability"*
- Guernsey Chamber of Commerce

Business

"The main thing customers hate about fog is lack of early communication, so we communicate with them from 4am"
- Nick Magliochetti, Waves CEO

Residents

*"When I travel for leisure, I **worry about getting on and off the island**. People in Jersey trust BA to get them wherever. If I miss a connecting flight it costs me a lot so I have to leave a day earlier"*
- Customer feedback

- Airlines operating out of Guernsey face the **additional cost of delays and disruptions due to bad weather**
  - Costs include investment in back-up aircraft and standby crews to improve bad weather resilience, as well as passenger delays
- Anecdotal evidence suggests that in order to avoid disruption, some **passengers are choosing to book next-day connecting flights and additional hotel nights.** This is also an issue for people travelling to the island as there is a perceived risk of Guernsey being a risky destination to travel to due to weather impacting ability to arrive/leave the island as planned
- Some stakeholders suggest public perceptions are **disproportionately shaped by disrupted business flights**, which are more often delayed due to flight schedules

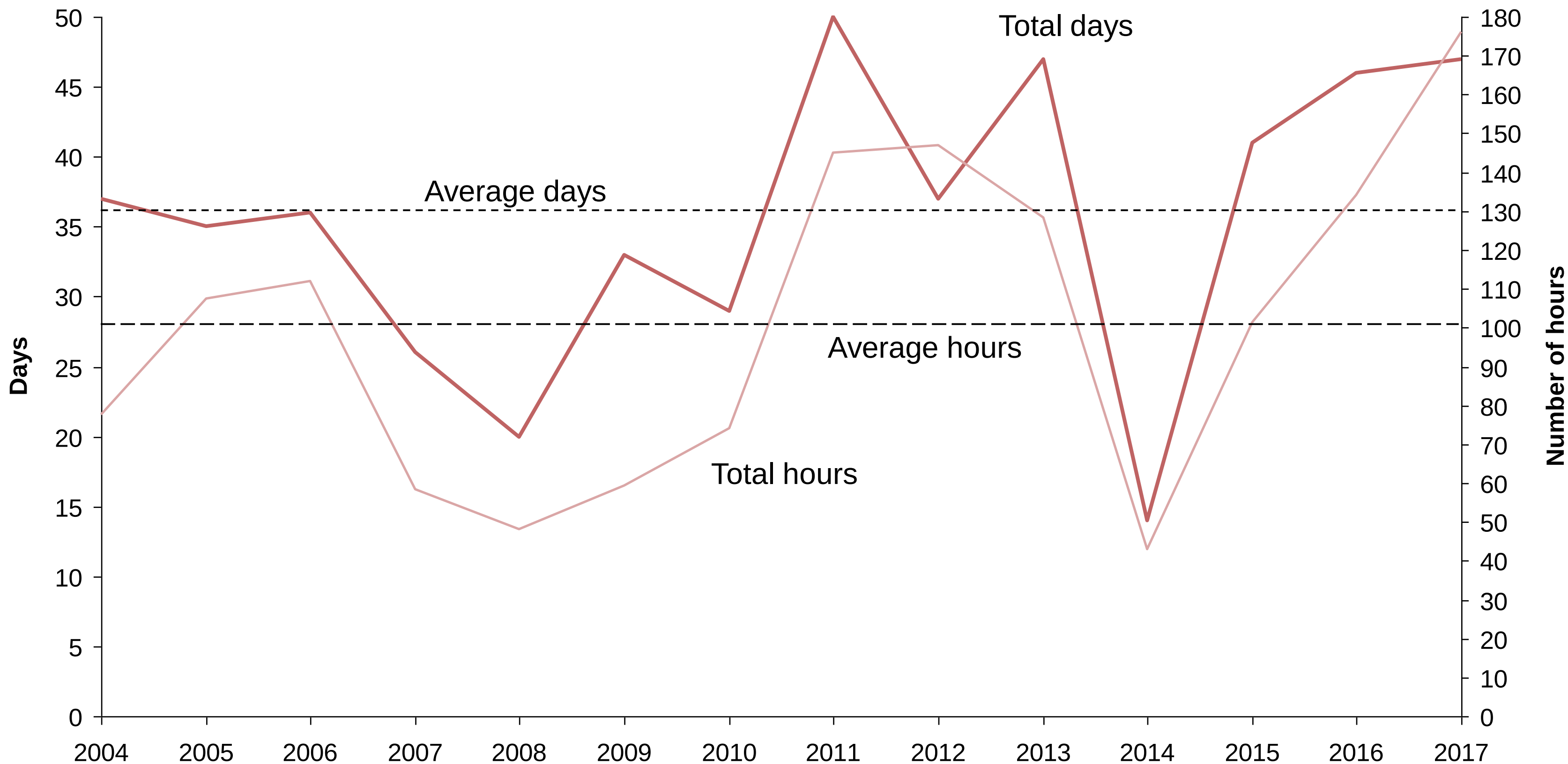
Source: News search, Stakeholder interviews

Poor visibility conditions affect the island, reducing airline performance and increasing delays

Here's what the data says…

Guernsey Airport poor visibility conditions

Runway Visual Range < 600m during flying hours, 2004-2017



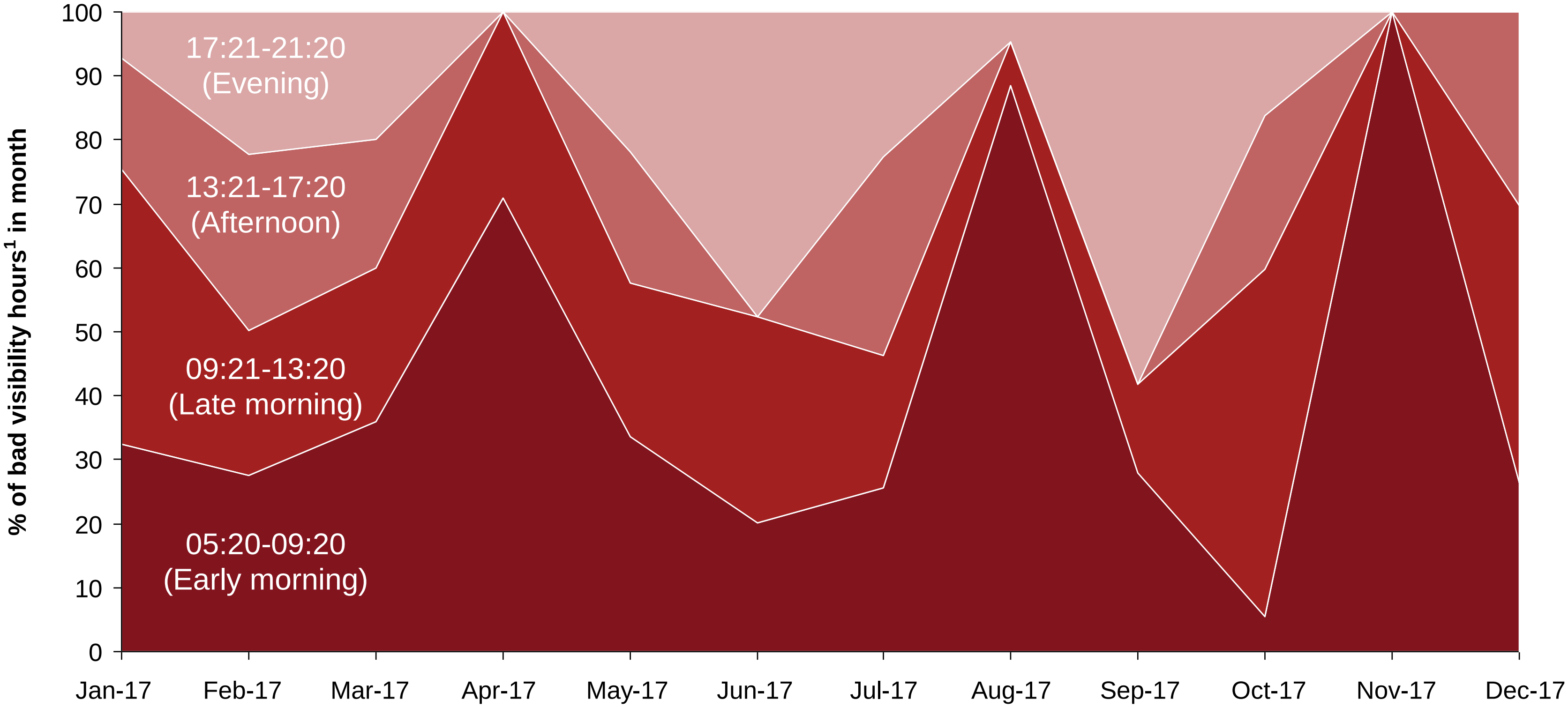
Source: Guernsey Met Office Annual Report 2017

Morning and evening fog are the most common, which coincides with the busiest operational times for the airport

Here's what the data says…

Proportion of monthly bad visibility hours occurring by times of day

Jan 2017 – Dec 2017 (1)



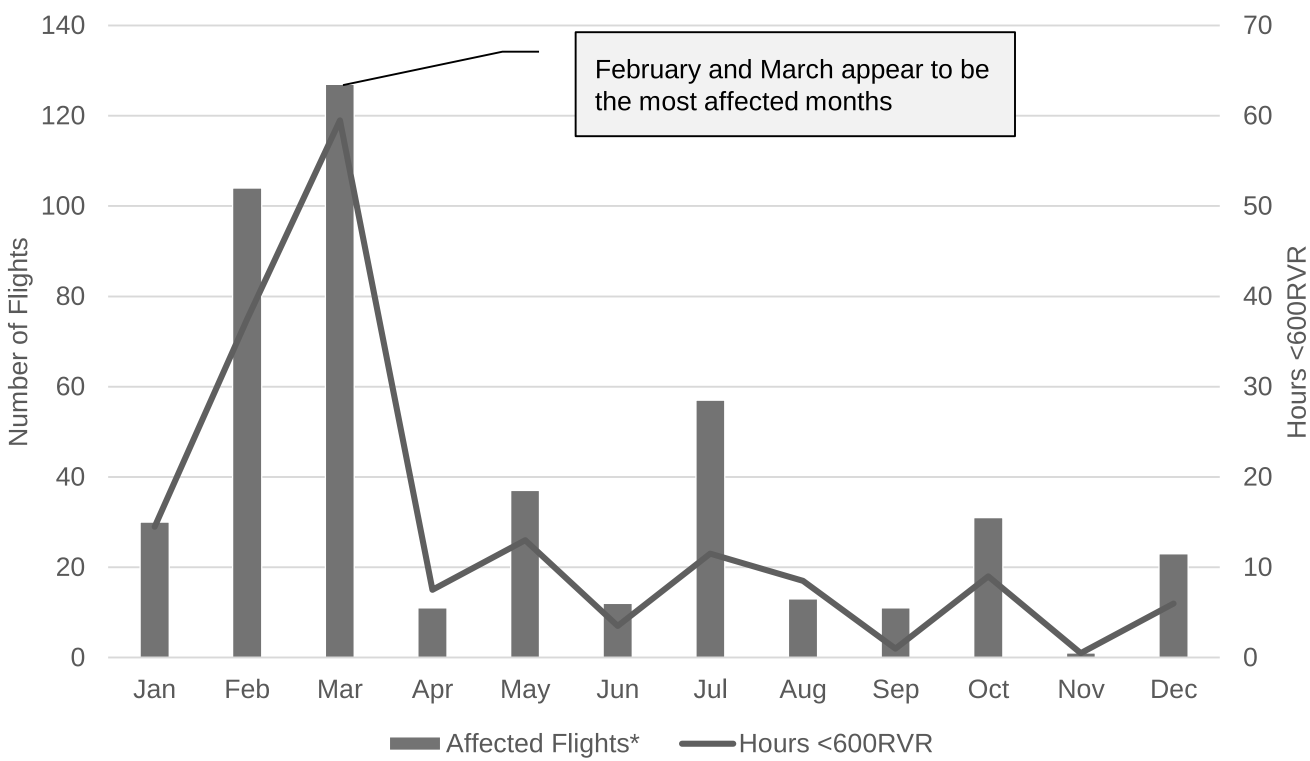
Note: (1) Hours <600 RVR

Source: Aurigny data

In 2017 a significant number of Aurigny flights were disrupted due to poor visibility

Here's what the data says…

Number of Aurigny flights disrupted by poor visibility by Month
Jan 2017 – Dec 2017



- Fog is most common during mornings and evenings, which coincides with the busiest time for flights
- The knock-on effects of bad visibility extend throughout the day with flights either being delayed, cancelled and/or diverted. This is an issue for the airlines, which incur additional operating costs as well as the passengers which need to account for such occurrences when planning to travel

Note: *Affected Flights are defined as delayed, diverted and cancelled flights; Planned flights are only reflective of number of flights that should have been operated on days affected by fog (i.e. not total monthly flights); All figures exclude ACI-SOU flights; RVR values are Touchdown- Daily hours may not equal sum of quarterly; Source: Aurigny, PwC analysis

3. Affordability

Residents perceive fares to be expensive, particularly relative to low cost carriers serving Jersey

Here's what people are telling us…

Government

*"**We will never be able to beat Jersey**. Our leading fare to Gatwick is £50, but easyJet from Jersey is £30. Aurigny's fare structure is also less transparent than it used to be, leading to the perception they've put prices up"* ***- SteerCo***

Industry

"Fares seem pricey, but we balance cost with revenue. If there was a runway extension and an LCC came in, that would destroy our business model. easyJet would just price us out"
- Mark Darby, Aurigny CEO

Tourism

*"Hotels see that **fundamentally it is about the cost of getting here**. People say they might not come due to cost, especially given **they can get to Jersey for a lot less"***
- Guernsey Chamber of Commerce

Business

"If it becomes expensive and difficult to get to a place, it starts to become less attractive as a business destination"

- Tony Mancini, Deputy Chairman GIBA

Residents

*"**Aurigny is too expensive to consider using more frequently**"*

- Customer feedback

- Guernsey air fares are perceived to be too expensive – both in absolute terms and relative to fares from Jersey
  - Customers **tend to focus on the difference in headline fares**, especially the Aurigny Guernsey-Gatwick fare vs. easyJet Jersey-Gatwick fare
- **Aurigny is perceived to be increasingly expensive**

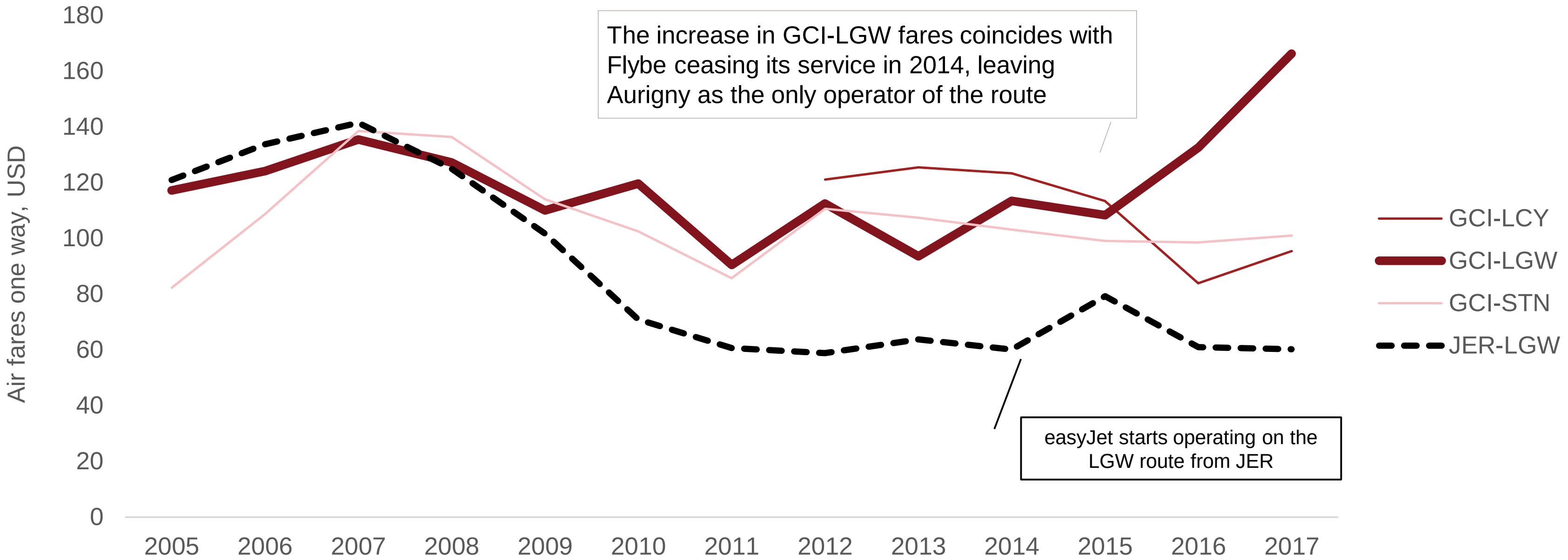
Source: News search, Stakeholder interviews

This perception is supported by an increase in air fares from Guernsey to Gatwick since 2014…

Here's what the data says…

Airfares on London routes from Guernsey and Jersey(1)

2005-2017



Difference in fares to LGW from Guernsey vs. from Jersey, 2005-2017

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
LGW	-3%	-7%	-4%	2%	8%	69%	49%	91%	47%	89%	37%	118%	176%

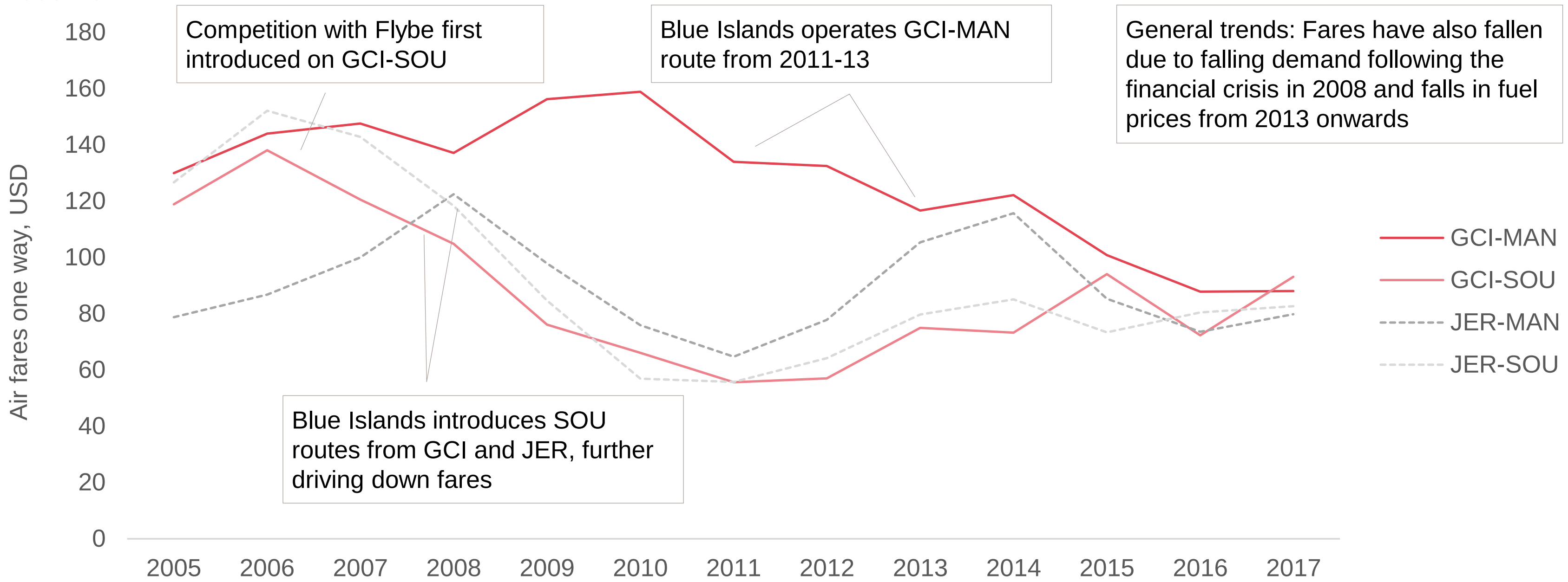
Note: (1) The average fares are sourced from the Planetoptim Milanamos Database. The database uses 80 different data sources worldwide and cross-references them in order to build a more accurate picture of the market demand and revenue. Major data sources include and are not limited to historical market data based on MIDT data from all major GDSs, BSP data, web scraping, Civil Aviation Authorities, airports and airlines-provided data. Fares are net of taxes, surcharges (e.g. fuel, security, etc), ancillary revenue and commissions.
Source: Planetoptim Milanamos, PwC analysis

…However Guernsey's routes to Manchester and Southampton appear to be more aligned in pricing with Jersey

Here's what the data says…

Airfares on key UK routes from Guernsey and Jersey

2005-2017



Difference in fares from Guernsey vs. from Jersey by destination, 2005-2017

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
MAN	65%	66%	48%	12%	60%	109%	107%	70%	11%	6%	18%	19%	10%
SOU	-6%	-9%	-16%	-11%	-10%	16%	0%	-11%	-6%	-14%	28%	-10%	13%

Source: Planetoptim Milanamos, PwC analysis

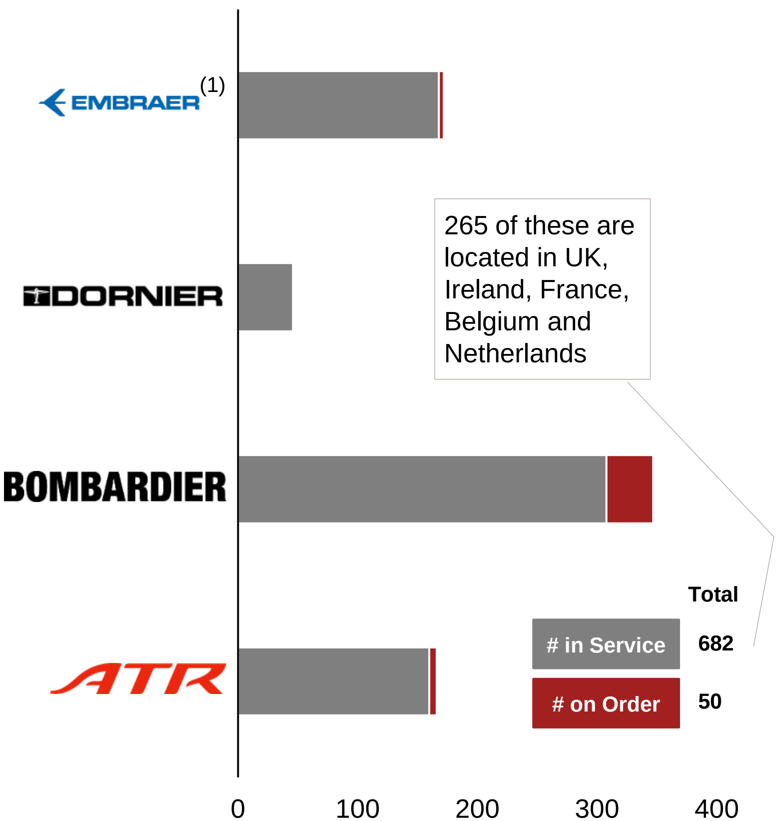
Industry context

There is no shortage of aircraft that can land in Guernsey

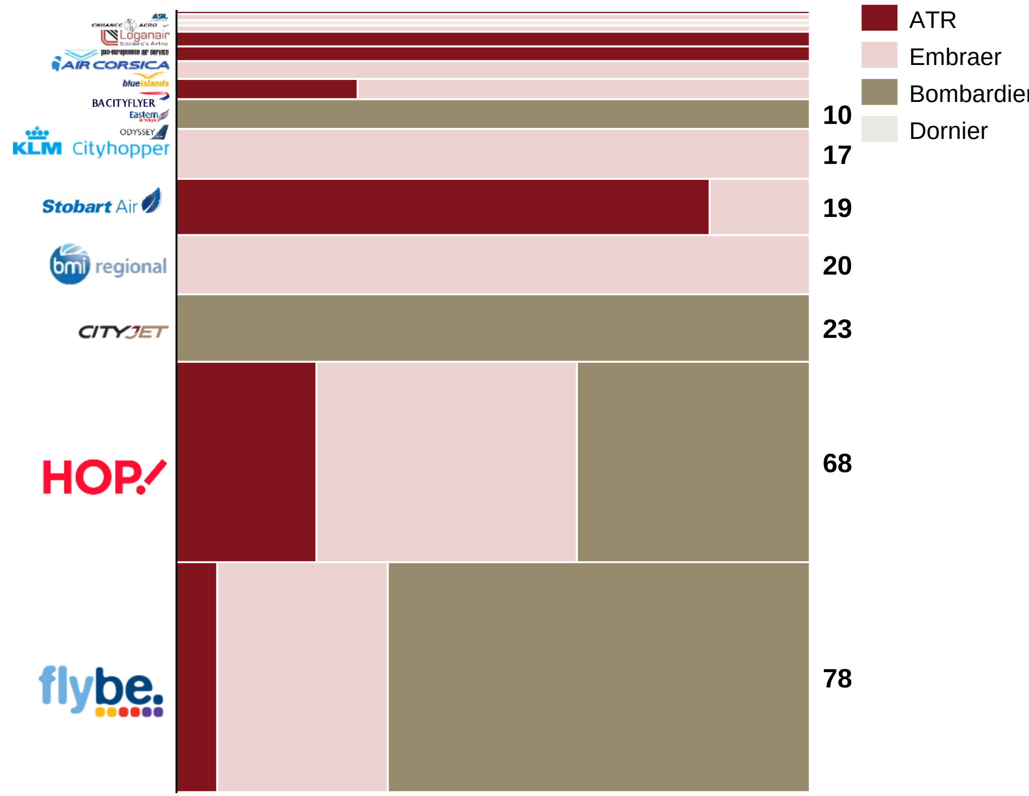
There are over 700 aircraft in service and on order in Western Europe that can land on a runway of Guernsey's current length. They are mostly operated by regional airlines

Number of aircraft in service and on-order that can land on a c.1500m runway

Total by manufacturer, Western Europe, 2018



Total by airline and manufacturer (2)



Note: (1) Embraer excludes the E190. (2) Flybe Embraer include 4 on order, Odyssey Airlines Bombardier include 10 on order.
Sources: CAPA Fleets, PwC analysis

LCC business models imply a number of factors that are the 'price' of low fares

Comparison of typical low-cost carrier business model with a network carrier

	LCCs	Network carriers
Structure of Network	**Point to Point (Secondary Airports)**	**Hub & Spoke Network**
Geographical network coverage	**Short to Medium Haul Intl**	**Domestic, Short to Long-Haul Intl**
Fleet	**Homogenous Fleet**	**Multi-Fleet**
Schedules	**Lower Frequency**	**High Frequency**
Seasonality	**Seasonal depending on destination**	**Low seasonality in schedules**
Required Load Factors	**85/90%***	**75/80%***
Cabin Class	**One Passenger Class**	**2-4 Passenger classes**
Fares	**One-Way Tariff**	**Multiple Tariffs available**
Alliances & Loyalty Programs	**No Alliances**	**Alliance/loyalty programs**
Sales & Distribution	**Online Sales**	**Agents/GDS, Online Sales**

Comment

Low-cost carriers (LCCs) do not bring the same connection benefits as network carriers

LCCs operate at a lower frequency than network carriers. LCCs are also likely to adapt seasonal capacity to market demand, adding in extra capacity during peak summer months but potentially looking to reduce frequency during winter, especially if minimum load factors cannot be reached

Low-cost carriers price dynamically, initially filling a number of seats further in advance at low headline rates before raising the price nearer the departure date. Last minute bookings can be as (or more) expensive as network carriers

Note: *The abovementioned load factors represent industry average to achieve profitability, and might not be reflective of specific requirements for Guernsey

…in particular, LCCs are more likely to 'up and leave' if their demands are not met

Case Studies

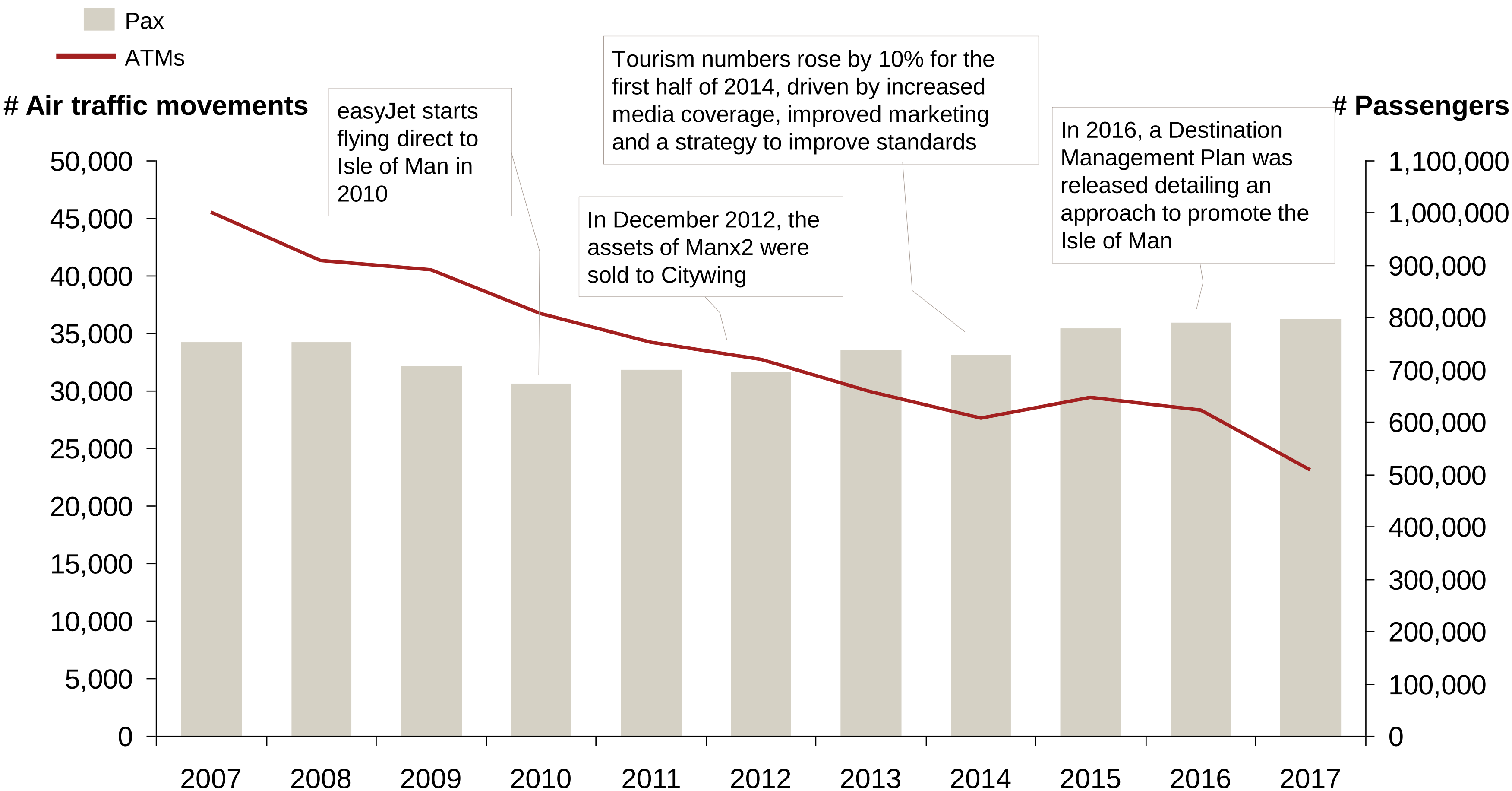
London Stansted Airport (UK)

- Stansted Airport increased its charges per passenger by 74% between 2006–2007 and 2007–2008 following the regulatory review. Between 2006–2007 and 2013–2014, Stansted's share of the London air passenger market declined from 17.4% to 12.9%
- Ryanair, Stansted's key customer, reduced seat capacity from Stansted by 9% while simultaneously doubling its total network capacity. In the press, Ryanair has often cited increases in aeronautical charges as the reason for these reductions
- In 2013, Ryanair and Stansted signed a 10-year agreement to lower airport charges and raise airline growth targets. This resulted in a return to growth of Ryanair services between 2013–2014 and 2015–2016 of 26% in terms of seat capacity

Gatwick Airport (UK)

- In 2015, during the UK Airports Commission inquiry into the need for a new runway, Gatwick Airport made the promise to cap landing charges for 30 years and bear the main risks of expansion to have a new runway (charges per passenger to be kept at £15 plus inflation for 30 years)
- Gatwick's promise to cap charges, however, was unlikely to satisfy easyJet, the airport's largest operator, which strongly condemned what would represent a big rise in the current rate of £9. easyJet came out in favour of Heathrow's expansion in what is believed to be an attempt to avert the increase

In 2010, easyJet started flying to the Isle of Man, increasing passenger numbers but decreasing the number of flights



Sources: UK CAA Statistics, PwC analysis

The introduction of easyJet into the Isle of Man has also presented various operational and scheduling challenges

Larger aircraft and higher load factors have caused bottlenecks in security and flight delays…

*"Sometimes it's [the delays are] when we have **very large airplanes** rather than just the number of aircraft"*

- Ann Reynolds, Isle of Man Ports Director

- Aircraft are now bigger and **the number of passengers per flight have doubled**
  - In 2016, the airport dealt with c.800k passengers, about the same as in 2005, but only half the number of planes
- The average load factor per aircraft has also increased

…as have undesirable flight timings, due to the lower priority placed on remote connections

*"Some of it [the delays] was about the **close timing of flights using large aircraft**, such as on Friday evenings where Gatwick and Bristol flights have been almost together…*

*…They are flying to us **when they have availability for their flights**. In summer easyJet flights come in from an international destination and there was every chance **it could be subject to a slot delay**"*

- Ann Reynolds, Isle of Man Ports Director

- There is often a 20-30 minute peak period in the Isle of Man airport in the morning and evening. However, if a second security scanner were to be opened to ease the bottleneck, **a minimum of five extra contract staff would be required just to cover a 30 minute peak period**

It is clear that any policy to attract a low-cost carrier to Guernsey must be accompanied by policy designed to mitigate consequences such as those experienced in the Isle of Man

Source: Public information, Travel Weekly, Strategy& Analysis

Initial overview of options

Possible actions

(Non-exclusive)

	Options	Possible actions
Infrastructure options	Runway Option 1: 1,570m	Existing runway with minor changes
	Runway Option 2: 1,700m - 1,800m	Small-to-medium extension outside current boundary
	Runway Option 3: 2,000m	Large extension outside current boundary
	ILS and navigation improvements	Upgrade to CAT2 or CAT3 ILS
Market-based options	Find new connecting hub	Access London Heathrow (3rd runway or remedy slots) or Amsterdam
	Route support and incentives	For existing and / or future operators to improve destination range
	Introduce PSOs	Public Service Obligations for e.g. lifeline routes
	Liberalise aviation market	E.g. 'open skies' policy
Airline options	Optimise or upgrade fleet	E.g. sell jet, review leasing arrangements, upgrade
	Interlining or code-sharing	Work with other airlines to help passengers connect seamlessly and access a wider network
	Virtual airline	Retain Aurigny's name and rights as a shell airline with operations carried out by other operators

It is not within our scope to assess or review Aurigny's strategy. However, the States should look to ensure that Aurigny's role aligns with future strategic decisions

Runway extension comparisons

What is it?

- Four different options have been outlined to extend the Guernsey airport runway:
  - 1,570m extension
  - 1,700m extension
  - 1,800m extension
  - 2,000m extension

What would be required to implement it?

- The different options each require different levels of construction
- The 1,570m option would be possible within the existing airport boundary, whilst the other options would require construction outside of the existing boundary
- Because of the geographical characteristics of the airport, an extension of the runway that goes beyond the existing boundary is likely to require filling in a 'valley' to the east, which would have an associated cost
- Land purchases are also likely to be required

Potential benefits

- A runway extension would allow narrow-body aircraft to land in Guernsey, e.g. B737s, A319s, A320s etc.
- Proponents argue that this would attract low cost carriers to Guernsey, who could operate larger planes at lower fare prices on the most popular routes, thereby generating additional demand
- ASM have estimated that the extension plans would bring additional value to the Guernsey economy as follows:
  - 1,850m
  - 2,070m
- Additionally, easyJet have indicated that runway lengths of 1,570m and 1,700m could be suitable for their A319 and A320 fleets under certain conditions

Potential costs or risks

- Extending the runway would not guarantee the arrival of low cost carriers to Guernsey
- Even if the extension were to attract low cost carriers, this may not help address Guernsey's existing connectivity issues:
  - Low cost carriers would likely operate fewer flights, potentially at less convenient times, which would harm frequency and connectivity
  - This could have a particularly negative impact on the business community, which is known to favour frequency over low ticket fares
- A low cost carrier could also seriously impair Aurigny's long-term sustainability by cherry-picking profitable lifeline routes and disregarding development routes. This would need to be addressed during initial negotiations

As runway length increases, the airport becomes increasingly able to attract a wider selection of aircraft and airlines

Options	Requirements	Outside existing boundary?	Allows additional aircraft?	Suitable for		
				easyJet	British Airways	Ryanair
No extension	• None	No	No	✗	✗	✗
1,570m	• Minor changes to existing runway • No extension outside existing boundary	No	A319s A320s	✓	Unclear	✗
1,700m	• Small extension • Breaches existing airport boundary, [although airport already owns required land at east side]	Yes	No additional aircraft but would allow existing aircraft to land with fewer payload restrictions	✓	✓	✗
1,800m	• Medium extension • Relaying of whole runway required due to regulation • Requires either filling in low-lying land at one end of runway or demolishing buildings at other end	Yes	Unclear	✓	✓	✗
2,000m	• Large extension • Relaying of whole runway required due to regulation • Either fill in low-lying land or demolish buildings	Yes	All narrow-body aircraft, including Boeing 737s (Ryanair)	✓	✓	✓

Previous work looked at three runway extension options and the implied range of airlines that they would attract

Overview of runway extension options and airlines that could theoretically fly to Guernsey

Current runway *1,483m*	Medium extension *1,850m*	Long extension *2,070m*
Air Nostrum	easyJet [easyJet has indicated that it might be able to operate with a short 1,570m extension]	Ryanair
airberlin	Air France	Lufthansa
Aurigny	British Airways	norwegian
brussels airlines	BA CityFlyer	Thomson Airways
bmi regional	Eurowings	
Austrian	Carpatair	
blueislands	germanwings	
CityJet	Germania	
citywing	Jet2	
Eastern airways	helvetic airways	
flybe.	KLM Cityhopper	
Loganair Scotland's Airline	Primera Air	
HOP!	vueling	
SkyWork Airlines	Volotea	
SAS	transavia	
Twin Jet		
Stobart Air		

Source: ASM report

ILS and navigation improvements

What is it?

- Investment in landing technology at the airport could reduce the effect of bad weather on delaying flight schedules
- The airport could invest to upgrade its category rating to either:
  - CAT 2
  - CAT 3

What would be required to implement it?

- Upgrading the airport to CAT2 would require significant investment due to structural/construction requirements
- CAT3 would also have significant financial requirements
- It is most likely that upgrades to landing systems would take place at the same time as any proposed runway extension

Potential benefits

- The reliability of flights would be improved significantly by the introduction of CAT2 or CAT3 ILS. This in turn would have a positive impact on airlines' finances as well as generate significant benefits for the passengers (e.g. ensure connections are not missed or that passengers don't have to book additional days of leave in case flights are delayed and/or cancelled)

Potential costs or risks

- CATII would be very costly due to structural requirements and would not allow for more than 300m RVR
- It has been suggested during stakeholder meetings that the costs of implementing CAT3a is not significantly greater than the cost of implementing CAT2, due to the particular characteristics of the airport. This has not been confirmed at this stage
- Of the airlines currently operating to GCI, Aurigny and Blue Island do not have aircraft which can utilise ILS of CAT2 or CAT3. Therefore a different fleet composition, new aircraft or different airlines would likely be required to take advantage of any improved landing systems

ILS - Options

	ILS Type	Decision height	Runway visual range (RVR)	Minimum Visibility	Requirements	Cost
Current system	**CAT I**	200ft or more *>61m*	1,800ft *550m*	2,600ft *800m*		
Potential upgrades	**CAT II**	100-200ft *30-61m*	1,000ft *300m*	N/A	• With CAT2 ILS, an approach from the east would be impossible. Westerly approaches are foggy. They'd only save about 40% of approaches with CAT2	**+++**
	CAT IIIa	50-100ft *15-30m*	600ft *180m*	N/A	• None of the aircraft currently flying to Guernsey are CAT3-enabled	**++**
	CAT IIIb	less than 50ft *<15m*	150ft *46m*	N/A		
	CAT IIIc	No restrictions	None	N/A	• Not yet in operation anywhere in the world, as it also requires guidance to taxi in zero visibility	

Source: ICAO

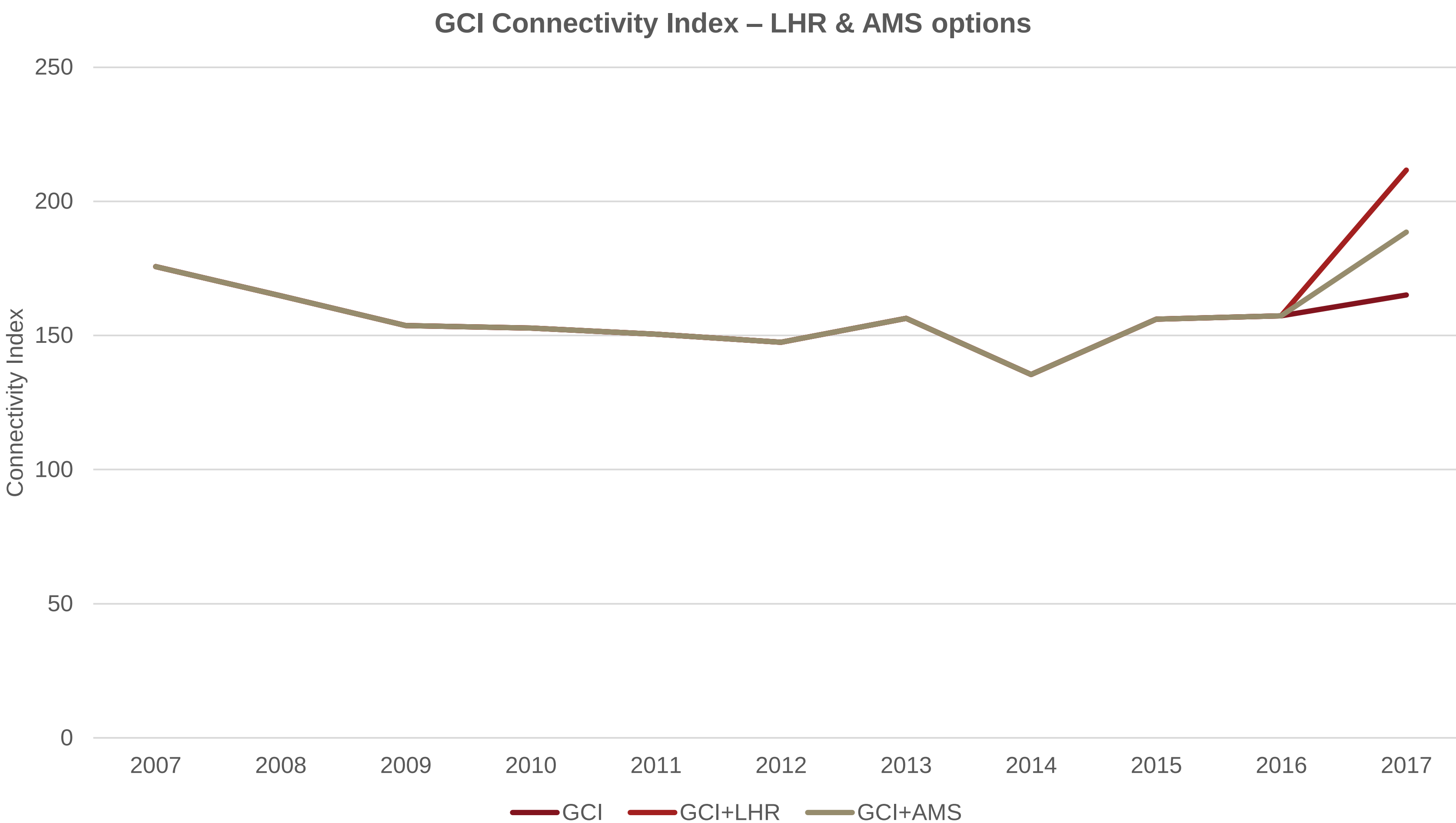
Route support to acquire new connecting hub

What is it?	***What would be required to implement it?***

• Access to a new connecting hub, via three main options:
- Heathrow remedy slots (short term) or Heathrow third runway (long term)
- Amsterdam Schiphol
	• **Option 1 Heathrow remedy slots / Option 2 Heathrow third runway** – the delivery of the service could happen in various ways (e.g. have another operator supporting Aurigny in delivery of service; support route through PSO, etc.)
	• **Option 3 Amsterdam Schiphol**
	  • Interlining between Aurigny and KLM
	  • KLM City Hopper to operate from Guernsey

Potential benefits	***Potential costs or risks***
• For existing travellers - Possibly lower generalised cost of travel (easy connection, better reliability) - Access to a wider route network • Could also stimulate demand by facilitating travel from and to other destinations • Connections to LHR would also benefit business travel	• Hard to secure Heathrow remedy or third runway slots • The cost of landing is likely to be significant, this cost in turn could be passed through to passengers, making air fares more expensive than current • Unlikely that an ATR would be allowed to land at LHR – the service might require to be operated by a jet

A route to London Heathrow or Amsterdam, would increase Guernsey's connectivity significantly



Note: connectivity index calculated on the basis of redistribution of half of the services currently offered to LGW to LHR or AMS

Route support assessment / PSOs

What is it?

Optimisation of route network and support to be provided in different forms – e.g.:

- Exploration of PSO on lifeline routes like LGW or LHR
- Incentives to be offered to support current or future routes

What would be required to implement it?

- Buy-in/agreement from all stakeholders e.g. airlines, States, etc.
- Might require a further understanding of priorities for certain routes and the implicit trade-offs
- Availability of funding

Potential benefits

- Focus on serving more profitable and lifeline routes directly whilst reaching less profitable destinations through a hub airport
- A simple route optimisation exercise could ensure the routes that make more commercial and social sense are served i.e. prioritise routes of highest importance to Guernsey residents and businesses

Potential costs or risks

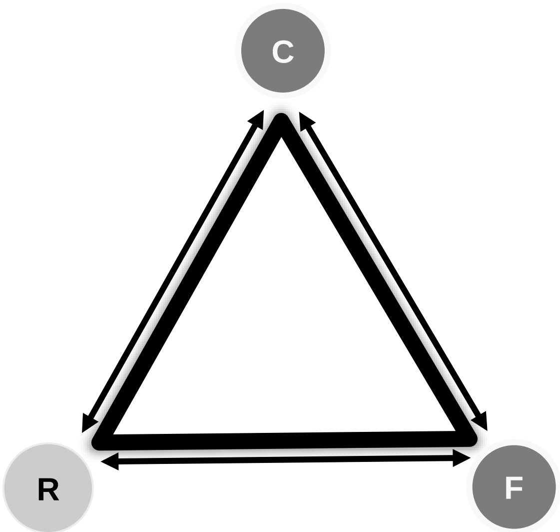
- Time and financial resources required for review
- Key routes might be harder to secure, at least in the shorter-term (e.g. Heathrow)

There are multiple PSO operations in the UK currently. Most are connecting islands

Country	Airport Origin	Airport Destination	PSO/ Contract start	Contract end	Geography	Number of routes	Market open or restricted (O/R)	Number of airlines	Airlines
UK	Cardiff	RAF Valley, Anglesey	15/02/2016	14/09/2016	Mainland	1	R	1	Van Air Europe
UK	Glasgow (International)	Barra	25/10/2015	24/10/2019	Island	3	R	1	Loganair, UK
UK	Glasgow (International)	Campbeltown	25/10/2015	24/10/2019	Mainland	3	R	1	Loganair, UK
UK	Glasgow (International)	Tiree	25/10/2015	24/10/2019	Island	3	R	1	Loganair, UK
UK	Kirkwall	Eday	01/04/2013	31/03/2017	Island	6	R	1	Loganair, UK
UK	Kirkwall	North Ronaldsay	01/04/2013	31/03/2017	Island	6	R	1	Loganair, UK
UK	Kirkwall	Papa Westray	01/04/2013	31/03/2017	Island	6	R	1	Loganair, UK
UK	Kirkwall	Sanday	01/04/2013	31/03/2017	Island	6	R	1	Loganair, UK
UK	Kirkwall	Stronsay	01/04/2013	31/03/2017	Island	6	R	1	Loganair, UK
UK	Kirkwall	Westray	01/04/2013	31/03/2017	Island	6	R	1	Loganair, UK
UK	Newquay	London Gatwick	26/10/2014	25/10/2018	Mainland	1(6)	R	1	Flybe
UK	Oban	Coll	16/05/2015	15/05/2018	Island	4	R	1	Hebridean Air Services, UK
UK	Oban	Colonsay	16/05/2015	15/05/2018	Island	4	R	1	Hebridean Air Services, UK
UK	Oban	Tiree	16/05/2015	15/05/2018	Island	4	R	1	Hebridean Air Services, UK
UK	Coll	Tiree	16/05/2015	15/05/2018	Island	4	R	1	Hebridean Air Services, UK
UK	Stornoway	Benbecula	01/04/2013	31/03/2017	Island	1	R	1	Loganair, UK
UK	Tingwall (occasionally operates from Sumburgh)	Fair Isle	01/04/2013	31/03/2017	Island	4	R	1	Directflight, UK
UK	Tingwall	Foula	01/04/2013	31/03/2017	Island	4	R	1	Directflight, UK
UK	Tingwall	Out Skerries	01/04/2013	31/03/2017	Island	4	R	1	Directflight, UK
UK	Tingwall	Papa Stour	01/04/2013	31/03/2017	Island	4	R	1	Directflight, UK
UK	Dundee	London Stansted	01/07/2014	30/06/2018	Mainland	1(6)	R	1	Loganair, UK
UK	City of Derry	London Heathrow, Gatwick, Stansted, Luton, City, Southend	27/03/2017	tender ongoing	Island	1(6)	R	ongoing	ongoing

Scotland also faces poor connectivity to remote areas, and has attempted to address this through multiple options

Scotland's addressing of the air links 'trilemma'



C

<u>PSOs</u>
- Transport Scotland imposes PSOs on several routes; **subsidies are paid by the Scottish Government or local authorities**
- Competitive bids are sought on an EU-wide basis, after which subsidies are allowed to be paid

<u>Air route development</u>
- Transport Scotland works in **partnership with airports, airlines, and tourism organisations**
- E.g. Memorandum of Understanding signed with Heathrow Airport in October 2016
- There is continual ambition to improve Scotland's international air connections

<u>Airport subsidies</u>
- Provision of airport services is through Highlands and Islands Airports Ltd, a Non-Departmental Public Body wholly owned by the Scottish Ministers
- The Scottish Government **subsidises the loss-making airports**, to allow airport charges to be contained at feasible levels

F

<u>Air Discount Scheme</u>
- It is an initiative to make air services more affordable for remote communities, offering a **50% discount on ticket prices** on eligible routes
- Residents in eligible areas can apply for membership to gain access to the discounted fares, which are provided to them by participating airlines at the time of booking
- Current scheme runs till 31 March 2019

R

Reliability and punctuality appear to remain an issue. One of the options mentioned to address the issue related to the Islands Transport Forum playing a role in monitoring punctuality and reliability and in monitoring operator's Quality Assurance programmes

Source: Transport Scotland

Aurigny - Fleet Optimisation

What is it?

- Aurigny currently has a fleet of 8 aircraft, including: 1 Embraer; 4 ATRs; 3 Dorniers
- The fleet is very ‘fragmented’ given the different types of aircraft utilised, which necessitate different maintenance, pilot licences and training, etc. ultimately driving costs up
- A review would consider if the current allocation is the best way to deploy available capital and what is needed for the future, e.g. if a route to LHR was to open

What would be required to implement it?

- The optimisation of the fleet would require a review of the current fleet
- Consideration should be given to leasing vs purchasing new aircraft

Potential benefits

- Improvements in reliability – a larger fleet will help Aurigny to continue to operate when technical or weather issues hit, in particular Aurigny is looking into purchasing new ATRs equipped with ClearVision
- Potential reduction in operating costs for the airline

Potential costs or risks

- The cost of an ATR72-600 equipped with ClearVision is reported in the region of £15-20m per aircraft*
- Reliability benefits only restricted to Aurigny and the new aircraft given not all fleet will be upgraded e.g. Blue Island won’t be able to afford purchasing this type of aircraft

*Source: CAPA Fleets (as of July 2018), Industry knowledge

Partnerships with other airlines

What is it?

- Interlining with other airlines to enable seamless connections and access a wider catchment both for the passengers and the airlines. Currently:
  - **Aurigny** signed up as a partner airline to easyJet in the provision of Channel Island services. The two airlines have signed a distribution partnerships to sell the partners' standalone flights on easyJet's website. Customers will be also able to seamlessly connect using the GatwickConnects product
  - **Blue Islands** has a franchise partnership with Flybe

What would be required to implement it?

- May require IOSA safety audit to align with industry safety requirements
- A change of booking system would also be required

Potential benefits

- Through the addition of new interlining partnerships with airlines that offer hubbing services, benefits could be achieved both at a passenger and airline level:
  - **Passengers** – interline agreements allow passengers to book multiple segments on multiple airlines, and baggage to transferred between airlines, thereby enabling seamless connections and access to a wider route network
  - **Airlines** - could equally benefits through access to a wider catchment thanks to the additional exposure gained (i.e. potential increase in inbound pax)

Potential costs or risks

- Risks and costs could be dependent on the type of agreement that is reached between the two airlines
- The IOSA and booking system requirements would result in costs for the airline

Aurigny as a Virtual Airline

What is it?

- The concept of virtual airline is associated with the outsourcing of a number of operational and business functions, whilst the effective control of the core business is still retained
- This concept could be applied to Aurigny

What would be required to implement it?

- Operating Aurigny as a virtual airline would require negotiating an agreement with one or more operators

Potential benefits

- The potential benefits of operating Aurigny has a virtual airline include:
    - Retention of slots and securing of lifeline routes
    - Decrease in operational costs, as well as fixed costs such as cost of capital required for fleet

Potential costs or risks

- The potential risks include:
    - Potential reduction in economic benefits generated by Aurigny's employment
    - A watertight agreement would be needed with the new actual operators as safety and security standards might otherwise be compromised – e.g. see Manx2 airline
    - Aurigny would be dependent on success of operating airline – e.g. Citywing operations between Belfast and Isle of Man suspended when operator's permission to fly was suspended

Glossary

Airport Codes (IATA)	
ACI	Alderney
AMS	Amsterdam
BHX	Birmingham, UK
BRS	Bristol, UK
CWL	Cardiff, UK
DNR	Dinard, France
DUS	Dusseldorf, Germany
EMA	East Midlands, UK
EXT	Exeter, UK
GCI	Guernsey
GNB	Grenoble, France
JER	Jersey
LBA	Leeds Bradford, UK
LCY	London City, UK
LGW	London Gatwick, UK
LHR	London Heathrow, UK
LTN	London Luton, UK
MAN	Manchester, UK
NUS	Norsup, Vanuatu
NWI	Norwich, UK
SOU	Southampton, UK
STN	Stansted, UK

Additional terms	
ATL	Air Transport Licensing
BA	British Airways
CICRA	Channel Islands Competition and Regulatory Authorities
EZY	easyJet
GIBA	Guernsey International Business Association
GIFA	Guernsey Investment Fund Association
ILS	Instrument Landing System
LCC	Low cost carrier e.g. EasyJet
LDA	Landing distance available
PSO	Public Service Obligation
RVR	Runway visual range
States, SoG	States of Guernsey
VFR	Visiting friends and relatives