Appendix 2 – Passenger Forecast Methodology and Market Outlook

Source: Dublin Airport

PASSENGER FORECAST METHODOLOGY AND MARKET OUTLOOK

September 2018

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01. FOREWARD

The global and local macroeconomic environment has dramatically improved since the publication of the current regulatory determination in October 2014, which has fuelled a post-recessionary upturn in passenger demand. Owing to our continued partnerships with airport stakeholders, annual traffic at Dublin Airport has accelerated from 18.4 million passengers in 2010, to a record level of 29.6 million in 2017. In early 2018, the rolling twelve-month passenger volumes crossed 30 million for the first time, elevating Dublin Airport into a new category of top tier, major international airports (which includes London Heathrow, London Gatwick, Amsterdam and Paris CDG). Dublin is now the eleventh largest airport in the European Union (by passenger volumes).

The Commission for Aviation Regulation recently commenced the regulatory determination process for the period 2020 onwards. A fundamental component of the regulatory proposition is the Capital Investment Programme (CIP) required to accommodate current and future demands on the airport. The volume and composition of future airport activity is a critically important input to the development plan.

Accurately forecasting demand is a challenging, multi-faceted exercise. The 2009 determination failed to appreciate the full scale of the recession to follow, while the 2014 determination struggled to forecast the scale of the economic recovery underway. Economic growth has long been recognised as a key driver of passenger demand. However, the Irish economy has experienced a relatively volatile trajectory over the past decade, thus hampering the accurate mapping of economic activity to short-term passenger demand.

To inform stakeholder engagement, Dublin Airport has prepared this consultation document, which provides detailed insights in the following areas:

- Dynamics underpinning current airport traffic
- Methodology for projecting future demand
- Demand outlook

Over-arching future traffic assumptions:

a) **Demand environment to remain positive in the short to medium term**
   The global and local macroeconomic trends remain positive and should continue to support increased levels of passenger demand. Passenger numbers and aircraft movements are expected to continue to grow over the next regulatory period and beyond. This is consistent with recent trends, industry forecasts and airline aircraft orders.

b) **Normalised traffic growth**
   A sustained period of moderated but stable demand growth is expected. Current growth rates have subsided to mid-single digit percentages and are expected to reduce further in the medium term, across the larger European airports.

c) **Broadening of the customer base**
   The composition and mix of airport traffic will continue to broaden. We anticipate further new entrants across a range of service offerings; from new, intercontinental five-star airlines, to additional short-haul low cost services. Transfer traffic is expected to grow and account for a larger percentage of overall airport traffic (currently 5.5%). A continuation of expansion on the North Atlantic is expected, as well as increased demands for US Preclearance. Trends towards larger aircraft and higher load factors continue to drive passenger growth above aircraft movement growth, albeit load factors are currently at record levels, with limited scope to increase further.

d) **Significant downside risks emerging**
   34% of traffic at Dublin Airport is between Ireland and the UK (over 11 million passengers in 2017). No growth has occurred in this key market for over two years. A hard Brexit could result in a sustained traffic decline in this market. Overall airport growth in 2015 and 2016 was delivered against a backdrop of oil prices at less than $50 per barrel (low of $29 was recorded in early 2016), but prices are currently on an upward trajectory and have recently surpassed $75. Oil at over $75 per barrel has historically required the introduction of airline fuel surcharges, which have the potential to suppress demand (particularly on longer routes). Aircraft technology will continue to progress, with enhanced performance to operate longer distances. This trend will inevitably result in the decline of the transit business (technical fuel stops). Finally, capacity headroom at the airport over the coming years will be significantly less than during the preceding period. Runway capacity will remain constrained until 2022, when the new runway is expected to be operational, albeit planning restrictions could limit its full potential. Lack of contact stand availability is a significant issue which will be addressed in the next development plan. A constrained demand profile may be a more valid forecasting assumption for the first half of the next determination.

Dublin Airport is inviting feedback from stakeholders on the assumptions and methodologies used to plan for future growth. We welcome guidance from airport users, as to their growth expectations over the medium term and thank you in advance for your submissions.

02. CONSULTATION TIMELINES

The table below outlines the timelines for this consultation process. All submissions will be carefully considered and will be used to inform our regulatory submission.

Action	Date
Consultation paper issued	07th September 2018
Deadline for receipt of clarification requests	21st September 2018
Dublin Airport to respond to any outstanding clarification requests	1st October 2018
Deadline for receipt of written submissions	12th October 2018
Consultation summary and response circulated by Dublin Airport	22nd October 2018

→ Please direct all correspondence relating to this consultation process (including queries and final submissions) to: **forecasts@dublinairport.com**

03
REVIEW OF TRAFFIC DYNAMICS

03. REVIEW OF TRAFFIC DYNAMICS

3.1. Summary of traffic dynamics

Several specific changes to the dynamics and composition of traffic at Dublin Airport have emerged since publication of the 2014 Determination. While most of these changes, listed below, have positively contributed to passenger and aircraft movement growth, they have also placed a strain on certain modules of airport infrastructure during peak periods.

Changes in airline operating models

- Ryanair's enhanced focus on customer service and Aer Lingus' change in ownership structure (the two largest carriers at Dublin Airport) will impact on the future business plans and facility requirements of both airlines. For example, Ryanair has signalled an interest to start transferring passengers at Dublin, while Aer Lingus has accelerated its long-haul expansion plans, by almost doubling its long-haul fleet since 2014. Undoubtedly, the growth of narrow-body, next generation aircraft operating transatlantic routes is a significant development in the market.
- There has also been a marked increase in the number of based aircraft at Dublin Airport since 2014, which is driving demand for overnight aircraft parking stands and first-wave departure slots. Ryanair has increased its first wave departures from 19 aircraft in 2014 to 31 aircraft in 2018, while Aer Lingus has increased its morning narrow-body departures from 24 to 28 over the same period.

New players in the market: changing growth dynamics

- The number of scheduled airlines at Dublin Airport has increased from 29 in 2014 to 46 in 2018
- With the arrival of Hainan Airlines and Cathay Pacific in Summer 2018, Dublin Airport now welcomes five of the world's 5-star airlines (out of a total of ten). These premium carriers require enhanced airport facilities such as business class lounges, dual-airbridges, fast-track security and chauffeur car parking.
- Ryanair and Aer Lingus generated up to 80% of the airport's growth in 2015 and 2016, however in 2017 and 2018, almost two thirds of the airport's growth came from 'other airlines'.

Growth in long-haul and transfer traffic

- Long-haul traffic accounted for 15% of overall traffic in 2017, up from 12% in 2014. There has been an increase from 43 widebody movements on a typical busy day in 2014, to 69 per day in 2018 (for 2018 to date, widebody movements on Pier 3 at Dublin have increased by 35%)
- Long-haul flights enhance Dublin's global connectivity, but widebody aircraft place heavier demands on the airport's infrastructure; i.e. generally consume two narrow-body parking stands, ground-times of over two hours, require wider Code E taxiways and will require a large number of ground servicing vehicles and equipment.
- Transfer passenger volumes have doubled since 2014, increasing from 3% to 5.5% market share. In 2018, connecting volumes will cross two million passengers for the first time. The vast majority of connections at Dublin Airport are from North America to Europe (and vice versa).
- The West-to-East transfer flows typically occur early in the morning. Aircraft arriving off the Atlantic normally require pier served contact stands, which by extension displace certain narrow-body/short-haul flights to remote and satellite aprons. The corresponding East-to-West connections occur daily from 0900 to 1500. Longer-haul flights from the US West Coast, such as San Francisco, Los Angeles and Seattle arrive in Dublin from 1100 onwards, with onward connections to Europe and the UK taking place in the afternoon.

Market analysis

- Dublin's transatlantic traffic has grown by over 50% since 2014 and Dublin is now the sixth largest airport in Europe for traffic to North America (ahead of Madrid, Rome, Barcelona, Milan and Munich).
- Core European destinations have seen an increase in flight frequency and capacity. The strong resurgence in Irish outbound leisure demand has resulted in a 38% increase in passengers travelling to Southern Europe/ Mediterranean destinations since 2014. The market size in 2017 was over six million passengers.
- Conversely, the UK market was flat in 2017 and is forecast to be similar in 2018. Leisure traffic flows in this market are particularly sensitive to currency fluctuations. The UK is by far Dublin's largest volume market and

accounts for over one in three passenger journeys. Traffic changes in this key market will have a critical impact on overall passenger numbers at Dublin Airport.

3.2. Passenger trends

Figure 1: Passenger and aircraft movements

	2013	2014	2015	2016	2017	2018F
Passengers (m)	20.2	21.7	25.0	27.9	29.6	31.2
Aircraft Movements (ooo)s	170	180	198	215	223	235
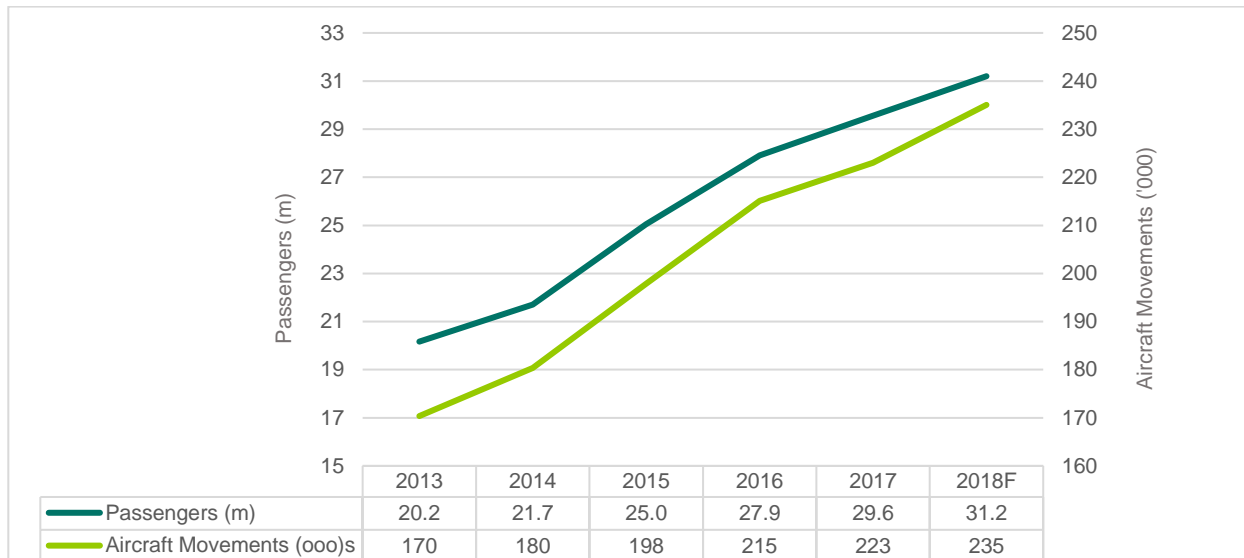
Annual passenger volumes have increased by over ten million since 2012. Aircraft movement growth has consistently occurred at a lower rate than passenger volumes, as the trend towards larger size aircraft continues. Growth in 2015 and 2016 was exceptional (11-15% passenger growth). The positive trend has continued through 2017 and 2018, but at a more moderate rate of circa 6%.

3.3. Long-haul v short-haul

Figure 2: Short-haul v Long-haul
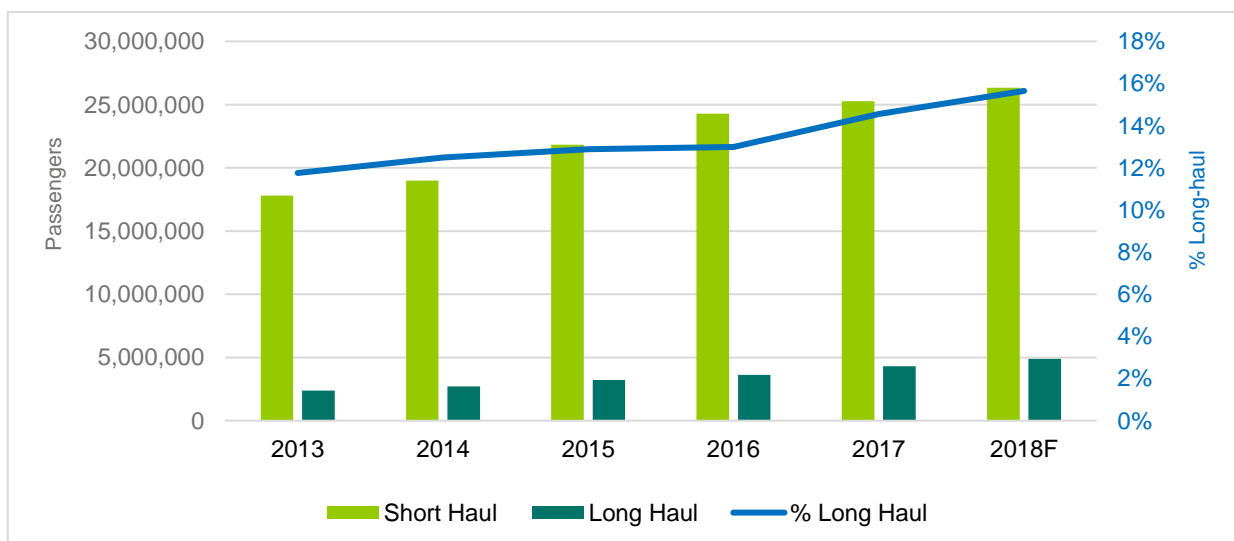
Short-haul traffic has increased, on average, by 9% per annum since 2013. Long-haul growth is more pronounced, with on average, a 16% increase per annum over the same period. Long-haul traffic has doubled in absolute volumes since 2013 and is now approaching 16% of total traffic.

3.4. Transfer traffic

Figure 3: Transfer traffic

Transfer volumes have increased by on average, 30% per annum since 2013. The share of transfer traffic has over doubled from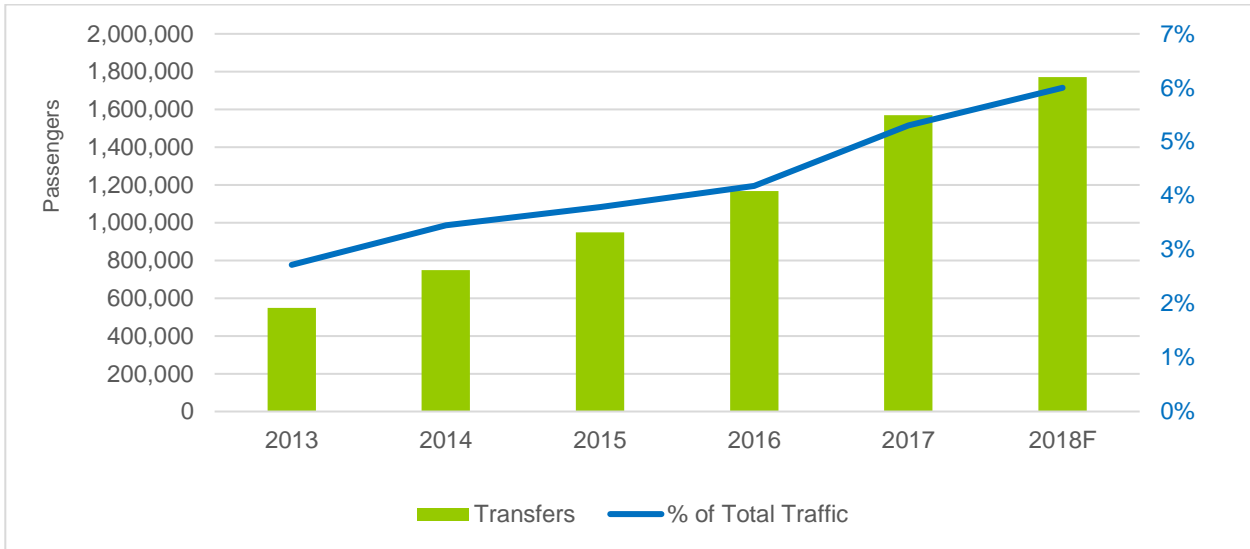 2.7% in 2013 to almost 6% in 2018. The rate of growth in 2018 is expected to moderate to 15% (an increase of circa 200,000 passengers on 2017).

3.5. Load factor trends

Figure 4: Load factor trends
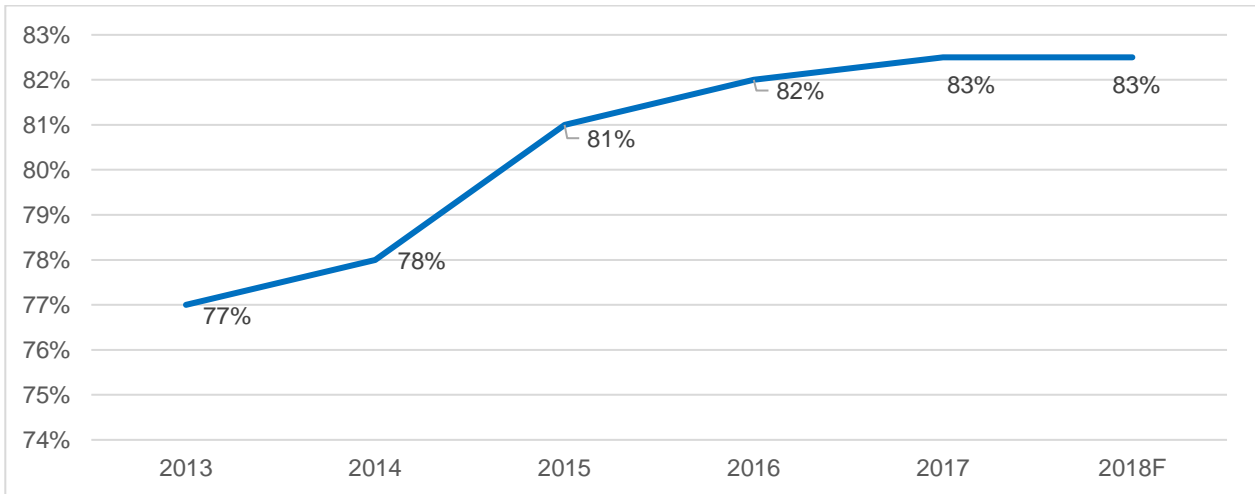
Pre-recession, the average load factor in Dublin was in the mid-70s. In recent years, airlines have increasingly focused on volume, with load factors crossing 80% in 2015 and now plateauing in the region of 83%. The progression from 77% in 2013 to 83% today, is the equivalent of adding over two million additional passengers per annum, without any increase in aircraft movements or seat capacity.

Table 1: Average load factors by month (2017)

Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
75%	79%	81%	85%	81%	87%	90%	89%	84%	83%	80%	80%	83%

Table 1 highlights that the peak Summer months of June-August operate at 'near full' load factors. An opportunity exists to target the Winter and shoulder months for load factor improvements.
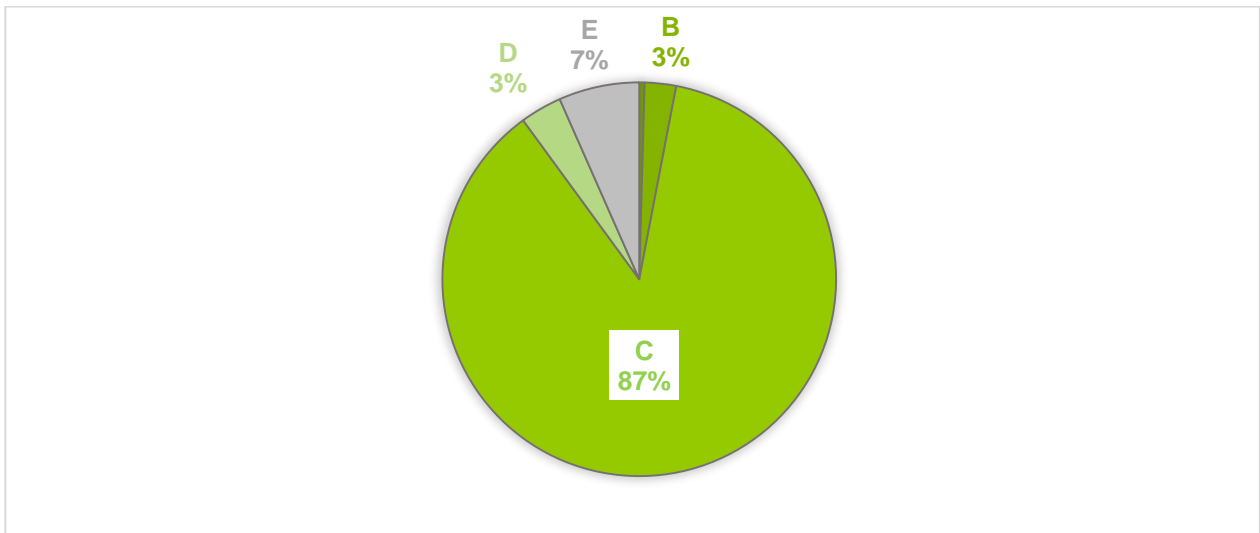
3.6. Aircraft size category

Figure 5: Aircraft size classifications (2017)

The International Civil Aviation Organisation (ICAO) classifies aircraft under six size categories, based on either wingspan or the aircraft's outer main gear wheel span.

Table 2: Aircraft classification

Code	Description	Passenger seating capacity	Typical aeroplane
A	Light aircraft	Less than 20	Cessna 404 Titan
B	Large business jets and narrow-body regional aircraft	Less than 50	Bombardier CRJ-200
C	Narrow-body short-haul aircraft	Less than 220	Airbus A320
D	Narrow and wide-body jet	Less than 300	Boeing B757 and B767
E	Large wide-body jet	Up to 500	Boeing B777
F	Ultra-large wide-body jet	Up to 800	Airbus A380

Activity at Dublin Airport continues to be dominated by Code C aircraft, which represent 87% of annual movements. However, the increase in long-haul services has led to a higher proportion of larger size aircraft. Code D/E aircraft

now account for over 10% of total movements, up from 8% in 2013. We expect that the proportion of Code D/E aircraft will continue to gradually increase over the medium term. At present, there are no Code F operations at Dublin Airport.

Table 3: Number of Code D/E movements by year

Code	2013	2014	2015	2016	2017
D	7,008	7,449	7,518	7,059	7,656
E	6,527	7,513	10,185	12,163	14,767

Since 2013, movements by Code D aircraft increased by 9% to 7,656, while movements by Code E aircraft more than doubled to 14,767.

Figure 6: Average aircraft size (passenger seat capacity)
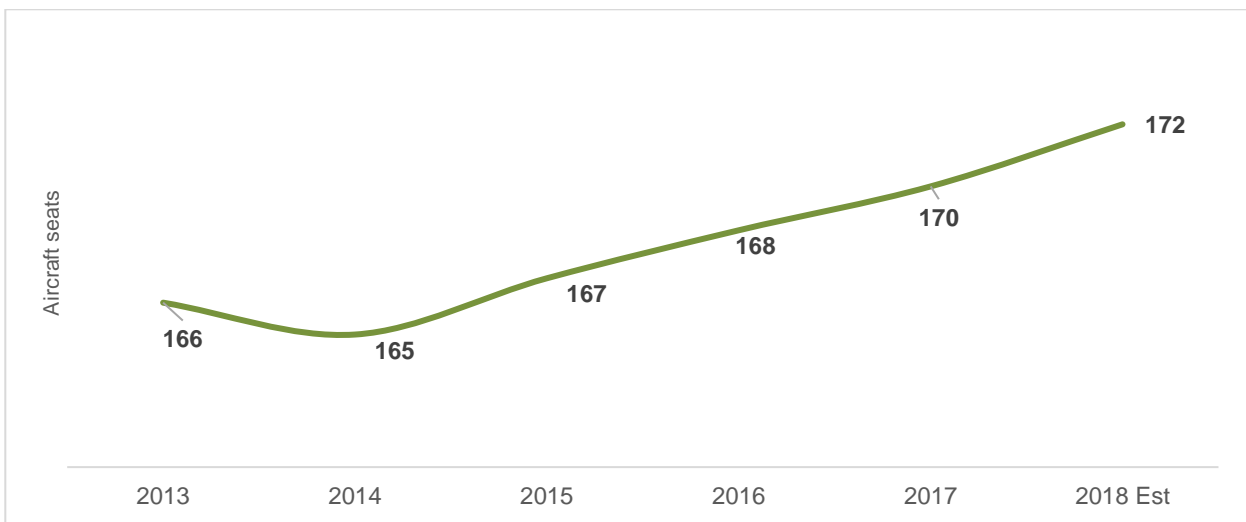
The average aircraft size has grown consistently over the past number of years. There is an expectation that average aircraft seat capacity will continue to grow by between 1-2% over the medium term.

3.7. Airline market share

Figure 7: Airline market share % by year

A noticeable trend in Figure 7 is the growth in market share of the 'Other' airlines, which has increased from 20% to 25% during the current regulatory peri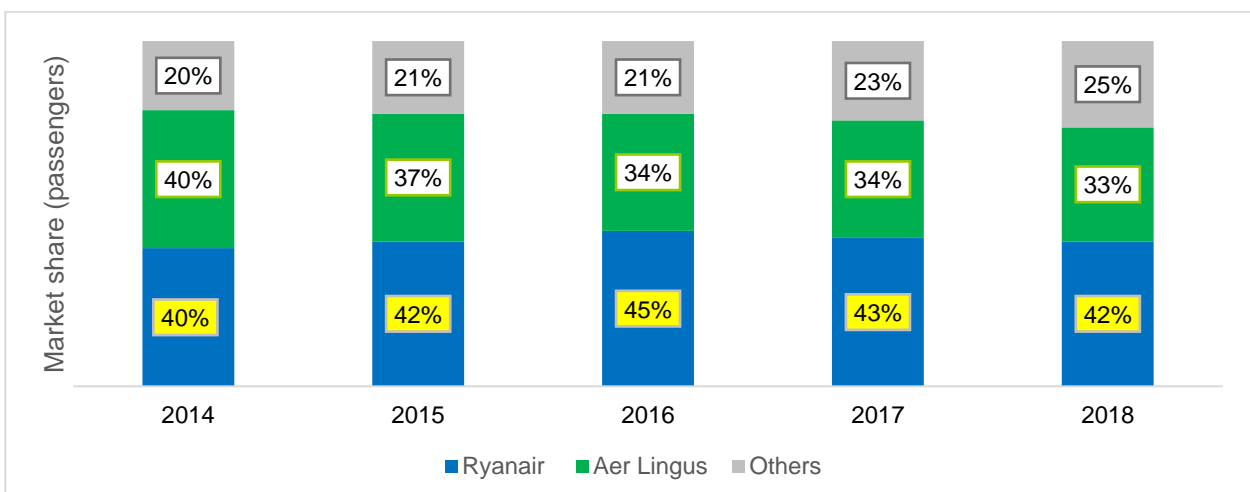od. The largest of the 'Other' carriers are British Airways (3%), Lufthansa (2%) and Cityjet (2%). Norwegian's market share has grown rapidly from 0.4% in 2016 to 1.3% in 2018.

The total number of scheduled carriers has increased from 27 in 2013 to 46 in 2018. In 2018, six new entrants will commence operations at Dublin Airport.

Figure 8: New entrant airlines in 2018

Table 4 lists the 18 scheduled carriers that have commenced operations at Dublin Airport since 2014.

Table 4: New entrant airlines at Dublin since 2014

2014	2015	2016	2017	2018
Vueling	ASL	Aegean Cronus	Air Arabia Maroc	Cathay Pacific
Westjet	Ethiopian Airlines	Cobalt Air	Air France Mainline	Croatian Airlines
	Wow Air	Fly One	Loganair	Hainan Airlines
		KLM	Qatar Airways	Iceland Air
				Lauda Motion
				Aeroflot

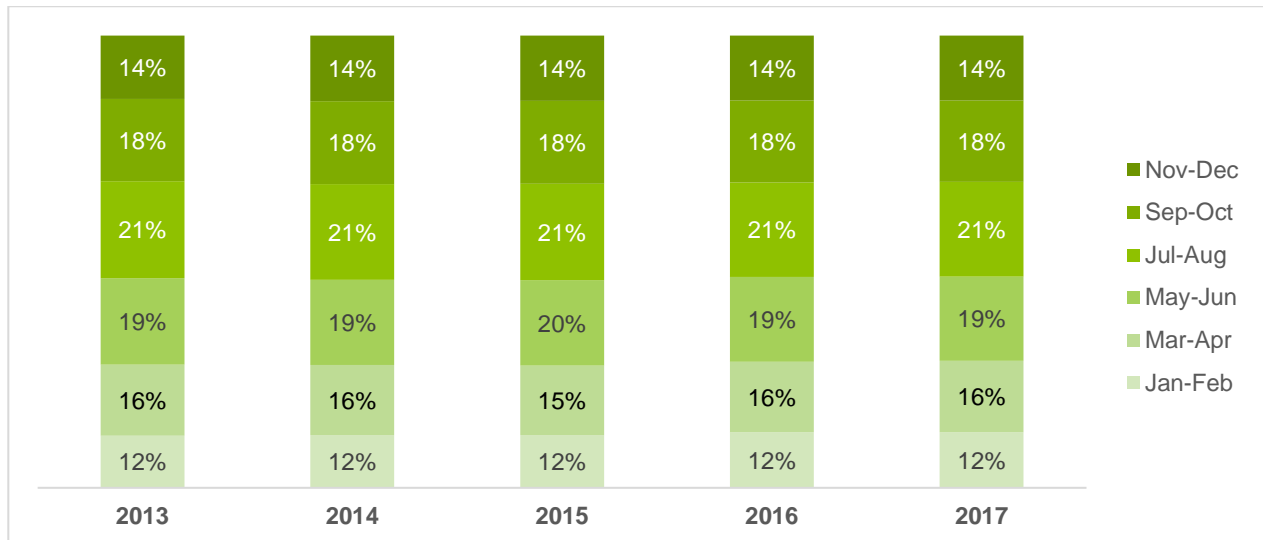## 3.8. Increase in 5-star airlines

Ten years ago, Etihad was the only Five-Star carrier operating at Dublin. The number of premium carriers has grown rapidly in recent years to five, with half of the world's Five-Star airlines now operating into Dublin Airport.

Figure 9: 5-star airlines at Dublin Airport

3.9. Seasonality

Figure 10: Percentage of passengers by month and year

There has been little change in seasonality profiles over recent years. The peak months of July and August continue to generate 21% of annual traffic. An 1%-point increase in the proportion of passengers travelling in Jan-Feb would equate to approximately 350,000 additional annual passengers.

3.10. Country of residence

Figure 11: Percentage of passengers by country of residence (2017)
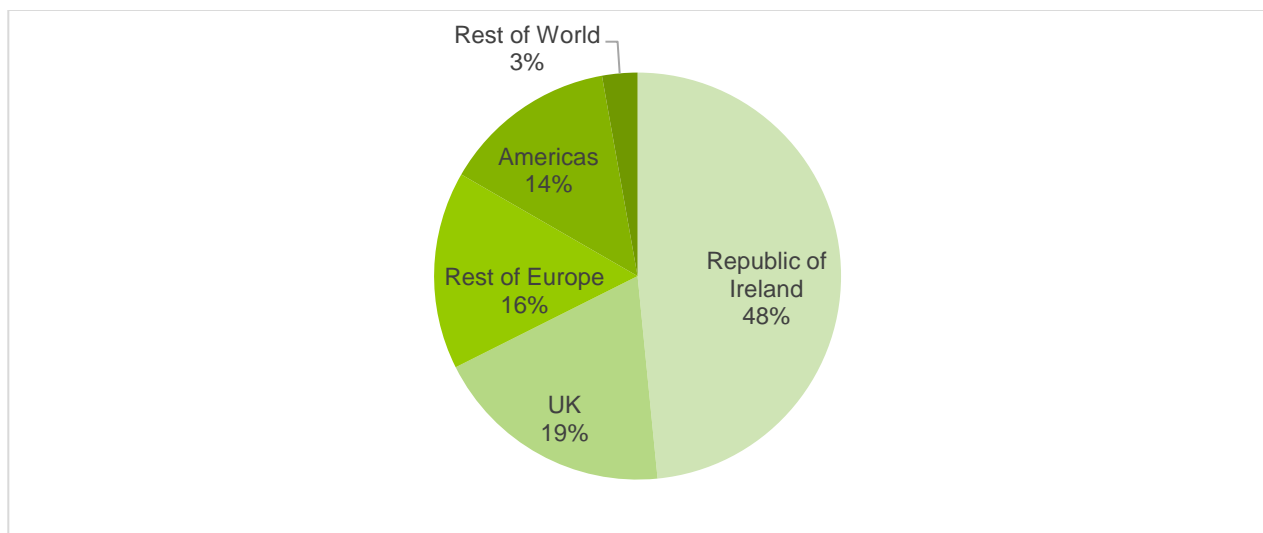
Over half of Dublin Airport's passengers are resident outside of the Republic of Ireland. UK residents account for almost 20% of traffic. The percentage of non-Irish passengers has increased in recent years. Since 2013, non-Irish passengers have grown by an average annual rate of 12% (compared to 8% for Irish passengers). The growth in non-Irish passengers is most notable on long-haul routes. Historically, traffic volumes from Asian residents has been minimal, but this is expected to increase significantly following the introduction of direct services to Beijing and Hong Kong in 2018.

3.11. Purpose of travel

Dublin Airport conducts an annual Passenger Tracking Survey[1] which gathers data on purpose of travel. The survey is administered to departing passengers only and shows that the split between leisure and business passengers has been broadly consistent from 2013 and 2018. Therefore, both segments have experienced similar rates of strong growth over the period. While arriving passengers are not surveyed, they would be expected to broadly correspond with the departing passenger profile, i.e. the same people arriving also departing.

Figure 12: Business v Leisure passengers, 2013-17
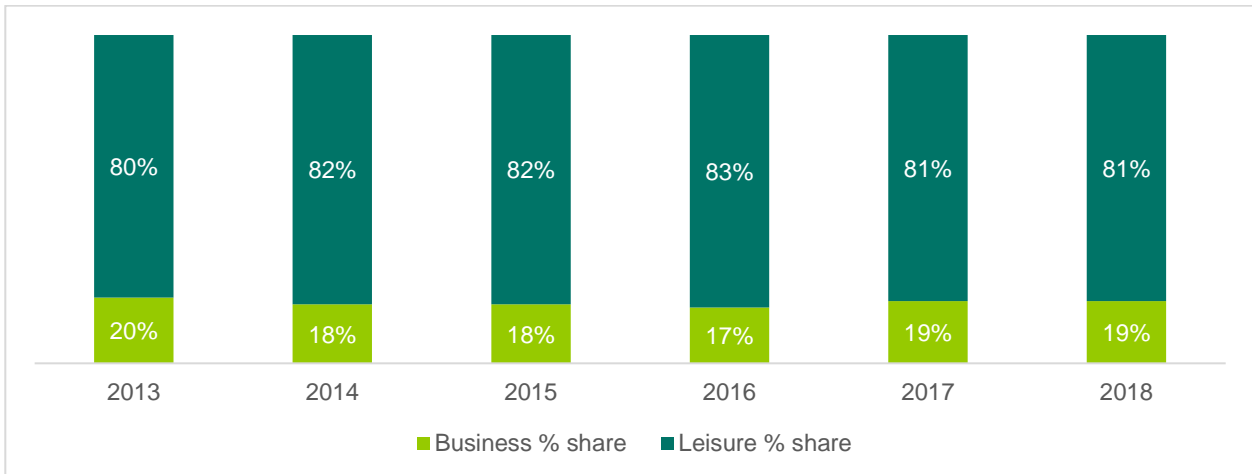
Note – Departing passengers only. 2018 for H1 only.

Within the 81% leisure category for 2018, 40% of these passengers are categorised as on holiday, 25% were visiting friends and family, 13% travelled for personal/family reasons and 3% travelled for work or other reasons.

Figure 13: Business v Leisure passengers on UK routes, 2013-17
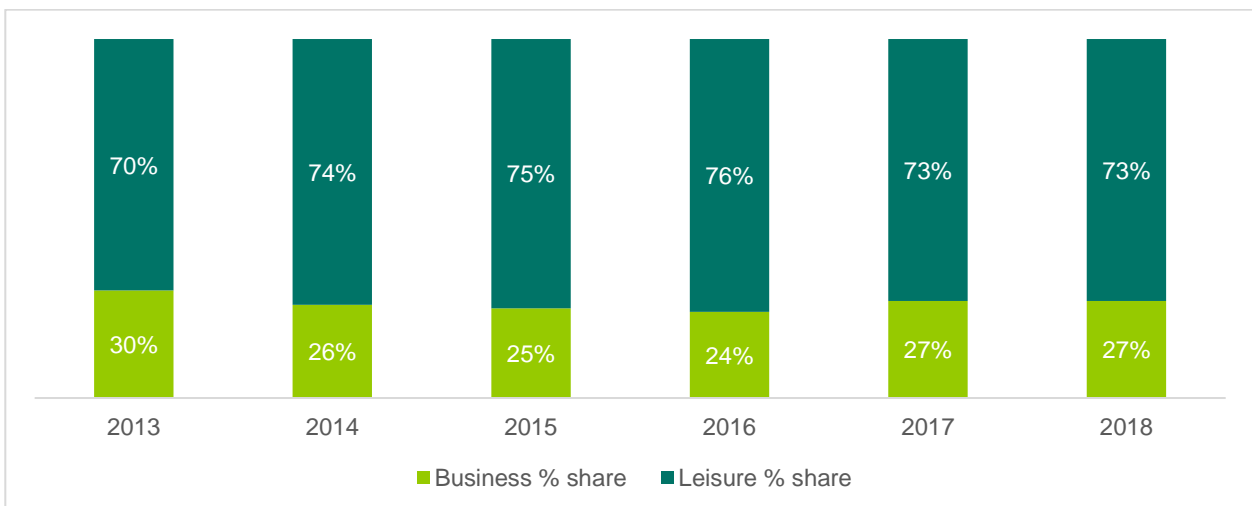
The proportion of business passengers is significantly higher on UK routes, at 27%. Within the 73% leisure category for 2018, 25% were on holiday, 29% are visiting friends and family, 16% travelled for personal/family reasons and 3% travelled for work or other reasons. With over one in four passengers travelling on business, any downturn in trade or business activity (such as that presented by a hard Brexit) could have a significant negative impact on overall traffic volumes at Dublin Airport.

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[1] *The Passenger Tracking Study is a face-to-face study of 21,000 passengers conducted at departure gates. Interviews are conducted continuously throughout the year and reported quarterly. The sample is controlled to reflect airline routes and ensure a representative sample for the Airport.*

04
DUBLIN AIRPORT STRATEGY

04. DUBLIN AIRPORT STRATEGY

4.1. National Aviation Policy

In considering our strategic targets, Dublin Airport is guided by the National Aviation Policy[2] (NAP), which was published by the Department for Transport, Tourism and Sport (DTTAS) in 2015. Among the goals outlined in the NAP are:

- *creating conditions to encourage the development of new routes and services, particularly to new and emerging markets;*
- *ensuring a high level of competition among airlines operating in the Irish market; and*
- *optimising the operation of the Irish airport network to ensure maximum connectivity to the rest of the world.*

In addition, the NAP specifically references the opportunity to develop Dublin Airport as a vibrant secondary hub, competing effectively with the UK and other European airports. A hub combines local passengers with transfer passengers enabling airlines to operate services to more destinations and more frequently than could be supported by local demand alone. Irish aviation policy states that the airport should be developed into a secondary hub over a period of time and that this will involve the construction of a second runway as well as other infrastructure developments. The importance of the United States Preclearance facility is a key contributory factor to the growth in the transatlantic connecting business over recent years. However, with several European airports currently in negotiations with the United States authorities for the provision of CBP facilities, connecting traffic at Dublin Airport will undoubtedly face greater competition in the years ahead.

4.2. Transfer targets

The number of transfer passengers at Dublin Airport doubled from 800,000 to 1.6 million between 2014 and 2017. Dublin Airport's 2025 Strategy has set the following traffic targets:

- *Accelerated development of Dublin as an international hub*
- *Grow depth, coverage and choice on the transatlantic network*
- *Double transfer traffic to approximately 10% of total traffic*
- *Maximise the scale and usage of the United States CBP facility*

4.3. North American market

Dublin Airport's geographical location on the outer west coast of Europe offers a compelling strategic advantage over other Continental European hubs for one stop connections to/from North America. Ireland acts as a natural gateway between the two land masses, with populations of between four and five hundred million people on either side of the ocean.

In 2013, Dublin served 11 destinations in North America. This has increased to 21 destinations in 2018, with four new locations on the West coast (Vancouver, Seattle, Los Angeles and San Francisco).

In terms of potential new destinations, Reykjavik (a significant competitor to Dublin in the transatlantic connecting market) offers 13 North American destinations that are currently not served from Dublin (Portland, Denver, Minneapolis, Pittsburgh, Baltimore-Washington, Edmonton, Halifax, Tampa, Cleveland, Detroit, Cincinnati, Kansas and Saint Louis). Other potential new destinations in North America could include Calgary, Las Vegas, New Orleans, San Diego and Phoenix.

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[2] Department of Transport, Tourism and Sport (2015) A National Aviation Policy for Ireland http://www.dttas.ie/aviation/english/national-aviation-policy-ireland

4.4. Expansion of intercontinental destinations

Historically, the Dublin Airport long-haul network was concentrated on North America. In recent years, connections have been added to the four major Middle Eastern hubs; Istanbul, Dubai, Abu Dhabi and Doha. In 2018, the first Asian services launched to Beijing and Hong Kong. In terms of global coverage, direct services between Dublin and the following regions remain underdeveloped and could be focus areas for new route development in the coming years;

- Top five Chinese cities, Korea, Japan, Thailand and Malaysia
- Indian Sub-Continent
- Mexico, South/Latin America and the Caribbean
- Sub-Saharan Africa

Many of the above destinations are currently served from Manchester and London Gatwick airports, which are peer competitors to Dublin for new intercontinental services.

4.5. Consumer choice and competition

In 2010, over 30% of Dublin Airport's passengers travelled on routes operated by a single carrier. By 2017, this figure had dropped to less than 19% and is on course to reduce further in 2018, as airlines offer new choices on existing services, which can lead to lower prices, improved schedule timings, greater flexibility, improved connections and ultimately, higher quality services for consumers.

Obviously, some of the thinner, lower frequency routes may remain in service with one operator, but each of the top ten volume routes now have at least two airlines offering services (and in many cases three or more carriers; i.e. Barcelona (3 airlines), Paris (4 airlines), New York and London (5 airlines),

Figure 14: Percentage of passengers on city-pairs with at least two carriers
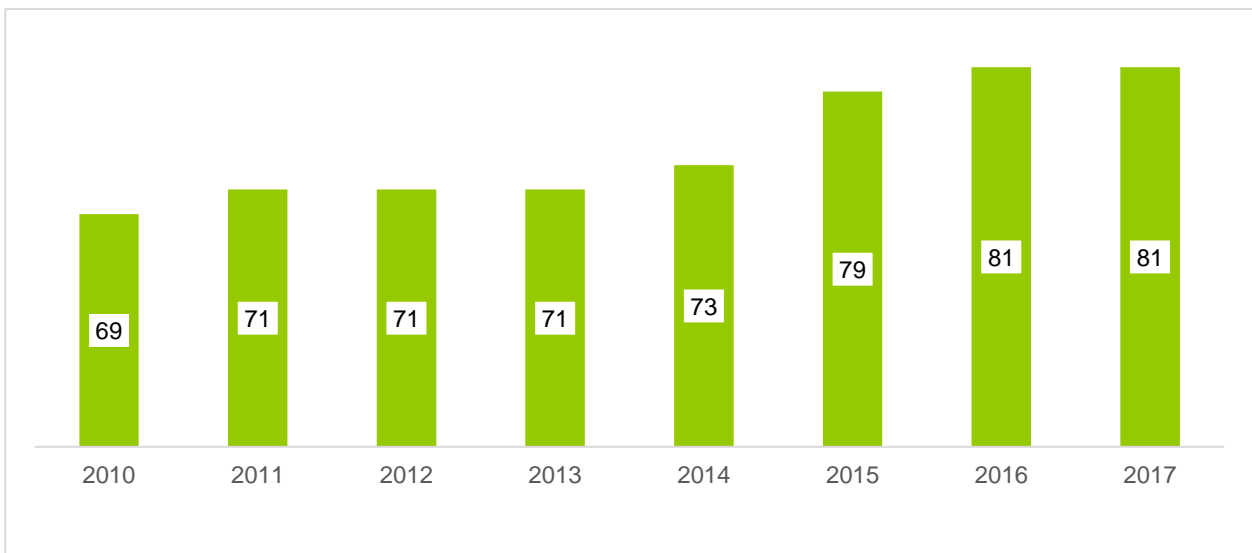
05
TRAFFIC FORECAST METHODOLOGY

05. DUBLIN AIRPORT TRAFFIC FORECASTING MODEL

This section will provide an overview of the techniques and models that Dublin Airport currently utilises to forecast the different categories of passenger traffic.

5.1. 2014 Determination

As part of the 2014 Determination process, Dublin Airport and various airport users produced forecasts of passenger traffic. CAR produced a traffic target that Dublin Airport was incentivised to outperform, based on CAR's own forecasting model. Given the well-established link between economic growth and passenger traffic, the forecasting models used GDP growth as the main driver variable, consistent with the standard approach used internationally. All the forecasts significantly underestimated the actual passenger outturn at Dublin Airport. The main reason for this was the unexpectedly sharp turnaround in the Irish and international economic environment, which rendered the GDP forecasts used in the models as too conservative. As discussed by CAR in their April 2018 Issues Paper, and as corroborated by our own analysis, if the actual GDP forecasts had been correct, the forecasts would have been far more accurate. CAR concluded that the inaccuracy of the passenger forecasts is largely explained by the inaccuracy of the GDP forecasts used. While Dublin Airport agrees with this statement, there are several additional factors that should be considered:

- Given the inaccuracy of the GDP forecasts used in 2014, the use of alternative measures of economic growth, such as GNP and GNI* should be considered. However, given that few medium-term forecasts are available for Irish GNP, with none available for Irish GNI*, these measures do not appear viable to use. They would be especially problematic for CAR's forecasting model, for example, given that Irish economic growth is the only driver variable currently used.

- Relying solely on Irish GDP growth as a driver variable may represent an overly simplified approach to forecasting international air traffic. Given the varied and changing composition of traffic at Dublin Airport (such as increased transfer and transit passengers, new passenger flows from Asia etc) the economic growth rates in other key source markets should also be considered as weighted inputs to the forecasting model. Dublin Airport is of the view that the use of a 'blended' GDP growth rate is likely to produce a more accurate forecast. For example, when forecasting traffic between Ireland and the UK, an econometric model should include both Irish GDP and UK GDP as driver variables.

- In choosing a source for economic forecasts and historical data, it is important that the relevant agency covers a sufficient range of countries and regions and adopts a consistent methodological approach across same. Also, robust forecasts are required for at least seven years into the future (i.e. 2018 to 2024). IMF remains well placed to meet these criteria, however, we are open to views on alternative sources of data. In terms of the accuracy of the forecasts, it is possible that we have entered a more stable economic environment. The global financial crises and extreme economic swings experienced over the past decade are not representative of the long-term trends and are unlikely to be repeated during the next determination period.

- In addition to GDP, other macro and socio-economic drivers should be considered. These may include variables such as disposable income, oil prices and exchange rates. For example, traffic between the US and Ireland will be influenced by the exchange rate of the Euro vis-à-vis the US dollar, and this dynamic is not fully captured by GDP alone.

- While economic growth is a good predictor of 'origin and destination' traffic, it is less useful for predicting transfer or transit traffic. Transfers are significantly growing as a share of overall traffic at Dublin Airport. Therefore, an alternative method for forecasting these traffic categories would seem appropriate.

- In the 2014 Determination, CAR applied an elasticity of 1.15 (i.e. a 1% increase in Irish GDP translated to a 1.15% increase in passengers). Had actual GDP growth rates been known, this elasticity would have proven reasonably accurate. CAR will need to recalculate the elasticity by updating its forecast model with actual

passenger outturn and GDP growth data from 2014-17. However, as stated above, the traffic forecast should consider more variables than just Irish economic growth.

- Dublin Airport's 2014 forecast assumed unconstrained passenger growth. However, the existing runway is currently operating at near capacity in Summer and will do so until at least 2022, when the new North runway is fully operational. Unconstrained growth has become a somewhat invalid assumption for the early years of the next regulatory period, given the known capacity constraints the airport is facing.

- Since the 2014 Determination, Dublin Airport is facing increased competition from other European airports, e.g. for North American transfer traffic. The recent decision by Ryanair to redeploy six Dublin based aircraft to Poland for Winter 2018/19 (due to a down turn in forward bookings and airfares in Ireland partly as a result of recent rolling strikes by Irish pilots) is a real example of the ease at which airlines can switch aircraft to competing airports. Unilateral decisions by key airlines to redeploy extremely flexible assets, can quickly impact on traffic levels at Dublin Airport. Also, speaking on Irish radio in February 2018[3], IAG's CEO commented in relation to new aircraft on order, that while Aer Lingus wants to operate the new units from Dublin Airport, if they can't do so efficiently, then the options are for Aer Lingus to operate those aircraft at other airports and not necessarily within Ireland, or for the aircraft to be allocated to other airlines in the IAG group. The forecast methodology may need a correction to account for these qualitative changes in the market, at least for the early years of the next determination.

5.2. Traffic categories

Dublin Airport divides passenger traffic into three main categories and forecasts each category separately. The three categories are:

1. Origin and Destination (O&D) traffic
2. Transfer traffic
3. Transit traffic

Figure 15: Dublin Airport traffic by category (2017)
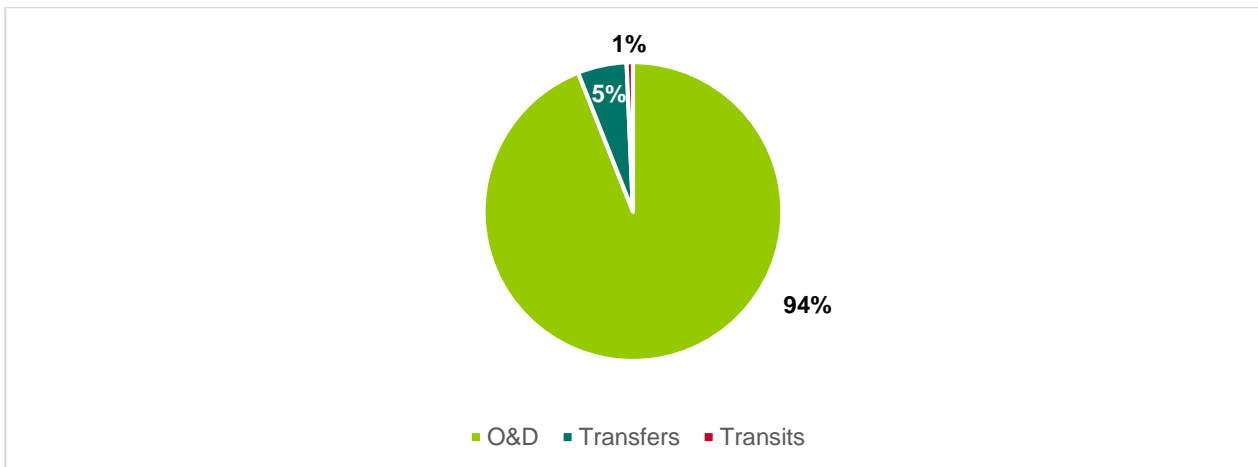
5.2.1. O&D

O&D traffic is passengers whose origin airport or destination airport is Dublin. In 2017, 94% of traffic at Dublin Airport was O&D, about half of which are Irish (including Northern Ireland) originators (i.e. residents) and half are foreign residents with Dublin as their destination. O&D traffic flows are significantly influenced by the strength of a national economy, particularly for traffic originating in that market.

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[3] Morning Ireland, Business News interview with Adam Maguire, RTE and IAG's CEO, 23 February 2018

5.2.2. Transfers

A transfer passenger arrives into Dublin Airport on a flight from another airport ('airport of origin') and then departs Dublin as a passenger on another flight with:

- A different flight number to an airport or city other than the airport of origin or city of origin, provided that the scheduled time of departure of the second flight is not more than 12 hours after the scheduled time of arrival of the first flight.
- The same flight number, but the passenger does not remain on board the aircraft they arrived on and does not stay within a secure segregated area within the airport.

Hub airports with high percentages of transferring passengers tend to exhibit less of a correlation between the local economy and the growth in transfer traffic. If a high proportion of traffic is transferring at an airport (such as in Amsterdam), there is less of a reliance on O&D traffic to fill the aircraft. In recent years, the transatlantic fleet expansion of Aer Lingus has been heavily correlated with the growth in transfers. Aer Lingus has given some indication about how its transatlantic fleet is expected to develop over the next five years, which means that a reasonable transfer forecast can be derived from the planned expansion, rather than relying on a less correlated variable, such as the Irish economy.

5.2.3. Transits

A transit passenger arrives and departs on the same flight number and remains on board the same aircraft or stays in a secure segregated area within the airport. In 2014, transit traffic was modest in Dublin (below 10,000 passengers per annum). Ethiopian Airlines has since developed Dublin as a convenient location for technical fuel stops enroute from Africa to North America and in 2018, Ethiopian will operate three transit routes through Dublin (Toronto, Washington and Chicago). There is little or no correlation between this traffic and the performance of the Irish economy. Aircraft performance is constantly improving, and it is highly probable that at some point in the short-medium term, these technical stops will be superseded by direct services.

5.3. Growth by category

While O&D currently accounts for approximately 94% of total traffic at Dublin, this category has only accounted for 87% of the overall traffic growth since 2013. This trend is firmly expected to continue, with 10-20% of the expected future traffic growth to come from non-O&D flows.

Figure 16: Dublin Airport passenger growth (2013 to 2017)
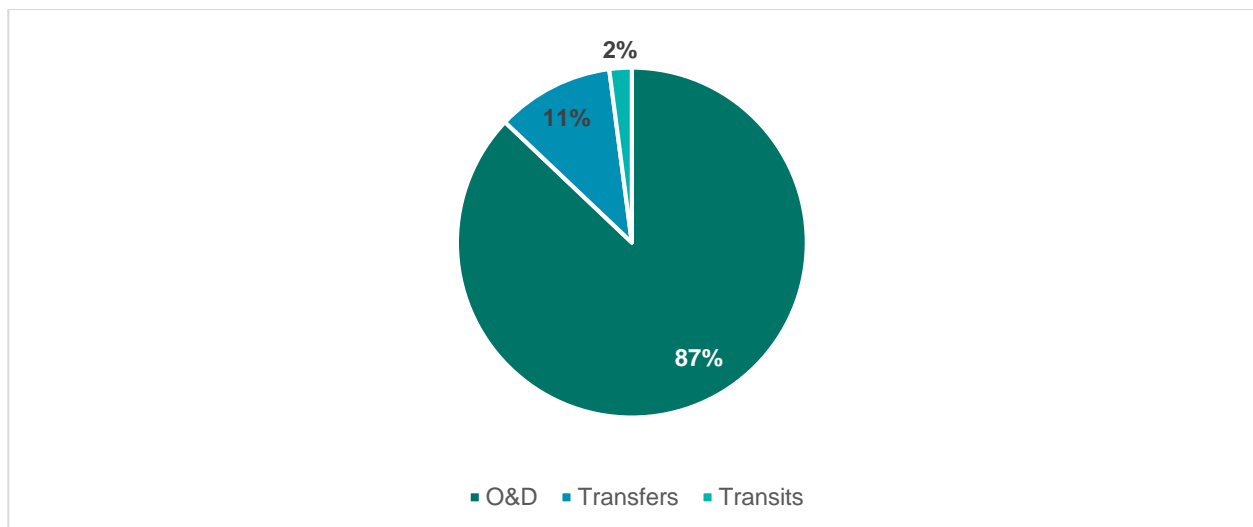
5.4. Forecasting methodology

As previously explained, Dublin Airport forecasts the two main traffic segments separately (O&D and transfer passengers).

5.4.1. O&D forecasting – International approaches

Dublin Airport uses an econometric model to forecast O&D passengers. This is the standard approach used internationally for forecasting basic passenger flows.

- The UK Department for Transport's National Air Passenger Demand Model (NAPDM) consists of a series of econometric models. The key drivers are income and economic activity, but it also includes a module which forecasts air fares. NAPDM divides the overall market into 19 segments or sub-markets, applying an econometric model to each.

- European airports also generally use econometric models to project passenger numbers.

- The US Federal Aviation Authority develops commercial aviation forecasts and assumptions from econometric models that incorporate emerging trends for different segments of the industry.

- Airbus uses up to 15 different explanatory variables when it produces its global market forecast. GDP is an important driver and the size of the variables in the word cloud below represents the number of times they have been used across more than 100 traffic flows.

Figure 17: Airbus word cloud of forecast variables

- Boeing categorises its forecast driver variables into three groups:

    1) Economic activity (e.g. GDP)
    2) Ease of Travel (e.g. air traffic liberalisation, new aircraft technology, airline models)
    3) Local market factors (e.g. airline mergers)

Overall, certain markets can exhibit different drivers and therefore, should be modelled differently. While economic indicators have strong explanatory power in some markets, there is a risk that regression of traffic on GDP alone can overstate the importance of this driver (especially if other more pronounced factors are changing at the same time).

5.4.2. Dublin Airport's methodology for forecasting O&D traffic

Dublin Airport forecasts passenger traffic across 17 different markets:

1. London
2. Rest of UK
3. France
4. Germany
5. Benelux
6. Nordic countries
7. Austria / Switzerland
8. Italy
9. Spain
10. Portugal
11. Rest of Southern Europe / Mediterranean
12. Poland
13. Rest of Central Europe / Eastern Europe
14. USA
15. Rest of North America / South America
16. Middle East / Ethiopia
17. Asia Pacific

For each market, Dublin Airport undertakes regression analysis to establish the historical relationship between traffic and various macro and socio-economic variables, which is used to determine the variables (or combination of variables) that best explain and predict traffic growth. The driver variables used in the forecasting model currently include the following:

- Economic growth, per country (i.e. GDP).
- Jet fuel prices
- Inflation rates, per country
- Exchange rates
- Employment / unemployment rates, per country
- Population, per country
- National savings as a % of GDP, per country

Most of the above variables are available in the IMF's bi-annual World Economic Outlook, the exceptions being jet fuel prices, which are forecast by the US Federal Aviation Authority and exchange rates, which are forecast by various agencies, such as the Economist Intelligence Unit.

On Airfares, Dublin Airport does not have adequate information on historic fares and no information on future airfares. Thus, their impact on the passenger forecast is currently not captured. However, CAR noted in the Issues Paper that the effect of airfares on passenger volumes does not appear to be material, at least for small changes. Given that airport charges are a subcomponent of airfares, this is even less likely to have a material impact on passenger numbers.

The graph below provides an example of the forecasting model. Based on the results of this example, historic traffic between Dublin and the UK (excluding London) is 89% explained by Irish GDP and the UK Consumer Price Index (CPI). A proportion of traffic (11%) is not explained by the model and may result from qualitative factors not included in the model (e.g. increased competition in the airline sector or capacity issues at UK airports). Applying the most recent forecasts of Irish GDP and UK CPI, results in passenger numbers from Dublin to the UK (excluding London) increasing from 4.8 million in 2017 to 6.3 million by 2028.

Figure 18: Dublin Airport's forecasting model - regression example
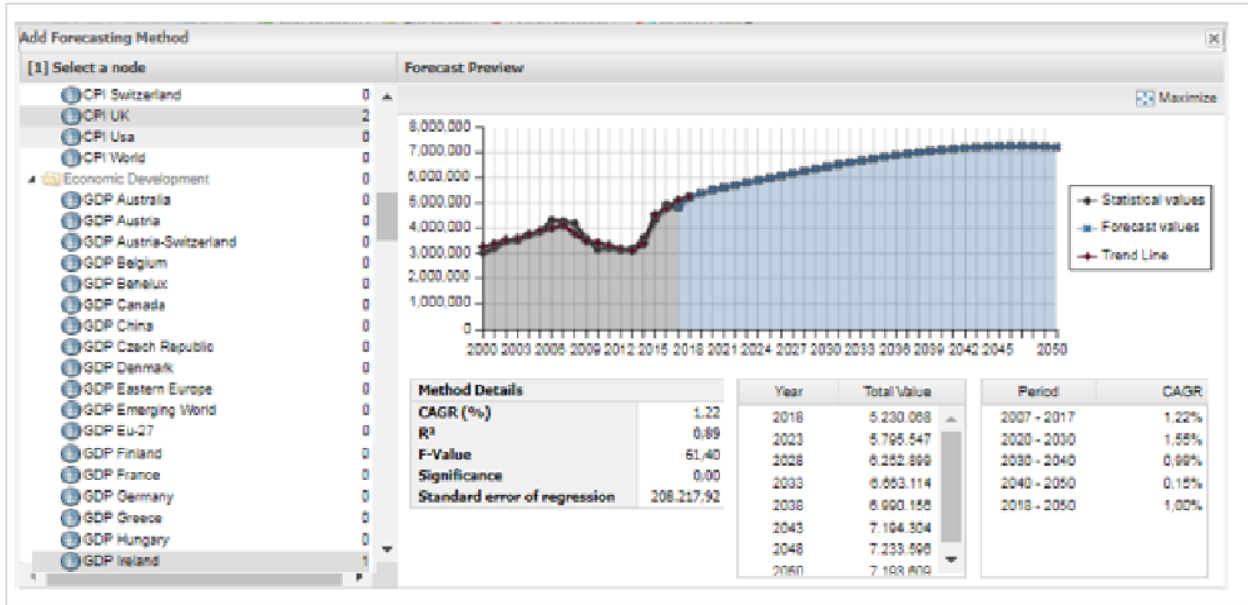
If this combination of Irish GDP and UK CPI does indeed represent the underlying traffic trend, the forecast model will show whether the actual performance is tracking above or below this trend. Actual traffic may be above the underlying trend, if there is significant competition in this market, or conversely, below the underlying trend, if there is a lack of competition in the market, which reduces the growth potential.

Figure 19: Comparing actual growth with modelled growth
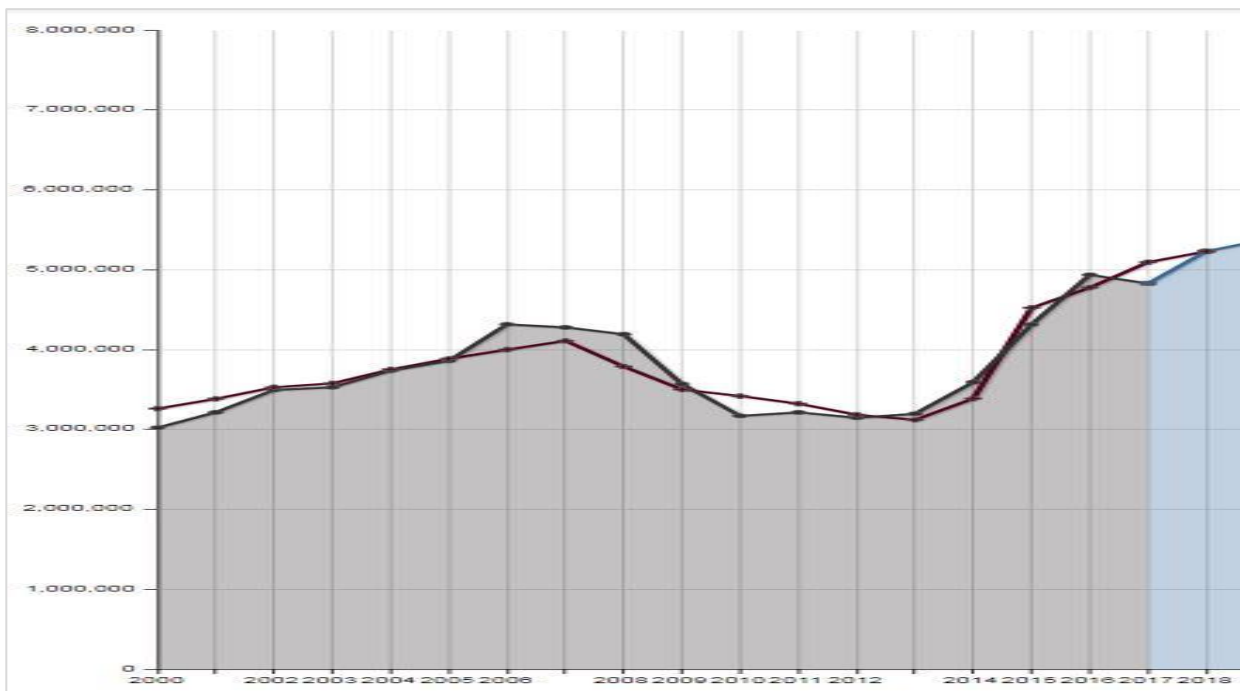
Rather than extrapolating the actual historic volumes, the model extrapolates the underlying trend, as it would be expected for traffic to return to this trend over the longer period. This approach reduces the likelihood of a short-term peak having a detrimental impact on the forecast.

In the above graph, the blue line is the actual, while the dark red line is the underlying trend. Currently, the actual traffic is above the underlying trend, which means that the model is suggesting little growth in 2018. The actual volumes may not return to the underlying trend in 2018, but would be expected to return to the trend in the medium term, assuming the forecast GDP and CPI rates are realised.

This regression-based methodology is applied to 16 of the 17 markets. The Asia/Pacific market is calculated differently, as there is no historic traffic for this market up to the end of 2017. Instead, the actual traffic expected for this market is hardcoded into the model for 2018/2019 and then a similar growth rate is applied as derived from the "Middle East / Ethiopia" model.

The forecast model then combines the results from all 17 markets to produce a total annual passenger forecast for Dublin Airport.

5.4.3. Dublin Airport's methodology for forecasting transfer traffic

Dublin Airport's performance in this market is not driven by the performance of the Irish economy. The most accurate historic predictor of transfer volumes is Aer Lingus' transatlantic growth, which is driven by its long-haul fleet expansion. Using historic trend data, this long-haul fleet expansion can be converted into a transfer passenger number. Beyond 2022, the longer-term transfer growth rate is set at the transatlantic O&D growth rate, as transfers are linked to the underlying performance of the transatlantic market.

5.4.4. Dublin Airport's methodology for forecasting transit traffic

Dublin Airport hardcodes the expected transit traffic for 2018 and 2019 into the model, based on airline fleet plans. Beyond these two years, traffic is not expected to grow, as there are limited opportunities in this market. With improving aircraft performances, there is a significant risk that this traffic may reduce or completely disappear.

5.4.5. Dublin Airport's methodology for forecasting aircraft movements

A passenger forecast can be converted into an aircraft movement forecast by dividing the annual passenger throughput levels in each market, by the average number of passengers per aircraft for this market. The average number of passengers per aircraft can be calculated by using historic load factor trends and forward-looking assumptions based on airline fleet orders. Increased load factors and/or larger aircraft will impact on the average number of passengers per aircraft. Once an aircraft movement forecast is produced for each market, the total aircraft movement forecast can be produced, by aggregating the individual forecasts.

# 06

FORECAST DRIVERS AND BENCHMARKS

06. FORECAST DRIVERS AND BENCHMARKS

6.1. Economic environment

Since 2014, the Irish economy has posted strong rates of growth. While growth is forecast to continue, it is expected to moderate towards a more stable and mature growth profile, converging towards the rates of growth experienced in our key partner markets. The IMF is forecasting that the three major generators of inbound visitors (Euro Area, UK and US) will all experience economic growth rates moderating to circa 1.5% by 2022.

Figure 20: GDP forecast growth (IMF's Apr 2018 outlook)
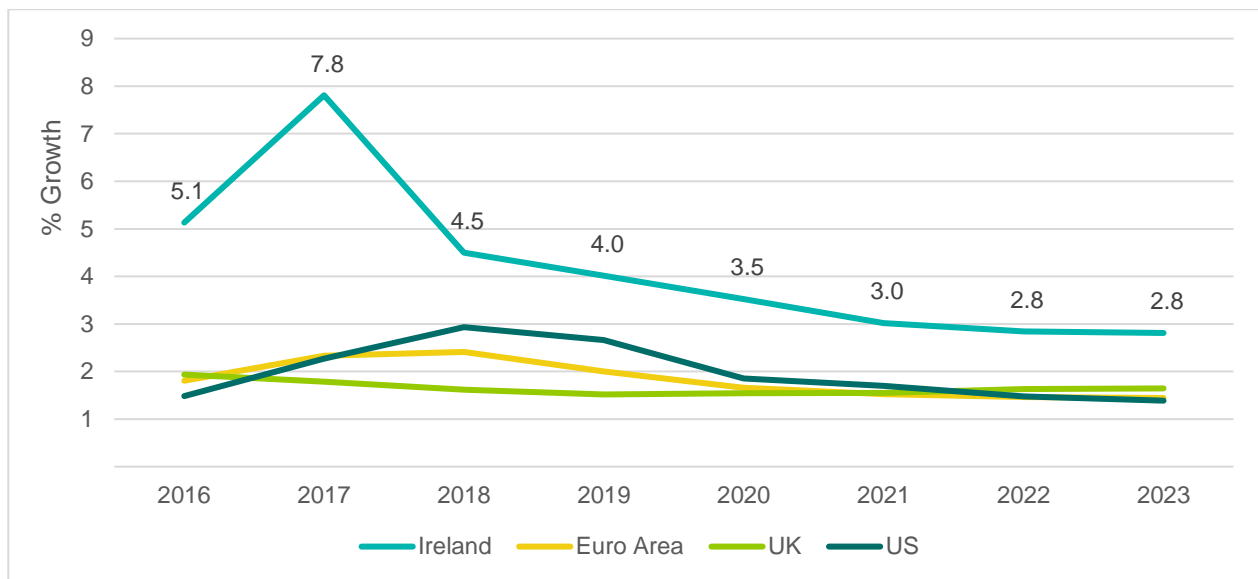
The Irish Department of Finance produces forecasts for both Irish GDP and GNP up to 2021. Figure 22 illustrates that growth rates for both measures of economic growth are comparable, albeit GNP rates are marginally lower.

Figure 21: Irish Department of Finance - GDP versus GNP forecasts
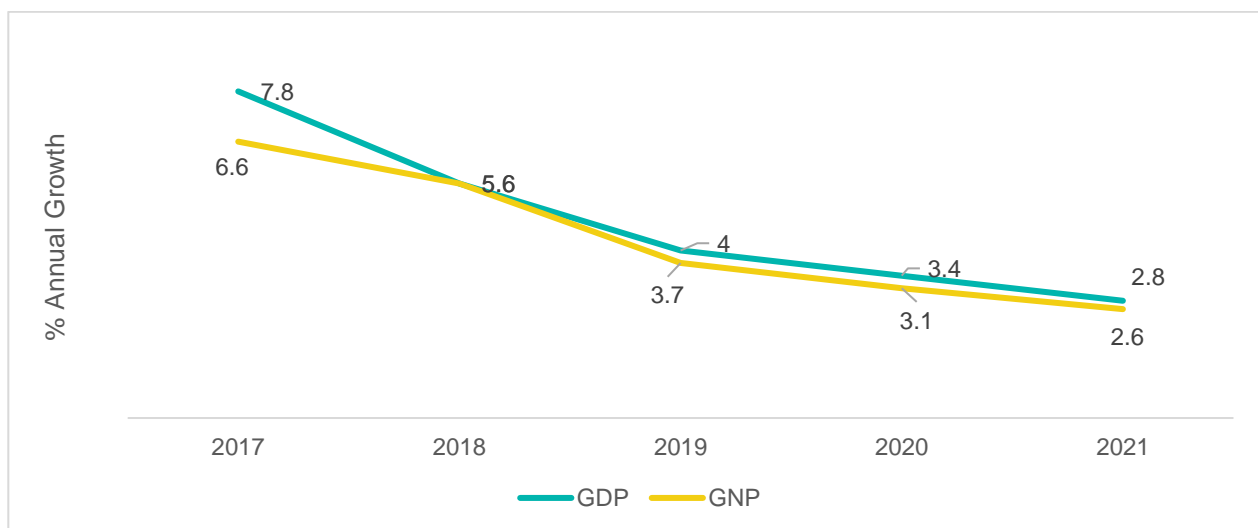
6.2. Population trends

Figure 22: Irish population forecasts
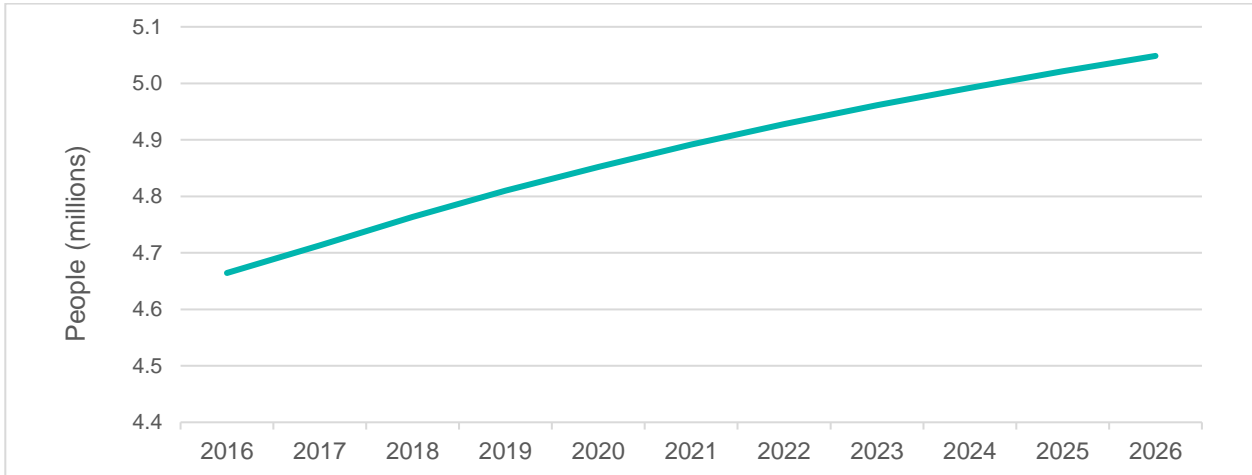
Source – Eurostat

Ireland's population is expected to continue to expand steadily over the next ten years, which will increase the size of Dublin Airport's catchment area. Project Ireland 2040, expects that an additional one million people will live in Ireland and an additional two-thirds of a million people will work here by 2040.

However, there are some concerns about the markets below with flat or negative population trends, some of which are significant markets for Dublin Airport (e.g. Spain, Portugal and Lithuania).

Figure 23: 10-year population growth rates (2016 to 2026)
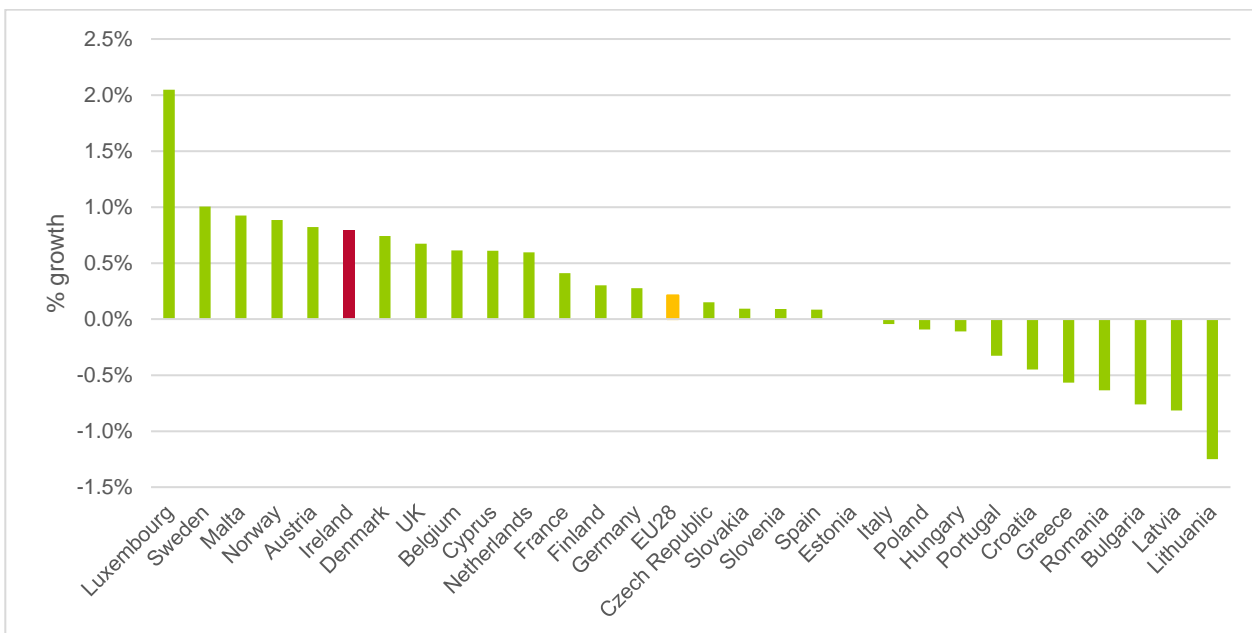
Source: Eurostat: EU 28 + Norway

6.3. Jet fuel forecasts

Oil prices have steadily risen throughout 2018; up from $30 per barrel in January 2017 to $80 dollars per barrel in July 2018. Fuel is a large share (20 to 30 percent) of an airline's operating costs and such volatility in a major cost component creates uncertainty for future ticket pricing strategies. There are mixed views and some uncertainty around future oil price guidance. However, most commentators are signalling future ranges, at a minimum, north of $60 per barrel. These levels would be significantly ahead of the 2015 – 2017 ranges, which supported dramatic growth across Dublin Airport.

Figure 24: 5-year historic Brent Crude Oil price

Source – Macrotrends www.macrotrends.net/2480/brent-crude-oil-prices-10-year-daily-chart

Airbus and Boeing produce their own forecasts for jet fuel prices and both believe that there is little probability of prices falling back to 2015/2016 levels. The UK Department for Transport and the US Federal Aviation Administration are also forecasting further increases in the price of oil. In summary, the next regulatory period is expected to be underpinned by significantly higher fuel prices than the current cycle.

6.4. Aircraft orders

The two main carriers based at Dublin Airport have significant numbers of aircraft on order, with deliveries planned over the next three years.

6.4.1. Ryanair

Ryanair has 135 Boeing 737 Max 200 aircraft on order, which have an additional eight seats compared to the current 737NG aircraft. This allows Ryanair to grow capacity at an airport by 4% without adding any additional flights (i.e. straight replacement of aircraft). Ryanair have yet to announce the base deployment of the Max fleet.

6.4.2. Aer Lingus

Aer Lingus has eight A321NeoLR aircraft on order for delivery in 2019 and 2020, with a possible four additional options to be added to this order. The new fleet is planned to eventually replace the four B757 currently operating on transatlantic routes. The Neo is significantly more fuel efficient than the B757 (c.15%) and is expected to act as a

pathfinder or developmental aircraft for thinner new east coast destinations. Dublin Airport has been at the forefront of narrow-body transatlantic operations and was one of the first airports to receive the B737Max on transatlantic operations.

6.4.3. Norwegian Air Shuttle

Norwegian Air Shuttle has over 100 Boeing 737 Max aircraft and 30 Airbus A321LR on order for delivery over the next three years. Four of these aircraft will be allocated to Dublin operations in 2019.

6.5. Forecast Benchmarks

6.5.1. Boeing/Airbus forecasts

Both Airbus and Boeing produce detailed passenger forecasts[4]. Ireland is not explicitly broken out, but traffic to/from Western Europe may be used as a reasonable proxy. While the US and Canadian markets are relatively mature, China, the Middle East and Central Europe are all forecast to experience strong growth to/from Western Europe. Short-haul traffic is expected to grow at a slower rate than long-haul.

Table 5: Airbus global market forecast

Region	2016 – 2026 CAGR
Intra Western Europe	2.8%
Central Europe - Western Europe	5.5%
Russia - Western Europe	3.8%
Canada - Western Europe	2.9%
USA - Western Europe	3.0%
Caribbean - Western Europe	3.0%
South America - Western Europe	3.5%
Middle East - Western Europe	4.9%
Indian Sub-Continent - Western Europe	4.1%
China - Western Europe	4.6%
South Africa - Western Europe	2.2%

Note – Compound Annual Growth Rate (CAGR)

The Airbus and Boeing forecasts are reasonably consistent, with some of the differences attributable to Airbus forecasting at 'Western Europe' level, with Boeing only forecasting at a 'Europe' level. Given that Western Europe is a more mature market than 'Europe', this may explain why the Boeing forecasts are higher for the long-haul markets. Also, the Airbus forecast horizon is out to 2026, while Boeing extend to 2036.

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[4] Measures in terms of Revenue Passenger Kilometre (RPK)

Table 6: Boeing Global Market Outlook

Region	2016 - 2036 CAGR
Intra Europe	3.2%
North America - Europe	2.9%
South America – Europe	4.6%
Middle East - Europe	5.3%
China – Europe	5.6%
South Asia – Europe	5.7%
Africa - Europe	4.7%

6.5.2. UK CAA forecasts

In 2017, the UK Department for Transport produced a medium-range forecast for air passengers at UK airports.

Figure 25: Passenger volume projections at UK airports
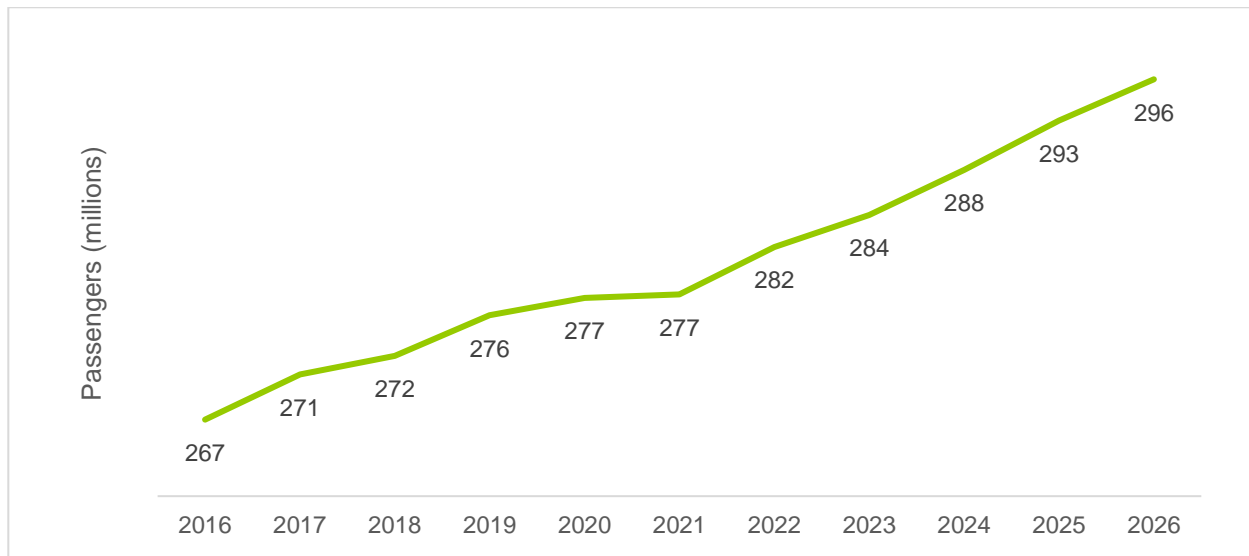
The medium-term UK growth rates are moderating to an average level of 1.1% per annum over the ten-year period. The UK's baseline forecast is constrained by the lack of runway capacity, particularly in the London area. Unconstraining the forecast would increase the growth rate by an additional 0.9% to 2.0% per annum. This is analogous to the emerging situation at Dublin Airport, where scarce runway capacity in Summer, is potentially constraining the true levels of demand. This underlines why economic growth in isolation, is unlikely to accurately predict future passenger numbers at constrained airports. Given the underlying similarities between the UK market and Dublin, the medium-term UK growth rate could be considered as a valid proxy for the expected growth in Dublin.

6.5.3. Other forecasts

The UN World Tourism Organisation[5] produces inbound tourism projections up to 2030. It projects 2.3% global growth per annum up to 2020 and thereafter, reduces to 1.4%, noting that the Western European and North American markets are comparatively mature.

The International Air Transport Association (IATA) expects annual air traffic to nearly double to 7.8 billion passengers over the next twenty years. The vast majority of this growth is expected to be generated from emerging markets. While global average annual growth of 3.6% is predicted, a lower growth rate of 2.3% is forecast for Europe[6].

6.6. Traffic Outlook

Traffic growth of 5.7% is expected at Dublin Airport in 2018. Passenger volumes will cross 31 million for the first time and approximately 1.6 million passengers will be added over 2017. The global and local macroeconomic trends remain positive and should drive increased levels of passenger demand over the medium-term. The current IMF projections for Irish GDP growth are; 4.5% in 2018, 4% in 2019 and circa 3% over the medium term. The economic conditions in Ireland's key source markets are also positive, but not as robust. The UK is expected to achieve 1.6% growth in 2018 and 1.5% thereafter. The Eurozone is expected to grow above 2% in 2018 and 2019, with medium-term trends similar to the UK. The United States is anticipated to grow near to 3% in 2018, before reducing below 2% growth per annum thereafter

Although airline schedules are not yet finalised for 2019, Dublin Airport anticipates a continuation of growth next year. However, a lower, more normalised rate of 2.7% is forecasted. This would equate to approximately 32 million passengers in 2019.

For illustrative purposes, Figure 27 plots a medium-term range of indicative normalised growth scenarios.

Figure 26: Potential medium-range normalised growth profiles
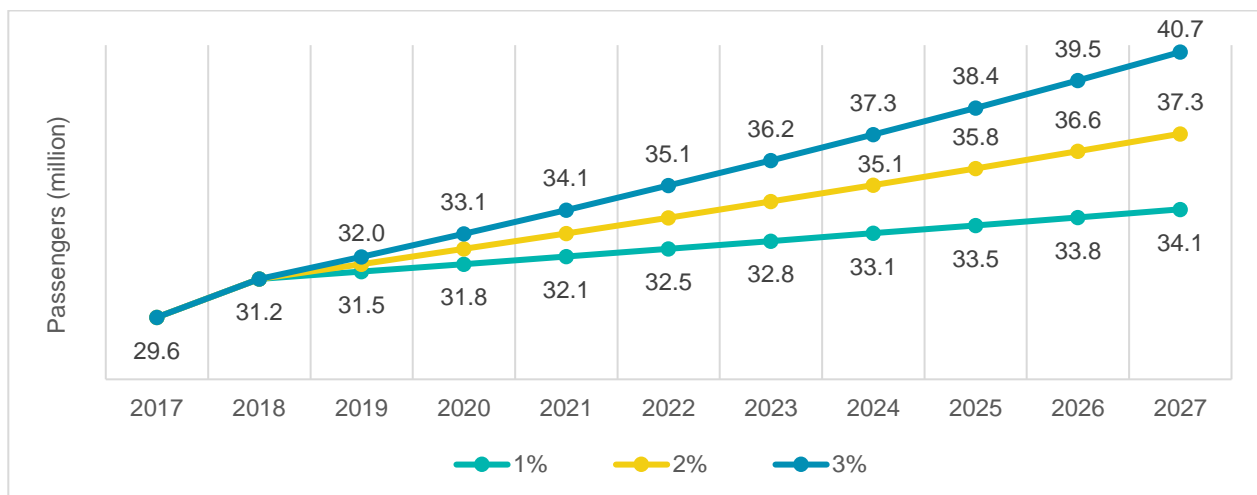

While passenger growth has been strong in recent years, this should be considered against the long-term trend. Figure 28 charts the twenty-year actual passenger movements at Dublin Airport[7].

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[5] UNWTO Tourism Highlights 2017 Edition
[6] IATA www.iata.org/pressroom/pr/Pages/2017-10-24-01.aspx
[7] The annual figure for 2018 is estimated based on outturn data for Jan-July 2018.

Figure 278: Long-term passenger trends for Dublin Airport
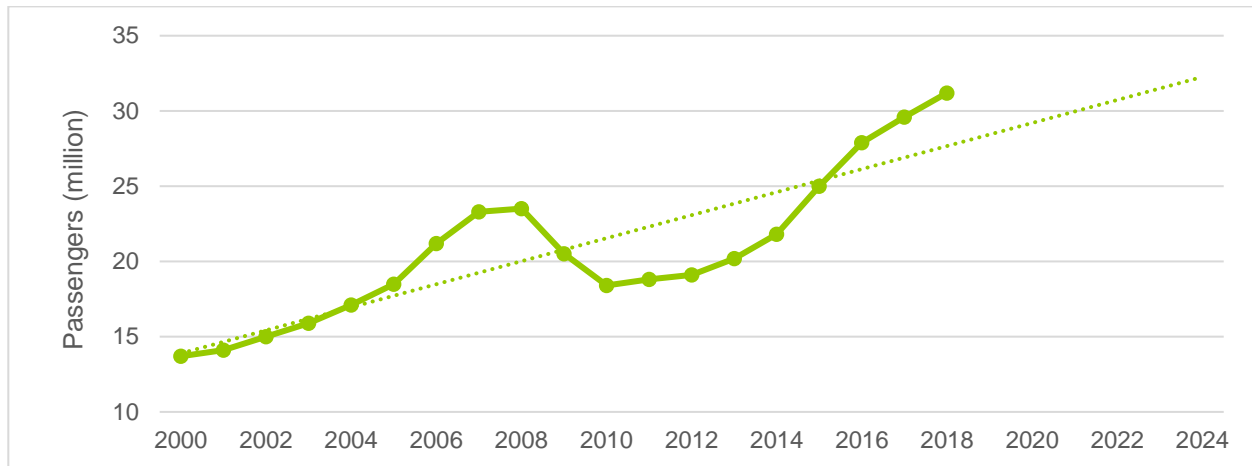
The trend-line highlights that passenger traffic moves in cycles, akin to economic cycles and demonstrates that recent growth is not necessarily the most accurate indicator of future growth. Periods or years can deviate above or below the long-term trend, as has occurred since 2005. The expectation is that passenger traffic will normalise towards the long-term trend over the coming years and the significant declines experienced post 2007 are not anticipated.

As previously advised, peak runway capacity has emerged as a potential constraint to growth in the short-term and Dublin Airport has attempted to calculate the maximum variance between pure unconstrained demand and the potential available aircraft movement capacity over the coming years.

The model assesses Dublin Airport's demand pipeline, which is a forward-looking set of potential new flight schedules (based off commercially sensitive market intelligence). Each new piece of business is assessed against the assumed capacity parameters for the hours in question. The primary assessments relate to terminal, gate, stand and runway capacity. The model identifies potential conflicts or capacity shortages for certain pieces of new business. For each case, the available capacity is also assessed in the adjacent hours. If a flight can still not be accommodated, the assumption is that this piece of new business will be deferred to the following year, when in theory, a marginal increase in capacity is assumed to be made available.

Table 7: Maximum potential variance between demand and available capacity

Year	Maximum (passengers)	Constraint
2019	315,000	Summer runway capacity
2020	504,000	Summer runway capacity
2021	711,000	Summer runway capacity
2022*	231,000*	Pier-served, contact wide-body aircraft parking stands
2023*	105,000*	Pier-served, contact wide-body aircraft parking stands
2024*	N/A*	No constraints anticipated

*The new north parallel runway is expected to be fully operational by 2022. For the purposes of slot co-ordination, the above analysis assumes a theoretically unrestricted runway system from 2022. However, the new runway would, pursuant to the 2007 planning permission, see the introduction of runway movement restrictions for the first time at Dublin Airport, including a limit of 65 movements between the hours of 2300 and 0700. If these proposed operating restrictions continue to have application, runway movements may be curtailed at certain times, at levels which are significantly below those which currently prevail. As a matter of priority, daa is seeking to amend the proposed operating restrictions on movements.

07
TRAFFIC RISKS

07. TRAFFIC RISKS

As explained in previous sections, the medium-term outlook for demand remains positive. The demand environment appears healthy and passenger growth should continue at Dublin Airport, but with a maturity towards the more normalised, longer-term trend.

Unfortunately, air traffic has been volatile over the past decade and it would be prudent to briefly outline the potential downside risks to passenger traffic over the coming years.

7.1. Brexit

34% of Dublin Airport's traffic is between Ireland and the UK. 5% of annual passengers originate in Northern Ireland. It has been suggested that the implications of Brexit are accounted for in the various GDP projections, however, aviation is without doubt, one of the most exposed industries to the consequences of a hard Brexit. The vote by the UK to leave the EU in 2016, has resulted in no passenger growth for a sustained period of over two years, despite robust economic growth in both economies.

The risks presented by Brexit to Dublin Airport's passenger traffic are specifically;

- **Depreciation of sterling**

Sterling has depreciated against the Euro by circa 15% since the Brexit referendum in June 2016. This has negatively impacted on the spending power of UK tourists in Ireland. Visitors from Great Britain declined by 5% in 2017[8].

- **Business traffic and trade**

The impacts of Brexit on the UK economy are generally perceived as negative. The potential for the UK to exit the EU Customs Union could result in depressed business traffic between the UK and Ireland.

- **Travel restrictions and disruption**

Any regulatory divergence between the UK and EU on aviation standards may impact on check in, customs, immigration and security procedures at Dublin Airport. In a 'no deal' scenario, the trade relationship between the EU/UK could default to World Trade Organisation (WTO) rules. However, WTO rules do not provide any fall back for aviation, which could result in temporary flight disruption between the UK and Ireland. Uncertainty regarding the eventual outcome could either restrict or divert travel decisions away from the UK.

7.2. Airport capacity constraints

The dramatic growth delivered between 2014 – 2018 was against a backdrop of capacity headroom across the principal airport processors. As outlined in the previous section, the main runway is now operating at its declared capacity for much of the summer period and although initiatives are currently underway to improve runway productivity, inevitably, over the short-term, certain demand or new business will be restricted to unviable times, which may require postponement until the new runway capacity is fully online in 2022. The morning peak departure period of 0600 – 0800 is effectively full all year-round, with limited opportunity for airlines to depart additional short-haul aircraft at their preferred times. For these reasons, the assumption of unconstrained growth being used as the traffic target for the first half of the next determination is impractical and a constraining adjustment should be developed to refine the growth targets.

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[8] CSO https://cso.ie/en/releasesandpublications/er/ot/overseastravelmay2018/

7.3. Transit and transfer traffic

Dublin will record circa 250,000 transit passengers in 2018. As previously explained, this traffic is expected to diminish over the coming years.

The transfer market is also vulnerable in several ways:

- Direct flights between Europe and North America are at a record high, with increasing numbers of European airports gaining direct access to North American cities. Competitive direct services are a distinct threat to one-stop transfers, which Dublin is attempting to grow.
- Transfer flows are relatively mobile and can freely move with relative ease to other airports. The loyalty of a transfer passenger to a particular hub is limited and price/elapsed time are usually the key decision drivers for which airport to transfer at.
- The US authorities concluded an agreement with Stockholm Airport in November 2016 to provide a US Preclearance facility in the future. Amsterdam, Brussels and Manchester Airports have all previously expressed an interest in developing US Preclearance facilities. Similar facilities would devalue Dublin's current unique selling proposition and undoubtedly, shift a portion of European originating volumes towards other hubs.

7.4. Jet fuel prices

Fuel is a significant cost component of an airline ticket price (up to 30%). If the current trending of crude oil prices continues, airlines will be pressured to start recovering the additional production costs through increased pricing. Higher ticket prices, in the first instance, will challenge price sensitive demand and may supress the demand for discretionary trips. In July 2018, Delta Airlines became the latest airline to issue a profit warning and attributed the rising fuel prices as the primary reason for its escalating operating costs.

7.5. Geopolitical risks and rise in protectionism

Geopolitical risks have elevated since the 2014 Determination. Increased tensions between the US and Iran, instability in certain Middle East/Gulf states, rising populist sentiment in Europe and emerging trade conflicts have the potential to significantly suppress the demand for flights to certain regions, as discretionary travel is effectively postponed for a period of time.

7.6. Maturity of load factors

As presented in Figure 4, the average annual load factor is plateauing at 83%. For much of the summer months, many routes operate with 90%+ load factors, which is effectively full utilisation. There is limited further scope to grow passenger numbers purely through load factors. Further growth will therefore need to be facilitated by additional movements and larger capacity aircraft, which places further pressure on the already constrained runway and aircraft parking stands.

7.7. Ability of airlines to switch airports

Airlines have immense flexibility to choose where aircraft should be deployed or redeployed at relatively short notice. The further trend towards greater airline consolidation, joint ventures and groupings in Europe, could pose a threat to the negotiating power of airports and result in the consolidation of services on specific routes. Aircraft switching and consolidating at bases is intensifying, which is a specific risk to passenger growth at Dublin, as over sixty short-haul aircraft are currently based at the airport.

08

CONSULTATION QUESTIONS

08. CONSULTATION QUESTIONS

This document is intended to provide guidance to interested parties on the current traffic dynamics at Dublin Airport and to also to outline the methodologies that could be used to forecast the future traffic composition and levels at the airport. Estimating the nature and shape of future activity is an essential input to the capacity development plan. We are therefore keen to receive feedback from stakeholders as to the assumptions and methods detailed in this document.

No.	Category	Question
Q1	**Current Traffic Dynamics**	Do you have any observations or comments in relation to the traffic dynamics presented in Section 3?
Q2	**Dublin Airport Strategy**	Do you have any observations or comments in relation to the strategic airport targets outlined in Section 4?
Q3	**Traffic Forecast Methodology**	What changes (if any) would you propose to the current traffic forecasting methodology used by Dublin Airport?
Q4	**Traffic Forecast Methodology**	What data and sources would you recommended to be used by Dublin Airport in forecasting traffic volumes?
Q5	**Traffic Outlook**	Do you have any observations or comments in relation to Dublin Airport's guidance on the market outlook, future traffic trends and potential indicative passenger volumes?
Q6	**Traffic Outlook**	Can you provide any guidance as to your future potential activity and direction at Dublin Airport? Please indicate the factors you consider most likely to affect your future levels of activity?
Q7	**Downside Risks**	Does your organisation's Risk Register contain additional concerns that should be captured in relation to constraining passenger growth at Dublin Airport?
Q8	**Brexit**	Does your organisation have specific traffic or activity projections related to the potential Brexit scenarios? If so, can you share guidance on implications for your activity at Dublin Airport or for the Irish market?
Q9	**General**	Do you have any further comments or general observations in relation to any of the information contained in this document?

CONFIDENTIALITY

Dublin Airport fully recognises the commercial sensitivities associated with forward looking statements. Please ensure that any sensitive material (not for disclosure) is clearly highlighted and marked as such in any submissions.

➜ Please direct all correspondence relating to this consultation process (including queries and final submissions) to: **forecasts@dublinairport.com**

Thank you in advance for your contributions to this consultation process.