Origin/Destination (O/D) Passenger Modeling

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Outline

- What is a O/D passenger model?
- What is the value of O/D model to tourism and aviation organizations?
- Why is estimating true O/D challenging?
- How is an O/D model generally created?
- Why hire InterVISTAS?
What is an O/D Passenger Model?

- An O/D model is a model that estimates the true origin and destination of passengers on a route by route basis.

For example, 100 passengers traveling on-board the Vancouver-Los Angeles flight. There could be a number of different O/D’s:
  - Vancouver-Los Angeles
  - Kelowna-Los Angeles
  - Vancouver-Mexico City
  - Vancouver-Honolulu
  - etc.
What is the value of an O/D Passenger Model?

- **Airports:**
  - Provides the fundamental information that goes into a route analysis which is critical when building a case to an airline.
  - Quantifies and identifies key market opportunities for new air services.

- **Travel and Tourism Organizations:**
  - Provides a detailed, robust and timely source of information.
  - Provides insight into the relationship between border entries and destinations.
  - Supports monitoring of results relative to forecast for the development of strategies to rectify or improve situations.
  - Targets marketing spend dollars to the most important markets.
What is the value of an O/D Passenger Model?

- **Airlines:**
  - Monitors performance of specific routes.
  - Seeks opportunities where the current demand surpasses the current supply.
  - Provides diversion information to other airports that an airline may not easily track.

- **Tour Operators:**
  - Provides an understanding of origin market, trip characteristics and booking patterns.
  - Assists in the creation of a strategic marketing campaign.
Why is estimating true O/D challenging?

- **No single source:**
  - O/D data is captured through travellers’ booking or ticketing information but there are numerous purchasing and booking channels so the data is not captured in one single source.

- **Traditional data source is deficient:**
  - Due to use of a number of different distribution channels.
  - For example, ticket sales of low cost carriers & charters are generally not captured through traditional booking channels.
Why is estimating true O/D challenging?

- **Diversion:**
  - Use an airport that is not your immediate hometown airport which disguises the true market demand by airport.
  - For example, a Manchester resident originating their air travel from London Gatwick. Why? Access to Lower Airfare and Non-Stop Service!!

- **Public sources:**
  - Offer limited detail.
  - Not timely.
  - Typically do not provide complete market information.
How is an O/D Model created?

- Compiling various data sources, for example:
  - Airline Booking & Ticketing data;
  - Airport site statistics;
  - Flight schedule data (Official Airline Guide);
  - U.S. Department of Transportation’s (DOT) on-flight & O/D statistics, and;
  - National civil aviation authorities (UKCAA, German CAA, ICAO on-flight Statistics Canada Transborder O/D passenger statistics).

- Estimating missing or incomplete data, not captured in the primary sources:
  - Low cost carriers;
  - Charter carriers, and;
  - Carrier direct sales.

- Cross checking the data against other sources for further verification:
  - Airport & travel agency surveys, etc.
# How is an O/D Model created?

## Data Inputs:

- **Airline booking/ticketing data source** *(ie. airline ticket)*

<table>
<thead>
<tr>
<th>Pax Counts</th>
<th>Origin Airport</th>
<th>Destination Airport</th>
<th>Booking Class (Business, Economy Discounted, etc.)</th>
<th>Country, region of booking</th>
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- *Mex*
- *YYZ*
- *YOW*
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**Data Inputs:**

- Airline booking/ticketing data source *(ie. airline ticket)*

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**Passenger Booking Record**

- Pax Counts
- Origin Airport
- Destination Airport
- Booking Class *(Business, Economy Discounted, etc.)*
- Connecting Airport
- Country, region of booking

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**ABC Travel Agency/Location**
How is an O/D Model created?

- **Data Inputs:**
  - **Airport Site Statistics (Enplaned & Deplaned data)**
    - Sum of passengers boarding or deplaning an aircraft at an airport.
    - Acts as a control number for the O/D model estimates.
    - Includes revenue ($$) and non-revenue passengers.
How is an O/D Model created?

- **Data Inputs:**
  - Flight schedule data (Official Airline Guide)
    - Provides airline schedule information.
    - Identifies carriers that serve an airport or market.

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<th>Arr Airp</th>
<th>Carrier</th>
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How is an O/D Model created?

- Data Inputs:
  - U.S. Department of Transportation’s (DOT) T100 on-flight data & other similar statistics:
    - Passenger on-board an aircraft, rather than true O/D data.
    - Public information available for domestic and international markets.
How is an O/D Model created?

- **Data Inputs:**
  - **National Aviation Statistics;**
    - Typically based on a survey.
    - Usually a survey of participating carriers.
    - Often used as a cross-check for the O/D model estimate.
Why hire InterVISTAS?

- InterVISTAS has more than 10 years experience in creating O/D passenger models for airports across North America and internationally.
- InterVISTAS has unparalleled experience with ticket booking/sales data and customised air travel market analyses.
- InterVISTAS has on-going access to timely aviation data sources.
- InterVISTAS full-service approach offers extensive knowledge of consumer travel behavior, as well as expertise in tourism marketing and development.
- InterVISTAS offers customised solutions to meet individual clients’ needs and budget.
For further information, please contact:

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