



**Asia-Pacific
Economic Cooperation**

2016/TPTWG42/AEG-SRV/002

Project TWG 01/2014A - Develop Air Connectivity in the APEC Region

Purpose: Information
Submitted by: IATA



APEC PERU
2016

**Air Services Sub-Group Meeting
Port Moresby, Papua New Guinea
5 April 2016**



Consulting.

TWG 01 2014A

Develop Air Connectivity in the APEC Region

Presentation to TPTWG42

5 April 2016



- 1 Introduction to TWG Project: Develop Air Connectivity in the APEC Region**
- 2 Objectives of the project
- 3 Best practices on air service development
- 4 APEC connectivity analytical results
- 5 Sample report for Australia

Introduction to TWG Project: Develop Air Connectivity in the APEC Region

- Tourism Working Group (TWG) project proposed in 2014 by Thailand and co-sponsored by Australia; Chinese Taipei; Indonesia; Malaysia; Peru; Philippines;
- Aims to develop air connectivity in the APEC Region and in turn stimulate a more efficient flow of goods, services, capital and people.
- Project Approved in December 2014
- IATA Consulting was selected contractor to implement in May 2015
- Final Report - July 2016

- 1 Introduction to TWG Project: Develop Air Connectivity in the APEC Region
- 2 **Objectives of the project**
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APEC has mandated IATA Consulting to carry out a project aiming at developing air connectivity in the APEC region

The study pursue the following objectives:

1. To develop market demand based recommendations for potential new routes, improved flight schedule connection times, and hubs between APEC economies based on analysis of air passenger flow, schedules and new aircraft range capability, including analysis of the number of seats, flights and air traffic.
2. To help airlines and regulators develop more accurate demand predictions so they can in turn help APEC economies by providing better air connectivity services, capacity and schedules.

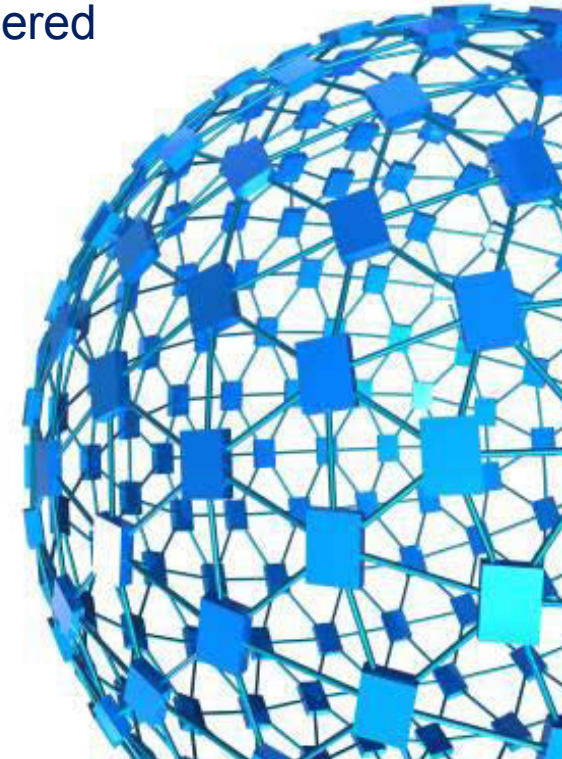
Note: Scope excludes domestic routes



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Main objectives of Air Service Development as identified by the aviation stakeholders

- Opening new markets to passengers and goods movement
- Improving access between two communities and connecting markets
- Maximize economic and social impact in area considered
- Introduce competitive air service
- Improve service reliability
- Improve access to global aviation network



Introduction: IATA has undertaken a wide review of publicly available literature to identify lessons learnt on the development of new air routes

- What is Air Service Development?
- What are the benefits of additional air services?

Benefits for an airport and its surrounding community of new air services



The importance and benefits of aviation to the economy has led governments and local development agencies to collaborate

- In the past, airports used to be the only airlines' interlocutor in dealing with Air Service Development
- Awareness of other stakeholders has recently increased as benefits of aviation are increasingly being recognized
- Nowadays, the role of local communities, development agencies and business/tourism stakeholders has become important in the Air Service Development process

Massport Created the 'Asia Task Force' to Help Attract and Support New Nonstop Service to Tokyo

- **Members Include Top Executives from the 250+ Massachusetts and New England Companies and Organizations Which Travel Extensively to Japan and Asia**
- **Surveys and Discussions With Asia Task Force Members Provided Key Information On Travel Demand to Japan and Asia**
 - Including members' overwhelming support for nonstop service over their existing frequent flier club benefits
- **In Early 2011, Massport Arranged Separate Meetings Between the Asia Task Force and Two Airlines Interested in Serving Boston from Their Respective Tokyo Hubs**
 - Japan Airlines' top executives were impressed to hear directly from their 'future customers'



Massport plans to use this Asia Task Force 'template' for other new international targets



How do airlines decide on / select the routes/airports they operate?



- Airlines serve markets that will generate profits
- Airlines' decisions are driven by 2 main criteria:

Size of the potential
market base



Quality of the
revenue profile and
operating costs



An Air Service Development study therefore aims at convincing airlines of the financial viability/profitability of the proposed destinations

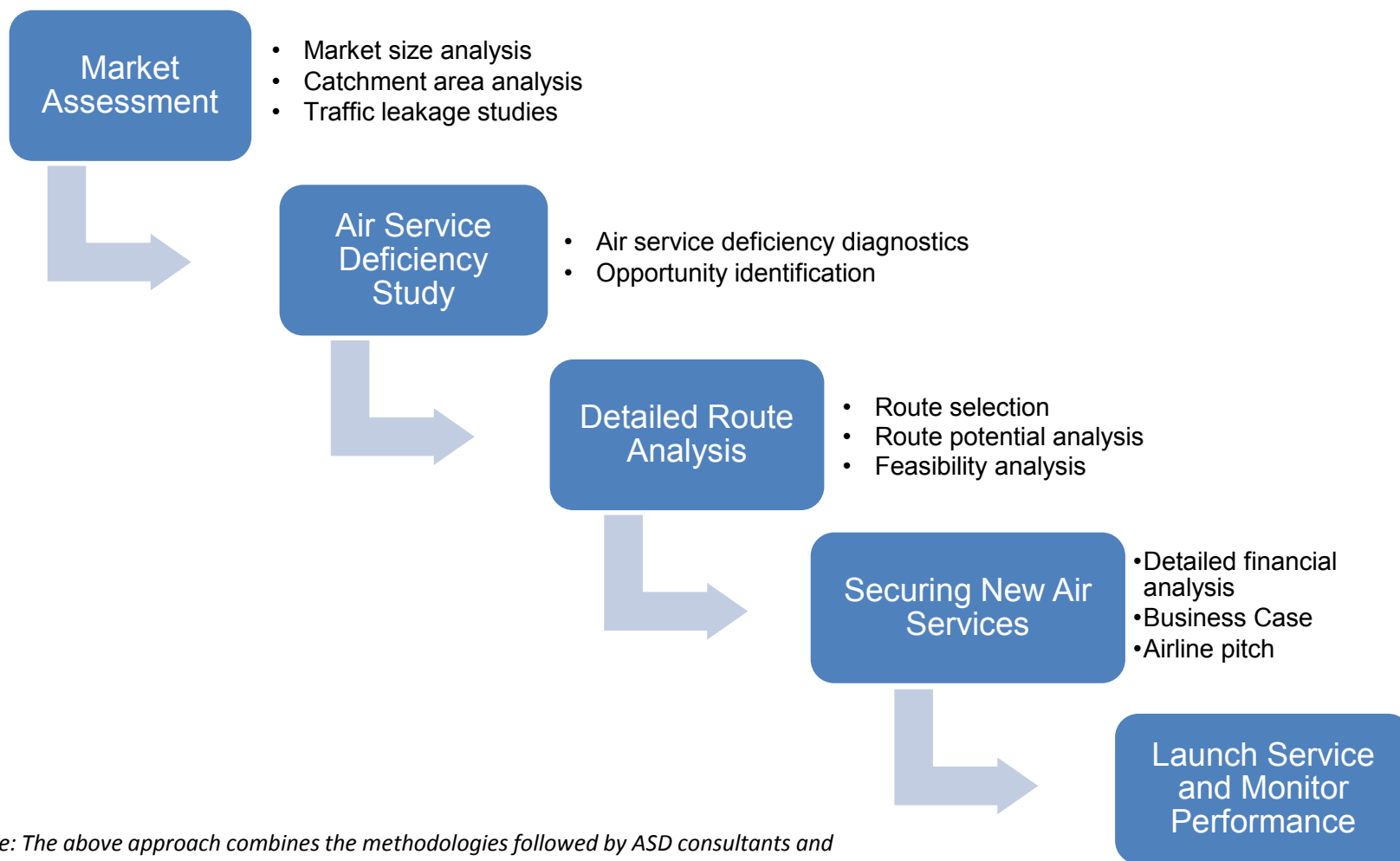
- Airlines lack resources to evaluate every market
- All stakeholders (airports, local communities, development agencies and business/tourism stakeholders) have a leading role to play in promoting their local destinations
- A well-articulated business case is a must in order to influence airlines planning process
- It must address both the market potential and the route financial profitability

“Massport is in the top 1 percent in how they prepare the [air service business] case and how they know the market, which helps us tremendously in the start-up of a new route. It’s a massive investment for us. They’re unique to give that confidence.”

Anko van der Werff, chief revenue officer at Aeromexico



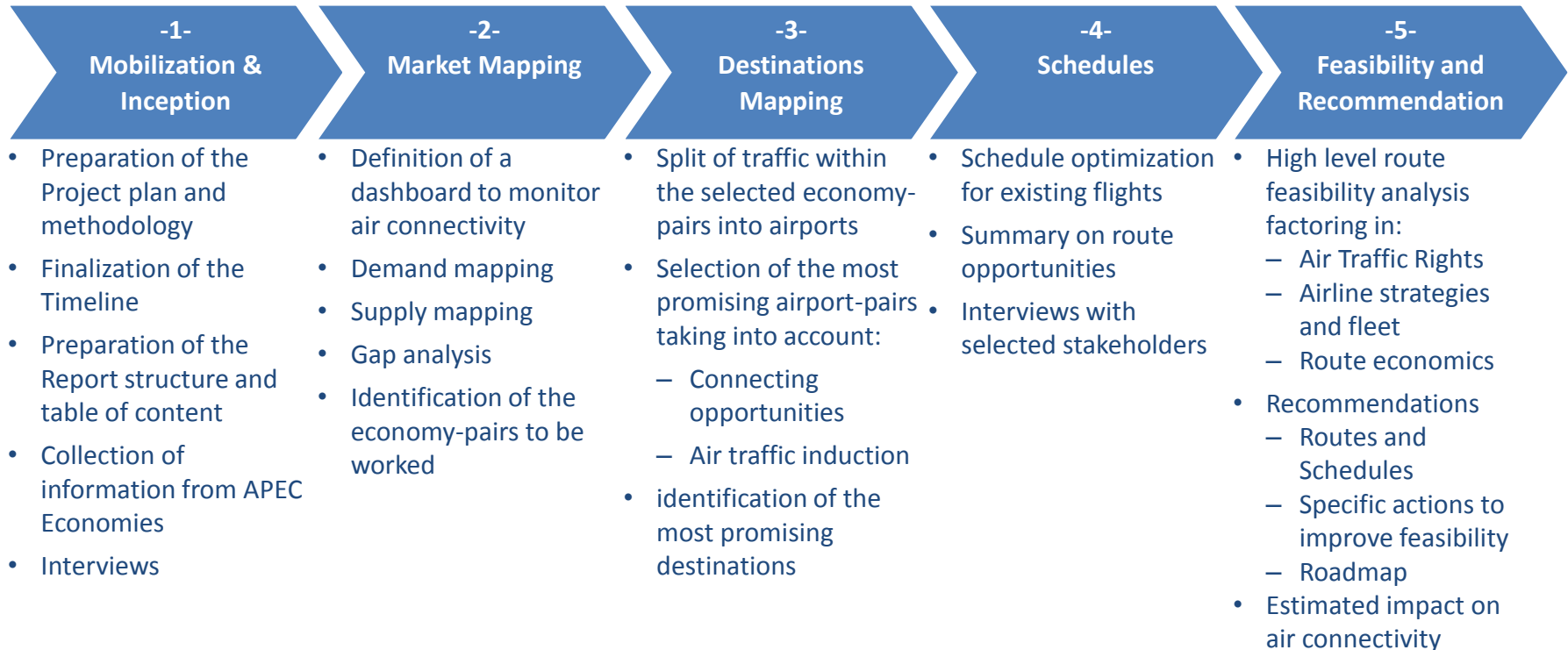
Literature says a thorough process is necessary to achieve a successful and beneficial route development



Note: The above approach combines the methodologies followed by ASD consultants and recommended by ASD specialists in the related literature

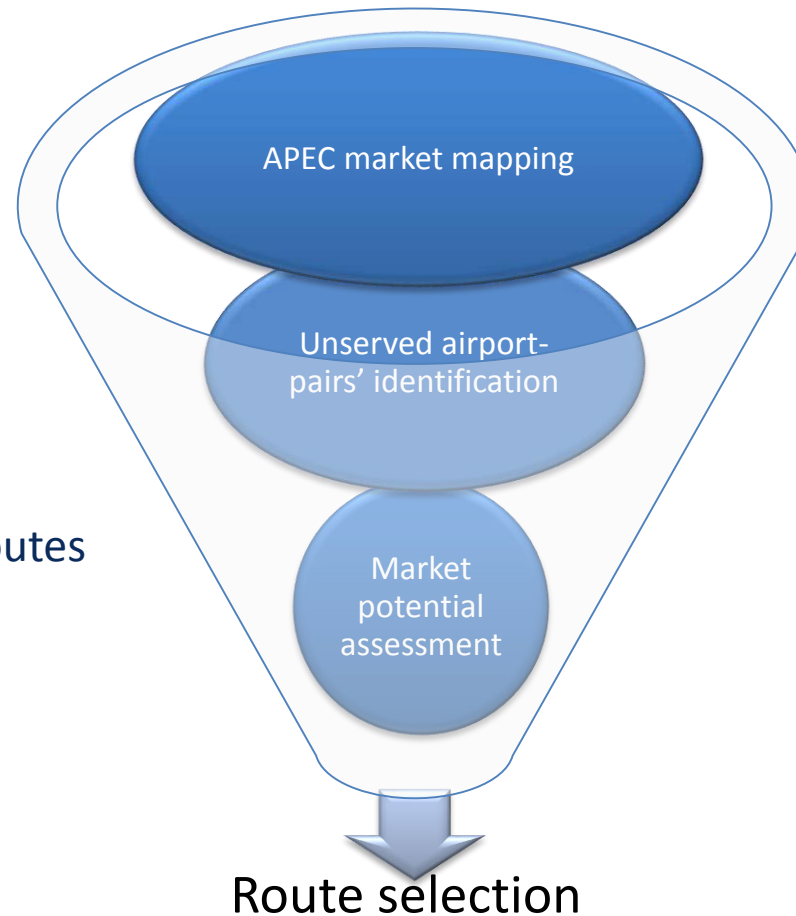
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Our approach follows the best practices mentioned above and has been customized to the specific needs of the APEC study



Once data is collected, the modelling work can start

- Data is analyzed through a funnel approach that aims at identifying the promising city-pairs that will be eventually further analyzed and potentially recommended for opening to airlines



- A total of 18,500 routes were analyzed

The market mapping exercise looks at both the demand and the supply sides and leads to the identification of gaps at the APEC economy-pair level

	Australia	Brunei Darussalam	Canada	Chile	China	Hong Kong	Indonesia	Japan	Malaysia	Mexico	New Zealand	Papua New Guinea	Peru	Philippines	Russian Federation	Singapore	Republic of Korea	Chinese Taipei	Thailand	United States	Viet Nam	
Australia	Grey	Green	Green	Green	Green	Green	Green	Green	Green	Red	Green	Green	Red	Green	Red	Green	Green	Green	Green	Green	Green	Green
Brunei Darussalam		Grey	Red	Red	Green	Green	Red	Green	Green	Red	Green	Red	Red	Green	Red	Green	Red	Red	Green	Red	Green	Green
Canada			Grey	Green	Green	Red	Green	Red	Green	Green	Green	Green	Green	Red	Red	Green	Green	Green	Red	Green	Green	Red
Chile				Grey	Red	Red	Red	Red	Red	Green	Green	Red	Red	Red	Red	Red	Red	Red	Red	Red	Green	Red
China					Grey	Green	Green	Green	Green	Green	Green	Red	Red	Green	Green	Green	Green	Green	Green	Green	Green	Green
Hong Kong						Grey	Green	Green	Green	Red	Green	Green	Red	Green	Green	Green	Green	Green	Green	Green	Green	Green
Indonesia							Grey	Green	Green	Red	Green	Green	Red	Green	Red	Green	Green	Green	Green	Red	Green	Green
Japan								Grey	Green	Green	Green	Red	Red	Green	Green	Green	Green	Green	Green	Green	Green	Green
Malaysia									Grey	Red	Green	Red	Red	Green	Red	Green	Green	Green	Green	Red	Green	Green
Mexico										Grey	Red	Green	Green	Red	Red	Red	Red	Red	Red	Red	Green	Red
New Zealand											Grey	Red	Red	Red	Red	Green	Green	Red	Green	Green	Green	Red
Papua New Guinea												Grey	Red	Green	Green	Red	Red	Red	Red	Red	Green	Red
Peru													Grey	Red	Red	Red	Red	Red	Red	Red	Green	Red
Philippines														Grey	Red	Green	Green	Green	Green	Green	Green	Green
Russian Federation															Grey	Red	Green	Red	Green	Green	Green	Red
Singapore																Grey	Green	Green	Green	Red	Green	Green
Republic of Korea																	Grey	Green	Green	Green	Green	Green
Chinese Taipei																		Grey	Green	Green	Green	Green
Thailand																			Grey	Red	Green	Green
United States																				Grey	Red	Red
Viet Nam																					Grey	Red

- 126 economy-pairs connected

- 84 not connected

- Economy-pairs not connected via direct air services
- Economy-pairs connected via direct air services
- Domestic markets – not considered as part of this study

Top 30 city pairs in APEC that are not served by direct flights

City Pairs	Origin Economies	Destination Economies	Reported daily OD PAX in PDEW	Non-Stop Seats 2014	1-Stop Direct Seats 2014 in PDEW
LAX-SGN	United States	Viet Nam	221	0	0
YYZ-MNL	Canada	Philippines	221	0	92
JFK-SYD	United States	Australia	190	0	494
JFK-SIN	United States	Singapore	190	0	424
SFO-SIN	United States	Singapore	179	0	556
SFO-SGN	United States	Viet Nam	159	0	0
PEK-MEL	China	Australia	149	0	162
JFK-MNL	United States	Philippines	128	0	314
LAX-BKK	United States	Thailand	122	0	473
SAN-YVR	United States	Canada	119	0	0
LAX-SIN	United States	Singapore	116	0	420
SHE-SIN	China	Singapore	110	0	220
JFK-MEL	United States	Australia	110	0	0
MCO-NRT	United States	Japan	101	0	107
JFK-SGN	United States	Viet Nam	100	0	0
BNE-HKT	Australia	Thailand	99	0	0
JFK-BKK	United States	Thailand	92	0	0
LAX-CGK	United States	Indonesia	91	0	0
FLL-YVR	United States	Canada	89	0	2
MIA-MNL	United States	Canada	88	0	0
BOS-PVG	United States	China	87	0	272
BOS-PVG	United States	China	87	0	0
BOS-MEX	United States	Mexico	87	0	0
IAH-MNL	United States	Philippines	86	0	0
SIN-PUS	Singapore	Republic of Korea	86	0	0
HNL -CTS	United States	Japan	86	0	0
PEK-YUL	Canada	China	86	0	0
BNE-MNL	Australia	Philippines	83	0	39
IAH-SIN	United States	Singapore	83	0	206
NRT -LIM	Japan	Peru	78	0	0

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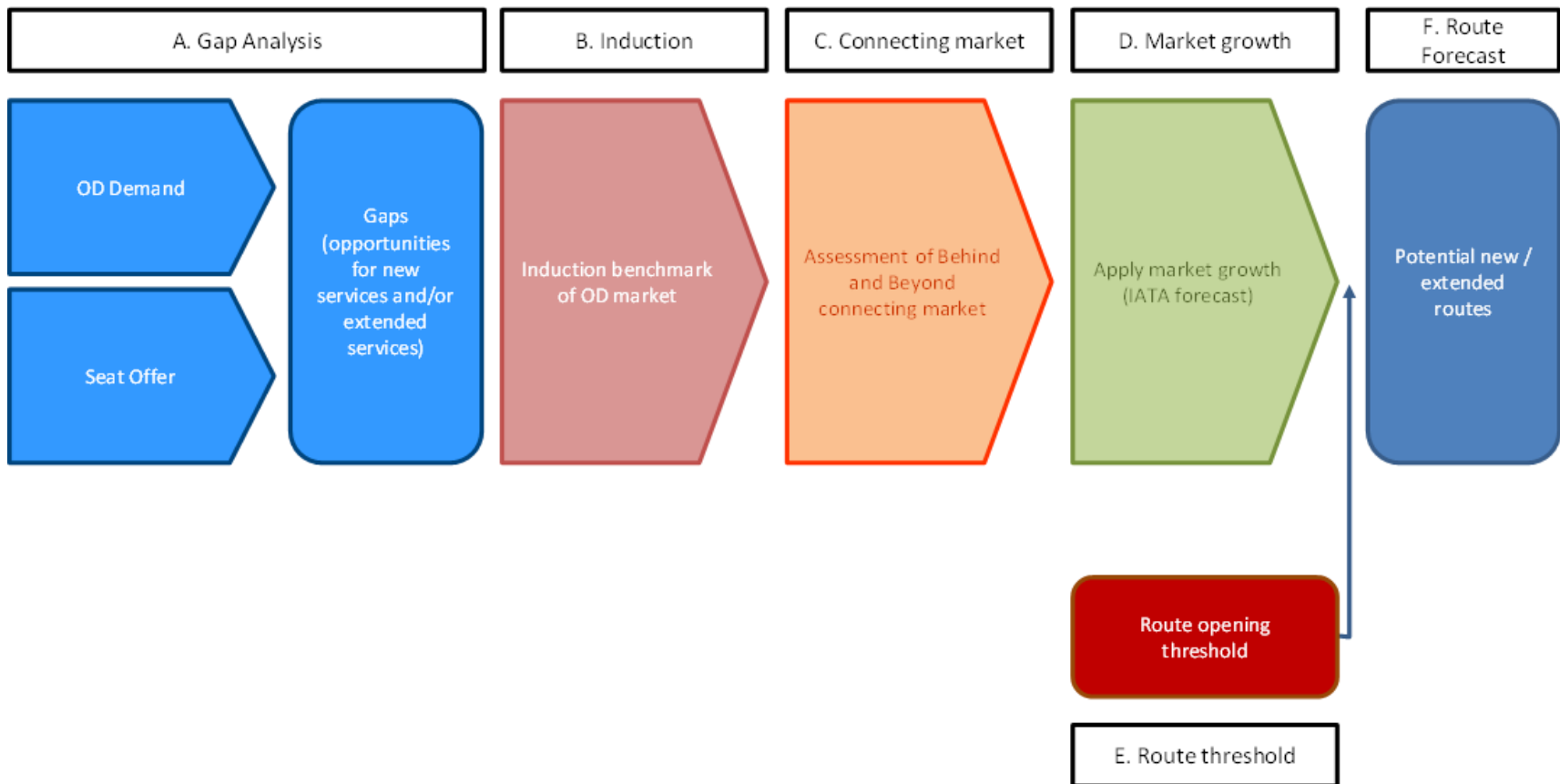
Below is the content for the final report for each of the APEC economies

1. Introduction to the project
2. Approach followed and data used
3. Context of the APEC Economy (customized)
 - Economy and demographics
 - Aviation situation
4. Medium-term new route opportunities (customized)
 - Route traffic forecast
 - High level feasibility analysis
5. Other opportunities (customized)
6. Recommendations to improve feasibility (customized)

This workshop will focus on #4, #5 and #6, using the report for Australia as an example

The analytical approach for each economy follows the best practices in the industry

- A comprehensive 6-steps approach was used to analyze the air transport demand and supply between APEC economies and city pairs and identify potential new routes



For the case of Australia, air services to 11 APEC economies can be further developed to enhance connectivity

- Analysis is based on demand and supply
- Capacities are under-supplied for economies like China, Japan, and Viet Nam
- Demand is reaching capacity for the Philippines, Republic of Korea, Chinese Taipei and Canada
- Supply to United States, Indonesia, Thailand and PNG are still sufficient but there are room to improve air connectivity

Origin Economies	Demand	Non-Stop	One Stop	Ratio of Demand to Supply
United States	4,312	5,186	704	73%
Mexico	65	0	0	*
Chile	135	215	599	17%
Peru	56	0	0	*
Russian Federation	5	0	0	*
Brunei Darussalam	21	254	0	8%
China	3,418	3,248	101	102%
Hong Kong	1,806	3,764	143	46%
Indonesia	3,820	4,936	9	77%
Japan	2,022	1,871	56	105%
Malaysia	1,965	4,893	0	40%
Philippines	861	899	82	88%
Singapore	3,116	8,925	168	34%
Republic of Korea	679	739	0	92%
Chinese Taipei	477	480	0	99%
Thailand	2,017	2,926	0	69%
Viet Nam	763	598	0	128%
Australia	72,614	214,830	3,380	33%
Papua New Guinea	610	780	0	78%
New Zealand	7,840	12,564	34	62%
Canada	589	317	290	97%

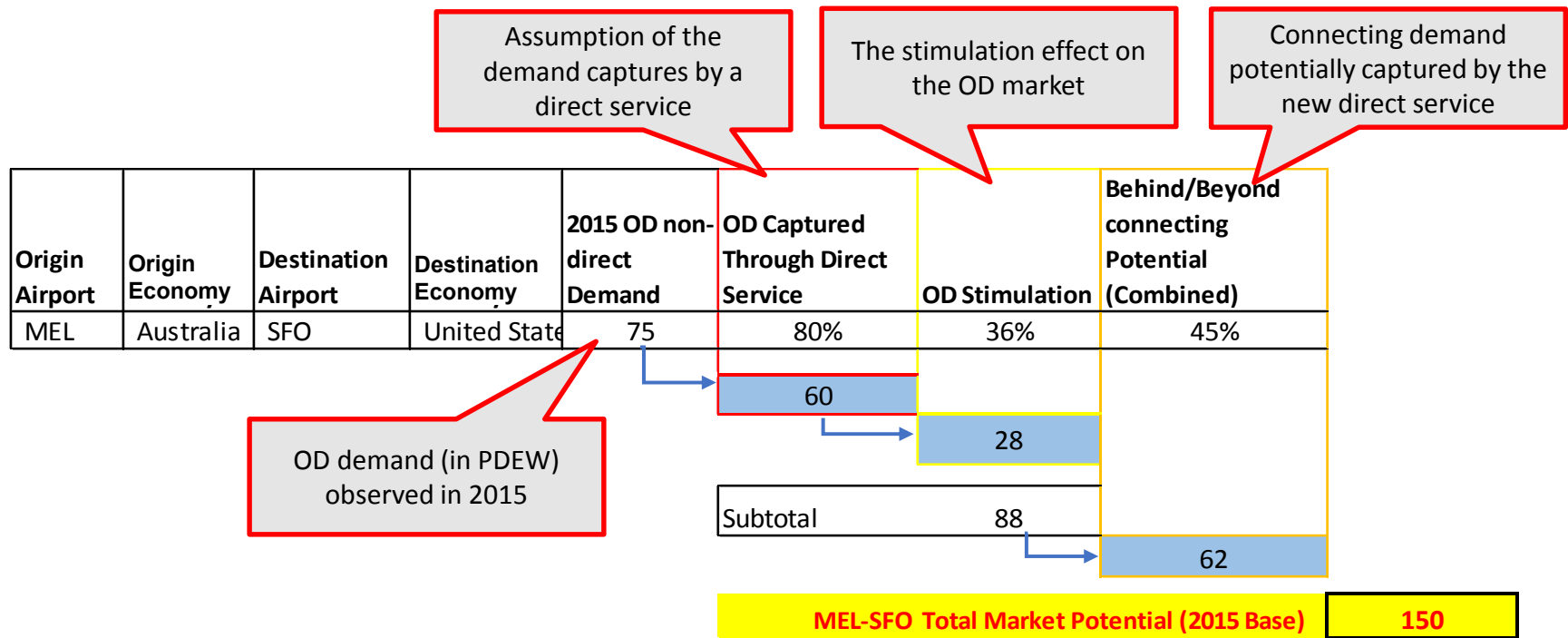
IATA is able to shortlist 8 city-pairs from Australia that has the potential to open as new air services in the short to medium term

➤ The routes identified are:

- Adelaide - Los Angeles
- Brisbane – Phuket
- Brisbane – Manila
- Brisbane – Ho Chi Minh
- Brisbane – Vancouver
- Melbourne – Seoul
- Melbourne – San Francisco
- Melbourne – Vancouver

Origin Airport	Origin Economy	Destination Airport	Destination Economy	2015 OD Demand	Distance is Viable for non-Stop Service	Demand is viable for long haul service
SYD	Australia	JFK	United States	191	No	Yes
MEL	Australia	JFK	United States	133	No	Yes
BNE	Australia	HKT	Thailand	94	Yes	Yes
BNE	Australia	MNL	Philippines	85	Yes	Yes
MEL	Australia	ICN	Republic of Korea	78	Yes	Yes
BNE	Australia	JFK	United States	76	No	No
MEL	Australia	SFO	United States	75	Yes	Yes
PER	Australia	LAX	United States	74	No	Yes
PER	Australia	MNL	Philippines	68	Yes	No
BNE	Australia	PEK	China	66	Yes	No
SYD	Australia	CTS	Japan	66	Yes	No
ADL	Australia	LAX	United States	63	Yes	Yes
SYD	Australia	HAN	Viet Nam	62	Yes	No
SYD	Australia	YYZ	Canada	62	No	Yes
SYD	Australia	LAS	United States	60	Yes	No
BNE	Australia	SGN	Viet Nam	58	Yes	Yes
BNE	Australia	PVG	China	57	Yes	No
ADL	Australia	HKT	Thailand	52	Yes	No
BNE	Australia	YVR	Canada	52	Yes	Yes
PER	Australia	NRT	Japan	51	Yes	No
MEL	Australia	HAN	Viet Nam	51	Yes	No
MEL	Australia	YVR	Canada	50	Yes	Yes
SYD	Australia	KIX	Japan	47	Yes	No
PER	Australia	SGN	Vietnam	46	Yes	No
PER	Australia	JFK	United States	46	No	Yes
MEL	Australia	KIX	Japan	45	Yes	No
MEL	Australia	USM	Thailand	41	Yes	No
SYD	Australia	FUK	Japan	41	Yes	No
SYD	Australia	FUK	Japan	41	Yes	No
ADL	Australia	CHC	New Zealand	40	Yes	No
PER	Australia	ICN	Republic of Korea	40	Yes	No

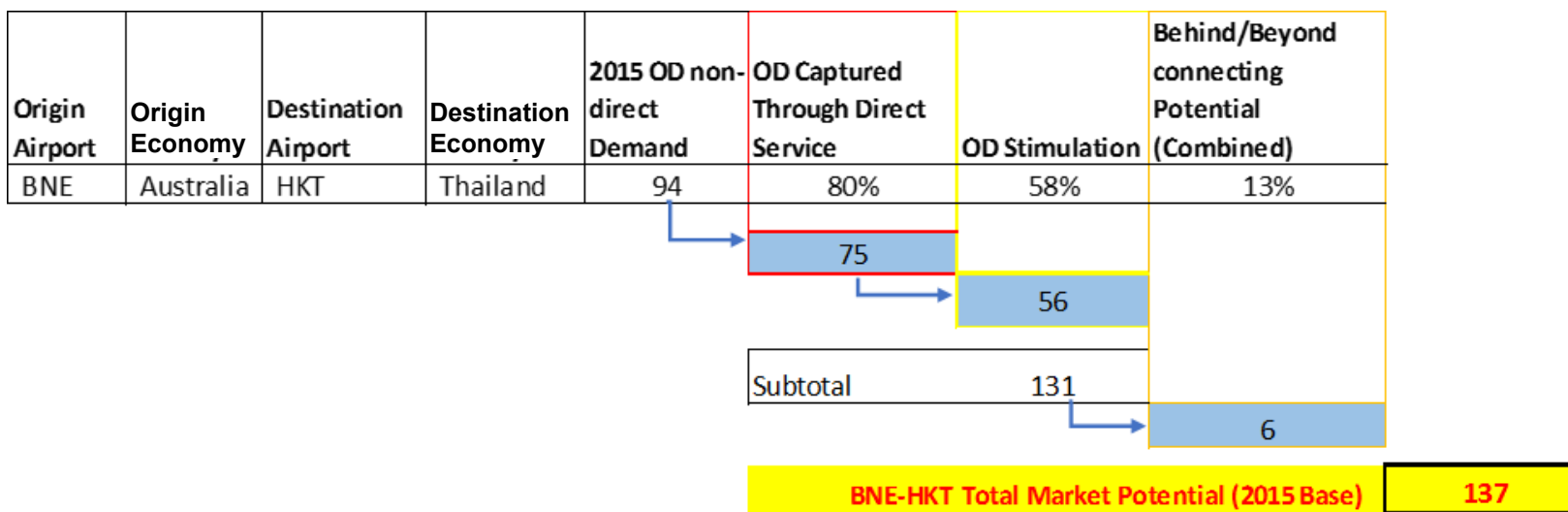
Take the MEL-SFO route as an example, analysis shows that in 2015 there is a market potential of 150 passengers per day each way (PDEW)



Country Pair	City Pair	Served in 2015	2015 OD Base	2016	2017	2018
Australia-United States	MEL-SFO	No	150	158	166	174

Applying IATA forecast growth rates

For the example of BNE – HKT, the demand in 2015 was estimated to be 137 PDEW



Country Pair	City Pair	Served in 2015	2015 OD Base	2016	2017	2018
Australia-Thailand	BNE-HKT	No	137	145	152	162

IATA anticipates some of the shortlisted route can start to operate in 2016 with a reasonable load factor

- The analysis had taken into account the all the potential airlines that can operate on the route and their aircraft fleet mix

Route (non-directional)	Start Date	Aircraft	Airline	Frequency	# of Seats	Number of Pax per Flight	Load Factor
BNE-HKT	Jun-16	Boeing 787-8	Jetstar Airlines	4x w	335	249	74%
BNE-MNL	Jun-16	Airbus A330	Philippine Airlines	3x w	368	321	87%
MEL-SFO	Jun-16	Boeing 787-8	United Airlines	5x w	255	183	72%
BNE-SGN	Sep-17	Boeing 787-8	Jetstar Airlines	3x w	335	298	89%
ADL-LAX	Jun-16	Boeing 777-200	Delta Airlines	4x w	291	227	78%
BNE-YVR	Jun-16	Boeing 787-8	Air Canada	5x w	251	174	69%
MEL-YVR	Jun-18	Boeing 787-8	Air Canada	4x w	251	230	92%
MEL-ICN	Apr-17	Airbus A330	Korean Airlines	4x w	276	206	75%

Aside from new air routes, several opportunities were identified for Australia to improve on connectivity

➤ Connectivity improvements:

- Encourage airlines to explore opening new routes from non-first tier cities to promote more direct air connectivity between different city pairs in APEC

➤ Route frequency increase:

- Some direct routes currently served from Australia are fast reaching its capacity e.g. from Australia to the Philippines, Republic of Korea, Chinese Taipei and Canada and there is room to increase frequencies on existing routes

➤ Long term opportunities:

- IATA recommend Australia to undertake a long term air traffic forecast (over 5 years horizon) to ensure the long term demand is catered for and opportunities are addressed in a timely manner

IATA proposes the following recommendations to Australia to improve air connectivity to the APEC economies

- Continue to liberalize the air services market to other APEC economies allowing the fullest access to Australia airports
- Explore the feasibility to shorten/remove the curfew imposed on airports (e.g. Sydney Kingsford Smith) to allow better operational flexibilities for airlines
- Encourage airlines to explore the opportunities on the ultra long haul market when they take delivery of new generation of long haul aircraft
- Work closely with different stakeholders for example Tourism Australia, the Australia Chamber of Commerce etc. to gain a deeper understanding of the development of the aviation demand
- Ensure the major international airports have the adequate investment and improvement program to cater for future traffic demand
- Explore the possibility of relaxing visa requirements for tourists
- Reduce Passenger Movement Charge on international air passengers

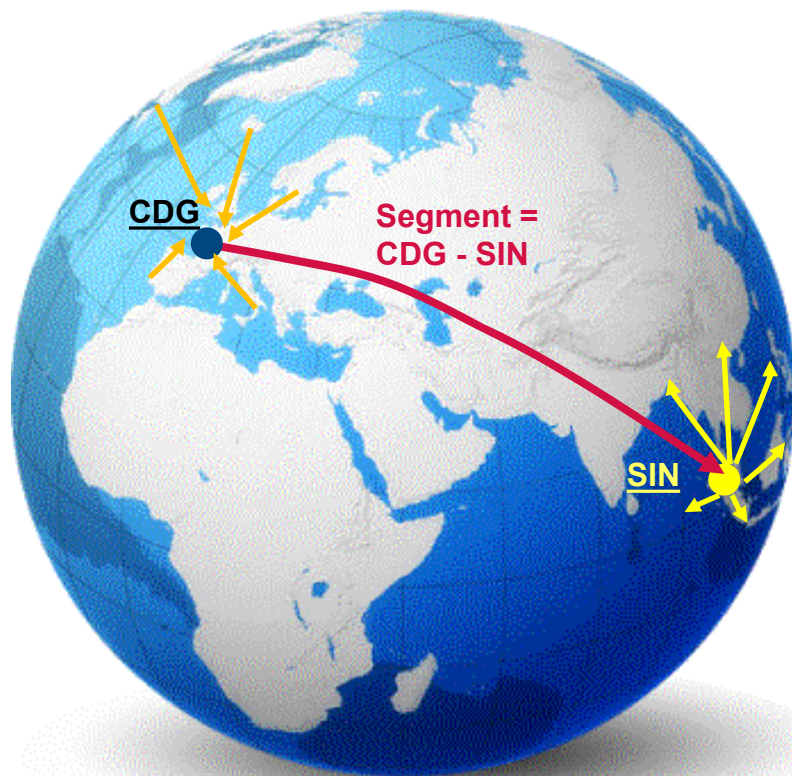
Appendix A **Air service development glossary**

Appendix B Introduction to IATA and IATA Consulting

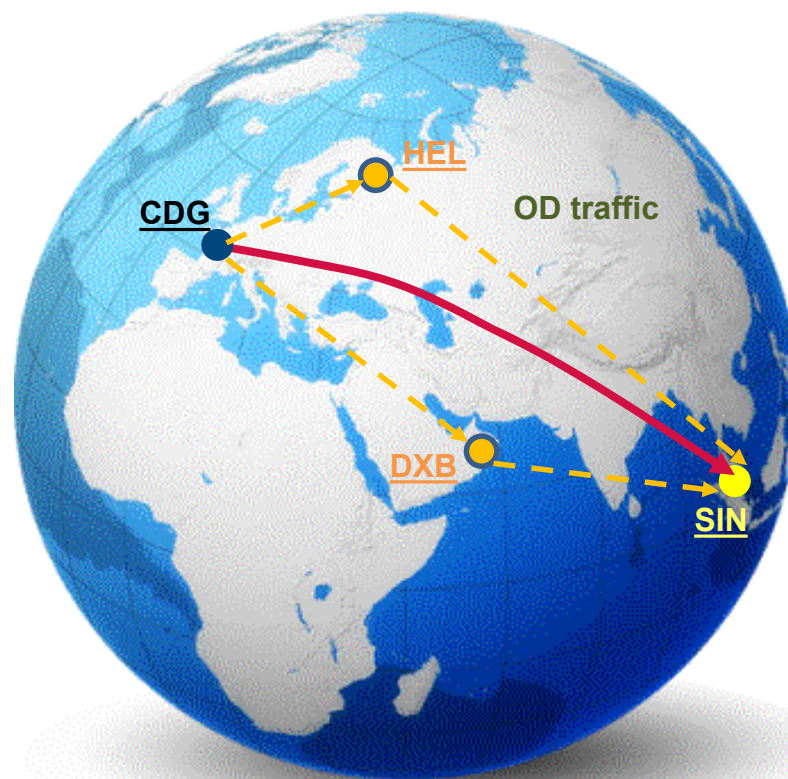
Concepts - Glossary

- ↗ O/D and segment traffic
- ↗ Direct and indirect flights
- ↗ Directional vs. non-directional traffic
- ↗ Definition of Passenger Daily Each Way (PDEW)
- ↗ Connecting beyond and behind

O/D and segment traffic

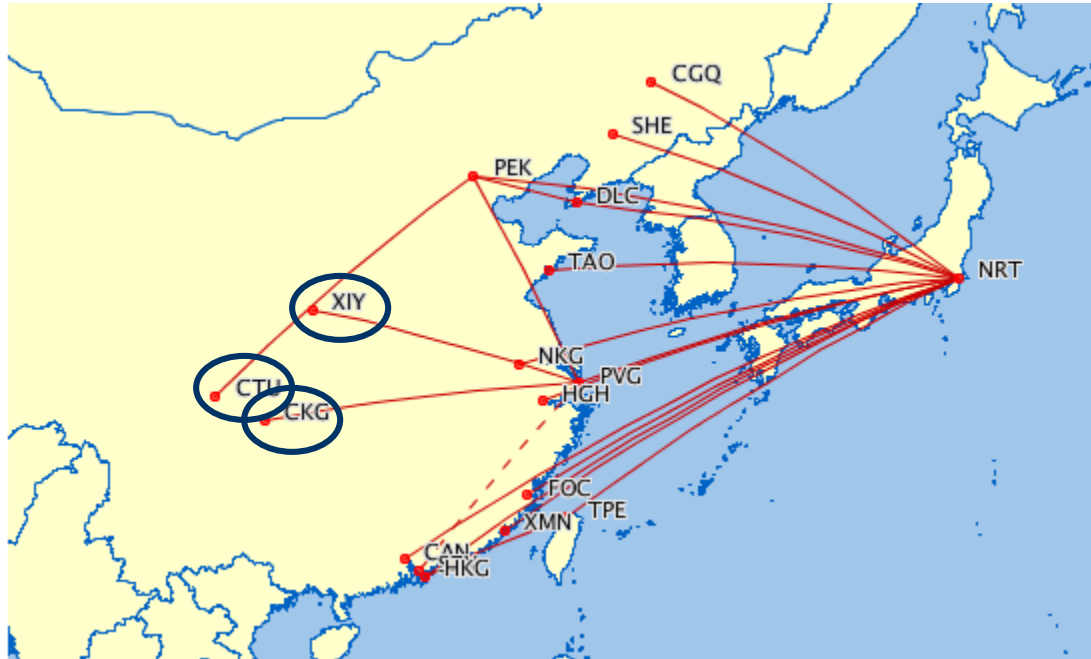


The traffic flying on the **segment CDG-SIN** includes all the passengers actually flying on direct flights between CDG and SIN, disregarding the initial origin and final destination of these passengers.



The **O/D traffic (or Origin / Destination)** between **CDG and SIN** includes all passengers starting their journey in SIN or CDG and finishing it in CDG or SIN, disregarding their actual routings.

Direct and indirect flights



Indirect destinations are serviced with a stop. The aircraft and flight number are the same before and after the stop. Indirect flights are therefore different from connecting ones – as passengers don't change aircraft.

Directional vs. non-directional traffic / Definition of Passenger Daily Each Way (PDEW)

Directionality	Directional (one way)
	Directional (one way)
	Bi-directional (both ways)
	Bi-directional Total
	Non-directional (merged)
Directionality	Bi-directional (both ways)
	Directional (one way)
	Bi-directional (both ways)
	Bi-directional Total
	Non-directional (merged)
Directionality	Bi-directional Total
	Directional (one way)
	Bi-directional (both ways)
	Bi-directional Total
	Non-directional (merged)
Directionality	Non-directional (merged)
	Directional (one way)
	Bi-directional (both ways)
	Bi-directional Total
	Non-directional (merged)

Orig	Dest	Total
OPO	LHR	229.06
		229.06

Orig	Dest	Total
LHR	OPO	217.06
OPO	LHR	229.06
		446.13

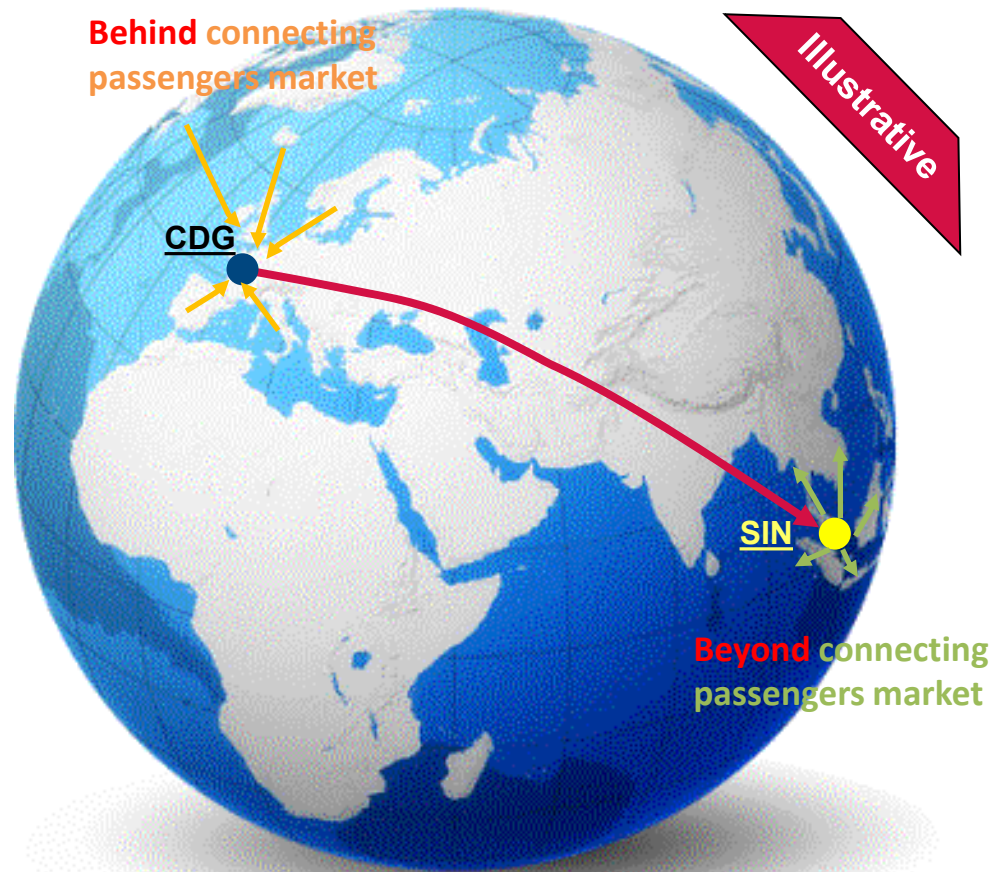
Orig	Dest	Total
LHR	OPO	446.13
		446.13

Orig	Dest	Total
OPO	LHR	223.06
		PDEW = 223.06

Passenger Daily Each Way (**PDEW**) is the recommended unit to measure the demand between two airports. It compares well with aircraft size.

30/03/2016

Connecting beyond and behind



- Considering the O/D traffic from CDG to SIN, the connecting behind market is defined as the passengers **connecting through CDG from behind origin airports** to reach their **final destination in SIN**
- Considering the O/D traffic from CDG to SIN, the connecting beyond market is defined as the passengers starting their journey in CDG and **connecting through SIN to beyond destinations**.

Appendix A Air service development glossary

Appendix B Introduction to IATA and IATA Consulting

Founded in 1945

As the prime vehicle for inter-airline cooperation in promoting safe, reliable, secure and economical air services - for the benefit of the world's consumers.

Our mission

To represent, lead, and serve the airline industry.

Our vision

To be the force for value creation and innovation driving a safe, secure and profitable air transport industry that sustainably connects and enriches our world.



IATA in numbers

250+

member airlines

84%

of total air traffic

\$387B

processed by IATA
financial systems

1,400+

employees

66

offices in 62 countries

OUR FIELDS OF EXPERTISE

IATA Consulting has comprehensive experience in the full array of business challenges facing the aviation sector. Serving the airline industry for 70 years, IATA has developed unrivaled practical experience, which we bring forth to provide the best solutions to our clients.

With our depth and breadth of aviation industry experience, we assist clients maximize the value of their operating model, realize growth ambitions, and gain insights that translate into sustainable competitive advantages.



AIRLINES

Solutions to achieve real and lasting results in every aspect of airline commercial and operational management.



AIRPORTS, PASSENGERS & SECURITY

Solutions to plan your airport efficiently to avoid costly mistakes and profit from untapped opportunities.



GROUND HANDLING & CARGO

Solutions to optimize your operations and improve your safety and security while reducing costs.



SAFETY & FLIGHT OPERATIONS

Solutions for aviation organizations and airlines to improve safety, efficiency and air transport management.



ENVIRONMENT & ECONOMICS

Solutions for fulfilling the vision of a safer, more competitive and sustainable aviation industry.



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