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# 51<sup>st</sup> CONFERENCE OF DIRECTORS GENERAL OF CIVIL AVIATION ASIA AND PACIFIC REGIONS

**AIRSPACE OPTIMIZATION  
BY HONG KONG TO  
ACCOMMODATE PHENOMENAL  
AIR TRAFFIC GROWTH**

Presented by Hong Kong, China

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# Growing Air Traffic Demand – Capacity by Region (May 2014)

	MAY 14			YTD		
	ASK (billion)	%	YoY	ASK (billion)	%	YoY
Asia and Pacific	203	31%	↑ 7.2%	993	33%	↑ 7.8%
Europe	181	28%	↑ 5.5%	784	26%	↑ 5.8%
North America	158	24%	↑ 2.6%	745	24%	↑ 1.8%
Middle East	57	9%	↑ 6.6%	283	9%	↑ 11.3%
Latin America and the Caribbean	33	5%	↑ 4.0%	166	5%	↑ 3.5%
Africa	17	3%	↑ 3.3%	81	3%	↑ 4.0%
<b>World</b>	<b>650</b>	<b>100%</b>	<b>↑ 5.2%</b>	<b>3,052</b>	<b>100%</b>	<b>↑ 5.8%</b>

(Source: ICAO, IATA, OAG)

*Note: Total scheduled services*

# Growing Air Traffic Demand – HKIA Movement (Monthly Ranking JUL 14)

## Aircraft Movements

(Source: ACI, updated OCT 14)

Landing and take-off of an aircraft

		Total	%Chg
1	CHICAGO IL, US (ORD)	83 017	2.3
2	ATLANTA GA, US (ATL)	76 222	(5.6)
3	DALLAS/FORT WORTH TX, US (DFW)	59 933	(0.3)
4	LOS ANGELES CA, US (LAX)	57 997	2.8
5	DENVER CO, US (DEN)	52 088	(1.5)
6	BEIJING, CN (PEK)	50 085	3.3
7	CHARLOTTE NC, US (CLT)	47 812	(0.6)
8	LAS VEGAS NV, US (LAS)	45 876	0.8
9	HOUSTON TX, US (IAH)	45 525	1.7
10	PARIS, FR (CDG)	43 778	0.4
11	FRANKFURT, DE (FRA)	42 841	(1.0)
12	AMSTERDAM, NL (AMS)	42 426	2.5
13	LONDON, GB (LHR)	41 674	0.5
14	TORONTO ON, CA (YYZ)	39 952	1.9
15	NEW YORK NY, US (JFK)	39 908	4.6
16	SAN FRANCISCO CA, US (SFO)	38 660	5.5
17	ISTANBUL, TR (IST)	38 368	6.2
18	MINNEAPOLIS MN, US (MSP)	37 672	(5.9)
19	PHILADELPHIA PA, US (PHL)	36 991	(2.8)
20	PHOENIX AZ, US (PHX)	36 880	(0.7)
21	TOKYO, JP (HND)	36 792	5.2
22	NEWARK NJ, US (EWR)	36 108	(0.2)
23	MEXICO CITY, MX (MEX)	35 972	6.7
24	GUANGZHOU, CN (CAN)	35 767	3.7
25	SHANGHAI, CN (PVG)	35 613	7.7
26	BOSTON MA, US (BOS)	35 234	1.3
27	DETROIT MI, US (DTW)	35 154	(9.7)
28	HONG KONG, HK (HKG)	34 360	4.0
29	MUNICH, DE (MUC)	34 205	(1.2)
30	ANCHORAGE AK, US (ANC)	34 057	(0.2)

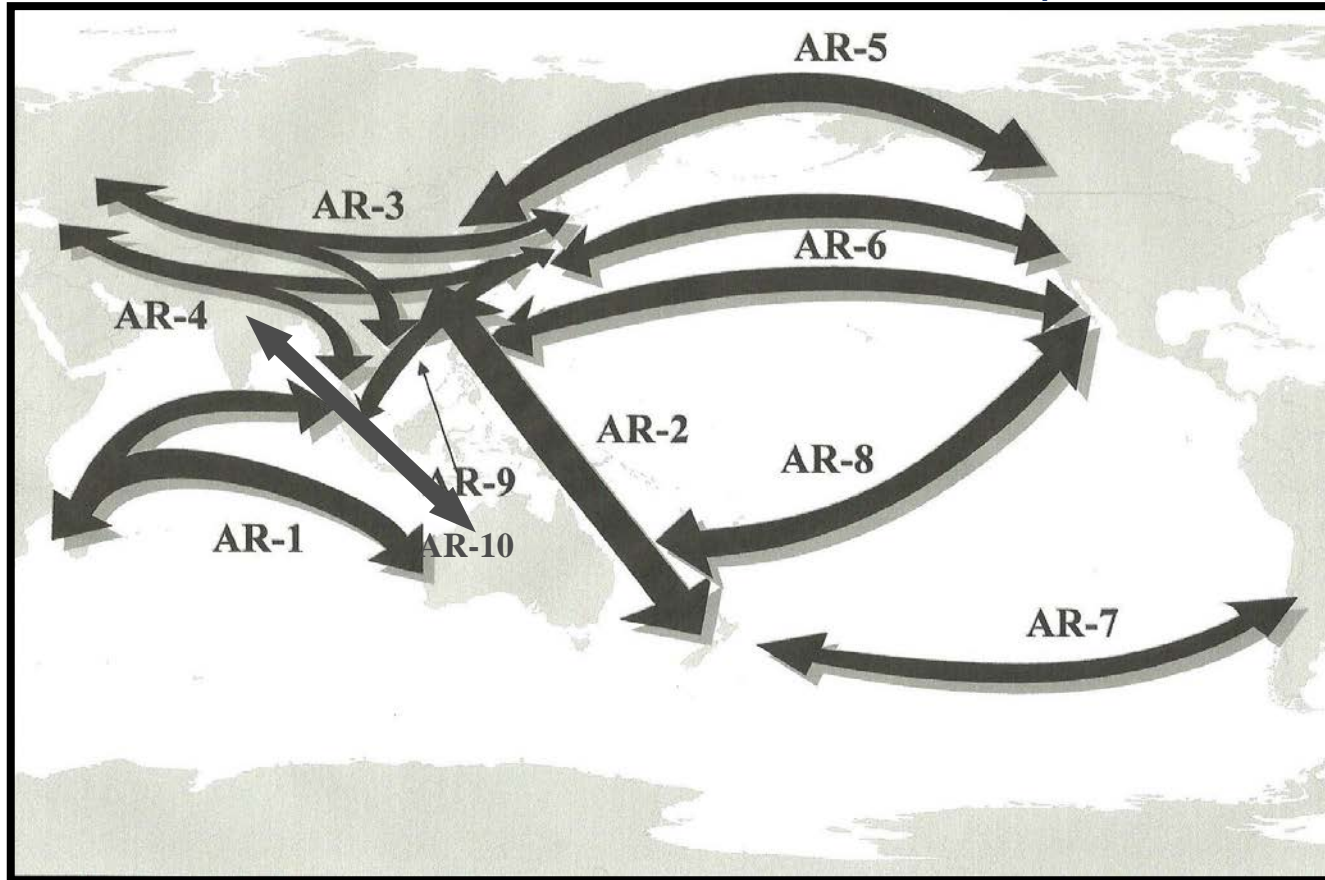
Airports participating in the ACI Monthly Traffic Statistics Collection. Results are preliminary.

# Growing Air Traffic Demand – Overflight Transiting HK FIR

HKSARG Financial Year	Overflights		Total Overflight
	OVF (Excluded MCU)	MCU	
2010/11	130760 (+19.4%)	36533	167293 (+14.8%)
2011/12	150986 (+15.5%)	39913	190899 (+14.1%)
2012/13	162710 (+7.8%)	44749	207459 (+8.7%)
2013/14	173476 (+6.6%)	50299	223775 (+7.9%)

# Major Traffic Flows

(Source: ICAO)



# Overflight Transiting HKFIR

(YOY 2013)

Incoming + 13%  
Outgoing + 5%

To/Fm  
China

Incoming + 33.8%  
Outgoing + 28.7%

Incoming + 18.5%

Outgoing -1.7%

To/Fm  
China,  
Thailand

To/Fm  
East Asia

Incoming + 61.6%  
Outgoing + 56.2%

Incoming + 8.4%  
Outgoing -3.3%

To/Fm  
Indonesia,  
Malaysia,  
Singapore,  
Thailand,  
Vietnam

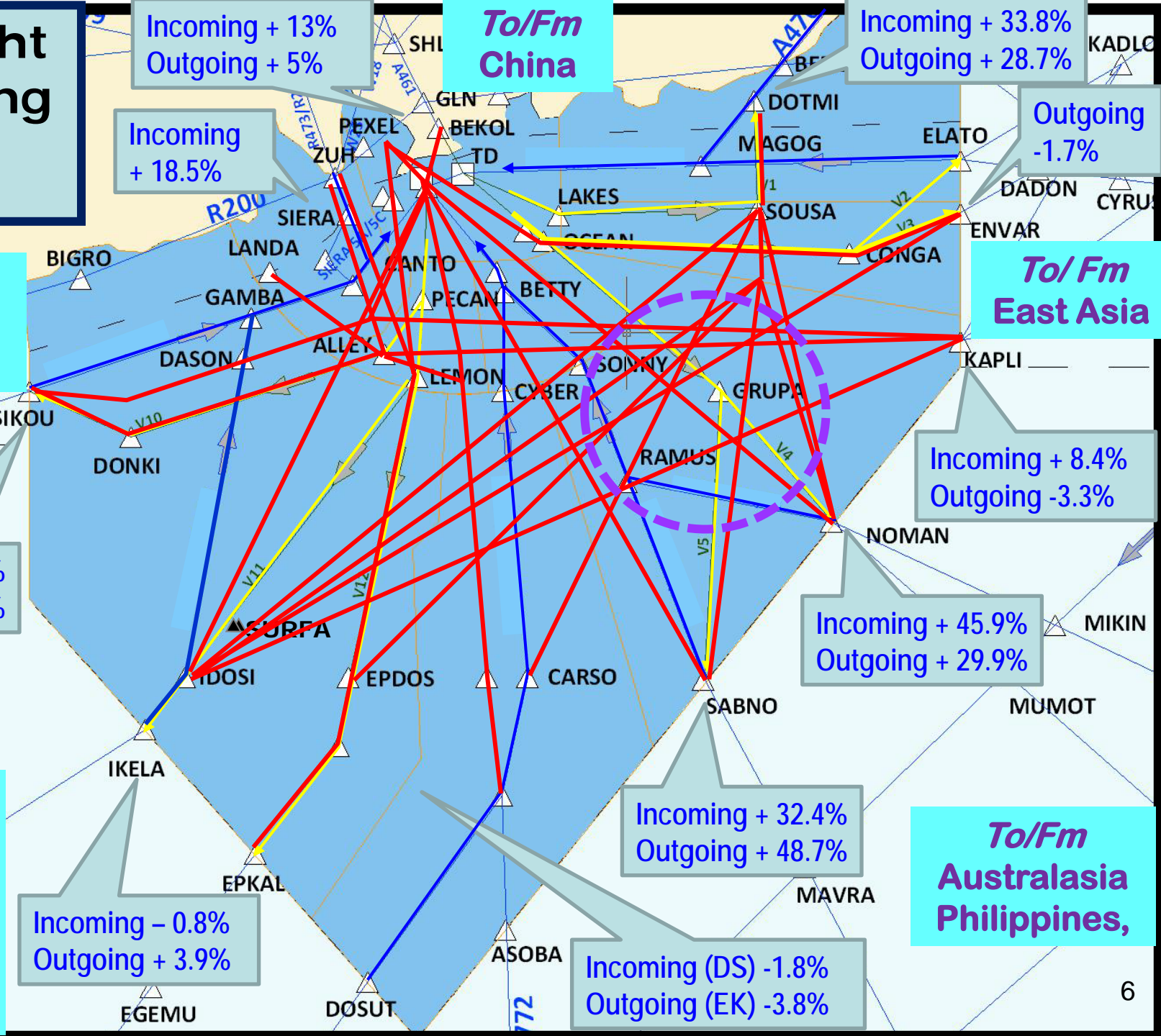
Incoming + 45.9%  
Outgoing + 29.9%

To/Fm  
Australasia  
Philippines,

Incoming - 0.8%  
Outgoing + 3.9%

Incoming + 32.4%  
Outgoing + 48.7%

Incoming (DS) -1.8%  
Outgoing (EK) -3.8%

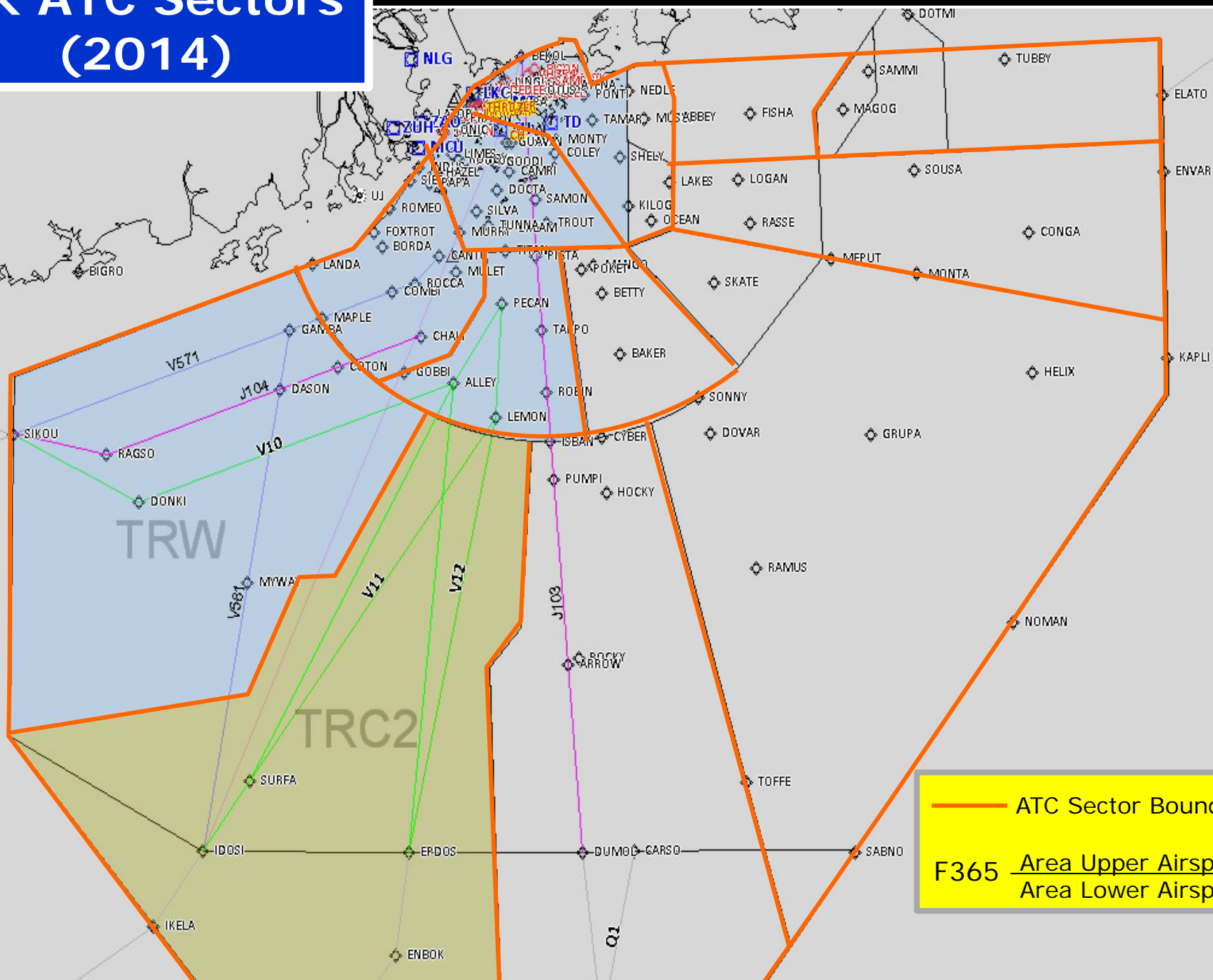








# HK ATC Sectors (2014)

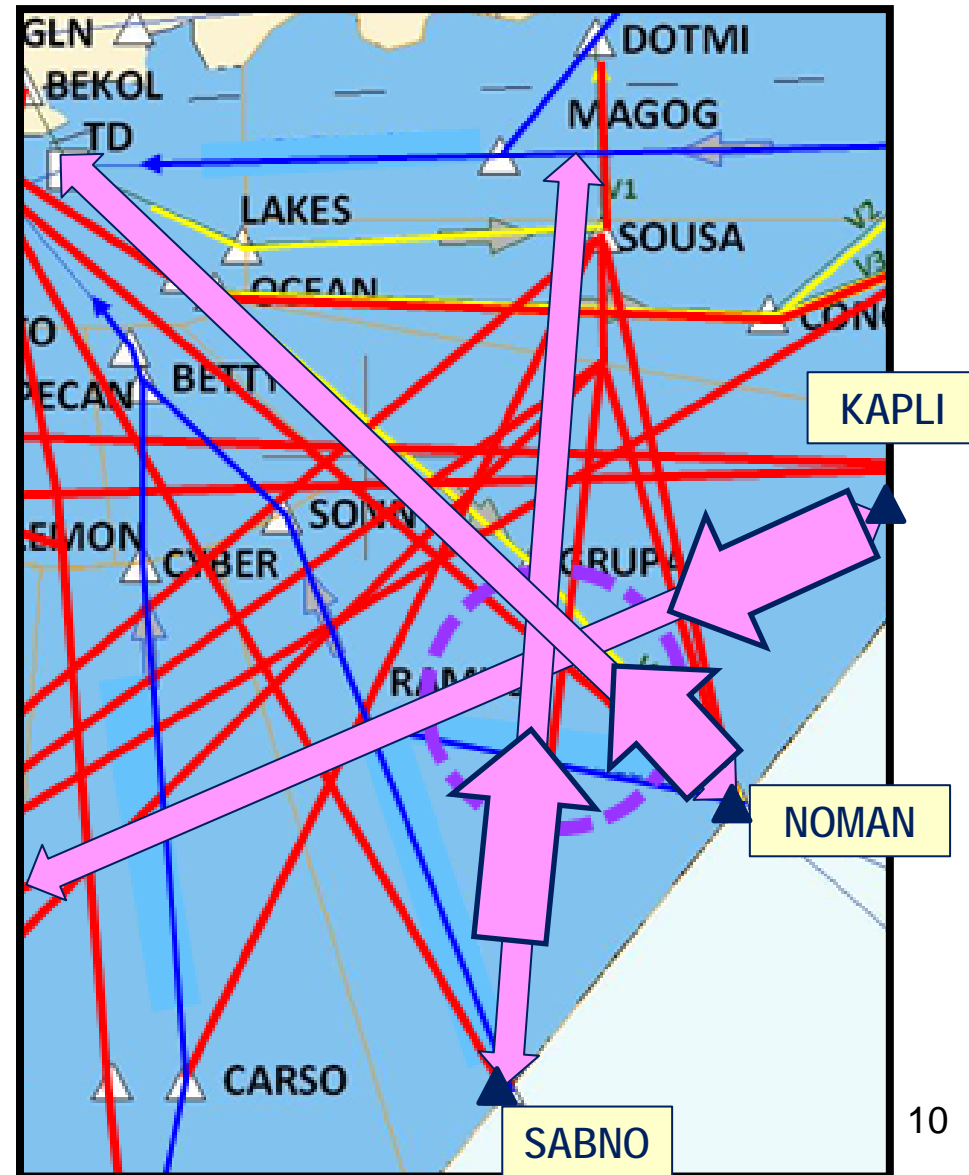


— ATC Sector Boundary  
— Area Upper Airspace  
— Area Lower Airspace

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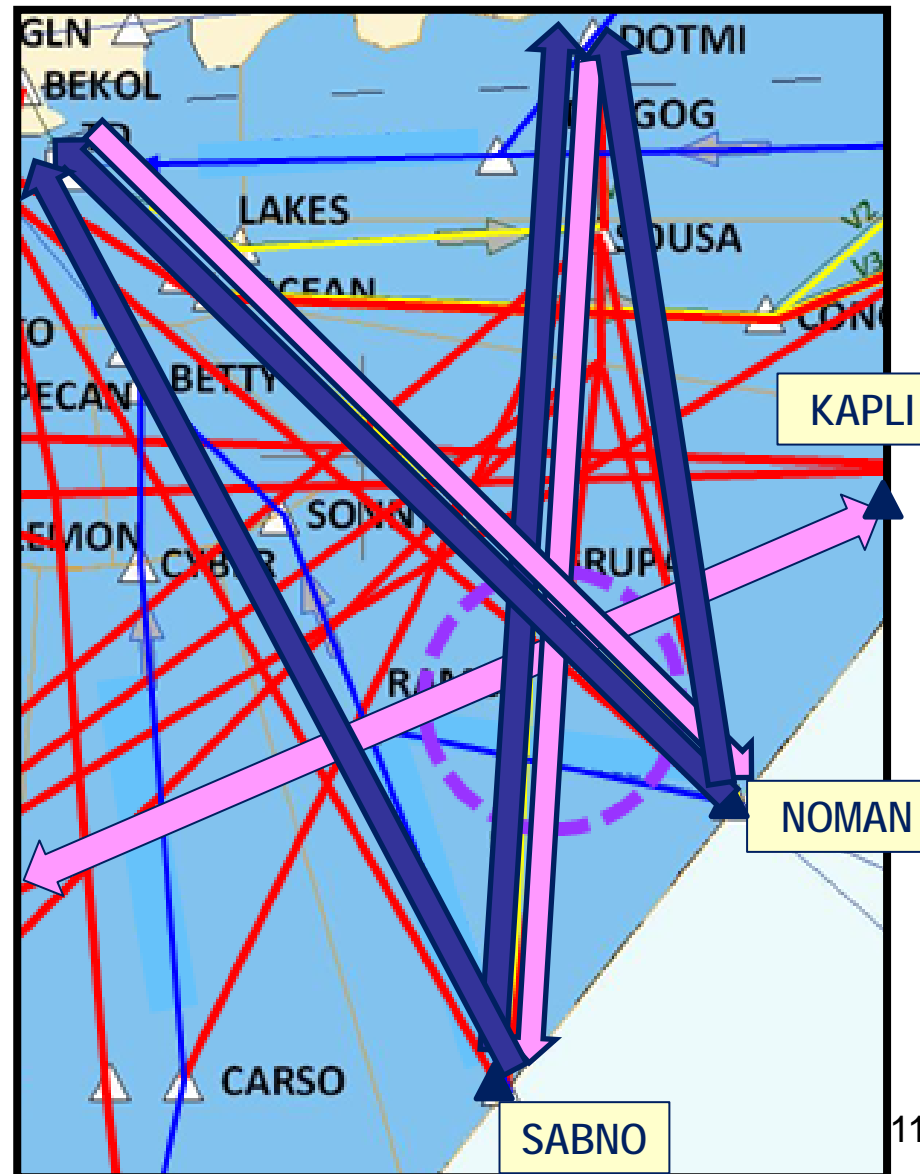
# Airspace Optimization Initiative - Rationalizing Overflight Routes

- Bidirectional tracks
- Traffic from KAPLI, NOMAN & SABNO are at the same FLOS / FLAS
- Require LVL adjustment before leaving HK via BEKOL or DOTMI
- Very short response time from FIR boundary to potential conflict point
- Safety implication



# Airspace Optimization Initiative – Rationalizing Overflight Routes

- Remove OVF track
- SABNO / DOTMI
- NOMAN / BEKOL
- Outcome
  - Reduce potential conflicts
  - Optimize airspace capacity
  - Ensure safe operation

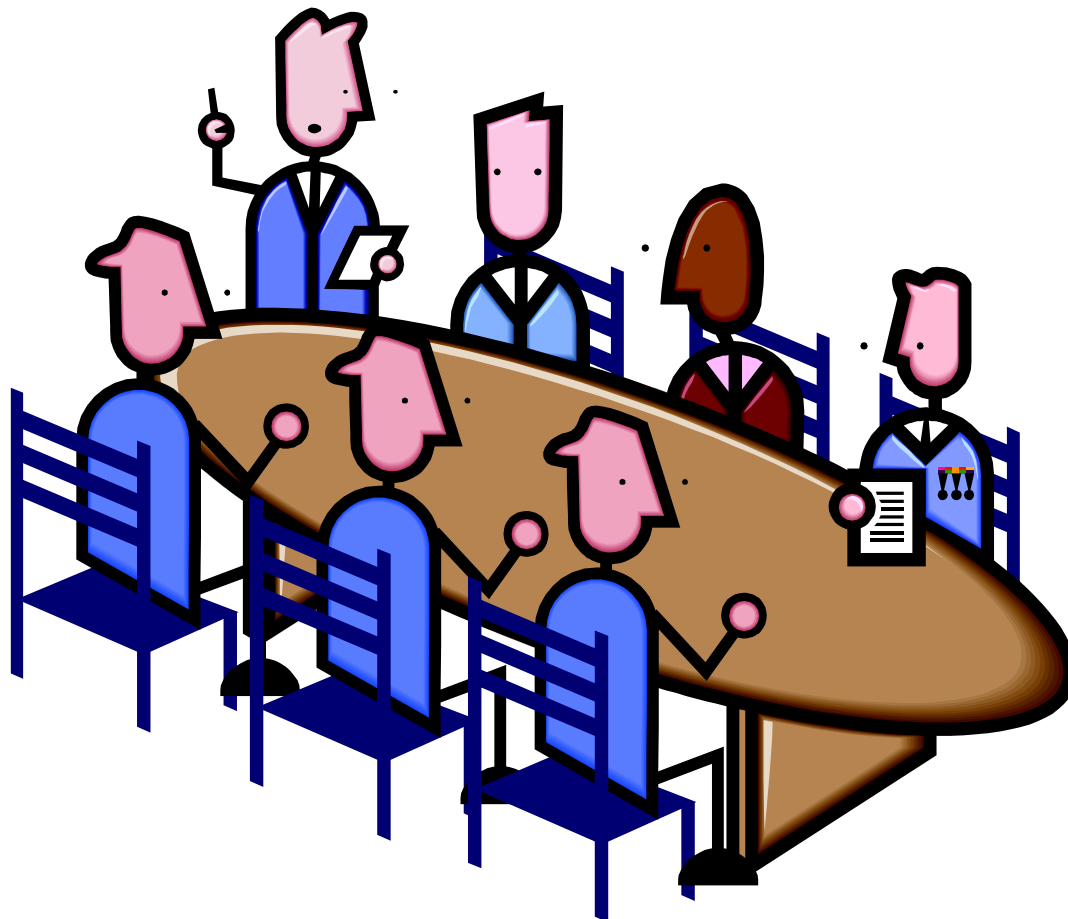


# Airspace Optimization Initiative – Support the Establishment of Major Traffic Flow Review Group

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- Decision SAIOACG4/SEACG21 2
- Review the overall traffic flow of overflight in the region.
  - Air routes
  - Suitability of FLOS / FLAS
- Goal – Enhance flight safety in APAC in the long term
- 1<sup>st</sup> meeting – DEC 14 to FEB 15 timeframe tentatively.

# Collaboration, Coordination & Visionary



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# *Thank You*

