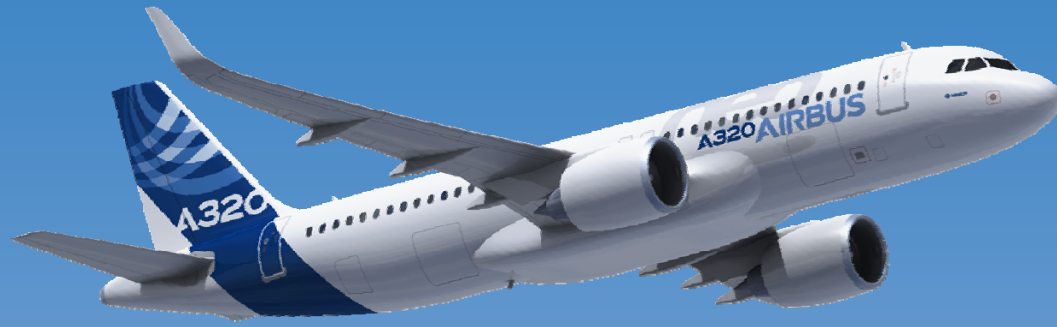


# Airbus Global Market Forecast 2010 – 2029

Toulouse, December 13<sup>th</sup>



**John Leahy**  
Chief Operating Officer  
Customers



# GMF highlights

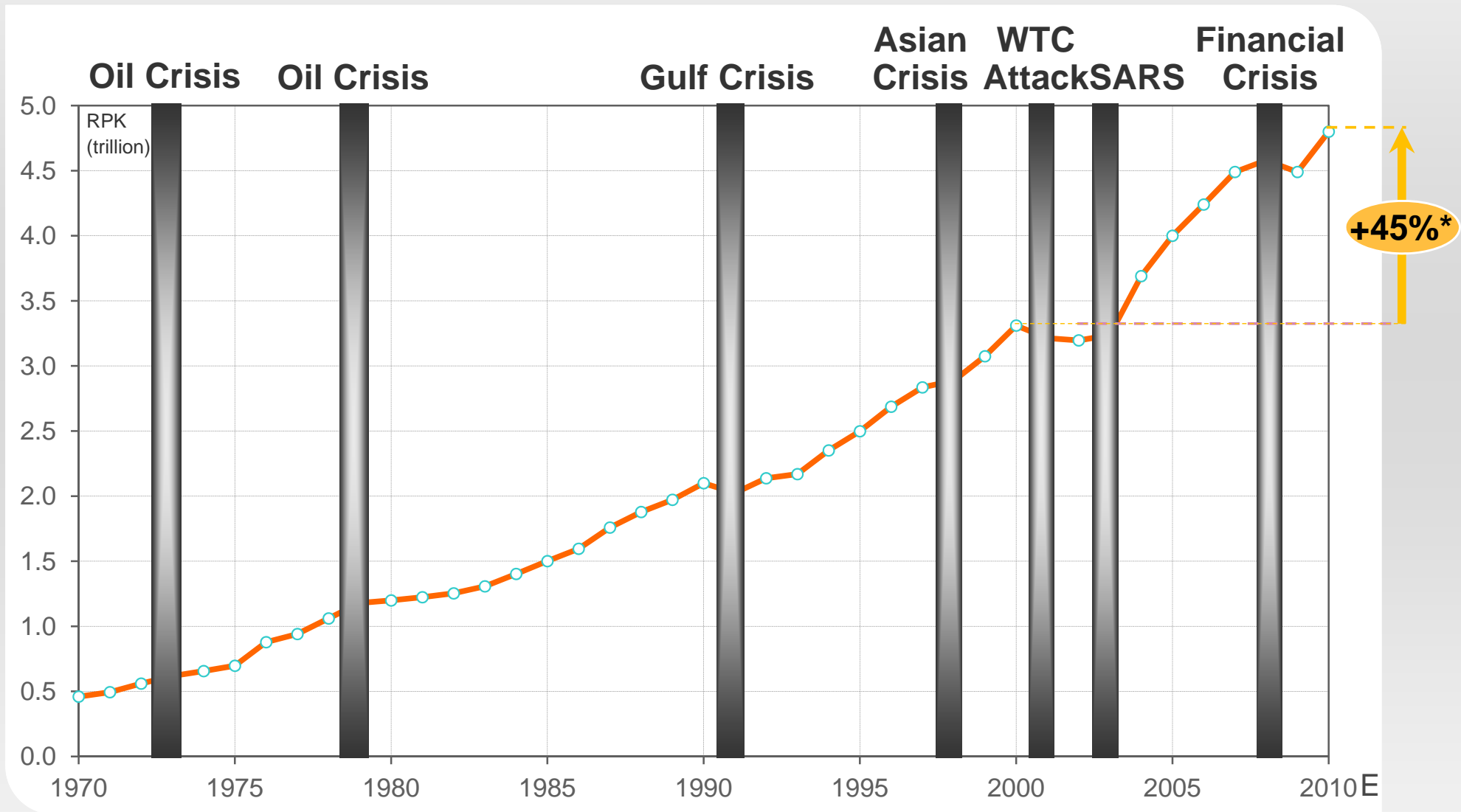
## GMF 2010 key numbers and 20-year change

<b>World fleet forecast</b>	<b>2009</b>	<b>2029</b>	<b>% change</b>
RPK (trillion)	4.76	12.03	153%
Passenger aircraft	14,240	29,050	104%
New passenger aircraft deliveries	-	24,980	-
Dedicated freighters	1,550	3,350	+116%
New freighter aircraft deliveries	-	870	-
Total new aircraft deliveries		25,850	

**Market value of \$3.2 trillion**

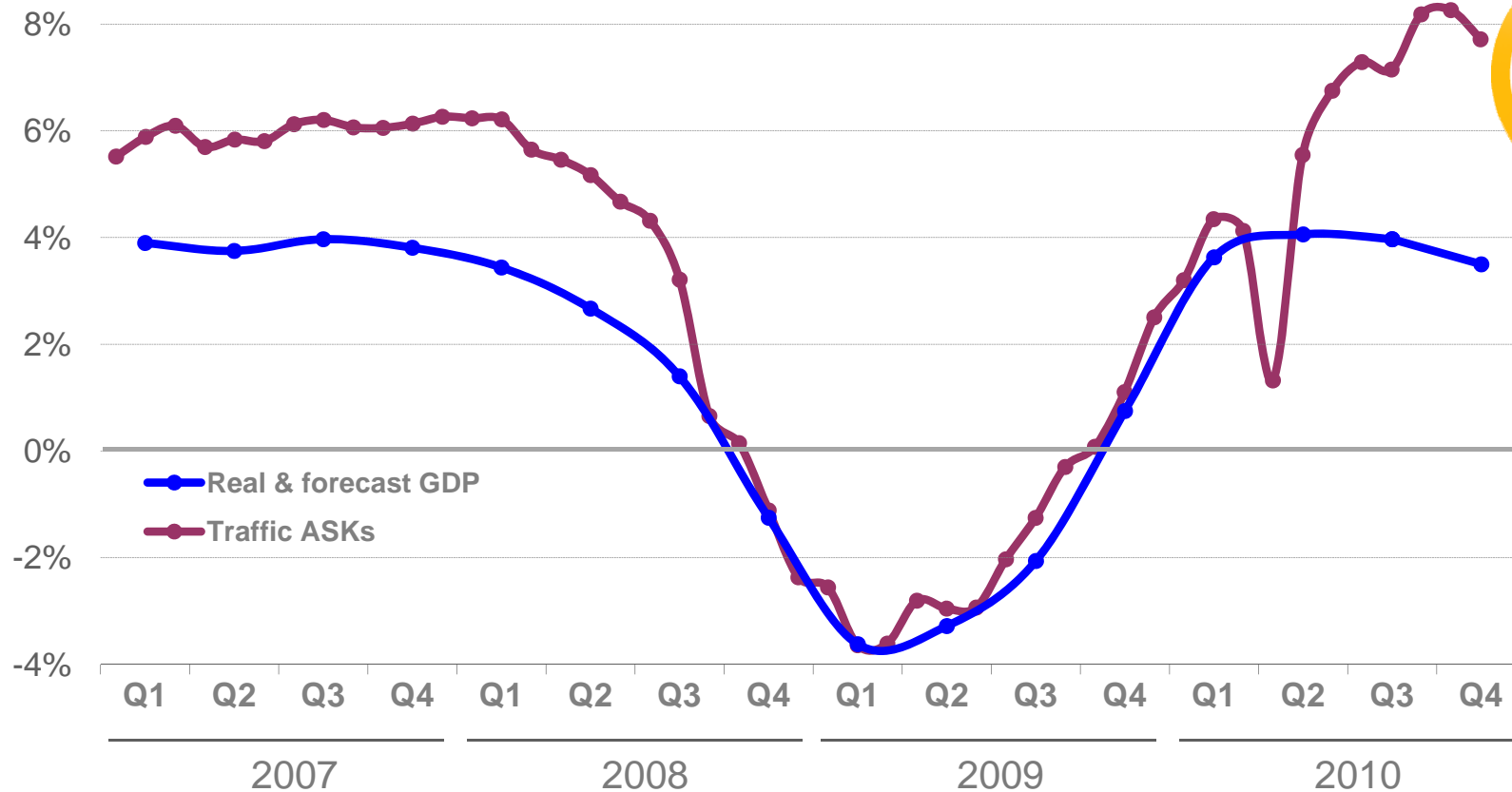
# Air travel has proved to be resilient to external shocks

World annual traffic



# GDP and passenger traffic development

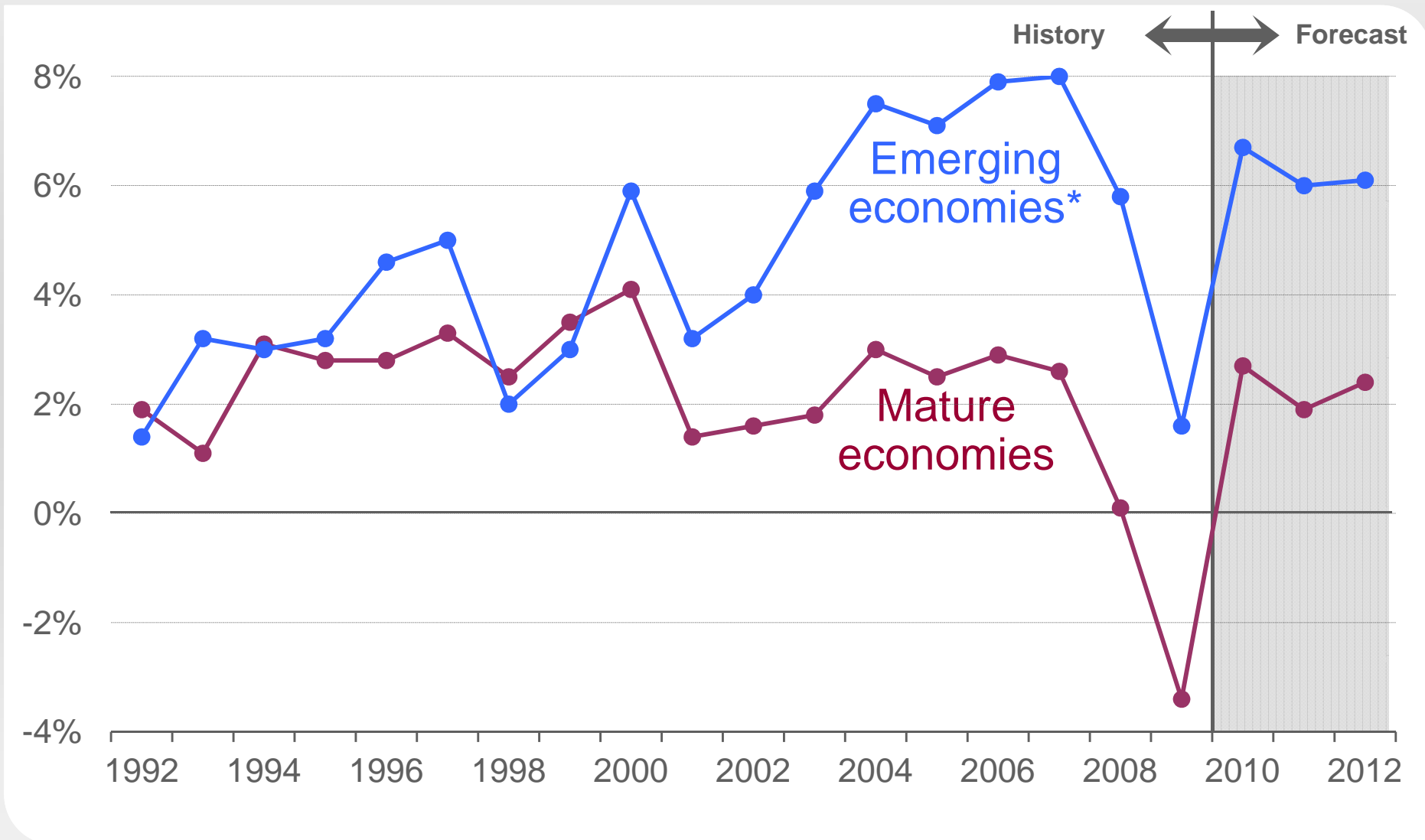
World real GDP and passenger traffic (year-over-year)



Passenger traffic recovering in-line with GDP

# Still a two-speed World

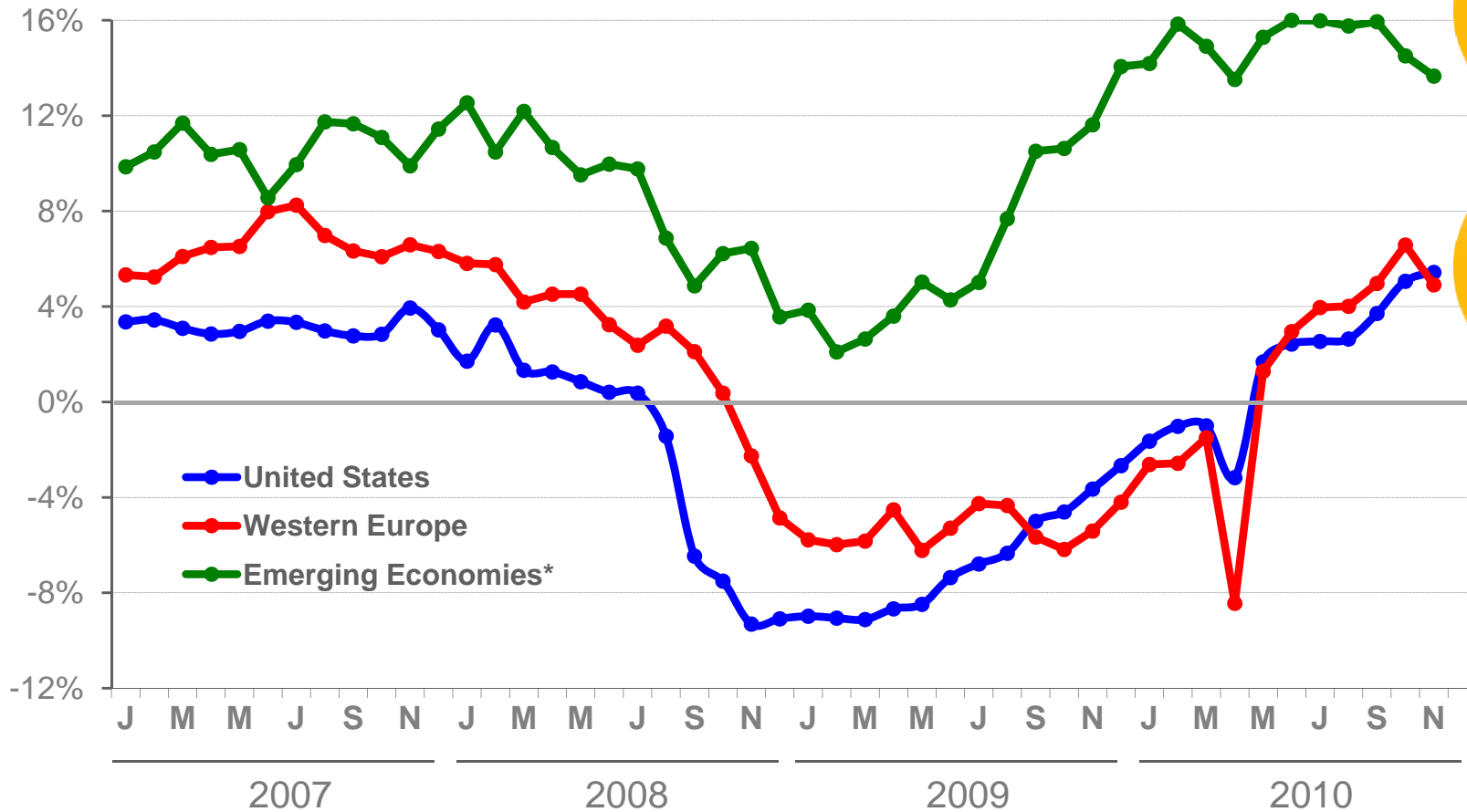
Real GDP growth (%)



This is mainly driven by the potential to travel in certain regions

# All regions are currently growing

Passenger traffic (monthly ASKs year-over-year)



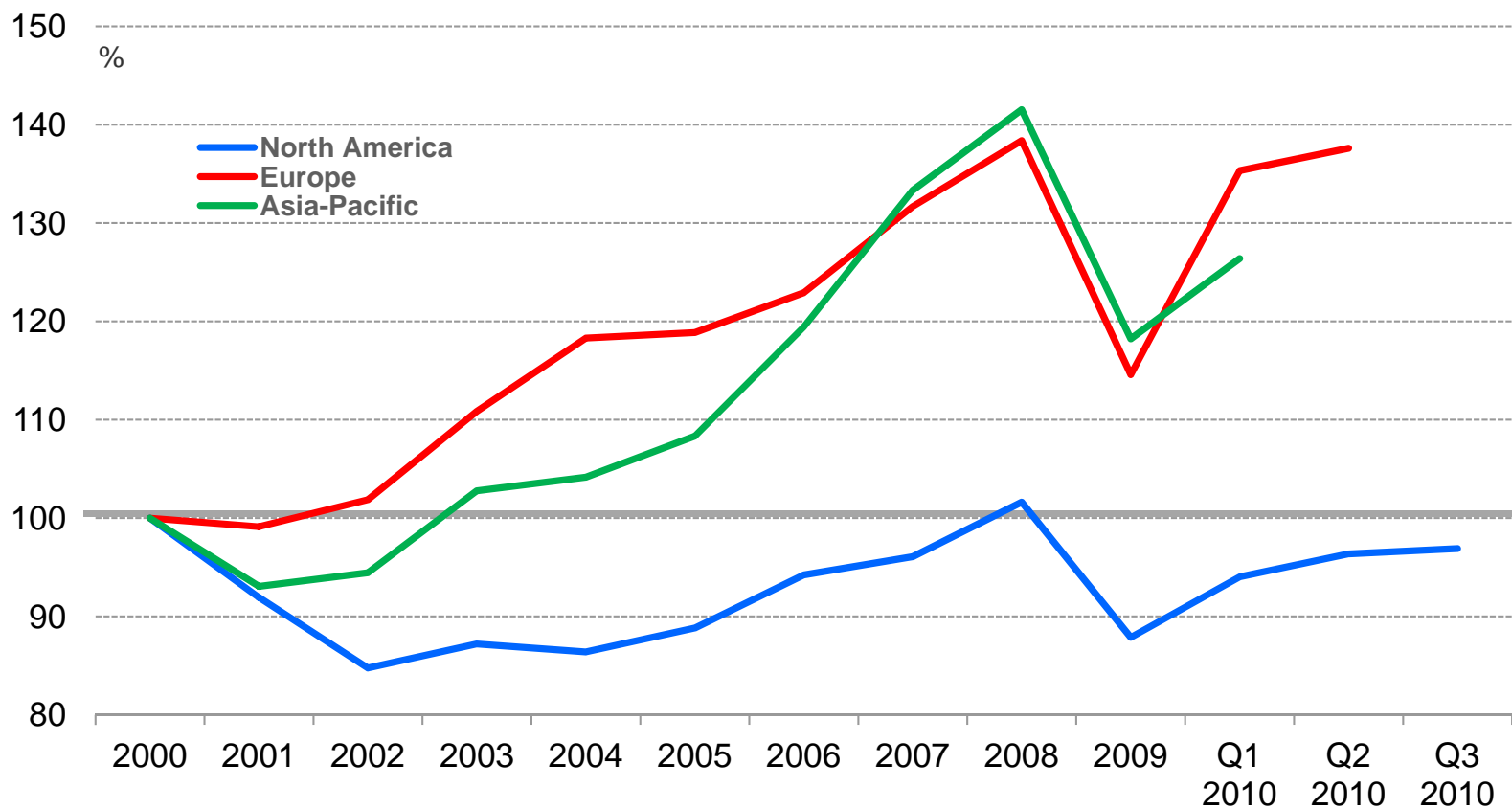
Traffic up  
13.7%

Traffic up  
5.4%  
4.9%

Emerging economies are leading the way

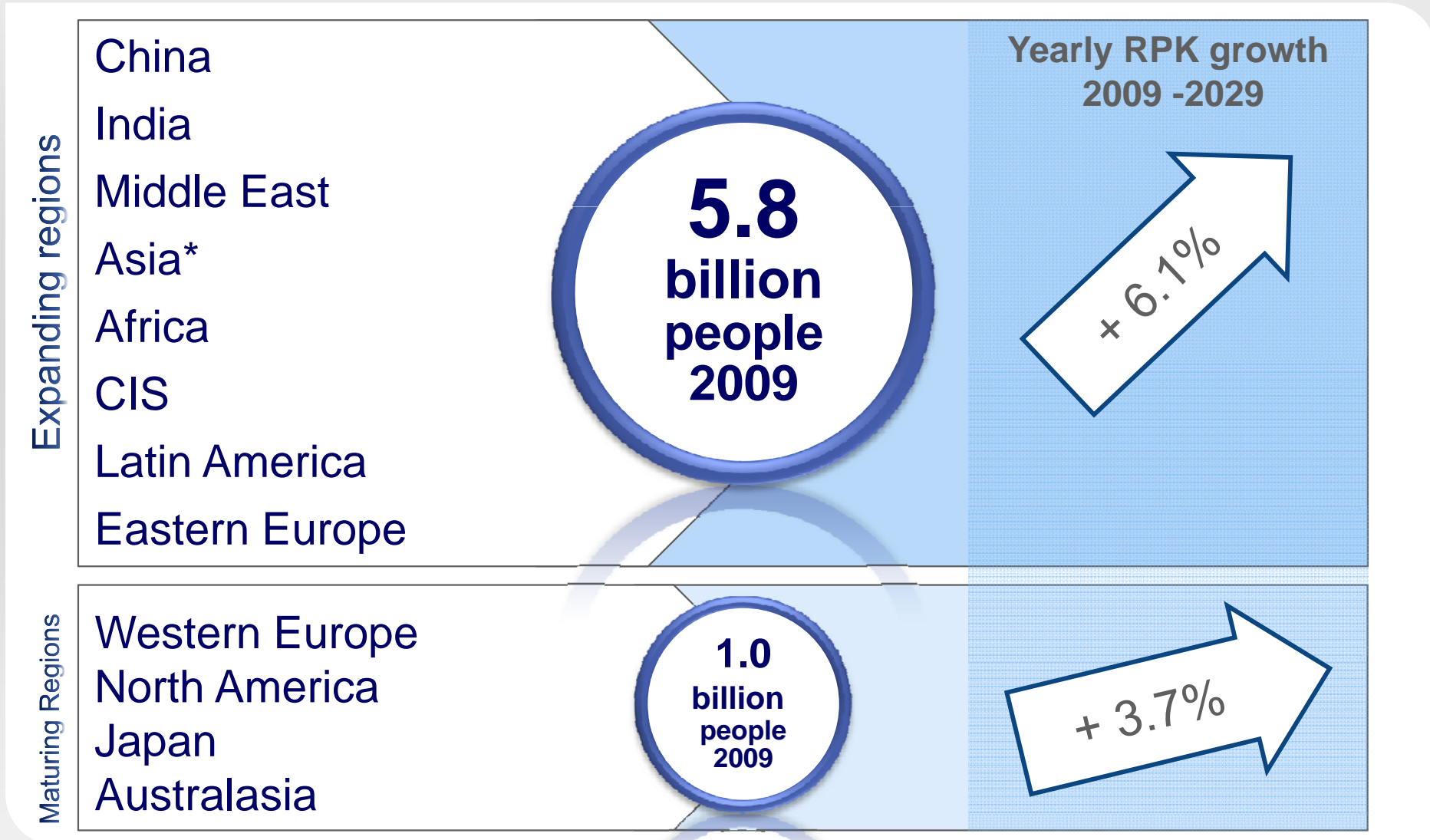
# Yields recovering in all regions

Relative yield evolution (base year 2000)



Recovery driven by premium traffic  
Global yields have increased +0.8% pa

# 5.8 billion people will increasingly want to travel by air



\* Asia excludes India, China and Japan



# Impressive airline industry expansion in emerging countries

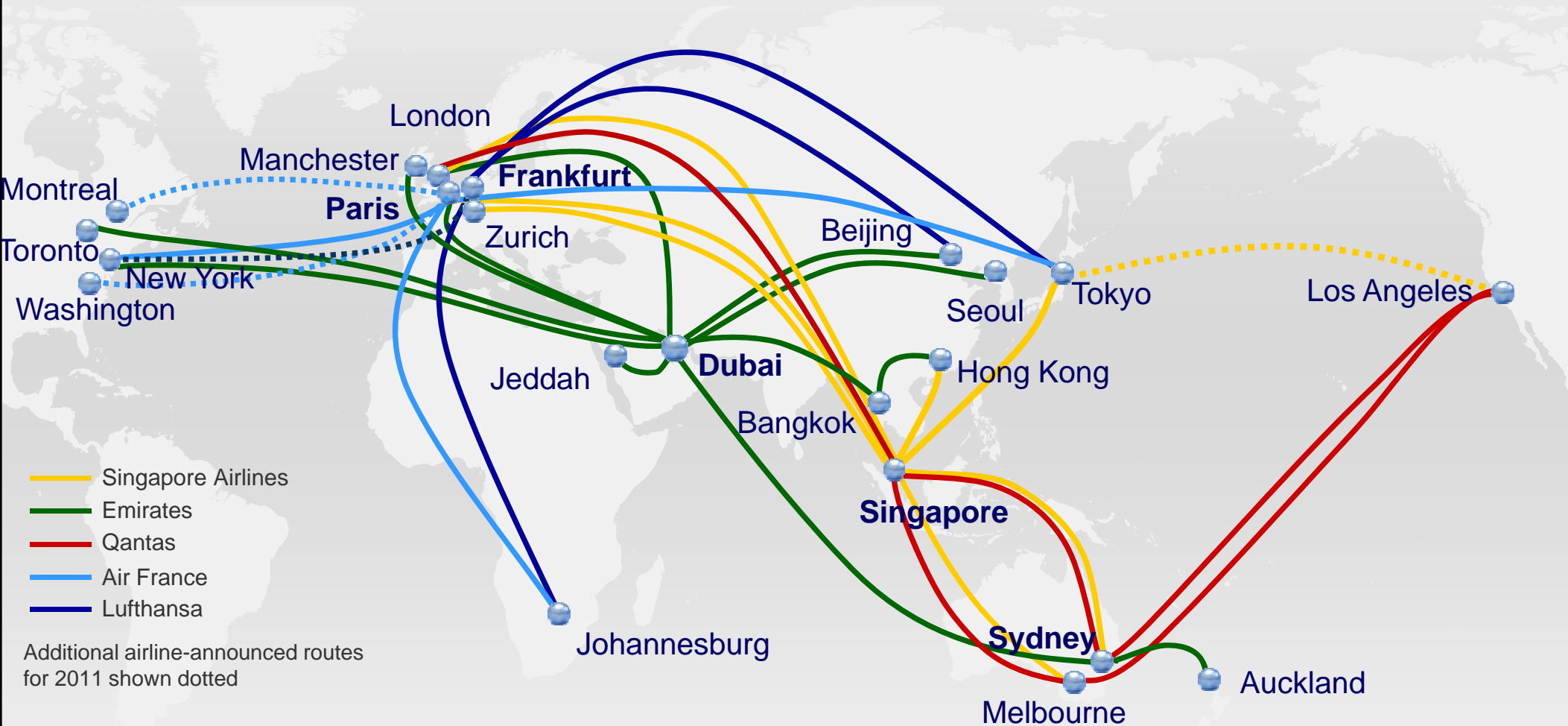
## Passenger aircraft over 100 seats operated by airlines

		Jan 2000	Dec 2010	
<b>China Mainland</b>	Fleet in service	453	1386	x3
	Backlog	47	565	x12
<b>India</b>	Fleet in service	112	322	x 3
	Backlog	12	280	x 23

# Growing A380 network especially in Asia-Pacific

40 A380s flying 27 routes to 20 destinations

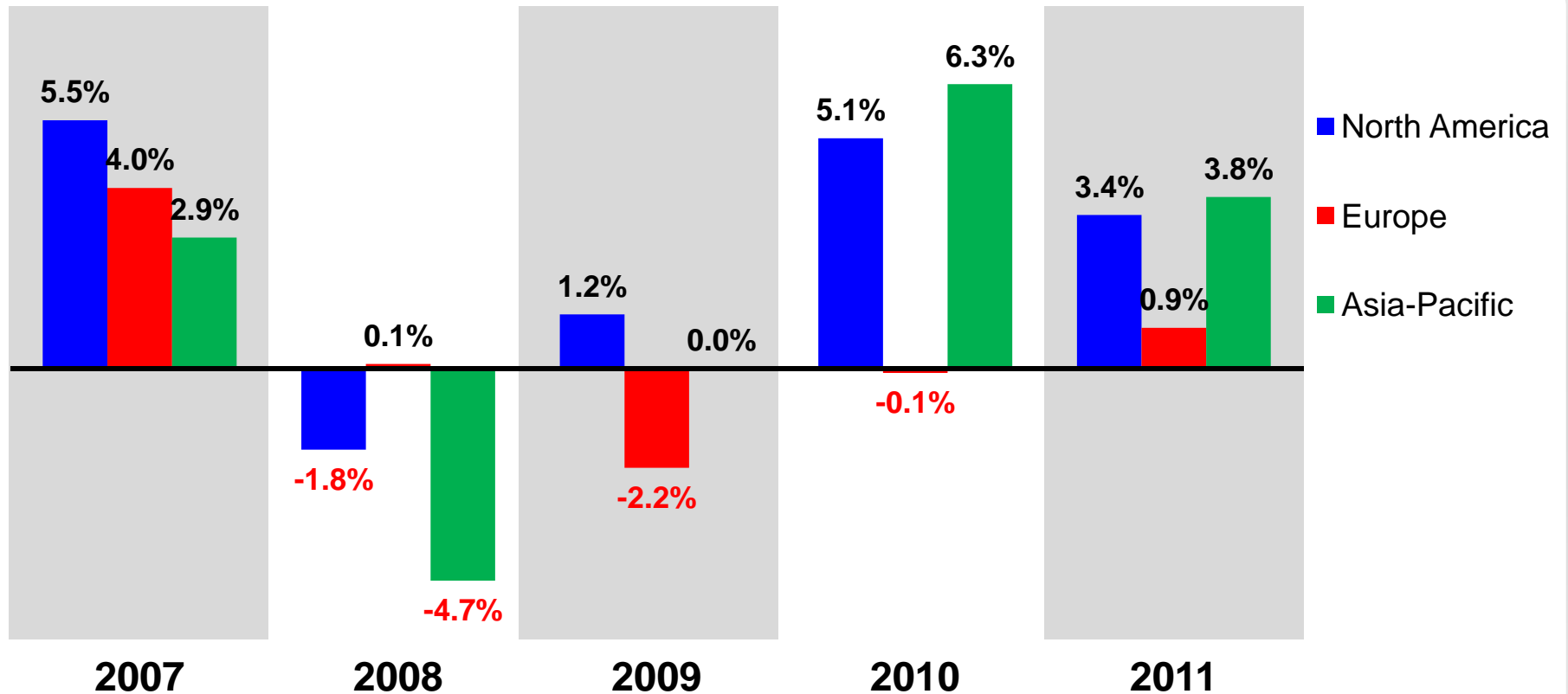
24,000 revenue flights and over 200,000 flight hours



Over 9 million passengers have enjoyed the A380 experience in the first three years

# Airlines returning to profitability

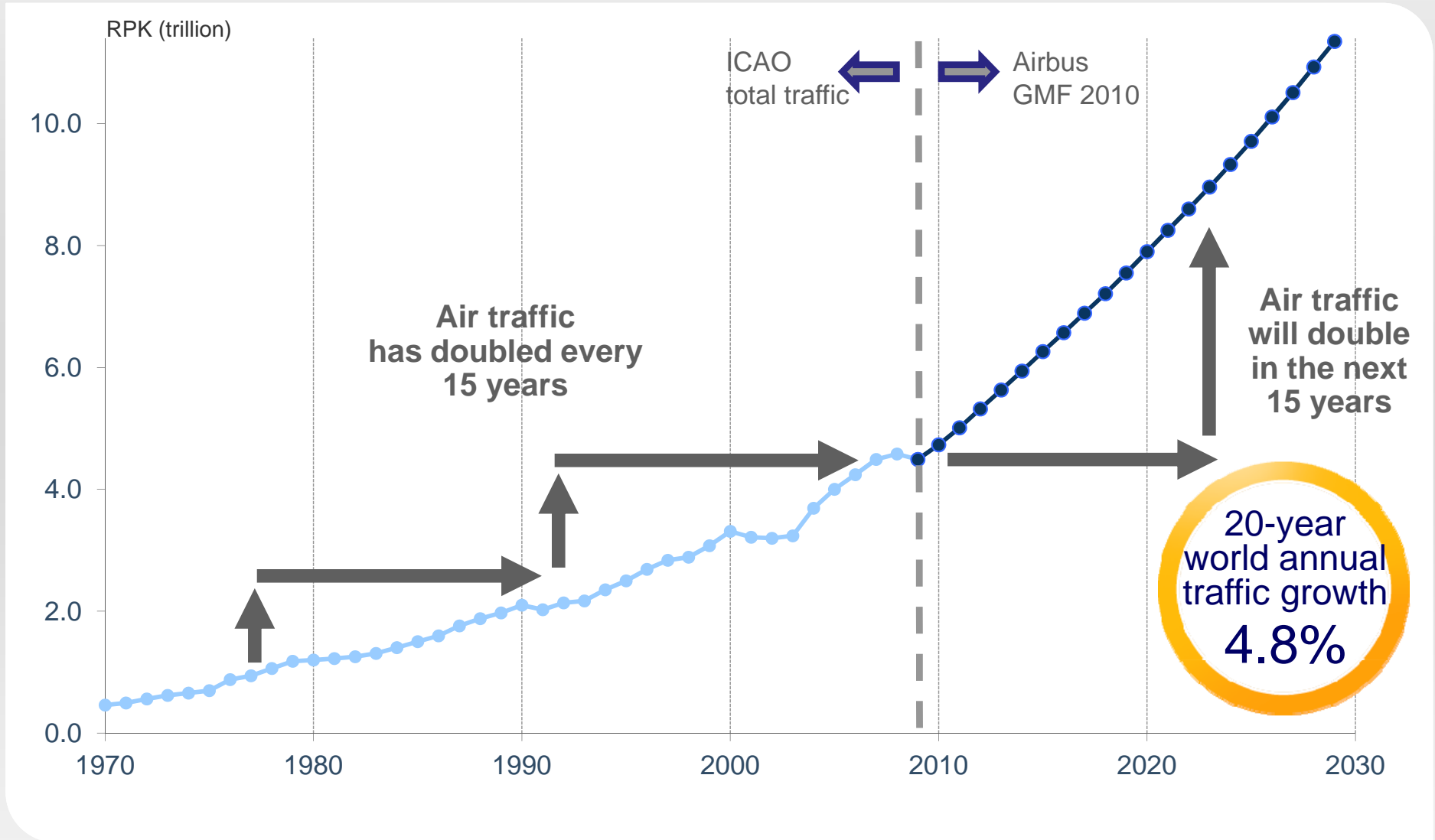
Airline industry EBIT margins (% of revenues)



EBIT: Asian airlines performing well

# Long term fundamentals will lead to growth

## World annual traffic

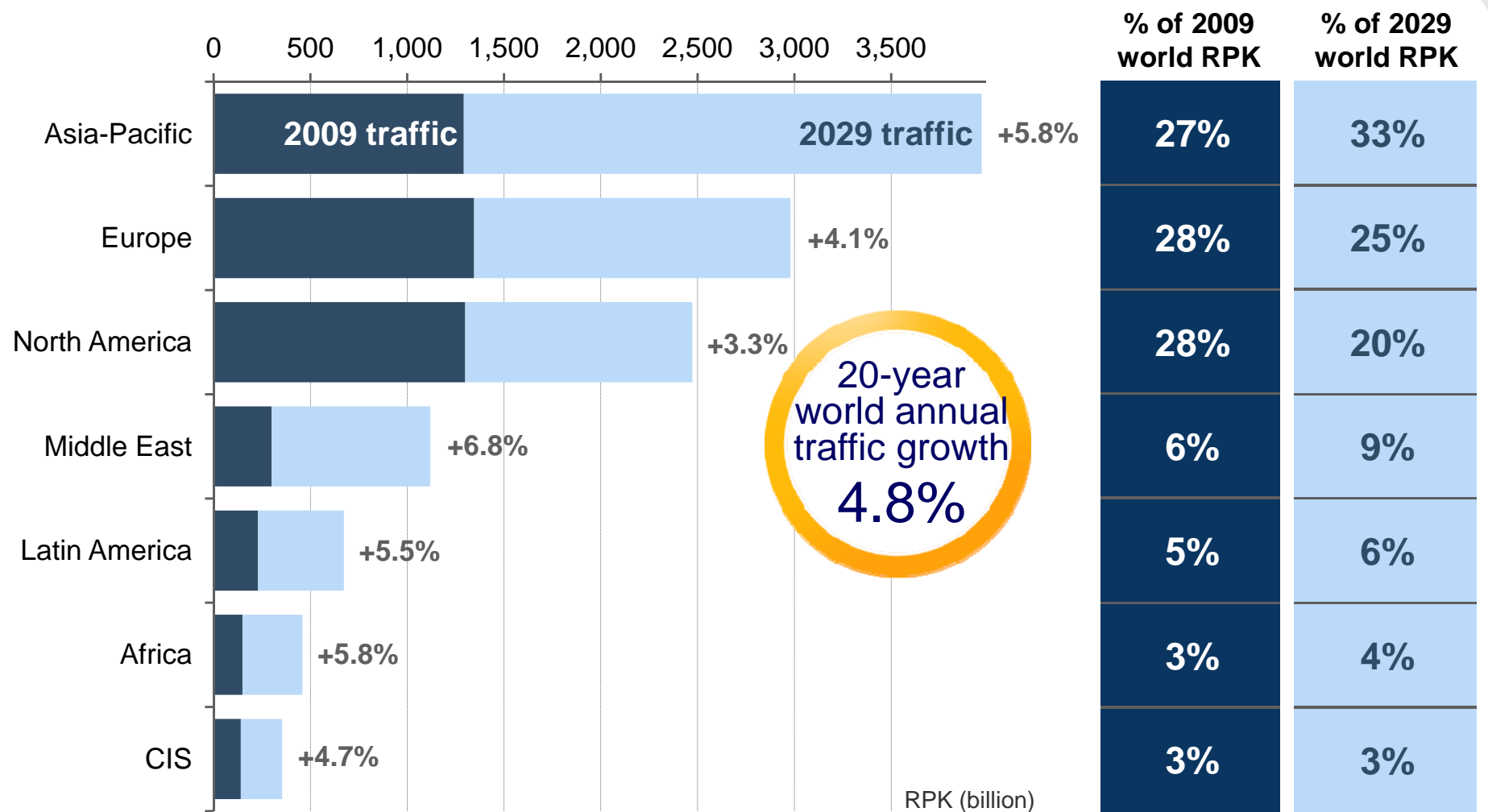


# Main drivers for growth

- **Replacement of aircraft in service in mature markets**
- **Dynamic growth in emerging markets**
- **Continued growth of LCCs, especially in Asia**
- **Greater and continued market liberalization**
- **Traffic growth on the existing route network where it is more efficient to add capacity than frequency**

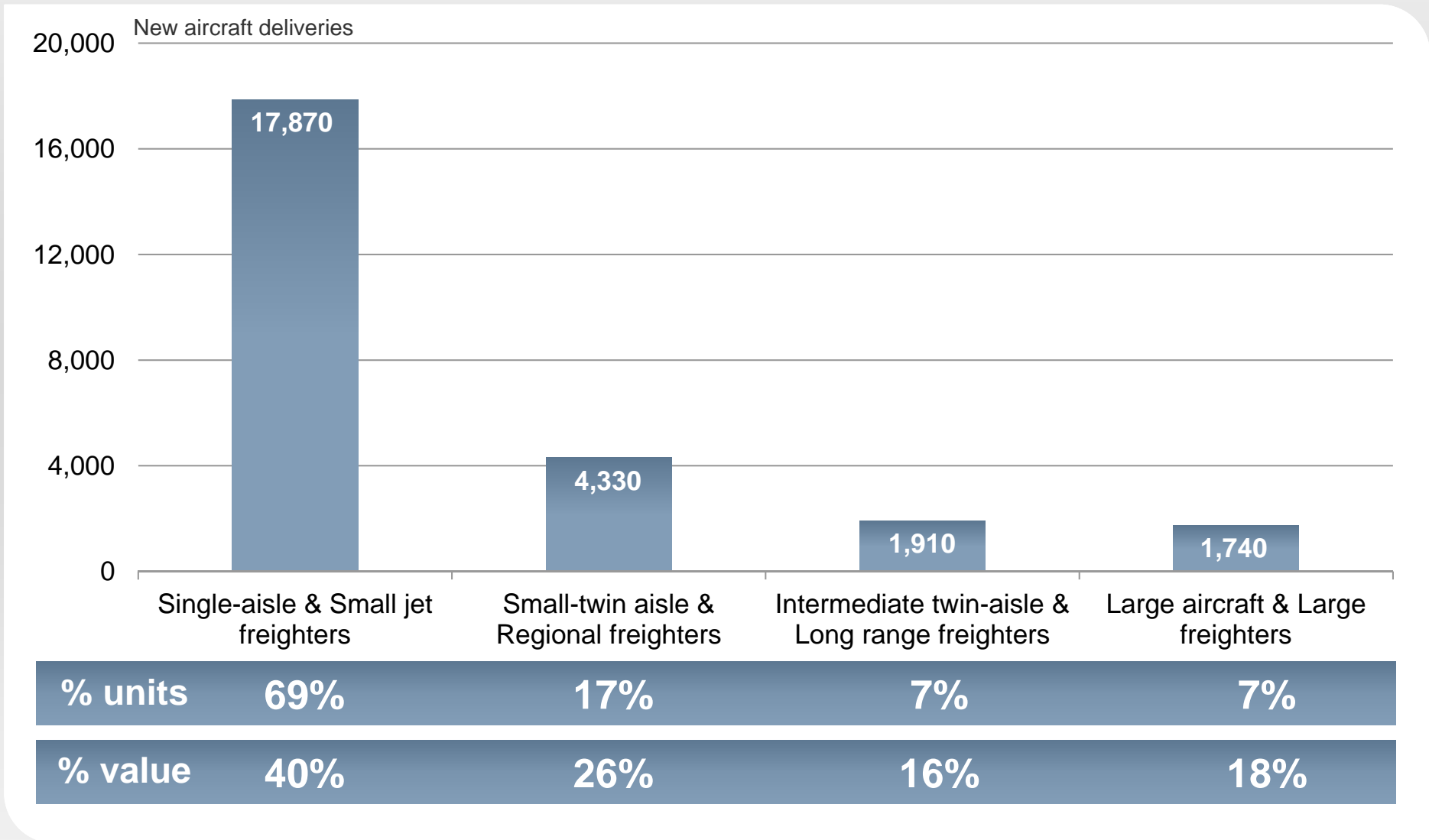
# Asia-Pacific airlines will lead world traffic by 2029

2009 and 2029 traffic volume per airline domicile region



# New aircraft demand will average at 1,300 per year

## 20-year new deliveries of passenger and freighter aircraft

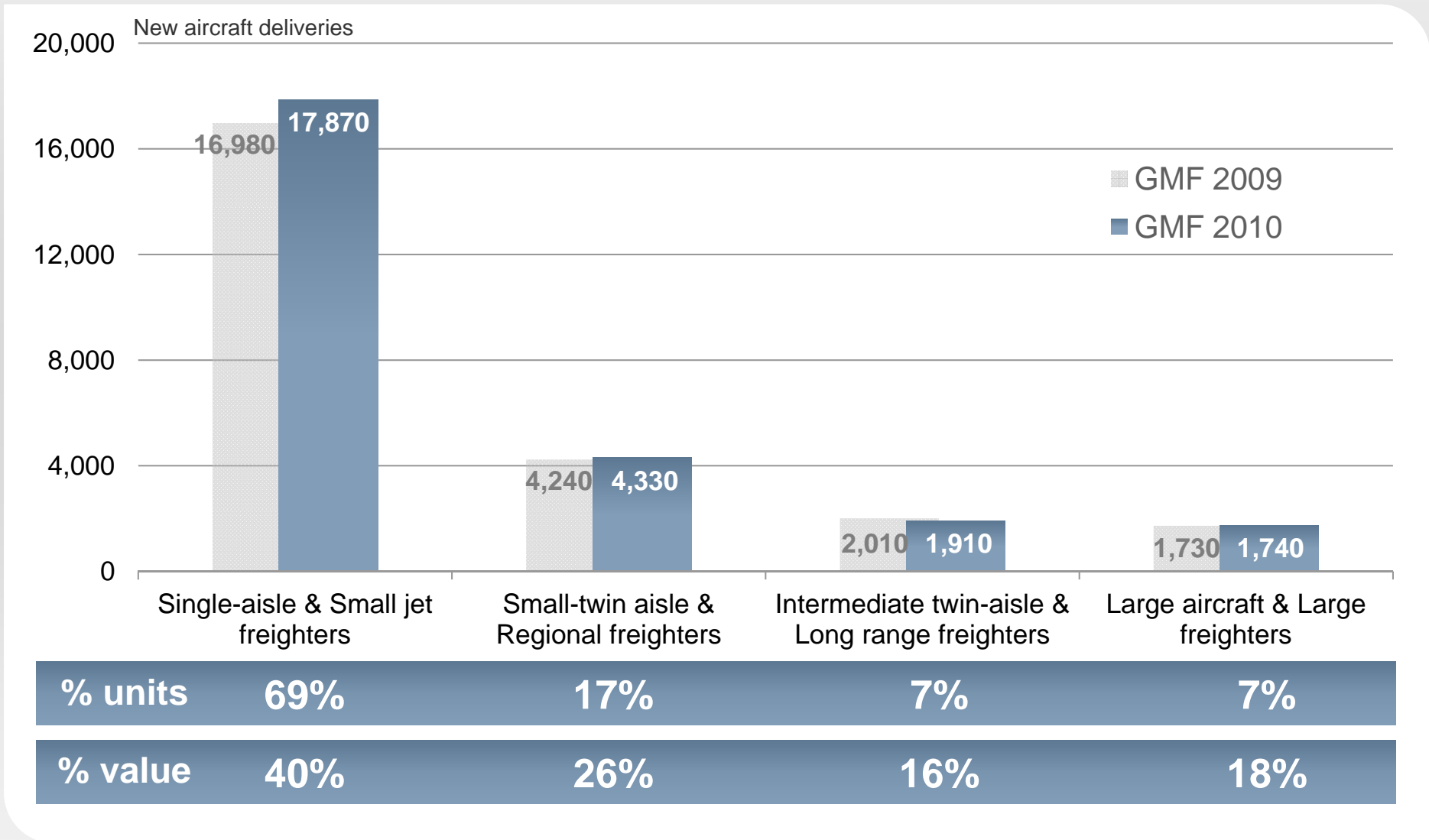


Passenger aircraft ( $\geq 100$  seats) and freighter aircraft ( $> 10$  tons)

Source: Airbus GMF 2010

# New aircraft demand will average at 1,300 per year

## 20-year new deliveries of passenger and freighter aircraft



Passenger aircraft ( $\geq 100$  seats) and freighter aircraft ( $> 10$  tons)

Source: Airbus GMF 2010



# 20-year demand for over 25,800 new aircraft

20-year new deliveries of passenger and freighter aircraft



**17,870** single-aisle aircraft



**6,240** twin-aisle aircraft



**1,740** very large aircraft

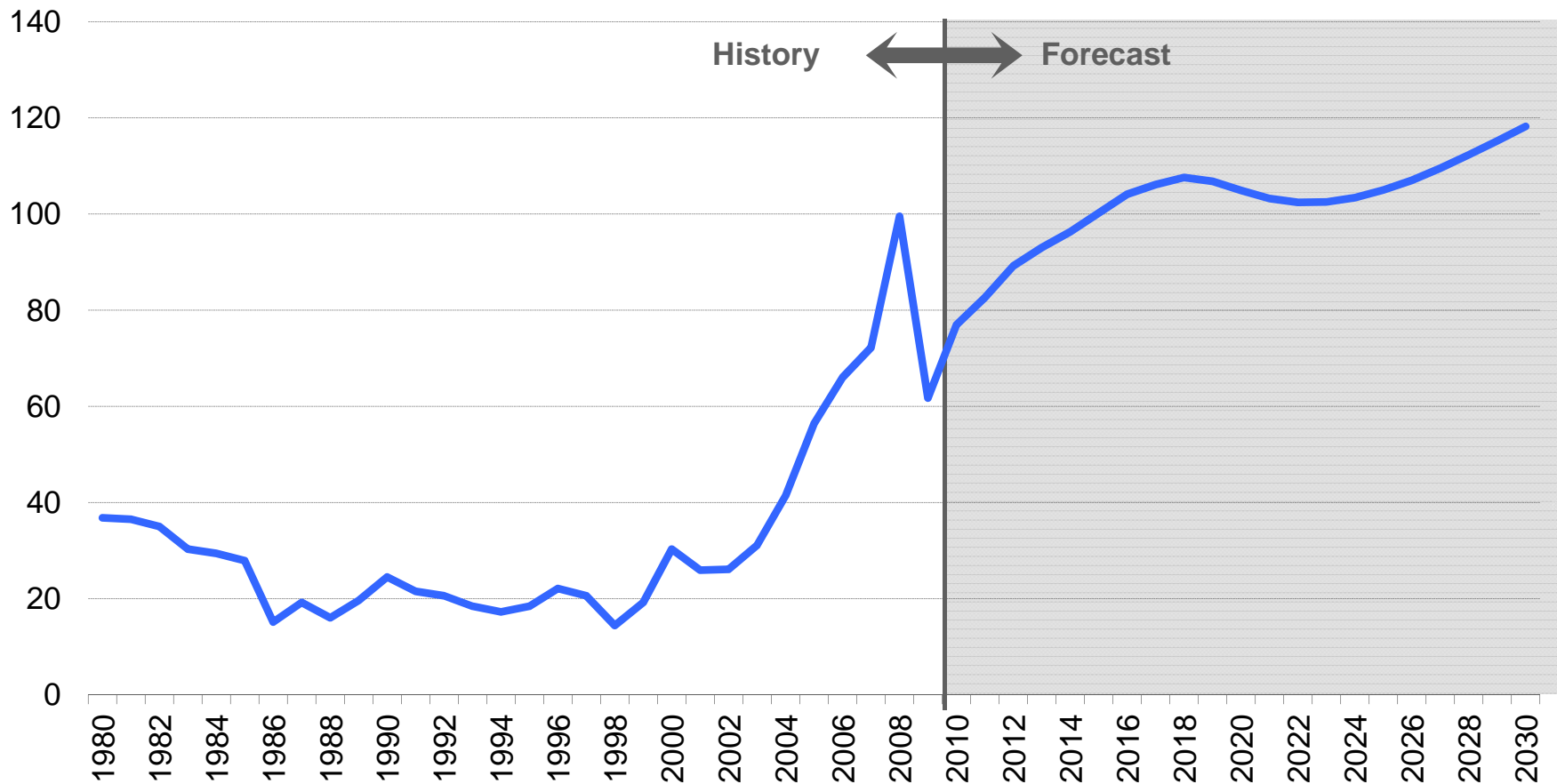
**Market value of \$3.2 trillion**

Passenger aircraft ( $\geq 100$  seats) and freighter aircraft ( $> 10$  tons)

Source: Airbus GMF 2010

# In the future there will be a need to mitigate oil price risk

Oil price (Current US\$ per bbl)



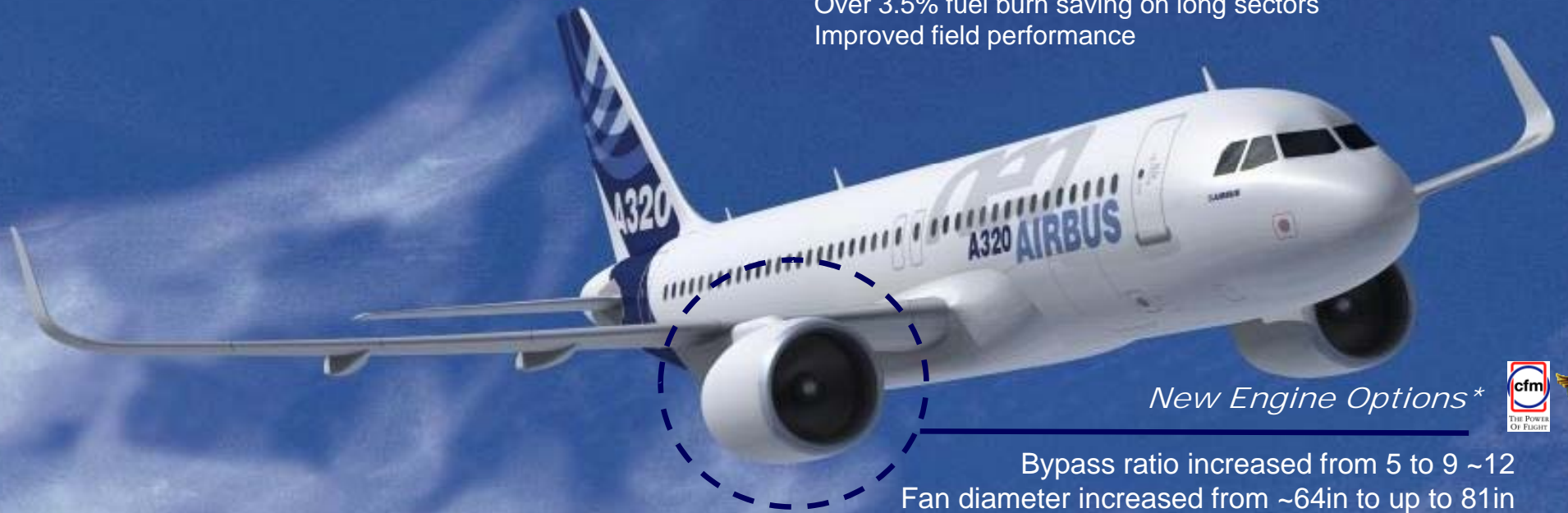
# Innovation towards greater fuel efficiency



# A320neo – to further improve efficiency

## *Sharklets:*

Over 3.5% fuel burn saving on long sectors  
Improved field performance



## *New Engine Options\**

Bypass ratio increased from 5 to 9 ~12  
Fan diameter increased from ~64in to up to 81in  
Lower noise levels  
15% lower SFC



Maintaining commonality... up to 15% fuel burn reduction

# The case for the A320neo

*Competes well  
with all new  
entrants in the  
market*

*Minimum change “new  
engine option”,  
maintaining maximum  
airframe commonality*



*From 2015 to beyond  
2025, demand for up  
to 4,000 A320neo  
deliveries*

*Includes the combined benefit  
of Sharklets and new engines  
(up to 15% fuel burn saving)*

Significant market demand for a significant improvement

# A320neo will be built on proven experience



## ***A320 Family in-service statistics:***

- Total take-offs: Over 50 million
- Average daily utilisation: 8.7FH (up to 14.5FH)
- Fleet reliability: 99.7%



## ***A320neo will inherit proven values:***

- A320neo will have a high level of systems and avionics commonality with the A320
- A320 systems and avionics are proven to be highly reliable – only 1 delay per 500 flights

**Maturity and reliability from day one**

***One A320 take-off or landing every three seconds***

# A320neo benefits summary

- **Keeping the best of the A320 Family with added efficiency**
- **A mature Family from EIS with low industrial/technical risk**
- **Preserved interoperability and training commonality**
- **Solid double digit reduction in fuel burn**
- **Significant noise reduction**
- **No increase in maintenance cost**

The best of what we have today – with MUCH better fuel burn



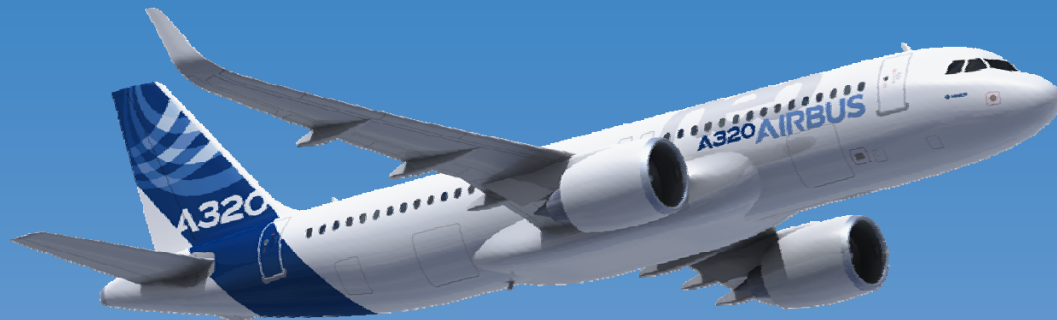


# Summary

- **A market for more than 25,800 new passenger and freighter aircraft.**
- **Neo will be addressing a market of about 18,000 single-aisle passenger aircraft.**
- **The twin-aisle passenger aircraft market will account for more than 5,700 new aircraft deliveries.**
- **Some 1,300 very large aircraft to meet passenger demand offering lower cost per seat and more flexibility.**
- **The demand for 870 new freighter aircraft deliveries reflects the market needs for highly efficient aircraft to compensate further increasing fuel price.**
- **Strong A380 demand: 32 mega-cities growing to over 80 in 20 years.**

# Airbus Global Market Forecast 2010 – 2029

Toulouse, December 13<sup>th</sup>



**Christopher Emerson**  
Senior Vice President  
Market & Product Policy



# Reducing risk through analysis

- 20 year aircraft demand forecast, **aircraft >19 seats**
- Traffic forecast modeling **155 distinct traffic flows**
- Detailed study of **network evolution**, including new routes, markets and deregulation hot spots
- Model the impact of **evolving airline models** e.g. Low Cost Carriers
- Fleet build-ups covering **938 passenger** and **217 freight carriers**
- In use for both Airbus **internal** and **external purposes**

Regularly updated to reflect market trends and evolution

# Taking into account key industry drivers

## Economics

- Growth
- **Emerging markets**
- Trade
- Cycles



## Passengers

- Ticket price
- Comfort
- **Origin and destination**
- Connectivity
- Environment

## Demographics

- **Population growth**
- Age profiles
- Middle class
- **Urbanisation**



## Airlines

- **Fuel**
- Range
- Fleet mix
- **Business models**
- Environment

## Networks

- **Global cities**
- Hubs
- **New routes**
- Deregulation



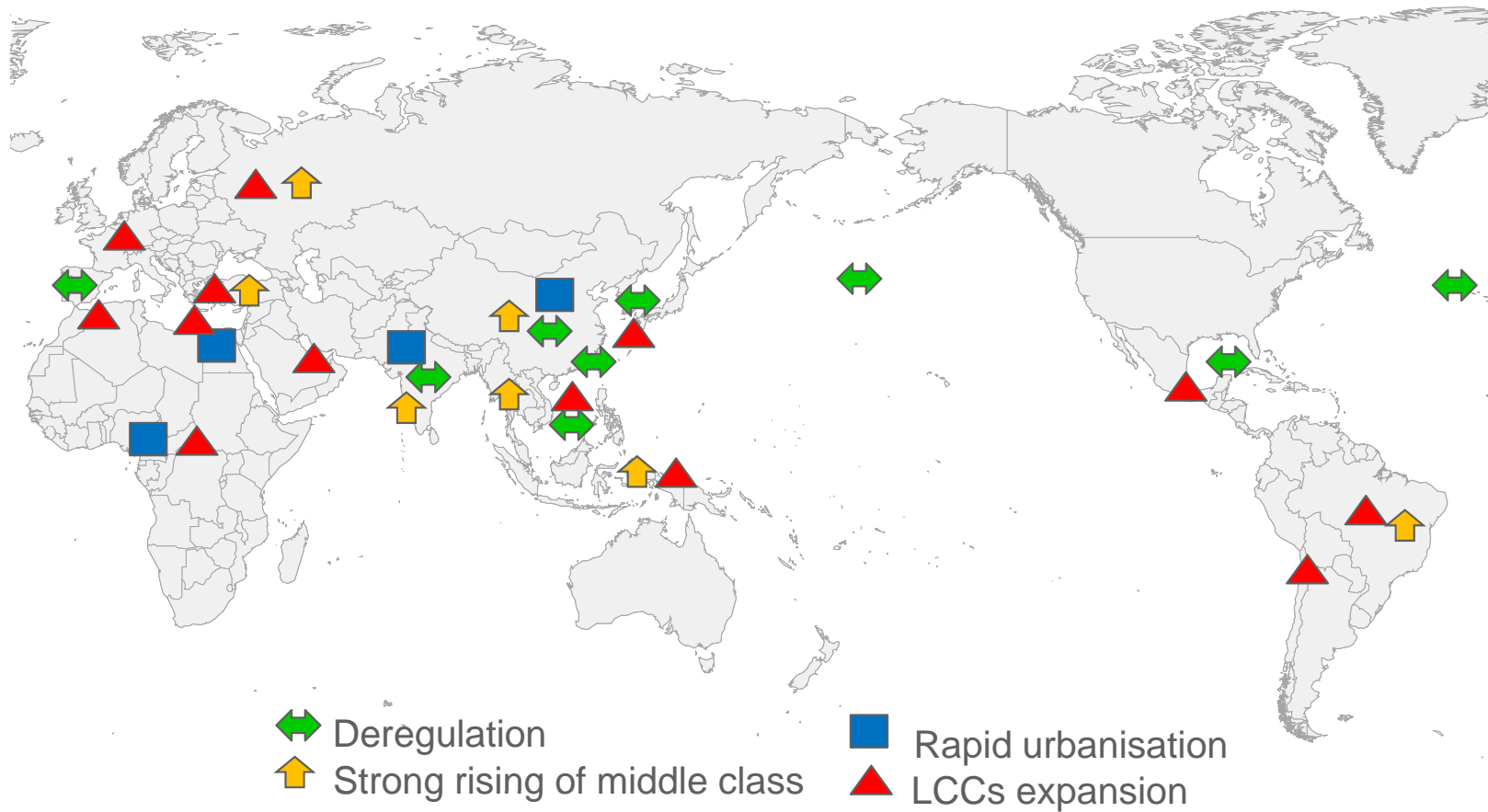
## Aircraft

- Seats, speed, utilisation
- **Frequency, load factor**
- Range, fleet mix
- Replacement
- Environment

# Growth is accelerated by certain macro factors

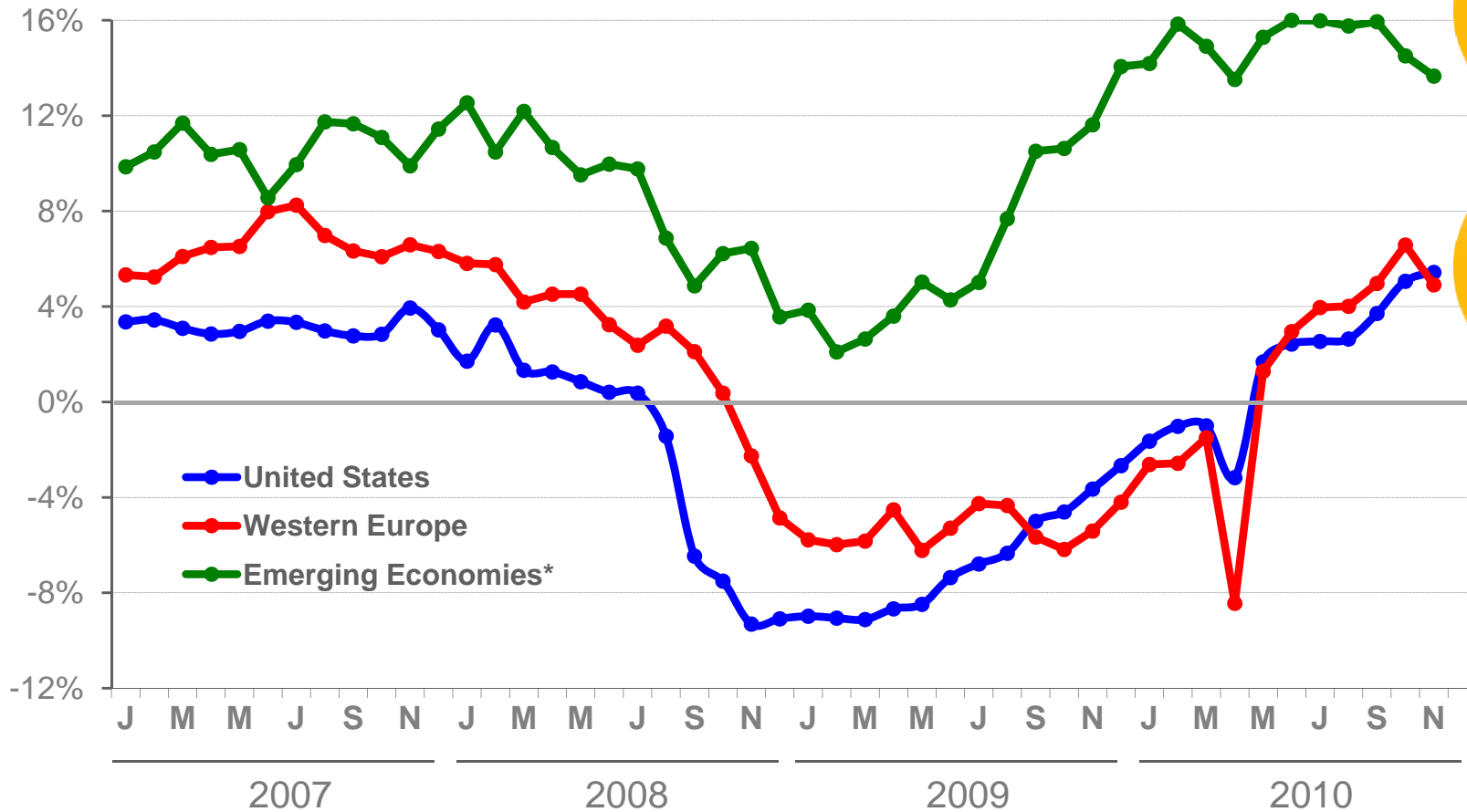
## Recent traffic “hot spots”

Note : non exhaustive map



# All regions are currently growing

Passenger traffic (monthly ASKs year-over-year)



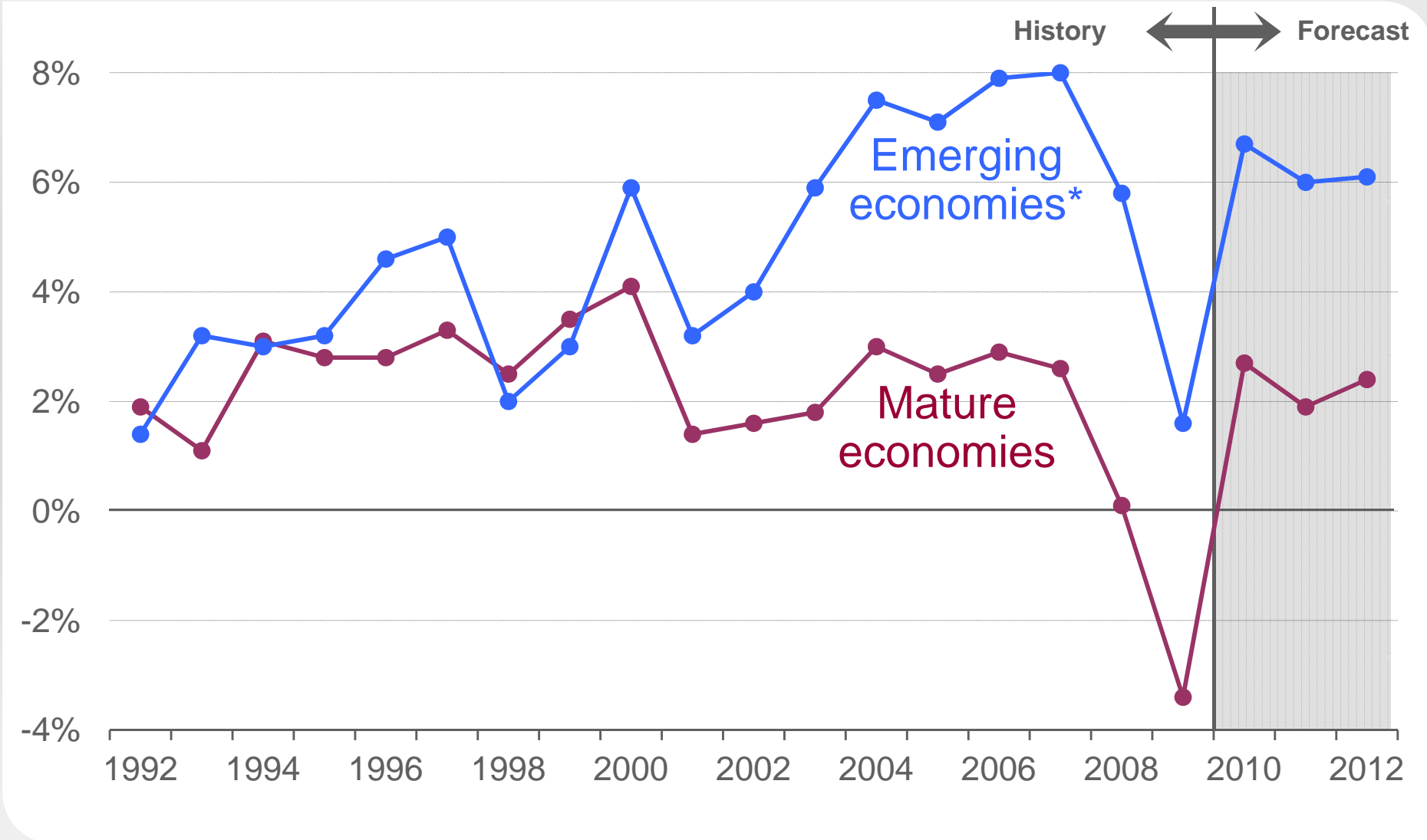
Traffic up  
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Emerging economies are leading the way

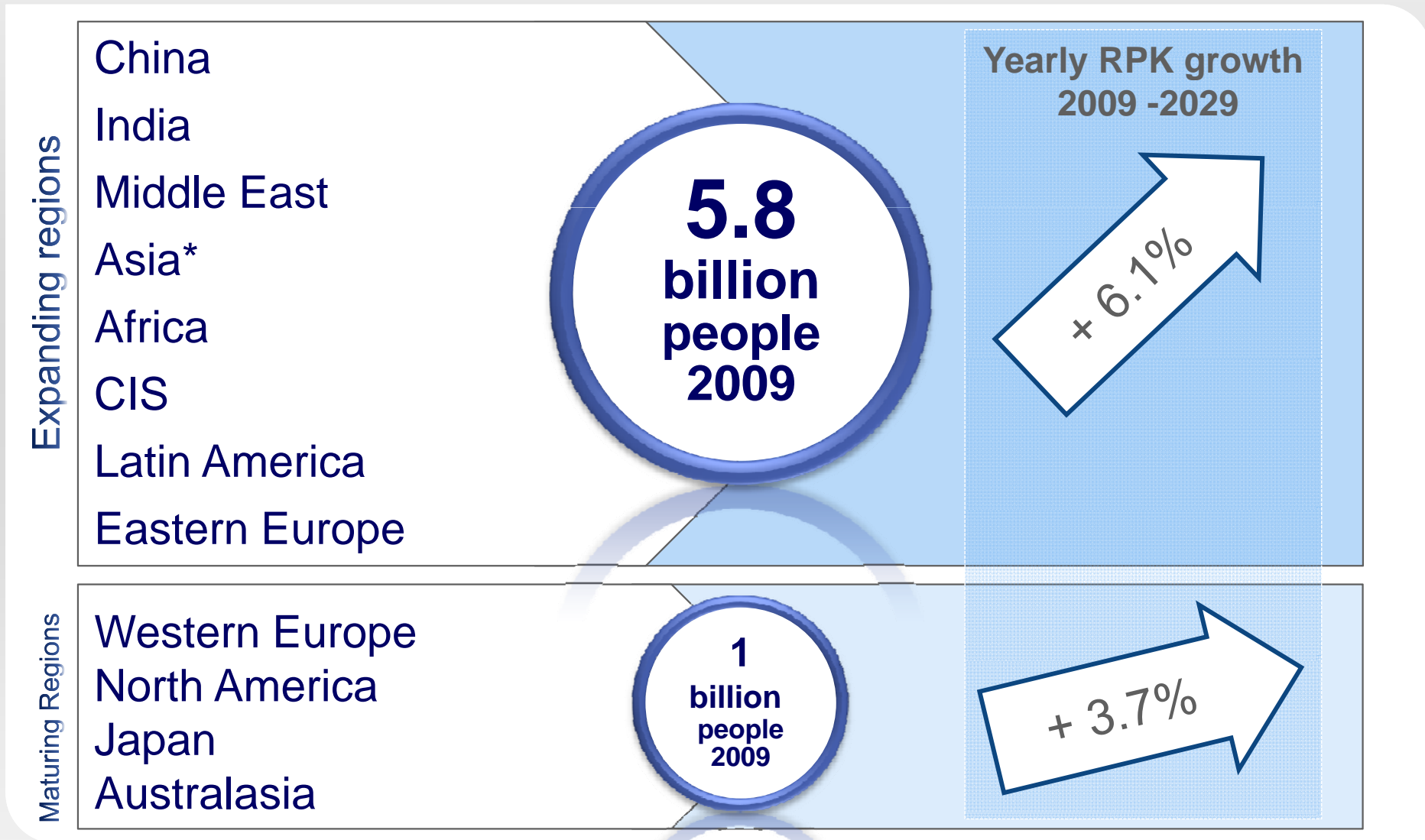
# Still a two-speed World

Real GDP growth (%)



This is mainly driven by the potential to travel in certain regions

# 5.8 billion people will increasingly want to travel by air

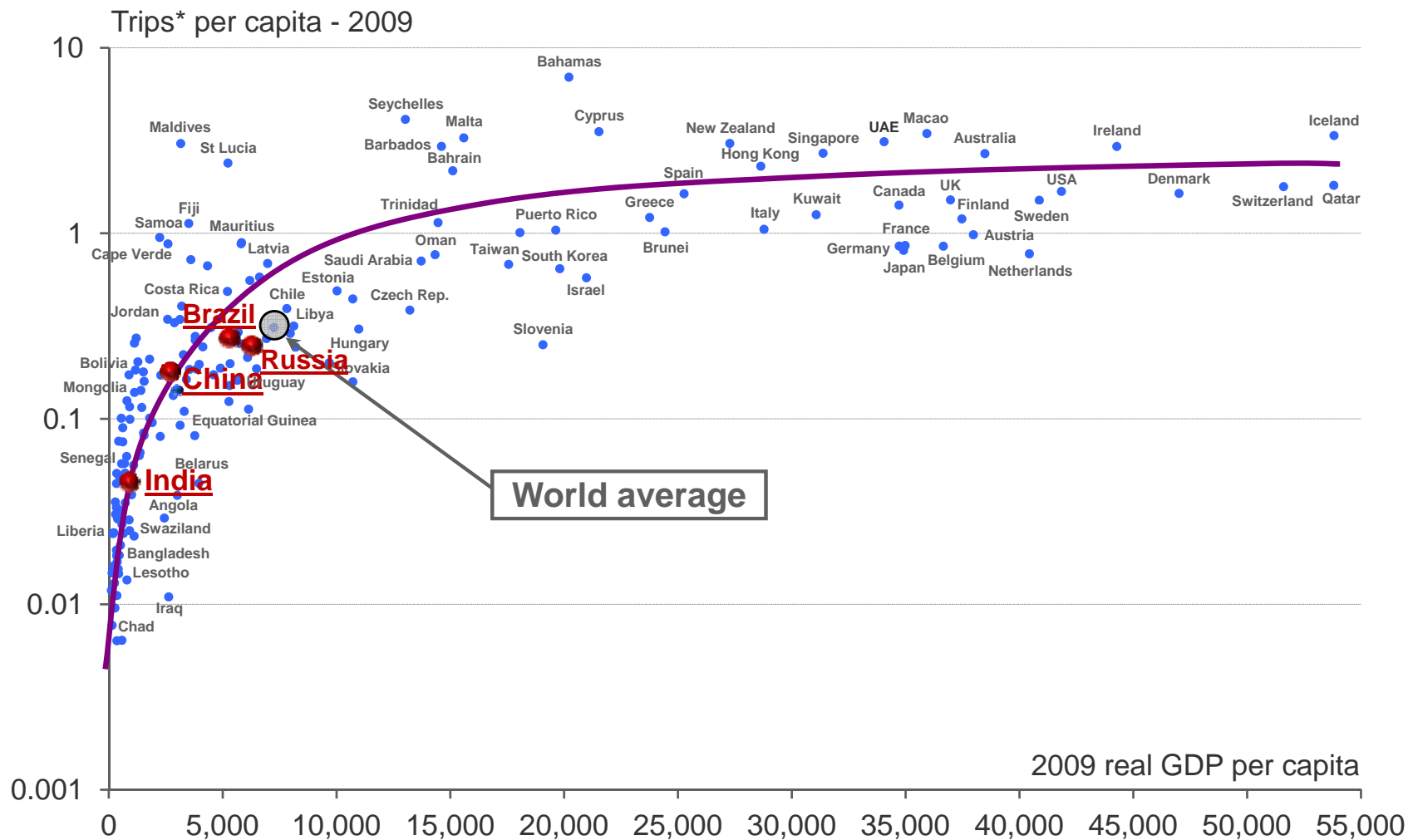


\* Asia excludes India, China and Japan



# Emerging economies on the edge to strong travel growth

## Propensity to travel

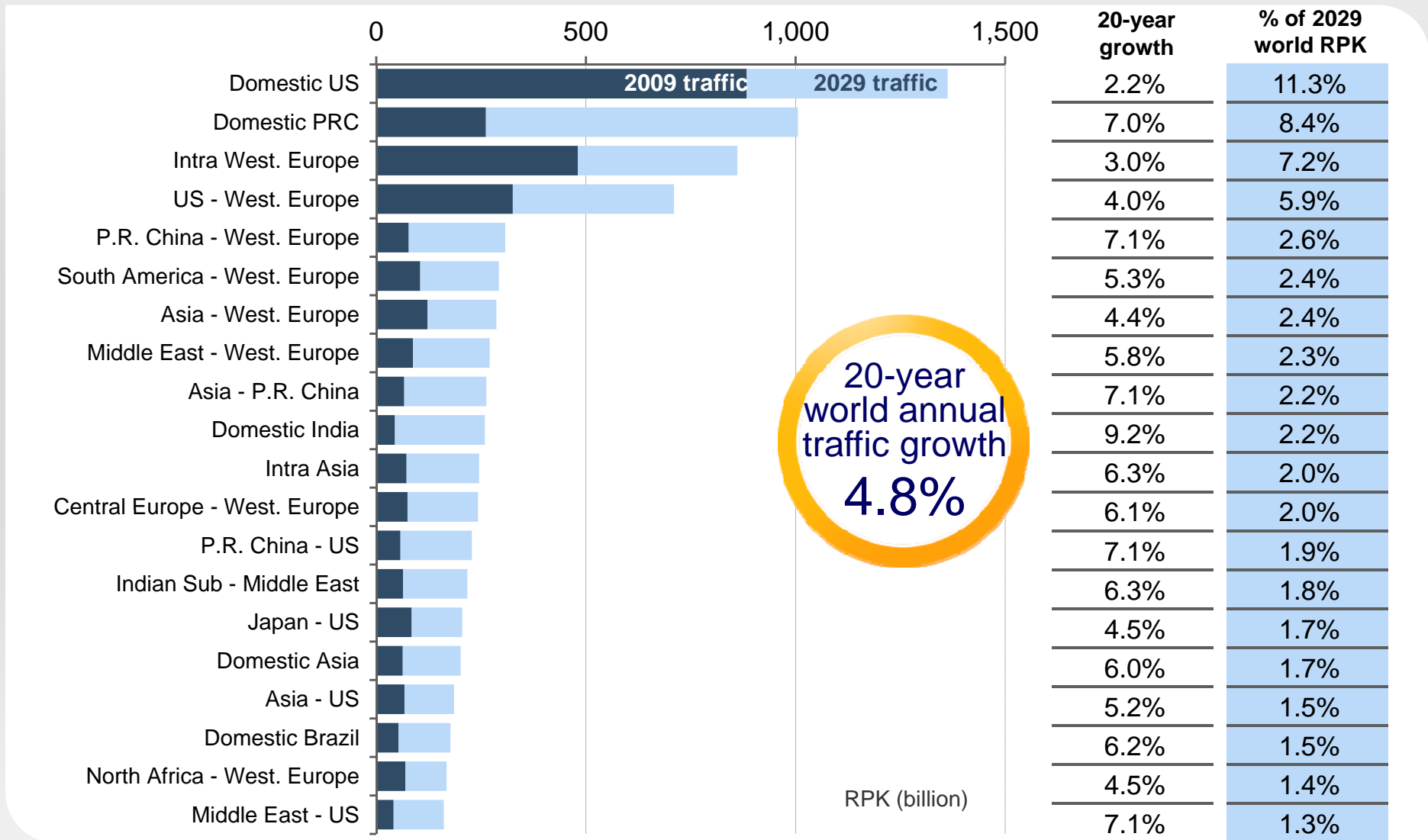


\* Passengers originating from respective country

Note: GDP in US\$2005

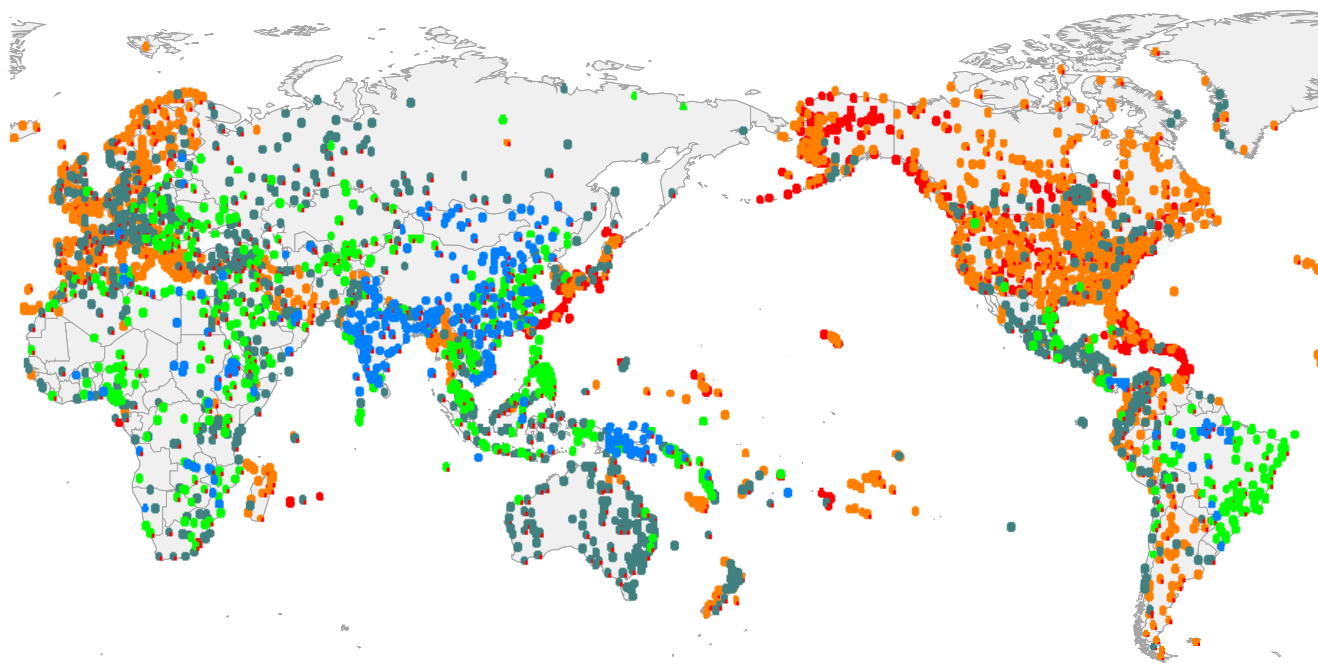
# Largest 20 traffic flows in 2029

2009 and 2029 traffic volume per biggest traffic flow



# Map of traffic growth

## GMF 2010 key numbers and 20-year change

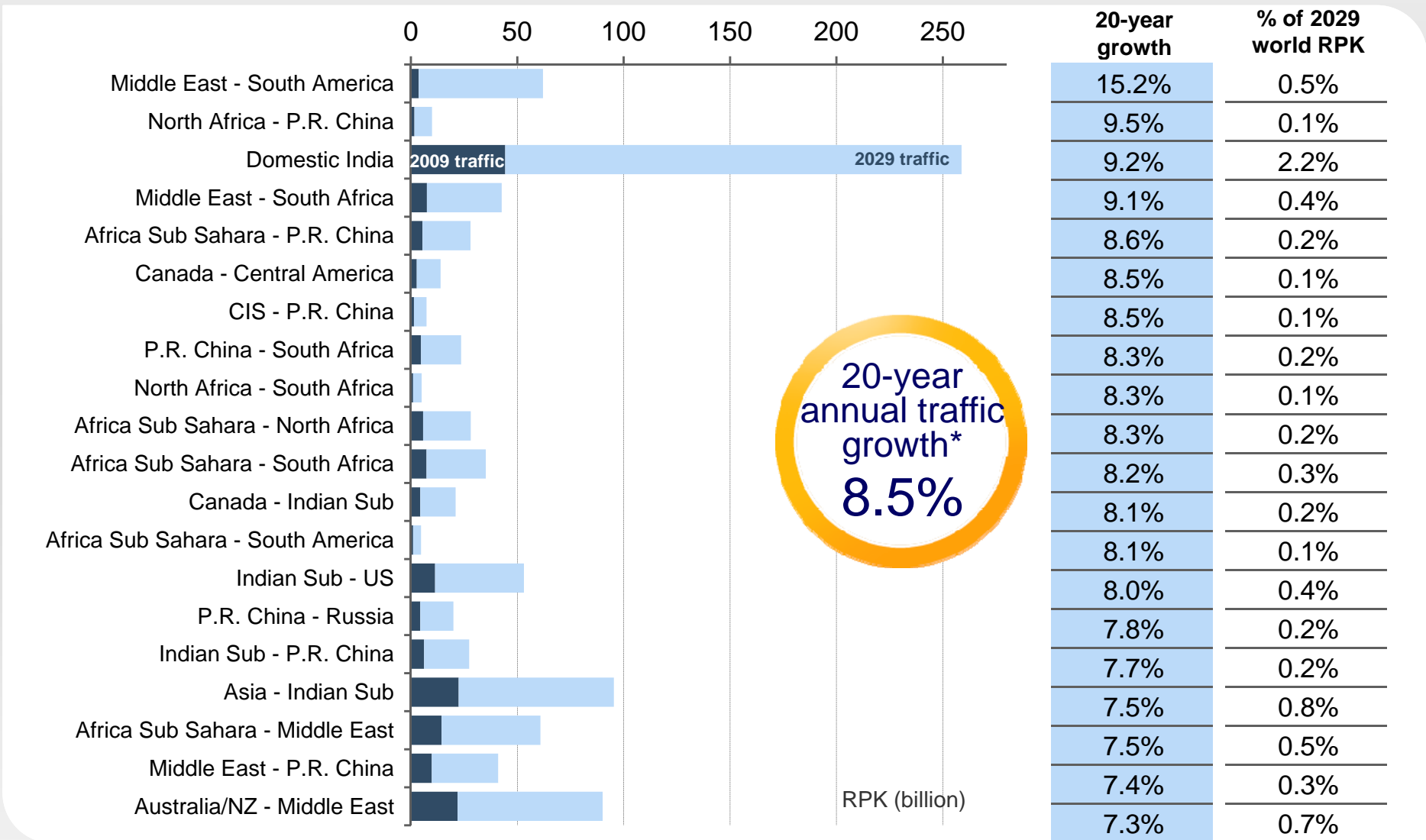


2009-2029 AAGR\*



# Top 20 fastest growing flows until 2029

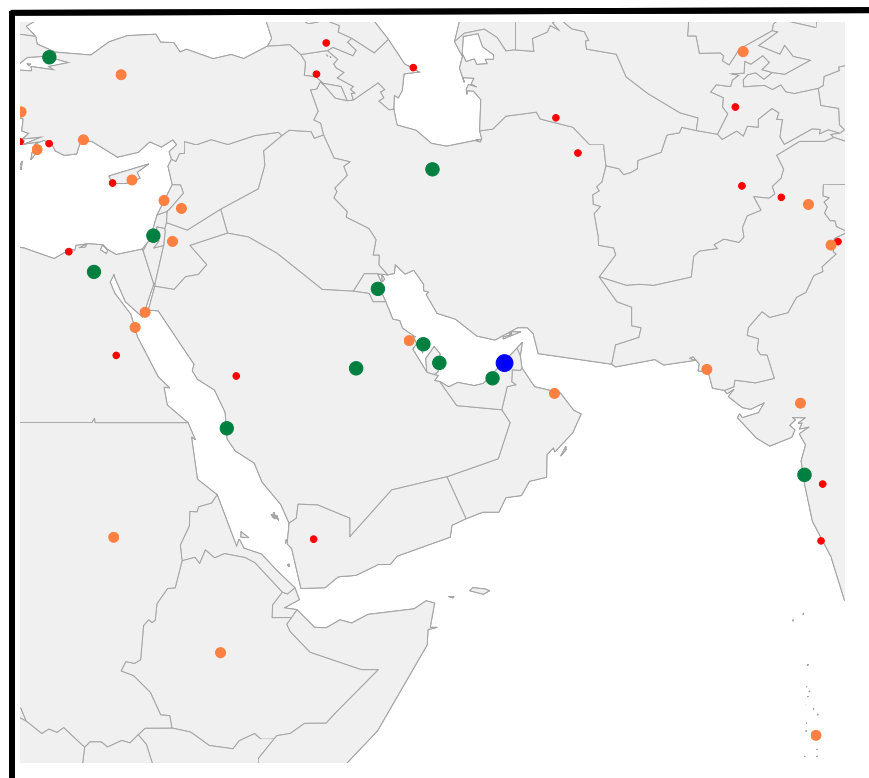
2009 and 2029 traffic volume per fastest growing traffic flow



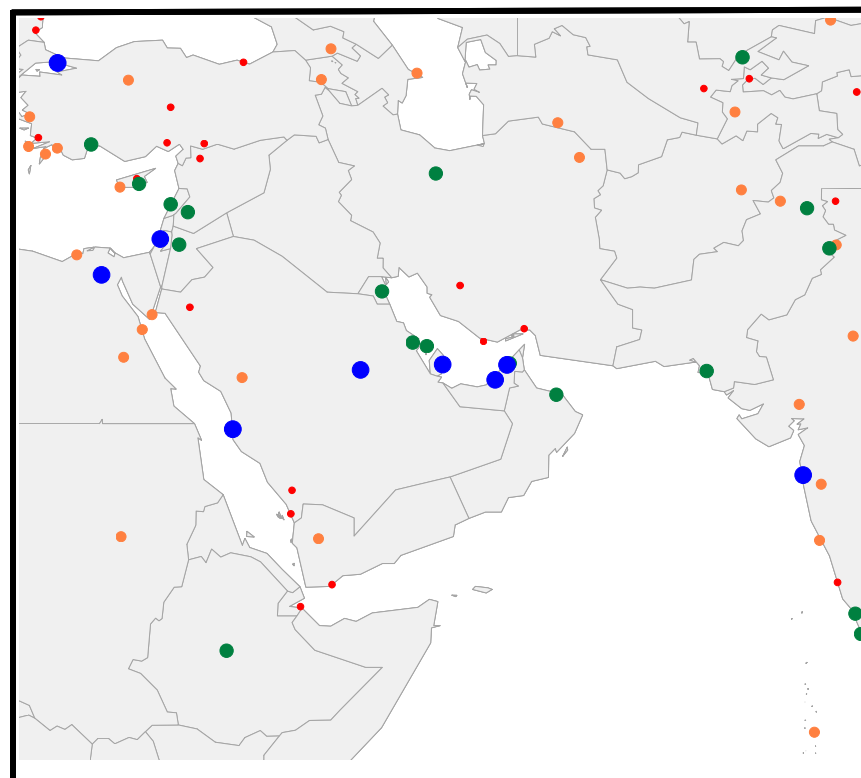
\* 20-year annual traffic growth referring to the illustrated 20 traffic flows

# Middle East traffic to double by 2017

Level of RPK from/to each city in 2009 and 2029 for Middle East



2009



2029

● 100-250 millions ● 250-1000 millions ● 1-5 billions ● >5 billions

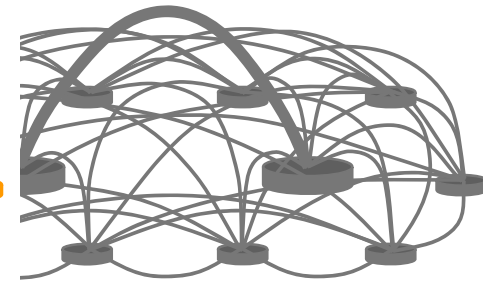
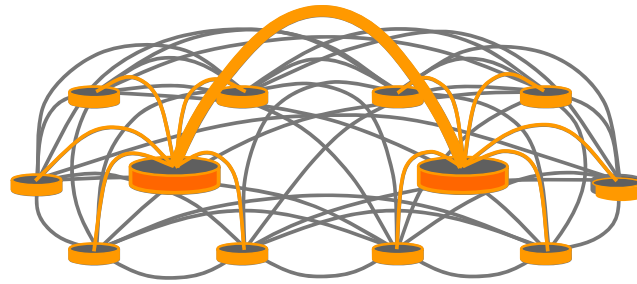
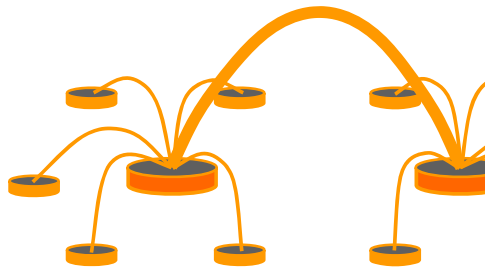
# From traffic growth to aircraft demand

The way how the traffic is accommodated in the network has a big impact on the type and the number of aircraft the industry requires

Hub & Spoke

Hubs are big points

⇒ “point-to-point”

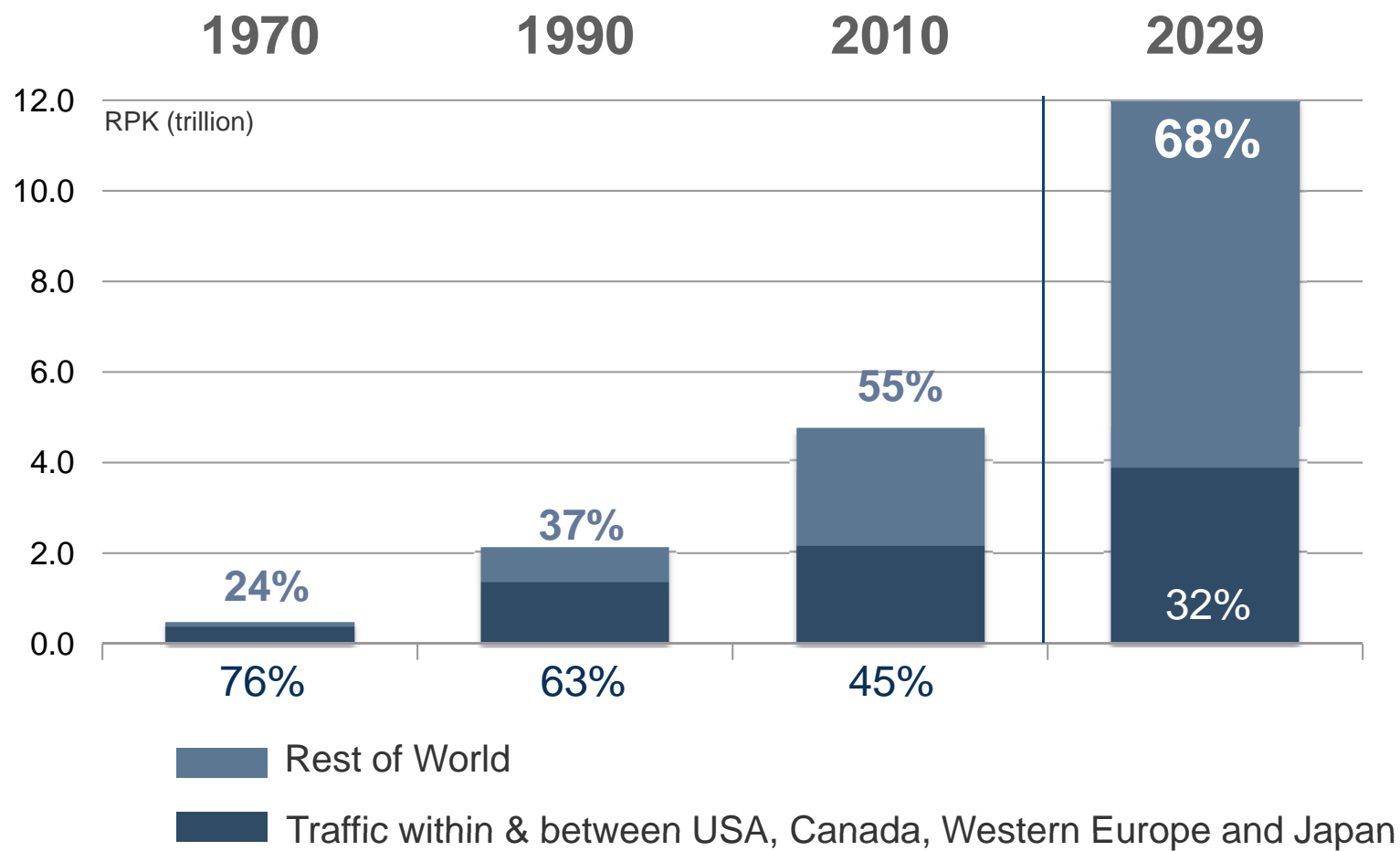


Tendency to Bigger ai

ncy to Smaller aircraft ?

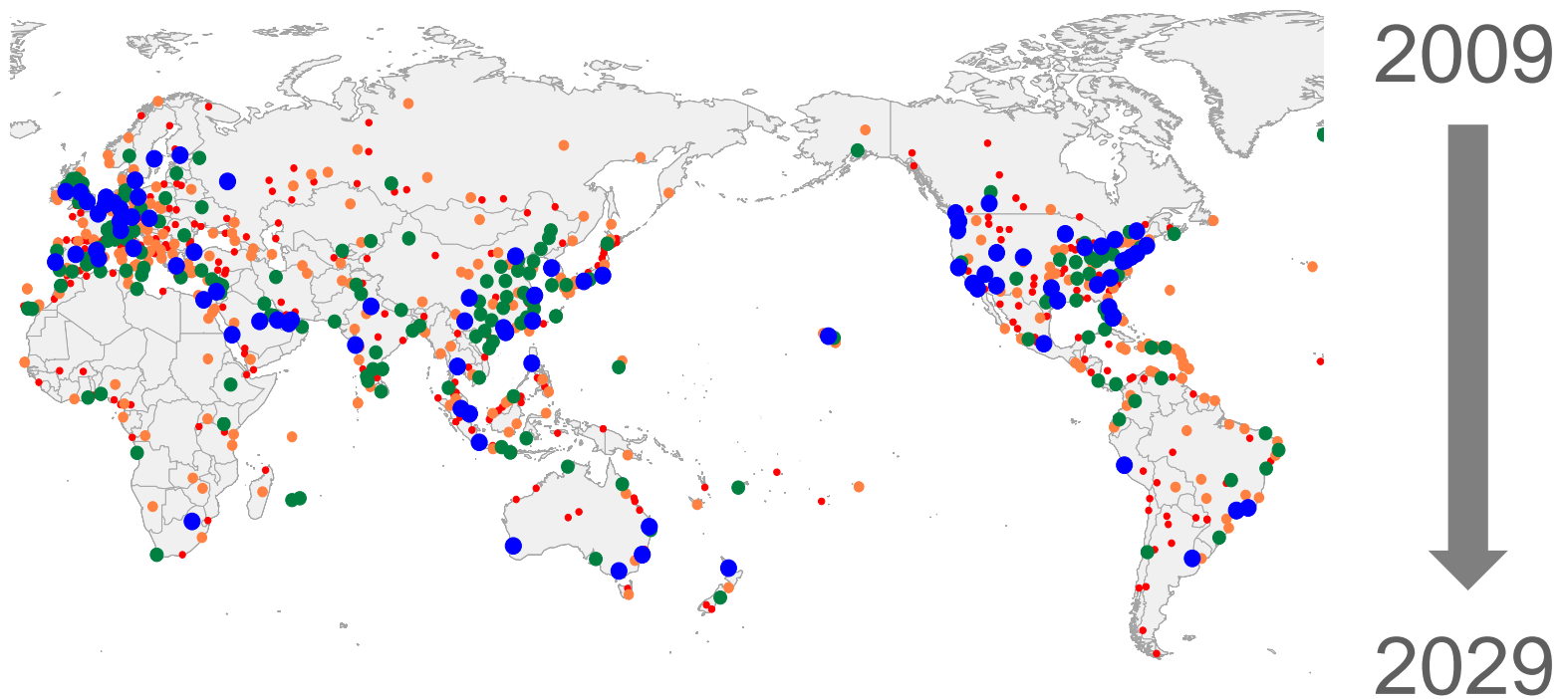
# 68% of 2029 traffic volume will be between expanding regions

Market share on total traffic, emerging vs. mature traffic flows



# Traffic will remain concentrated around mega-cities

Level of RPK from/to each city in 2009 and 2029



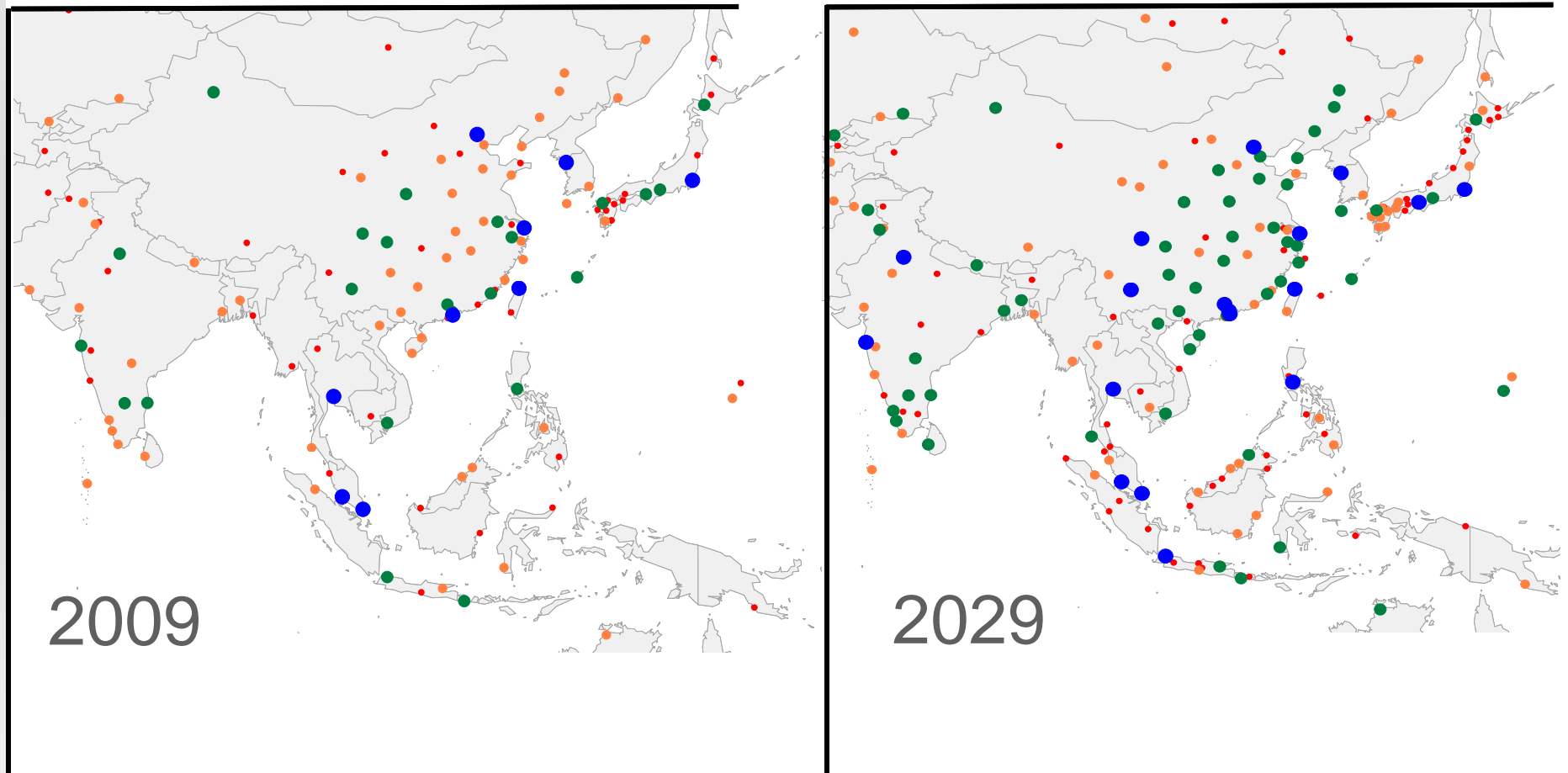
Top 500/3300 cities

● 100-250 millions ● 250-1000 millions ● 1-5 billions ● >5 billions



# Strong increase of mega-cities in Asia

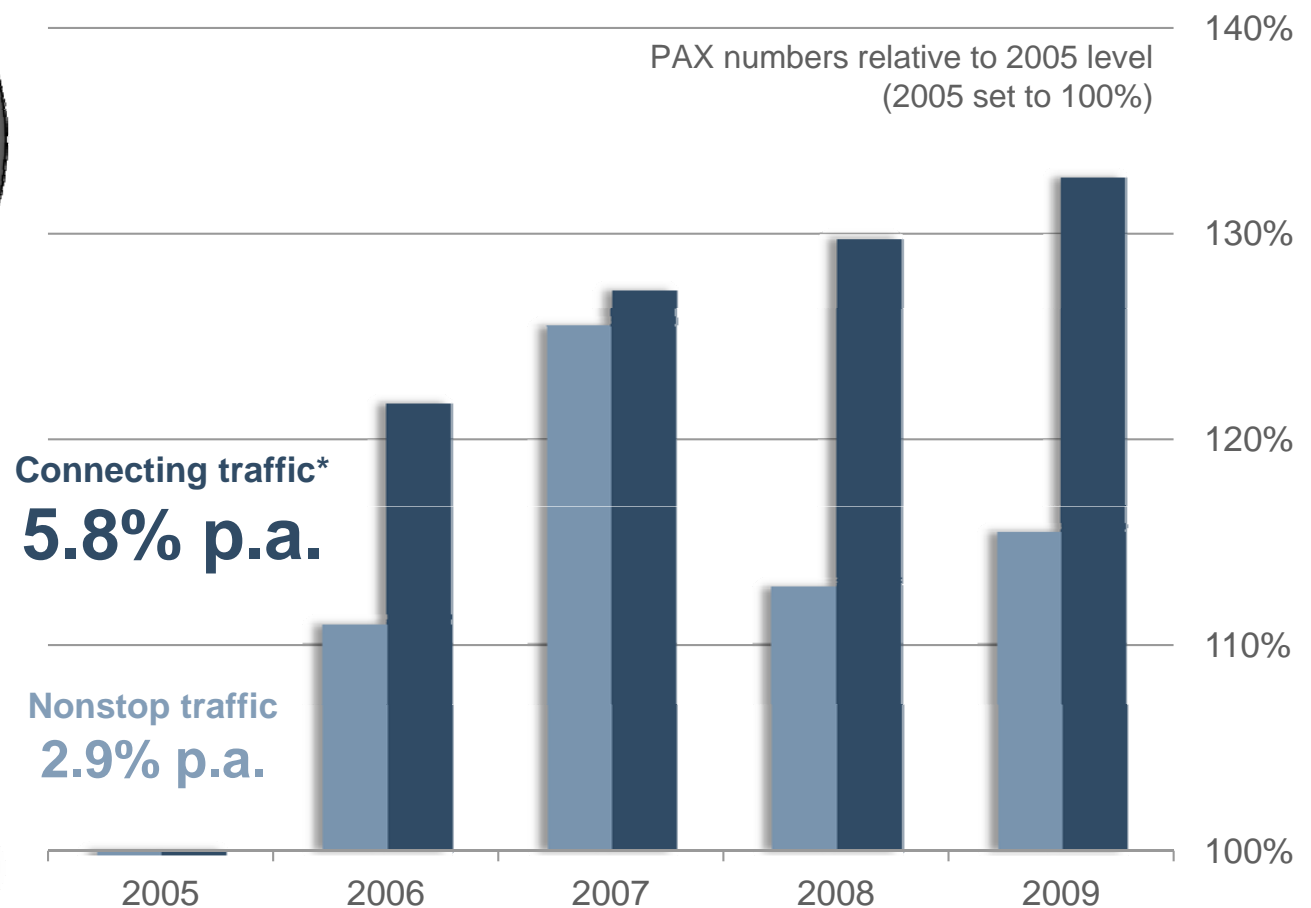
Level of RPK from/to each city in 2009 and 2029 for Asia



● 100-250 millions ● 250-1000 millions ● 1-5 billions ● >5 billions

# Mega-cities are likely to be hubs (e.g. Hong Kong)

Development of passenger numbers on HKG arrival flights from Europe and the Americas



\* Connecting traffic vs. nonstop traffic: e.g. LHR – HKG – SYD vs. LHR – HKG

# Successful airlines driven by hub strategy

Attracting passengers to the Hub  
from a wide range of origin and  
destination

Attracting a wider range of  
passengers profile (Business,  
Tourism, VFR, ...)

Building flexibility to reallocate traffic  
through the Hub

Lowering seat costs with bigger  
aircraft at the hub

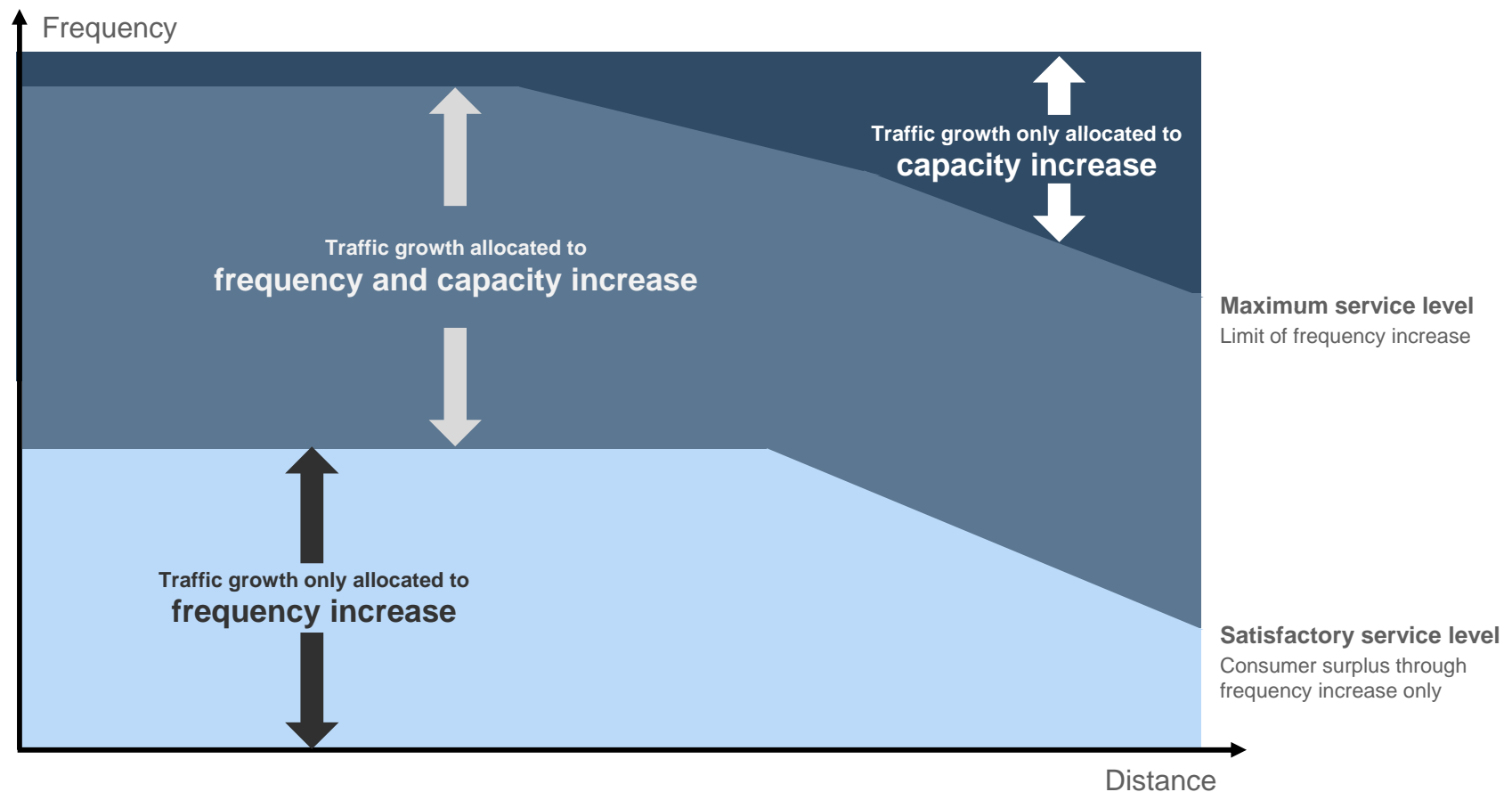
During the crisis the most resilient  
routes have been:

- large routes
- from/to hubs
- a wide class mix
- with many connecting pax



# Growth realistically split between frequency and capacity

Allocation of traffic growth to flight frequency and aircraft capacity (as function of frequency and distance)



Qualitative model; model quantitatively differentiated according to different traffic regions and traffic flows

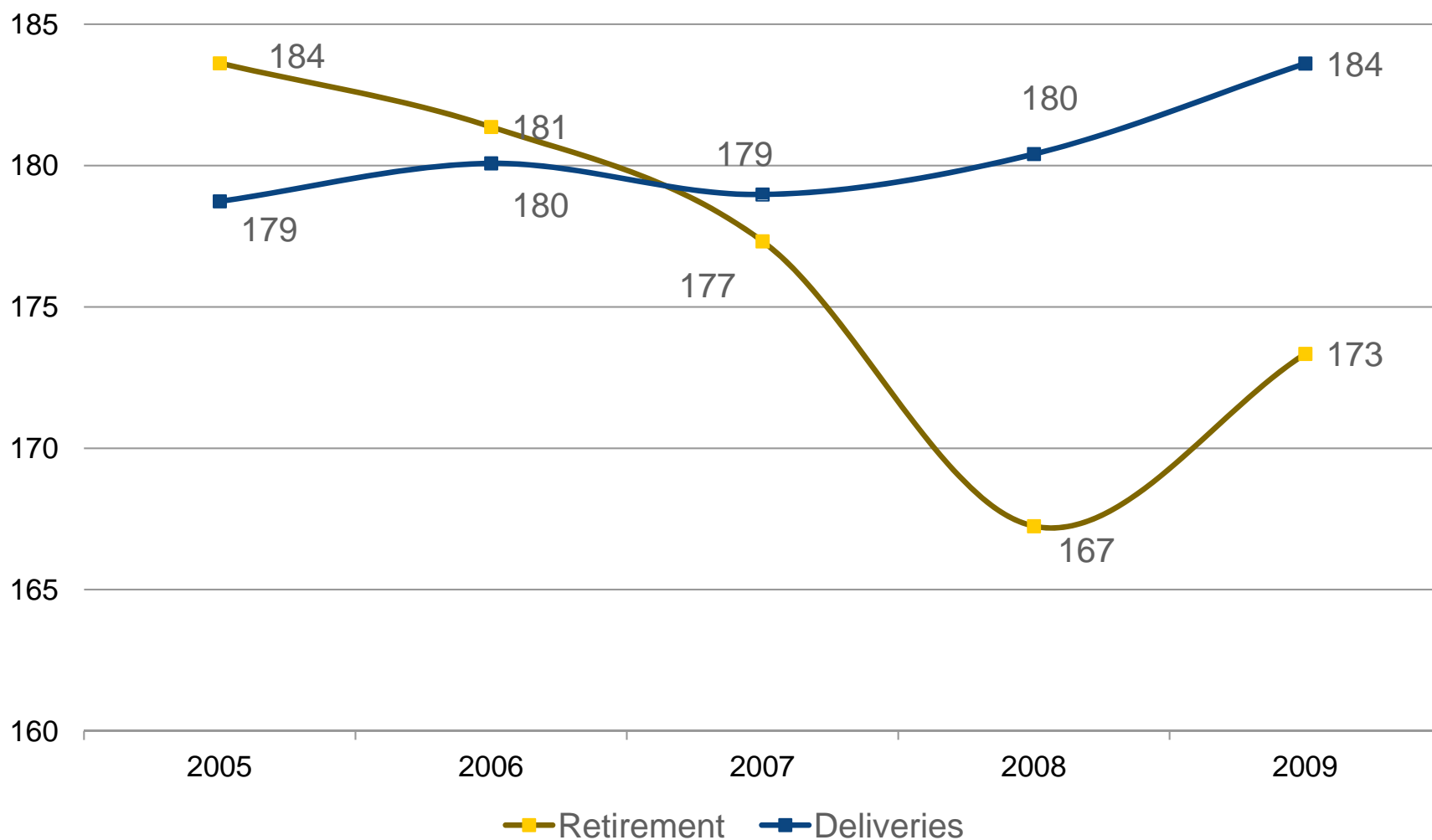
# Growth in the size and number of mega-cities



Destinations with more than 10 000 daily long haul pax

## Main long-haul VLA routes by 2029

# Aircraft delivered continue to be larger than those they replace

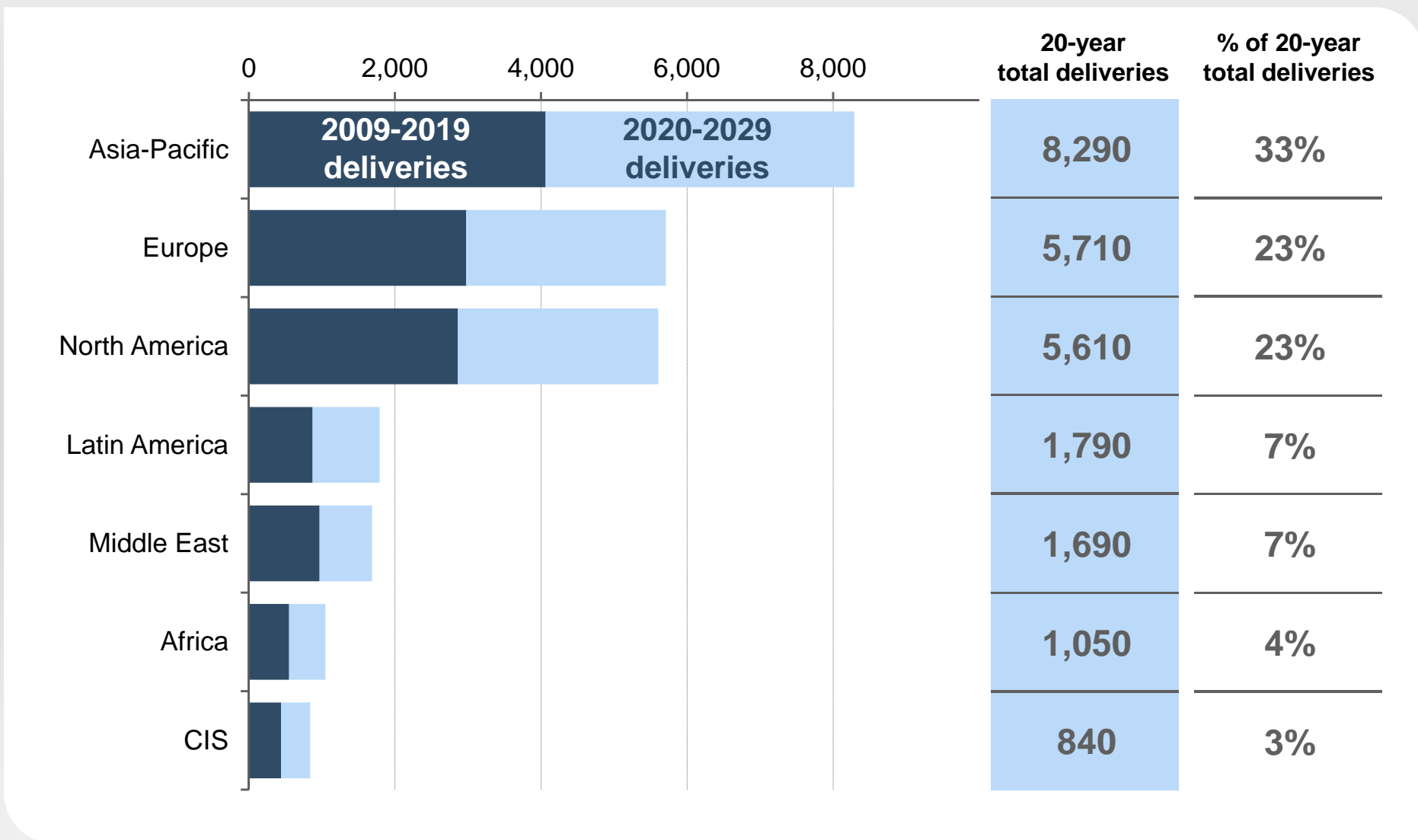


Note: Passenger jet aircraft excluding regional types

Source: Ascend, Airbus

# Asia-Pacific airlines to further strengthen their dominant position for new passenger aircraft

## 20-year new deliveries of passenger aircraft



# GMF freight forecast methodology

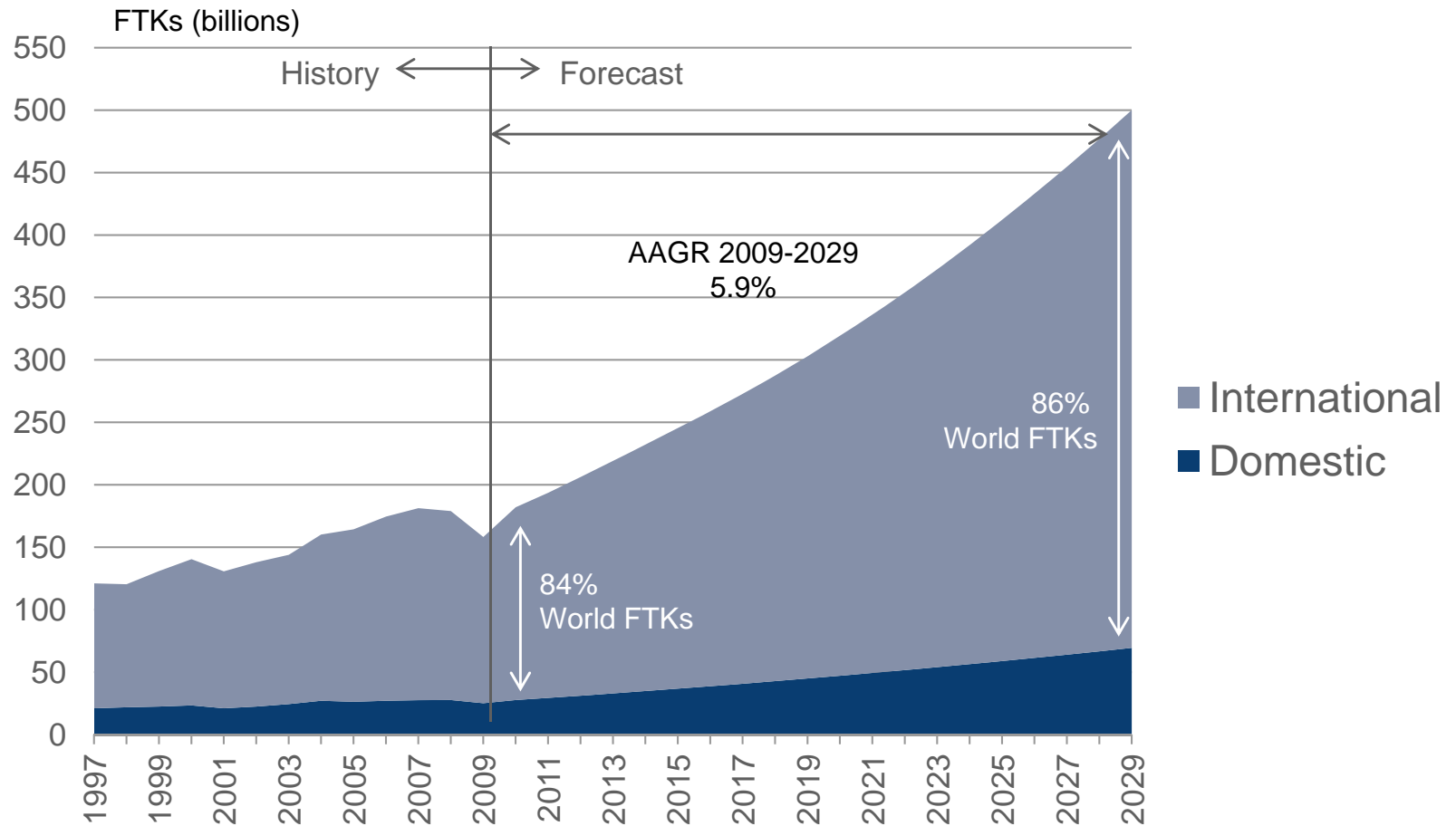
- **Specific methodology** for air cargo forecast
- **Regularly updated** to reflect market trends and evolution
- 20 year freighter aircraft demand forecast, payload **>10 tons**
- Traffic forecast modeling **144 distinct traffic flows**
- Fleet build-ups covering **217 freight carriers**





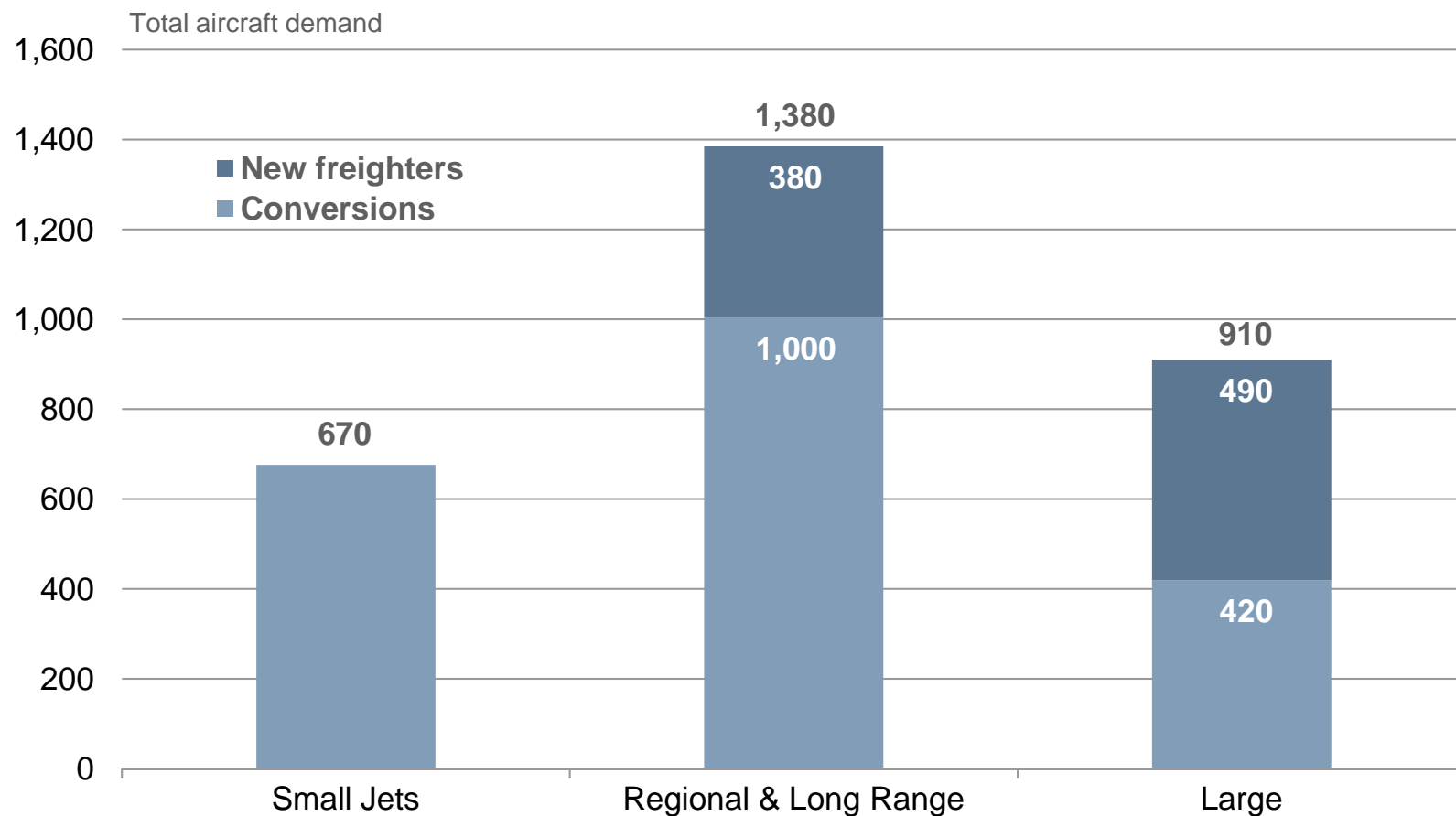
# Freight traffic to triple in the next 20 years

## Freight traffic forecast



# 20-year freighter demand for almost 3,000 aircraft

## 20-year freighter aircraft demand



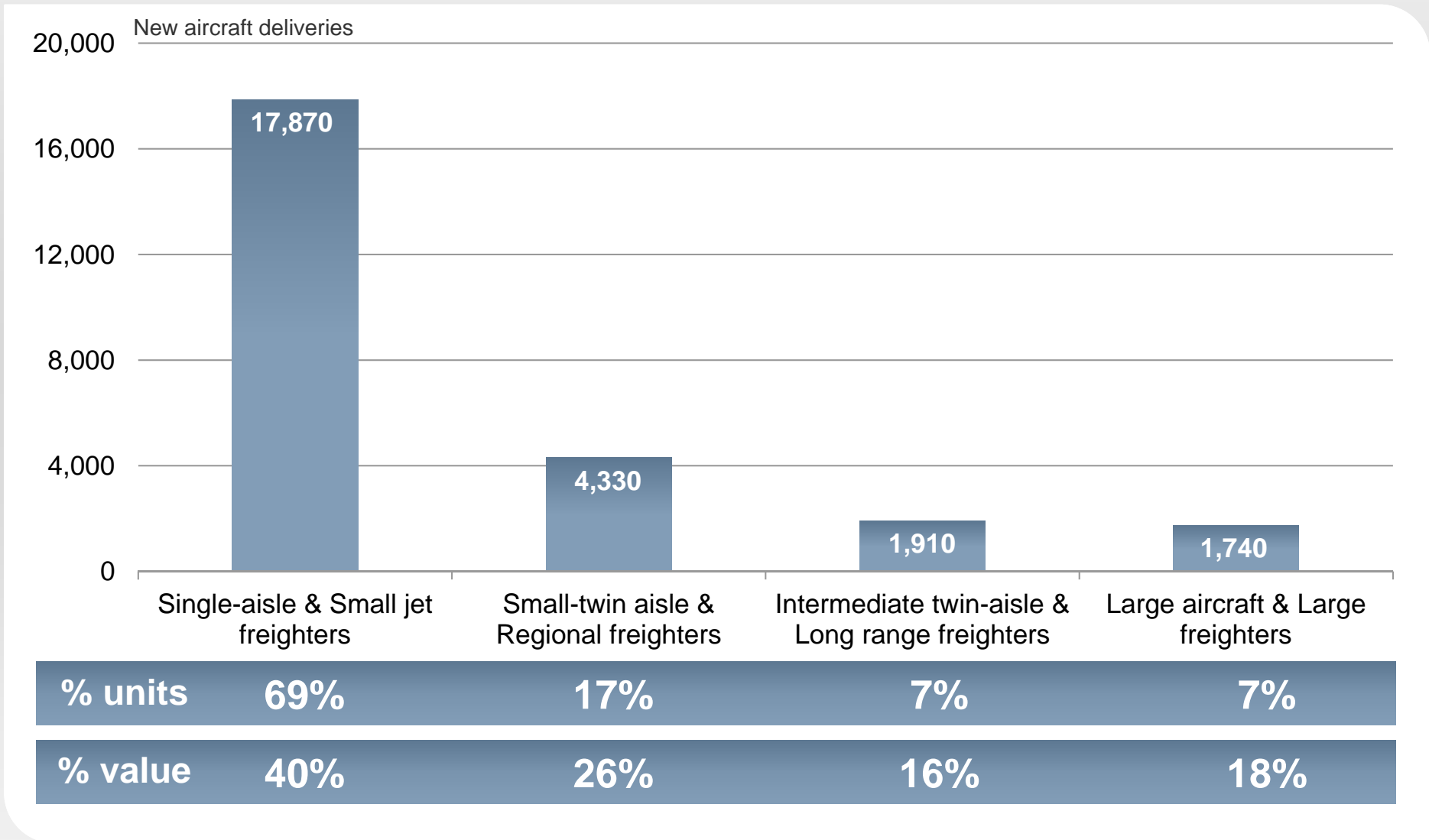
Small jet freighters: 727, 737, A320P2F, BAe 146, DC-9, Tu-204 ;

Regional & long range freighters: 707, 757, 767-200, A300, A310, A321P2F, DC-8, DC10 -10, A330, 767-300, 747 Combi, DC10-30 ;

Large freighters: 747F, 777, A350, MD-11, A380

# New aircraft demand will average at 1,300 per year

## 20-year new deliveries of passenger and freighter aircraft



Passenger aircraft ( $\geq 100$  seats) and freighter aircraft ( $> 10$  tons)

Source: Airbus GMF 2010

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Toulouse, December 13<sup>th</sup>

