

Global Market Forecast

Air Cargo Market Outlook

**Overview of the Airbus Cargo
Global Market Forecast 2014-2033**

Recent years have not been kind to air cargo



Drop in air freight demand



Air freight overcapacity



More than 90 large freighters grounded



High fuel price



Declining yields

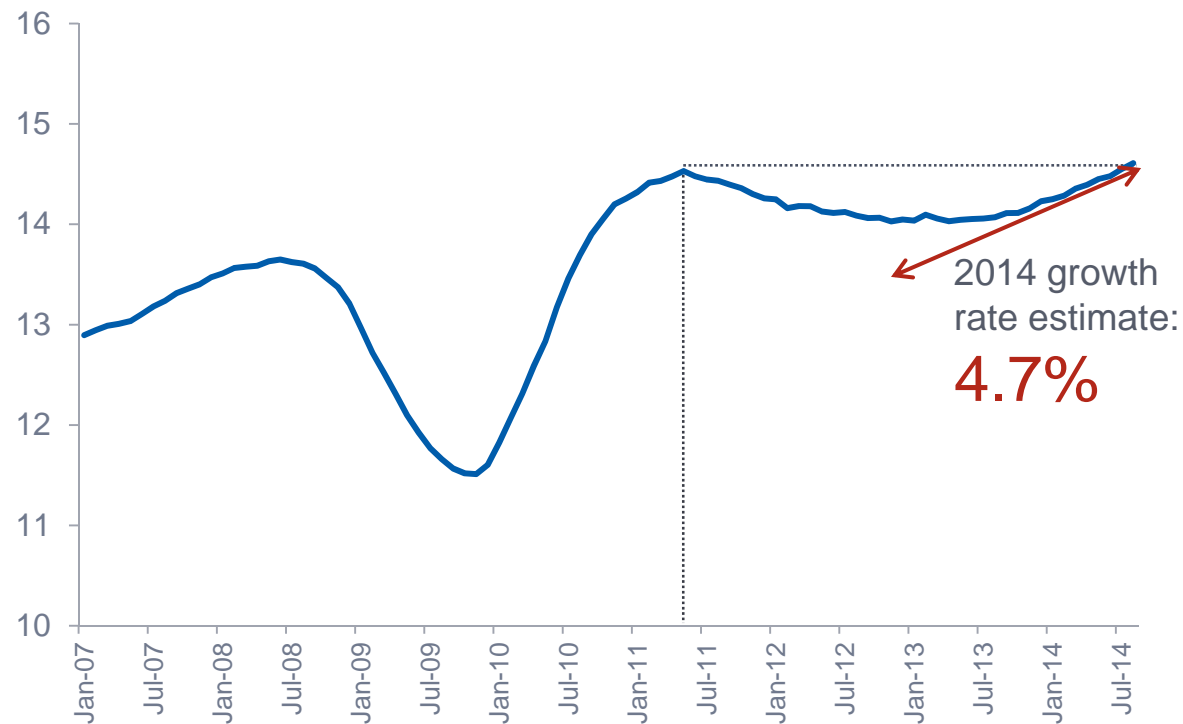
However cargo traffic growth is coming back !

Source: IATA, ACAS, CargoIS. Large freighters: 747F & MD-11. Parked aircraft data as of September 30 2014.

...but today the air freight industry is growing again

Monthly air freight evolution

Billion FTKs (Freight tonne kilometres)



Air freight volumes just reached again the 2011 peak

Growth drivers:

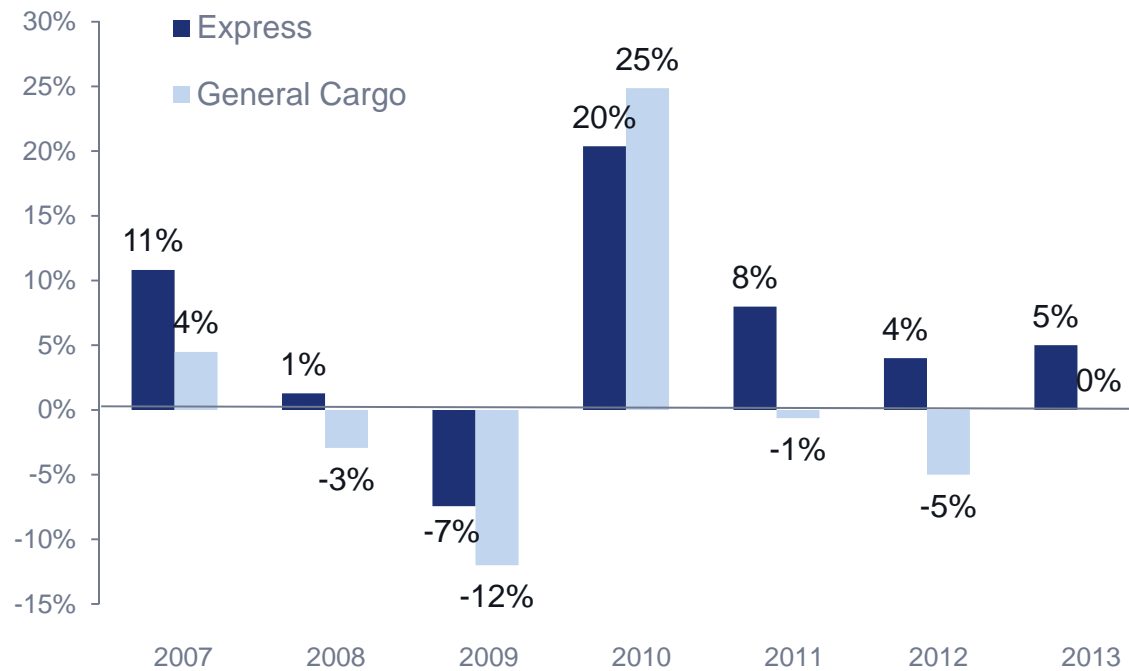
- Regional traffic
- Express traffic
- Emerging economies

Source: Seabury, IATA, Airbus

Time sensitive express goods proved more resilient to the crisis

International air freight growth

year-over-year evolution (%)



Express Cargo grew

50% in 7 years

General cargo

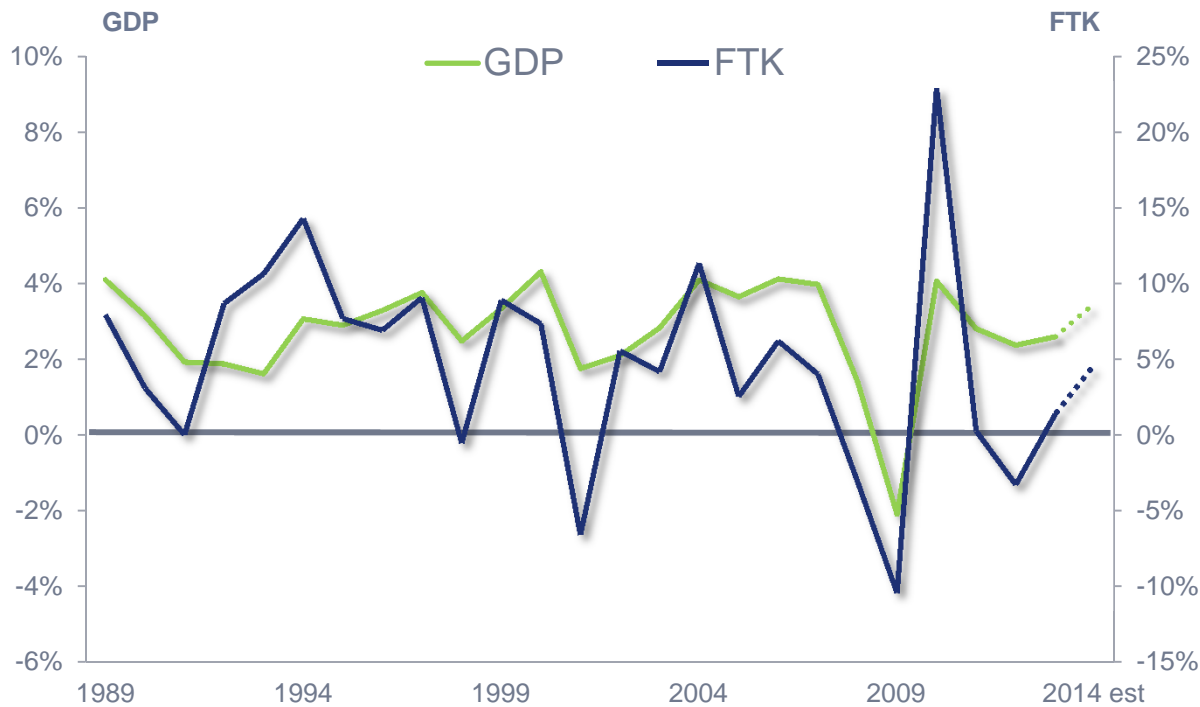
stagnated

in the last 7 years

Source: Seabury

Freight traffic growth and GDP are closely linked

GDP and FTKs year on year growth evolution



2014 YoY growth
(estimates)

GDP 2.6%

FTK 4.7%

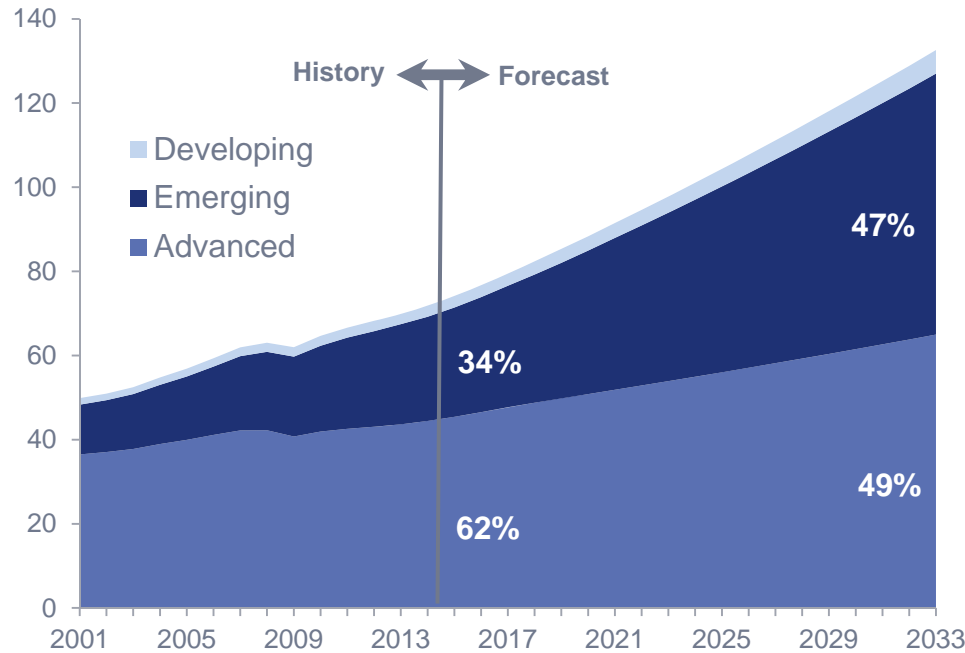
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Together traffic and world
GDP are recovering

Source: DOT, IATA, IHS Global Insight

World GDP is set to nearly double over 20 years

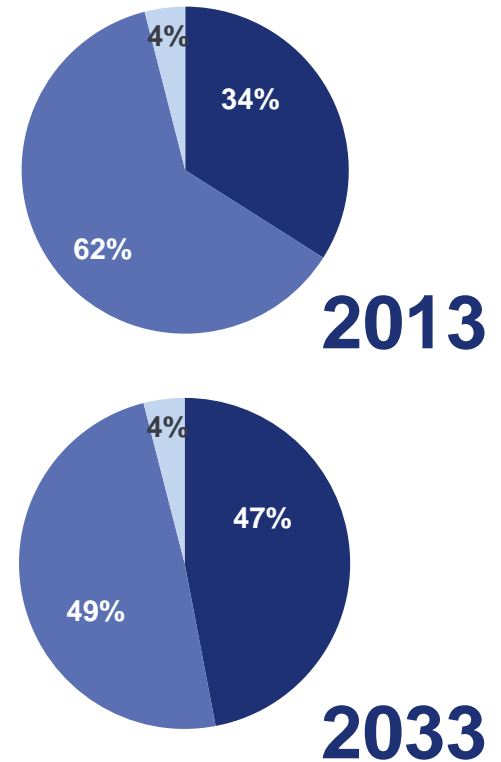
Total worldwide GDP evolution

Real in \$US trillion



Distribution of worldwide GDP

- Developing
- Emerging
- Advanced

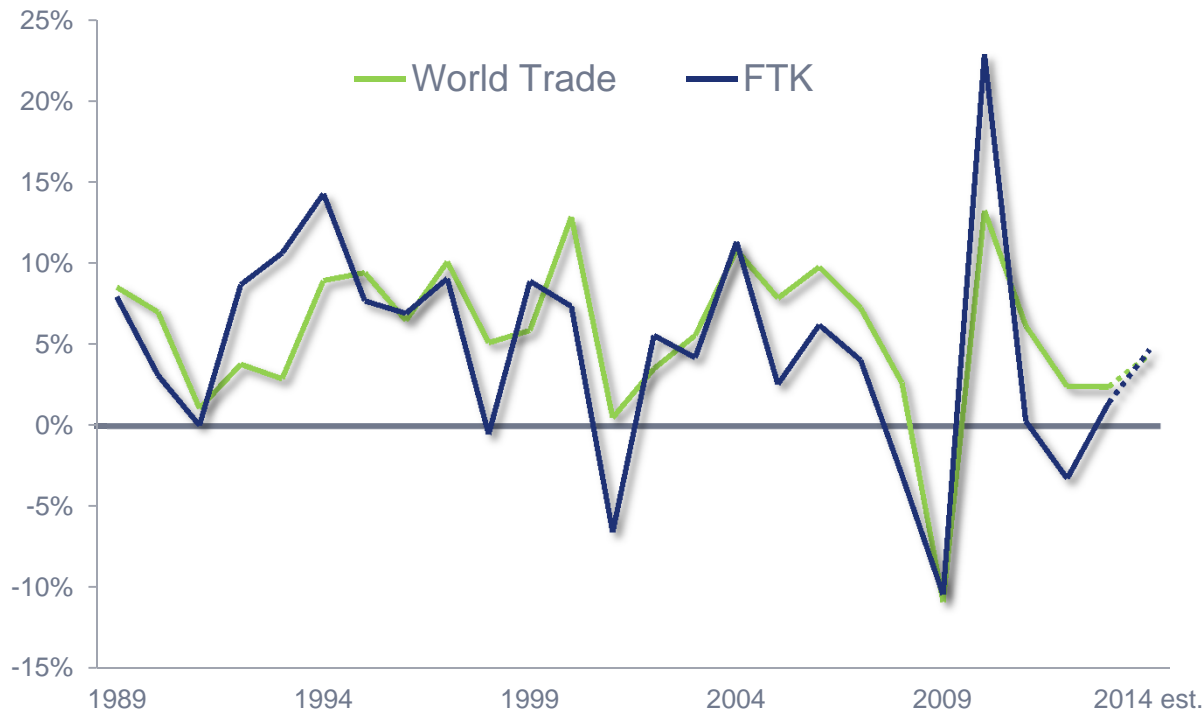


Emerging economies will account for almost half of world GDP in 2033

Source: IHS Global Insight

Cargo traffic and world trade are also well linked

World trade and FTKs growth evolution



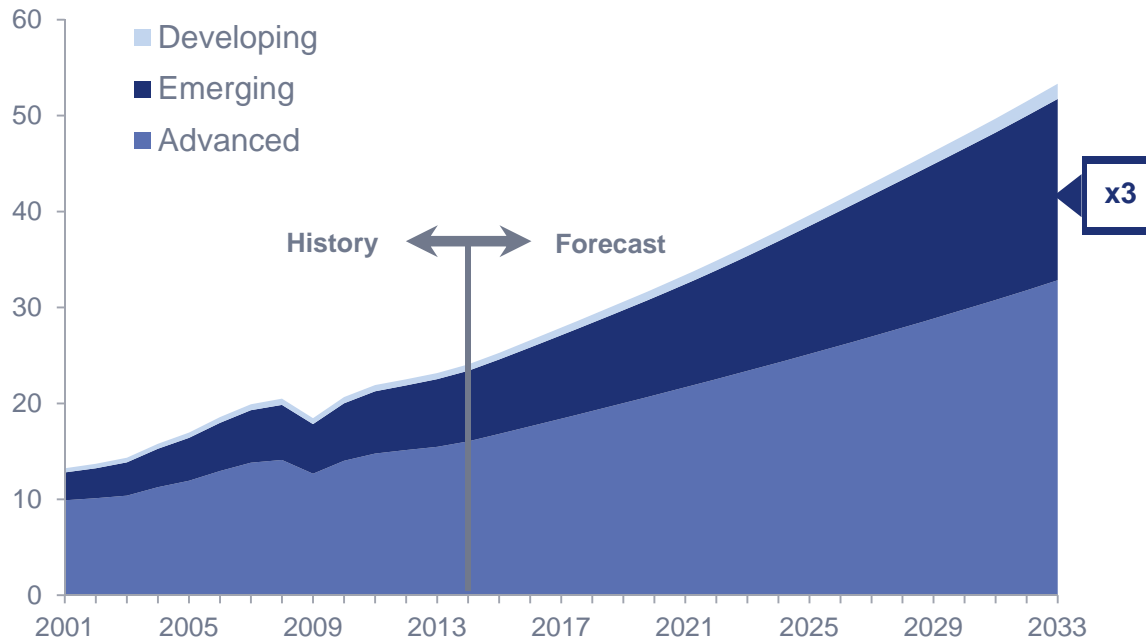
World trade shows continuous signs of **improvement**

World trade is driven by emerging markets, which are experiencing solid **growth momentum**

Source: ICAO, IATA, Airbus

World trade is set to more than double by 2033

Total world international trade evolution (Trillion \$US)



World trade will grow on average **4.3%** over the next 20 years -

Emerging countries' trade to almost triple over the next 20 years

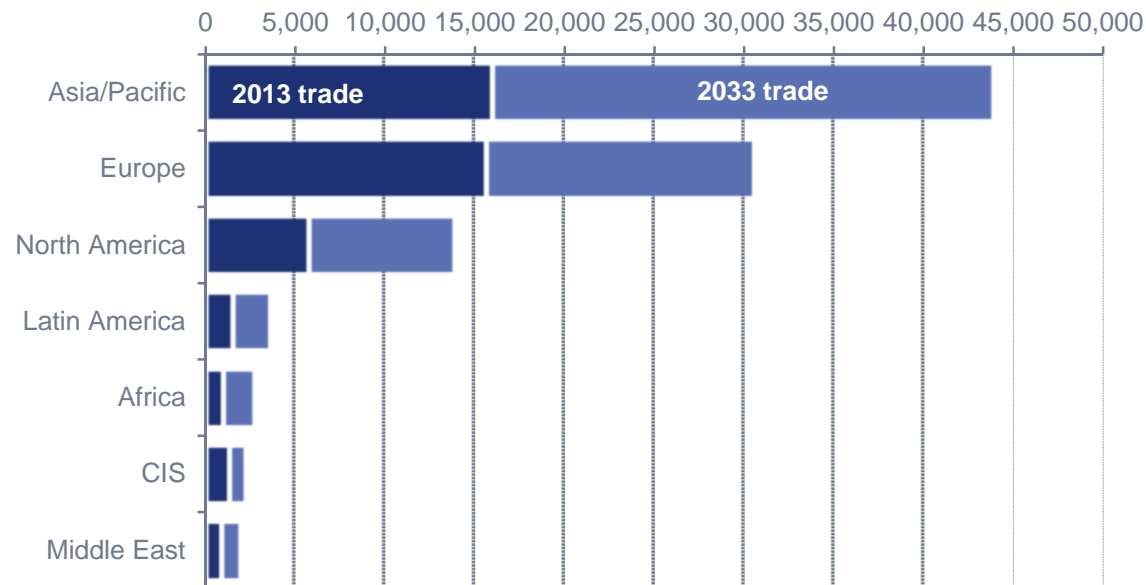
In the future, the traditional air cargo trade links will further diversify

Source: IHS Global Insight, Airbus, Seabury

New trade links will alter the current trunk routes

World trade in 2013 and 2033 by region

Trade (billion \$US)



Traffic **within Asia-Pacific** will be equivalent to PRC-North America flow

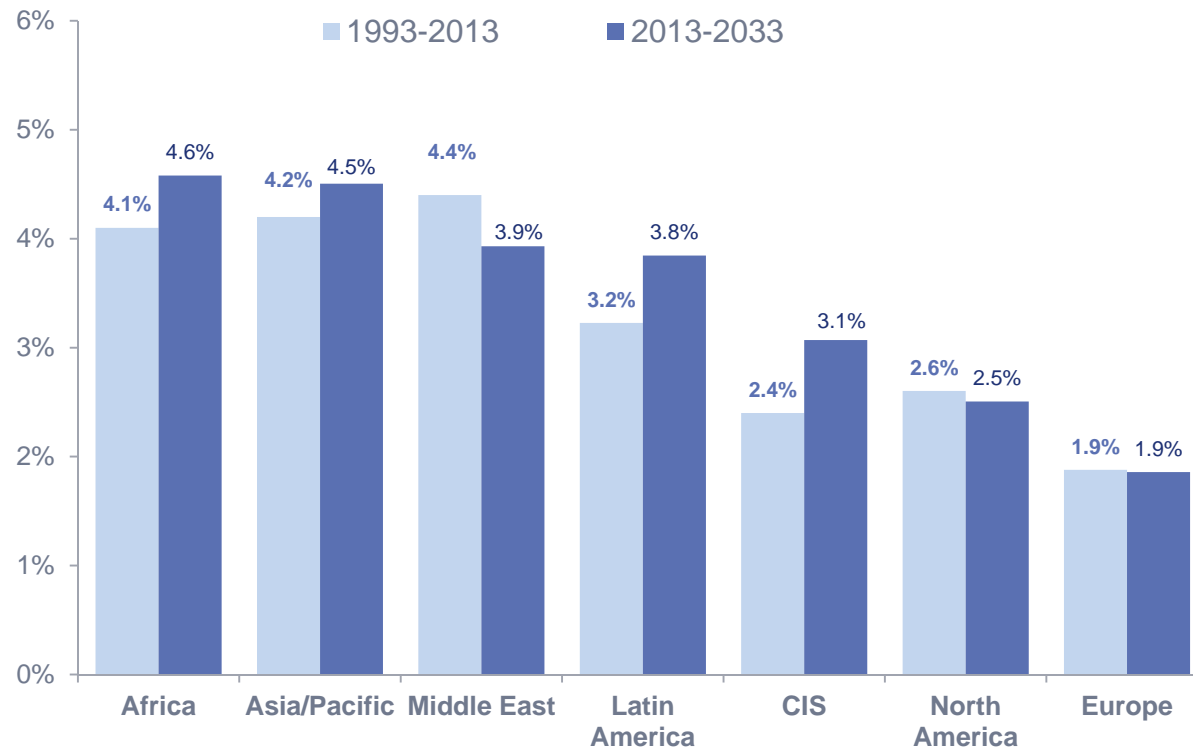
Latin America and Africa will also drive growth

Geographic locations for supply and demand will be different – traffic and cargo capacity will follow

Source: IHS Global Insight

Africa, Middle East and Latin America to lead growth along with Asia-Pacific

GDP growth rate, historical and forecast



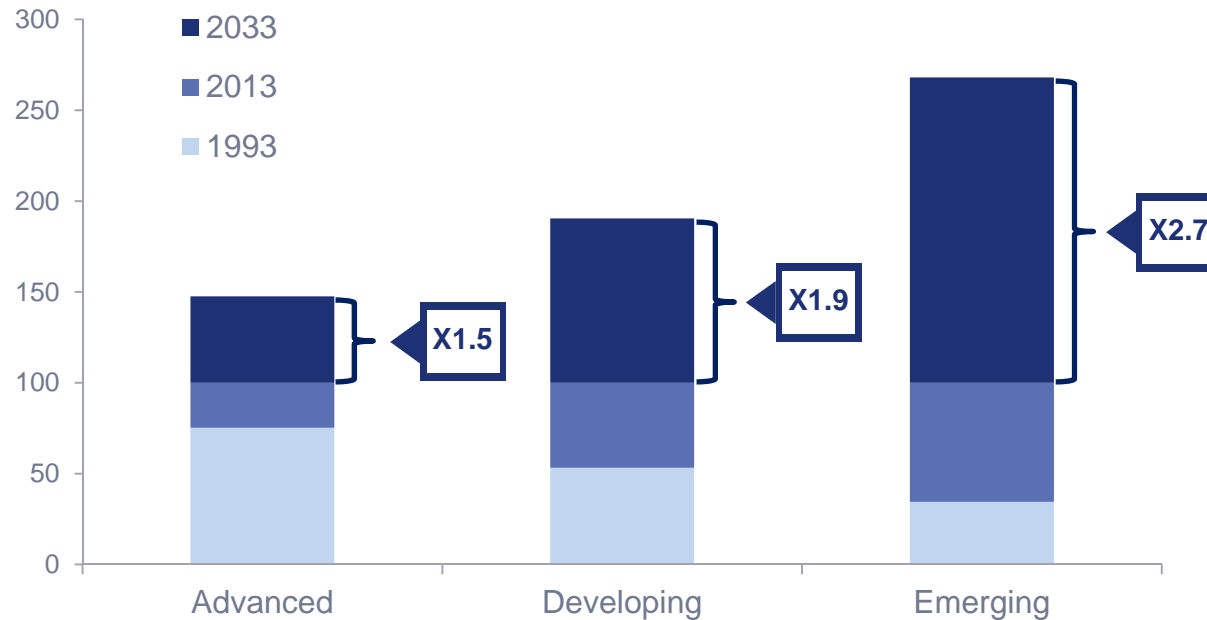
Mature economies' GDP to grow at **2.1%**
 Rest of the world to grow at **4.8%**
 -
 Asymmetric economic growth will alter cargo traffic

Source: IHS Global Insight, Airbus

Global supply: production centres will shift even further into emerging economies

Industrial Production by market

(base year 2013 = 100)



Further outsourcing of production to low labour cost countries

- More market fragmentation will be experienced
- New routes will add to traditional East-West trunk routes

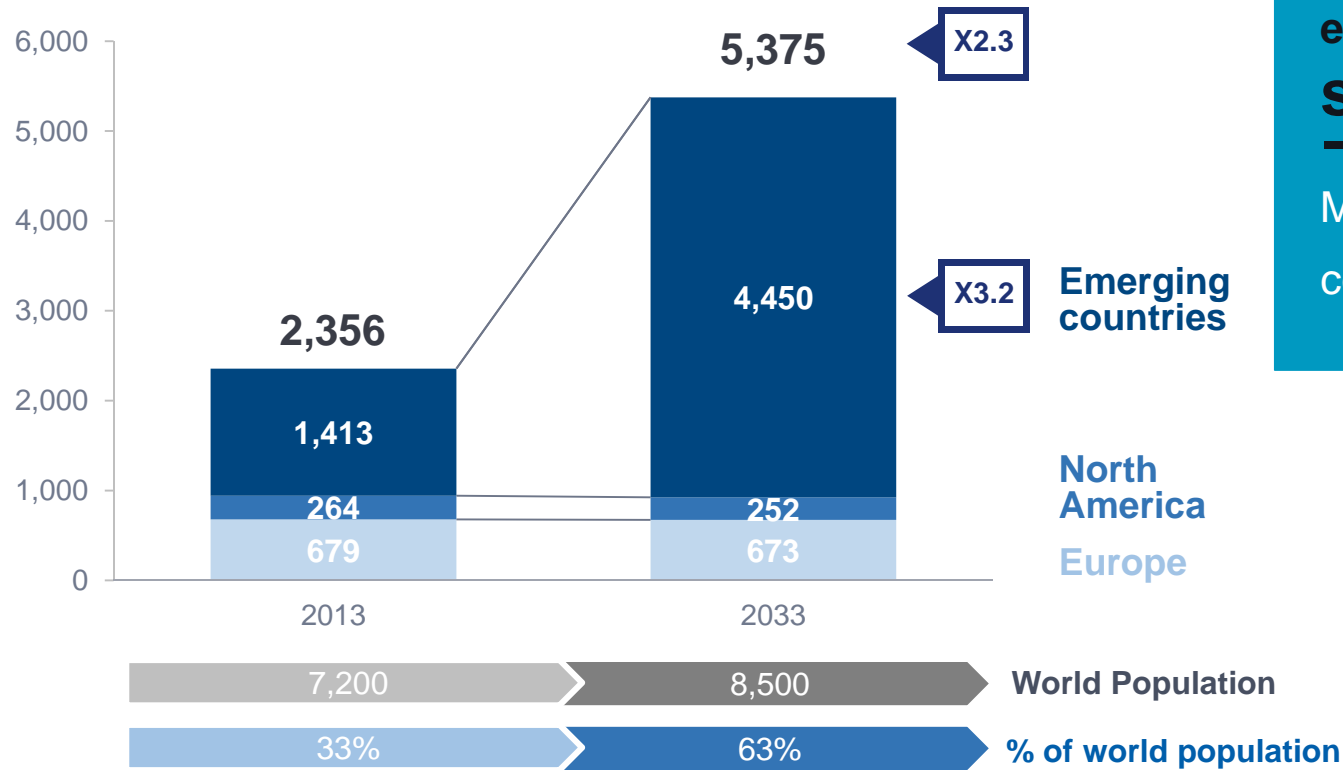
In the future, air cargo traffic between production centres will be redefined

Source: IHS Global Insight, Airbus

Global demand: purchasing power will follow suit

Global Middle Class

(Millions of people)



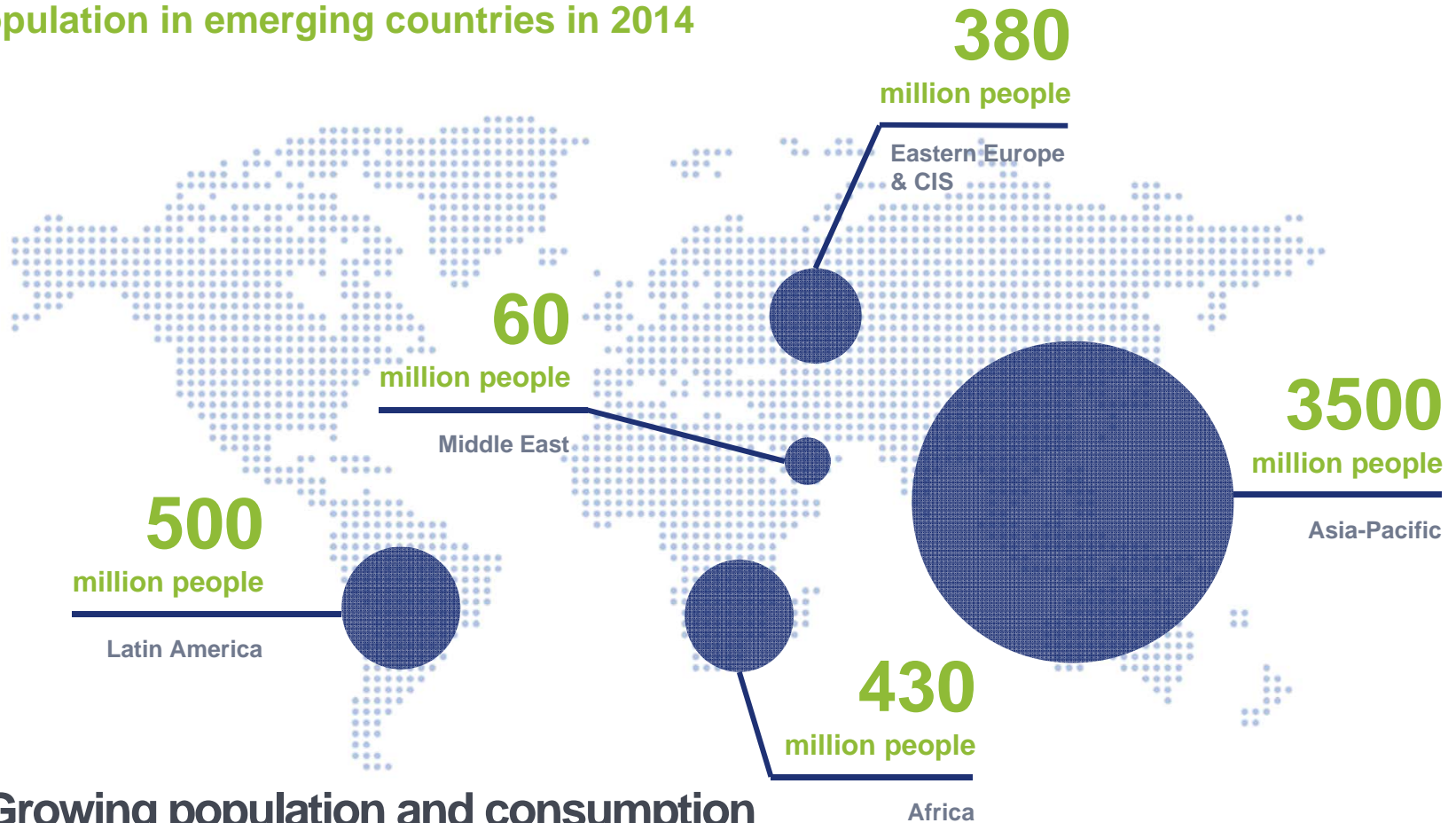
Middle class in mature economies will stagnate
 -
 Middle class in emerging countries will **triple**

Source: Kharas and Gertz, Airbus

Middle-class: Households with daily expenditures between \$10 and \$100 per person (at PPP)

Emerging economies are not only located in Asia-Pacific

Population in emerging countries in 2014



Growing population and consumption will drive trade and air freight

Source: IHS Global Insight, Airbus

GMF freight forecast overview

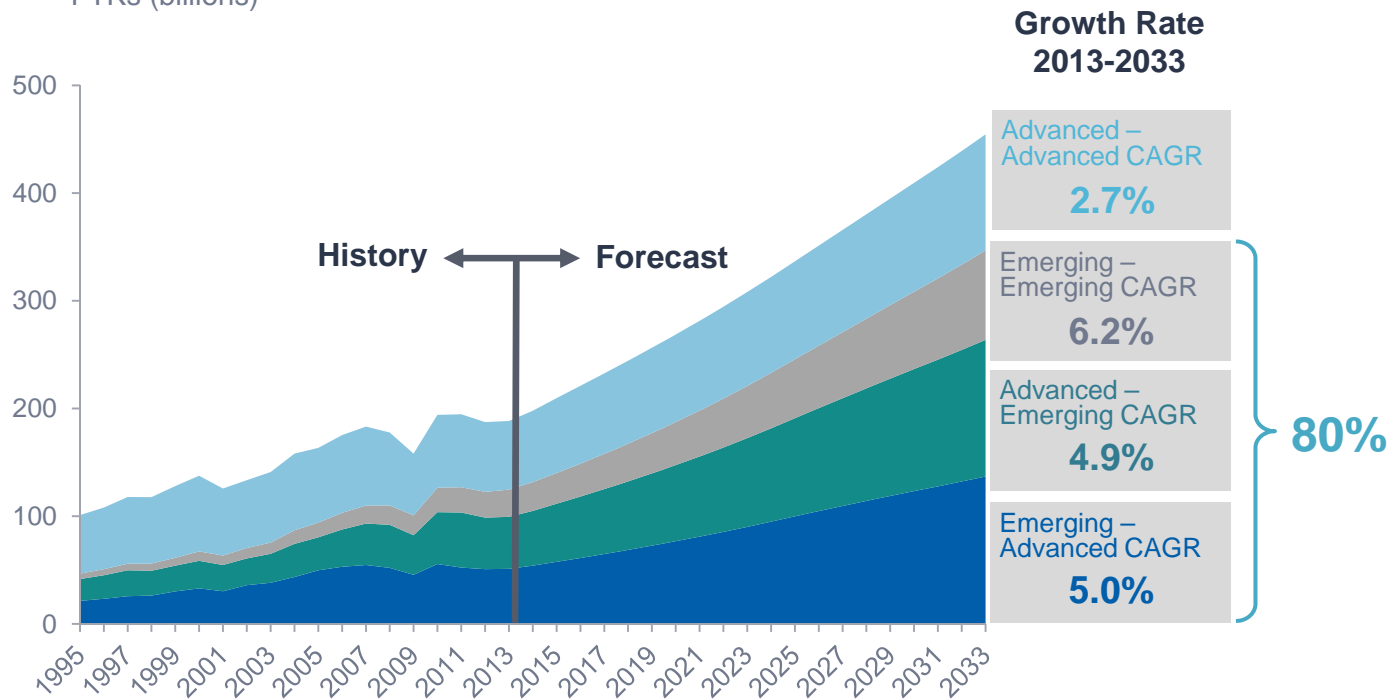
- 20 years freighter aircraft demand forecast of jet freighters over 10 tonnes
- Traffic forecast modeling **150 distinct traffic flows**
- Fleet build-ups covering **197 freight carriers**
- Freighters fleet divided in 3 segments:
 - **Small jet freighters: 10-30 tonnes**
 - **Mid-size freighters: 30-80 tonnes**
 - **Large freighters: >80 tonnes**

Source: Airbus GMF 2014

4.5% world FTK growth, driven by the strong traffic growth of emerging countries

Freight traffic growth, domestic + international

FTKs (billions)



20 year world annual FTK growth
4.5 %
 -
 Total traffic growth includes main deck and belly capacity

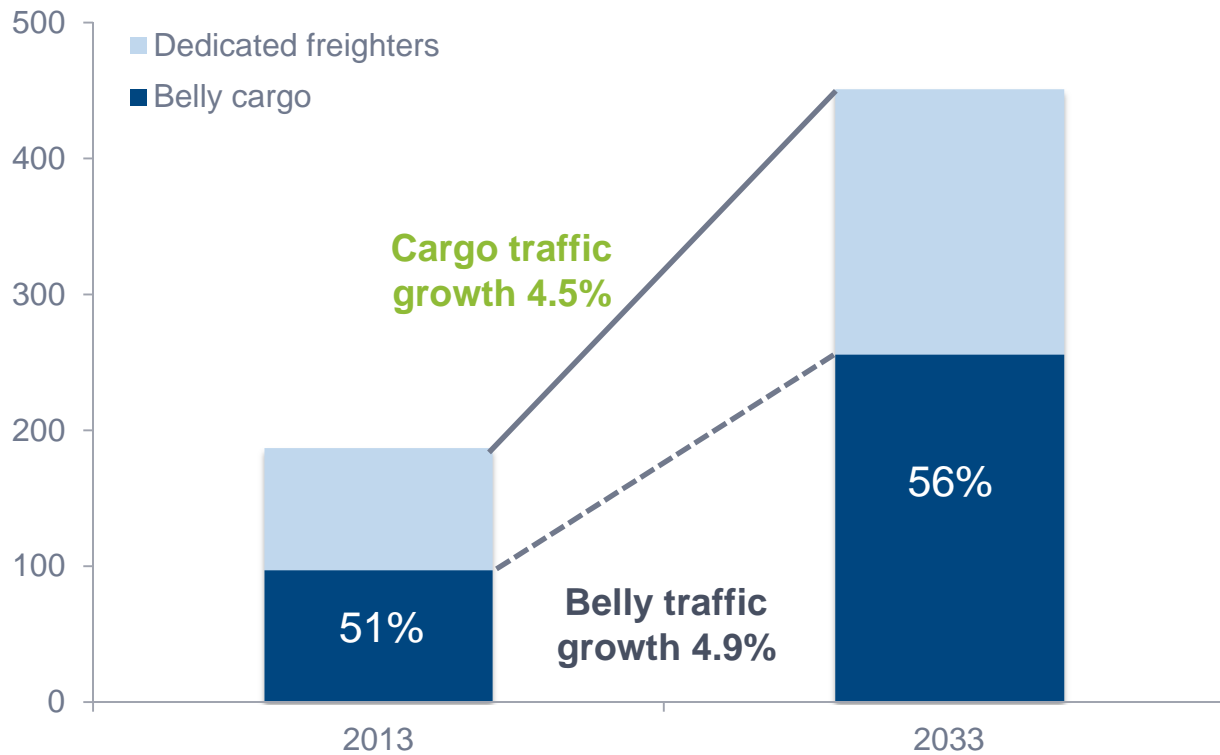
Future traffic with emerging economies will alter today's freighter fleets and networks

Source: Airbus GMF 2014

Belly capacity to capture market shares over main deck

Worldwide share of belly vs dedicated cargo traffic

Estimates FTKs (billion)



Due to the faster expansion of passenger traffic, belly capacity will capture market shares

Impact is mainly on long haul flows and larger freighters

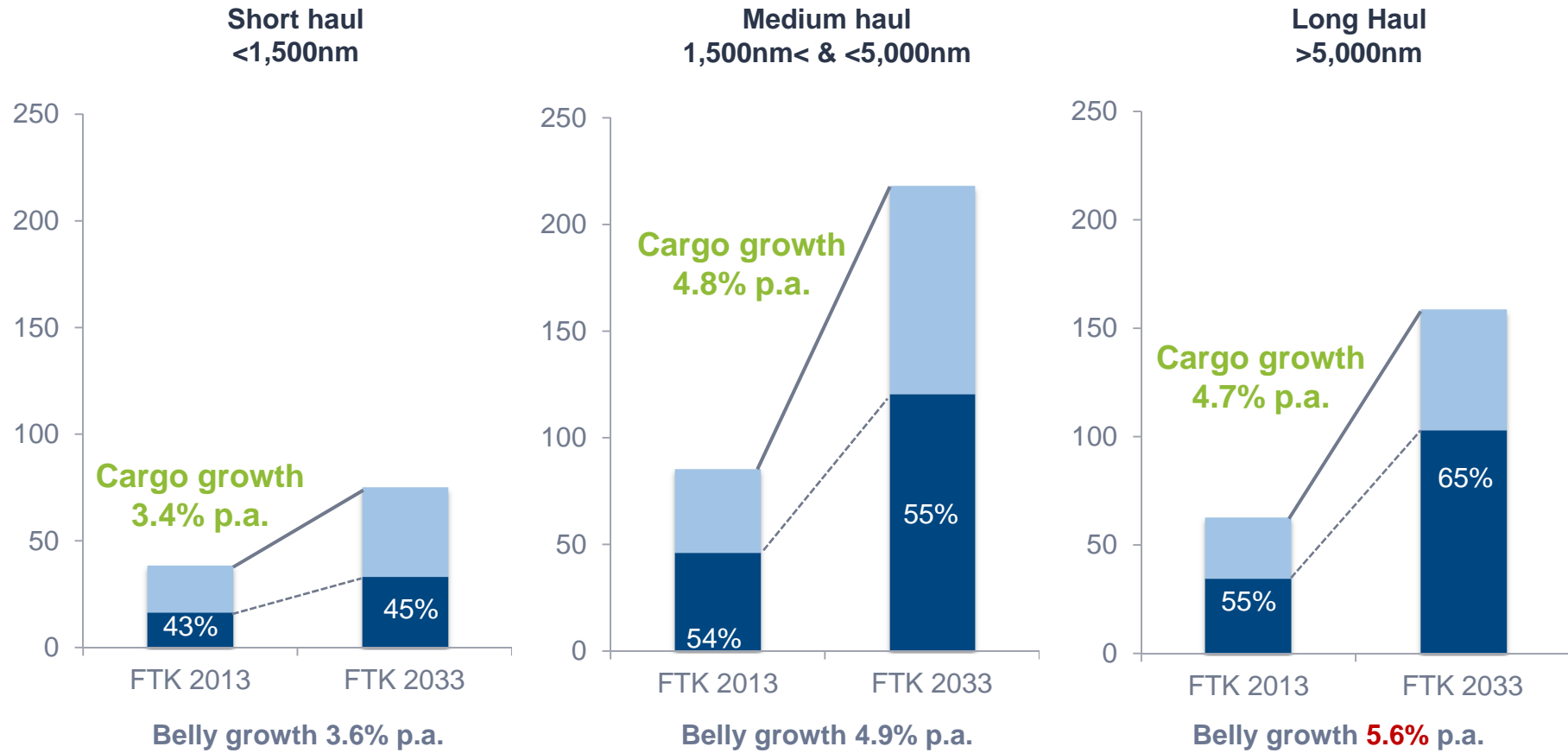
Source: Airbus GMF 2014

Belly shift will impact particularly long haul flows

Share of belly vs dedicated cargo traffic

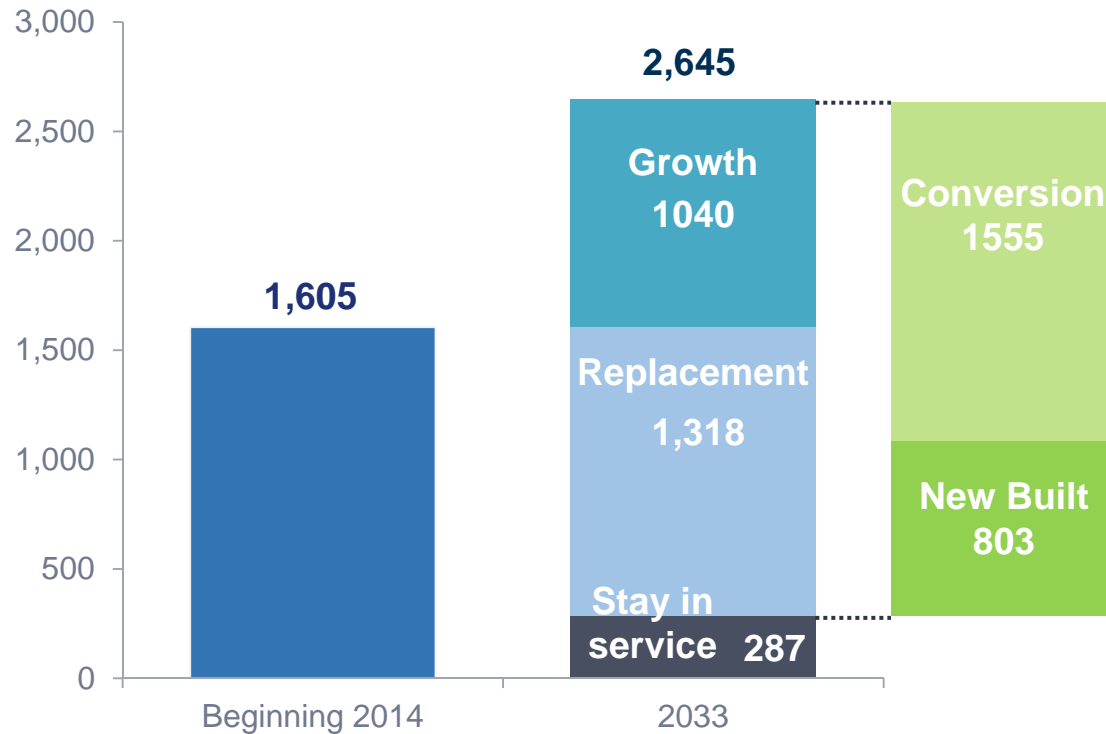
Estimated FTKs (billion)

- Dedicated freighters
- Belly cargo



Freighter fleet will increase to almost 2700 aircraft over 20 years

Freighter fleet



55% of deliveries are for replacement

Future fleet will be a mix of new built and converted freighters

Source: Airbus GMF 2014

The future freighter fleet distribution will reflect the growing influence of emerging markets

World fleet

2033: 2645

2014: 1605



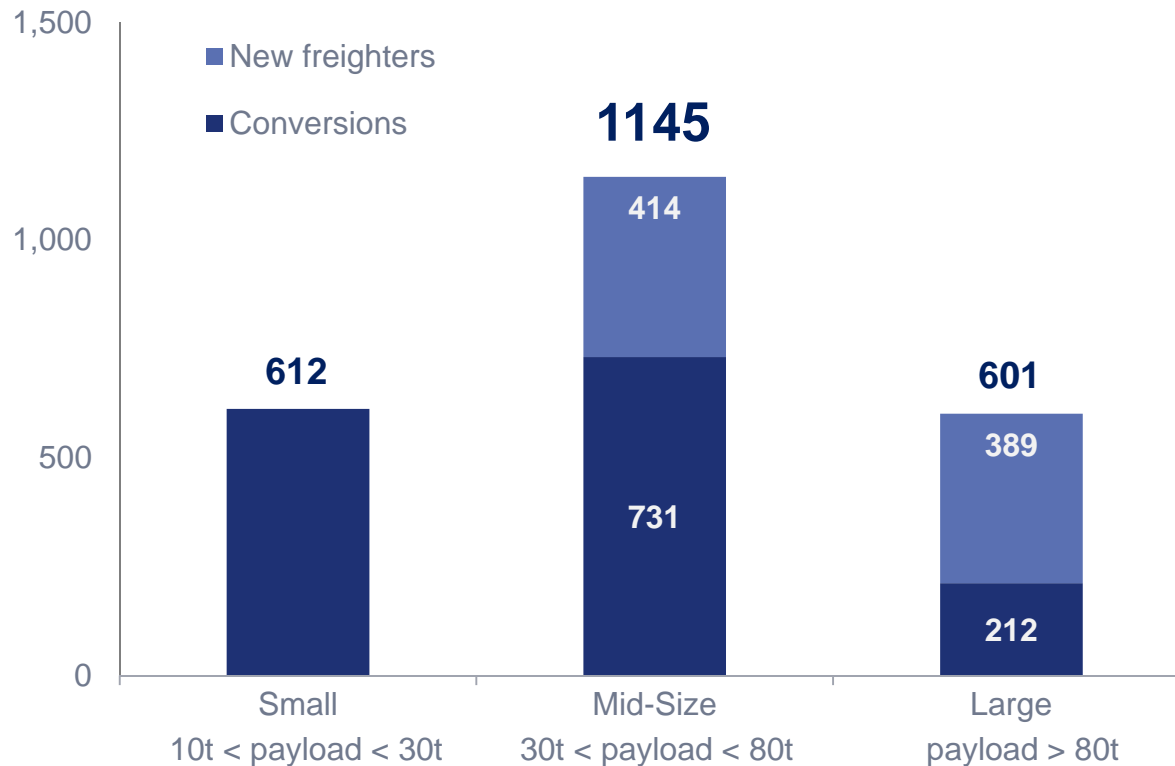
North America fleet is mainly a replacement market

Asia Pacific fleet is set to triple as growth market

Source: Airbus GMF 2014, ASCEND

800 new built freighters to be delivered over the next 20 years

Freighter deliveries over the next 20 years



Mid-size drivers

- Replacement for: US, EU
- Large growth in Asia Pacific
- New routes in Middle East, Latin America, Africa

—
Large freighters will face increasing competition from belly capacity

Source: Airbus GMF 2014

Airbus 2014 forecast key numbers

20 year annual
FTK growth

.....

4.5%

20 year demand
for aircraft
deliveries

.....

Total **2358**

New **803**

Business volume
for new freighters

.....

\$210 bn

Proportion of future
freighters

.....

Small **24%**

Mid-size **47%**

Large **29%**

Source: Airbus GMF 2014

Airbus recognises the need for mid-size freighters

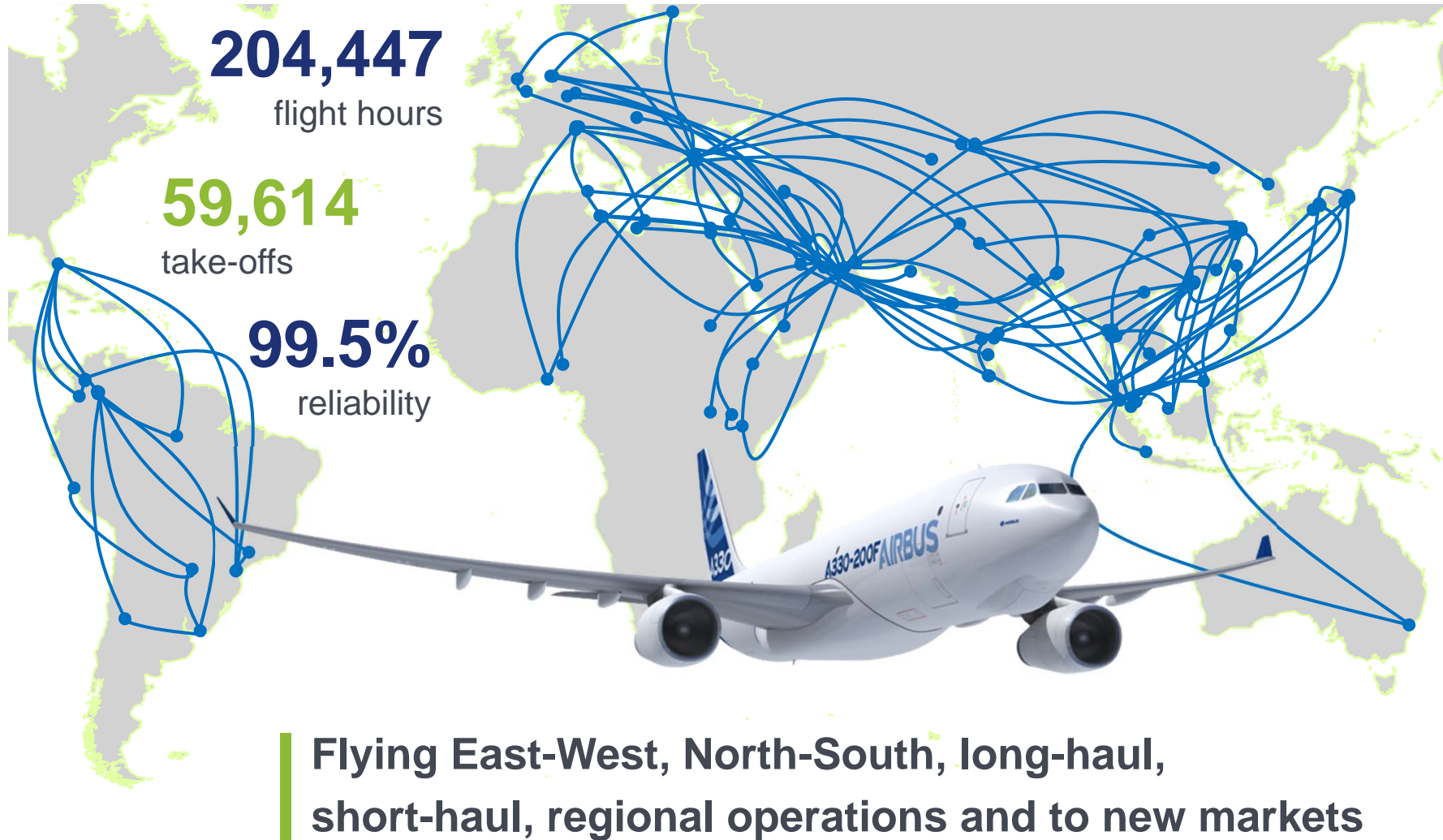


Nearly 50%
of all freighters will be
mid-size

—
The A330-200F is the
most modern mid-size
freighter on the market

**A330 Freighters: From short, regional
express routes to long haul general cargo**

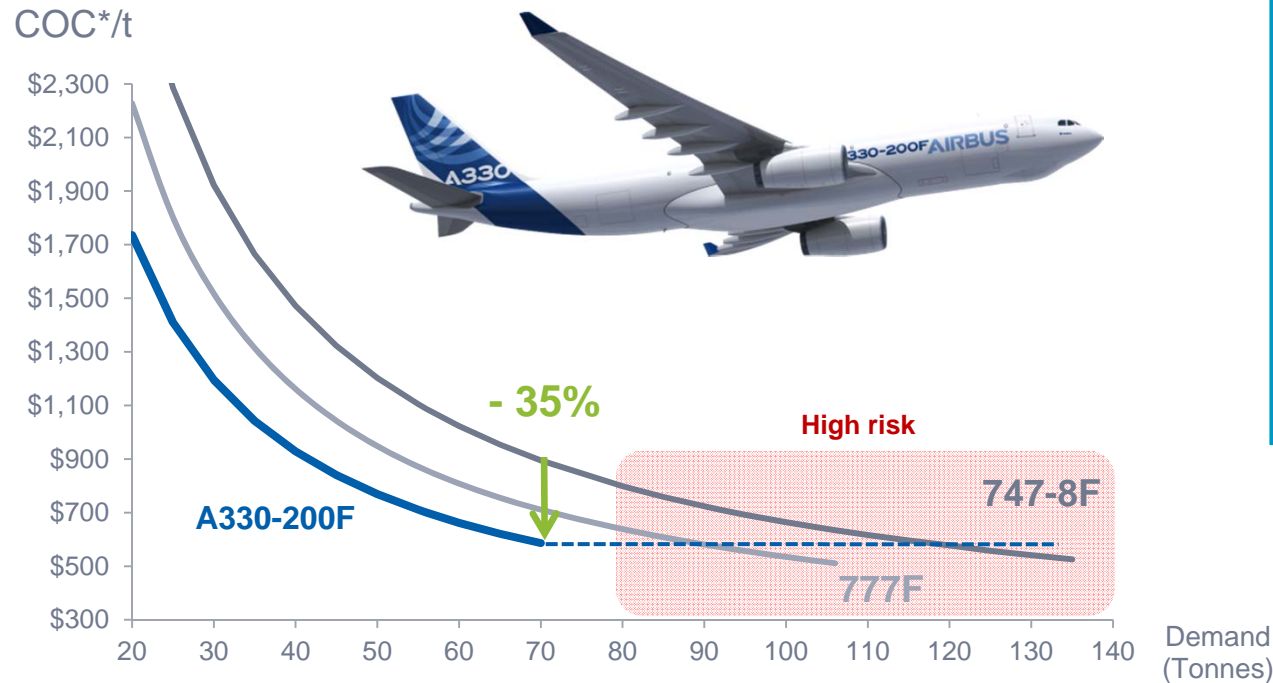
The A330F concept: Connecting diverse economies with diverse networks



Source: Airbus (Data up to September 2014 OR = >15' delays + Cancellations + Diversions + IFTBs)

Today's large freighters only work on the heaviest trade lanes

Costs per tonne carried



Large freighters need high demand and payloads all year

Mid-size freighters are more efficient when fuel, demand or yields fluctuate

As the global economy changes shape, airlines must adapt their capacity and network

COC*: Cash Operating Costs - Includes Fuel, Maintenance, Nav&Landing fees, Crew costs 3,000nm sector – JAR 5% flight profile

The 'one-type-fits-all' air cargo model no longer works

100t+ freighters



- For a limited number of high demand trunk routes
- **Challenged by growing belly lift on longer hauls**

Mid-sized freighters



- When belly cargo is non-existent or insufficient
- For diversified networks
- A flexible option for a changing industry

Belly cargo



- Basic cargo offering: **limited cost, limited risk**
- **Growing available capacity on long haul trunk routes**



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