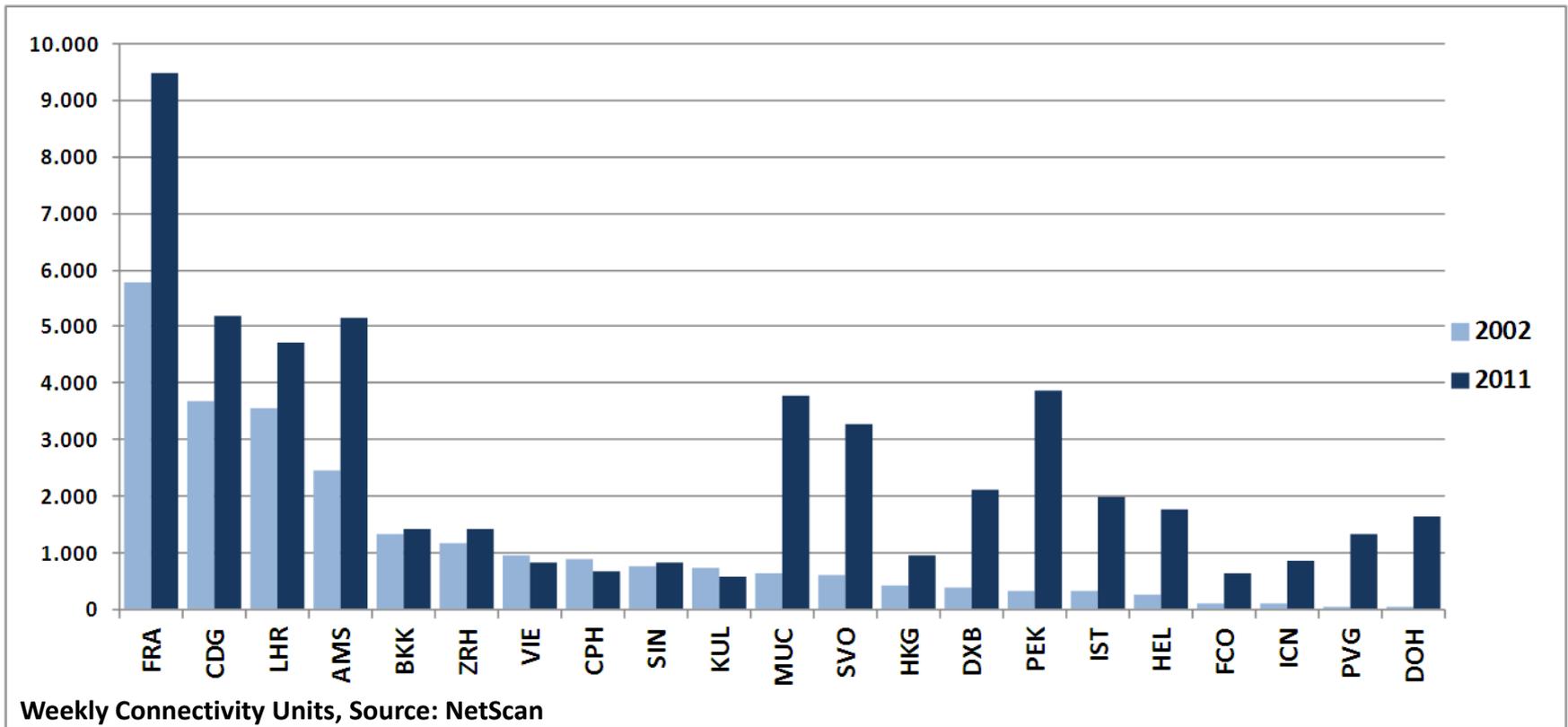


Established and Emerging Hubs in the last Decade

- **Leading Hubs Today**
- **Emerged Hubs in the last decade**
- **Which type of markets ?**
- **Where is the economic potential for hubs?**

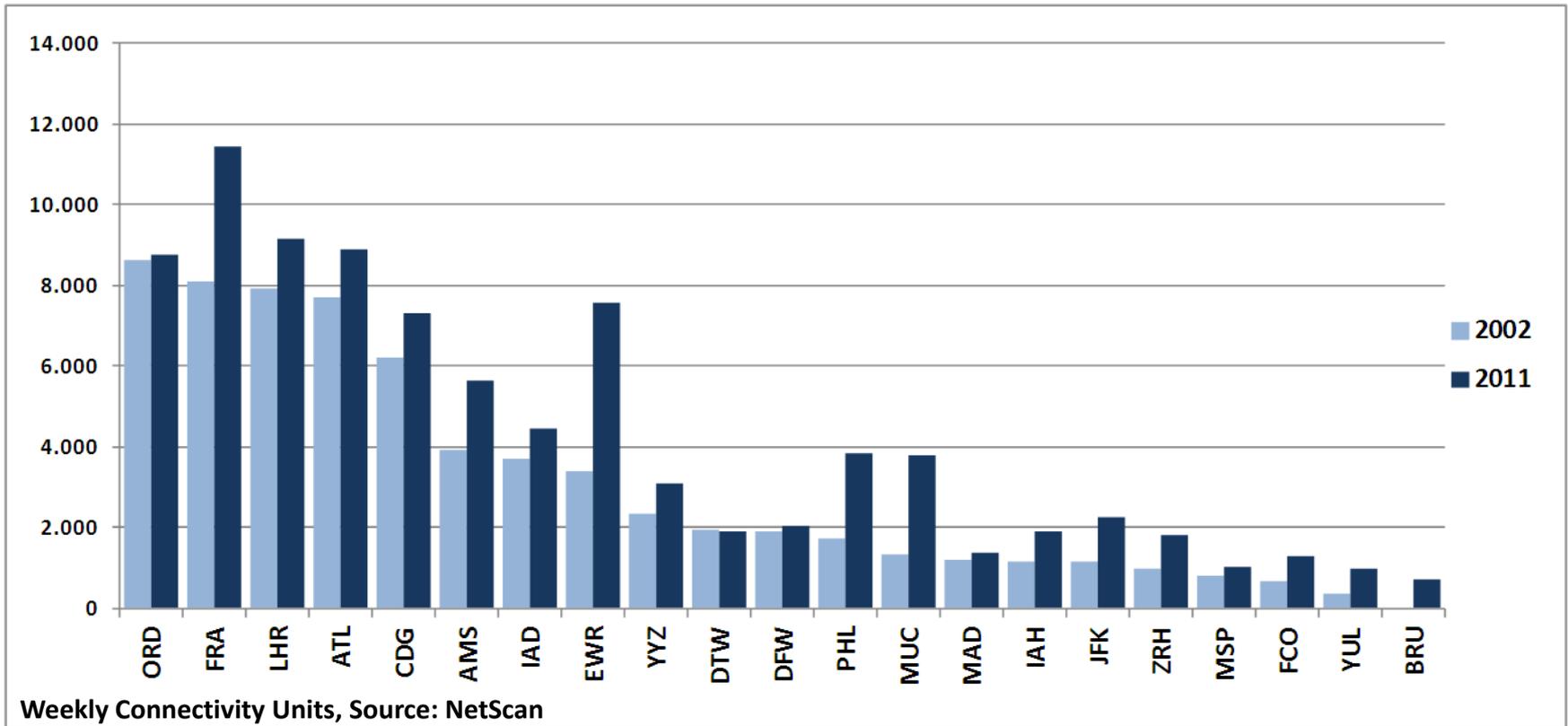
**Presentation at the 6th Annual Airneth Conference
Jan Veldhuis, Programme Manager Airneth
Den Haag, 19 April 2012**

Hub Connectivity in the Europe – Asia/Pacific Market



- Europe's main four hubs still leading, but...
- Munich and Beijing have emerged, partly with support of domestic feed
- Moscow, Dubai and Istanbul without domestic feed

Hub Connectivity in the North Atlantic Market



- Frankfurt took lead, despite of location
- Newark, Philadelphia and Munich have emerged

Attractive Markets for Hubs

LARGE MARKETS

- Large markets (such as London – New York) are generally direct connected
- Hence market share for hubs is low, unless.....
- Low airfares are charged
- Moreover, relatively few markets

SMALL MARKETS

- Small markets (such as Dortmund – Salt Lake City)
are generally not direct connected
- Market size is lower, but...
- Hubs can take 100% of share in these markets
- In case of unique service, better scope for higher airfares
- Moreover several tens of thousand's of these markets

Airport Categorisation by Size

NON-EUROPEAN AIRPORTS

Major

ATL, ORD, JFK, DFW+12

PEK, NRT, HKG, BKK+ 11

Medium Sized

SEA, PHL, BOS, SLC +35

MNL, TPE, BNE, SGN... + 37

Small

1100+ airports

1500+ airports

EUROPEAN AIRPORTS

Major

LHR
FRA
CDG
AMS
...
+4

Medium Sized

ORY
LGW
VIE
CPH
...
+34

Small

700+
air-
Ports

Hub Market Categorisation by Size

NON-EUROPEAN AIRPORTS

EUROPEAN AIRPORTS

		Major	Medium Sized	Small	
		ATL, ORD, JFK, DFW+12	SEA, PHL, BOS, SLC +35	1100+ airports	
		PEK, NRT, HKG, BKK+ 11	MNL, TPE, BNE, SGN... + 37	1500+ airports	
EUROPEAN AIRPORTS	Major	LHR FRA CDG AMS ... +4	<ul style="list-style-type: none"> • Major (cat 1) markets Typical market: London – New York	<ul style="list-style-type: none"> • Large (cat 2) markets Typical market: London – Salt Lake City	<ul style="list-style-type: none"> • Mid-size (cat 3) markets Typical market: London – Reno
	Medium Sized	ORY LGW VIE CPH ... +34	<ul style="list-style-type: none"> • Large (cat 2) markets Typical market: Vienna – New York	<ul style="list-style-type: none"> • Mid-size (cat 3) markets Typical market: Vienna – Salt Lake City	<ul style="list-style-type: none"> • Small (cat 4) markets Typical market Vienna – Reno
	Small	700+ air- Ports	<ul style="list-style-type: none"> • Mid-size (cat 3) markets Typical market: Dortmund – New York	<ul style="list-style-type: none"> • Small (cat 4) markets Typical market: Dortmund – Salt Lake City	<ul style="list-style-type: none"> • Thin (cat 5) markets Typical market Dortmund – Reno

Hub Market Categorisation by Size

NON-EUROPEAN AIRPORTS

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Hub Market Categorisation by Size

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EUROPEAN AIRPORTS

Major

LHR
FRA
CDG
AMS
...
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- Major (cat 1) markets
- Few markets
- Direct connected
by large aircraft (747, 380)
- Few opportunities for hubs

Hub Market Categorisation by Size

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- Few markets
- Direct connected by large aircraft (747, 380)
- Few opportunities for hubs

- Large (cat 2) markets
- Increasingly direct connected by smaller aircraft (777 etc..)
- Decreasing opportunities for hubs

Medium Sized

ORY
LGW
VIE
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- Large (cat 2) markets
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Hub Market Categorisation by Size

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Target Markets for Hubs

NON-EUROPEAN AIRPORTS

Major

ATL, ORD, JFK, DFW+12

PEK, NRT, HKG, BKK+ 11

Medium Sized

SEA, PHL, BOS, SLC +35

MNL, TPE, BNE, SGN... + 37

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1100+ airports

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...
+4

Medium Sized

ORY
LGW
VIE
CPH
...
+34

Small

700+
air-
Ports

too Large

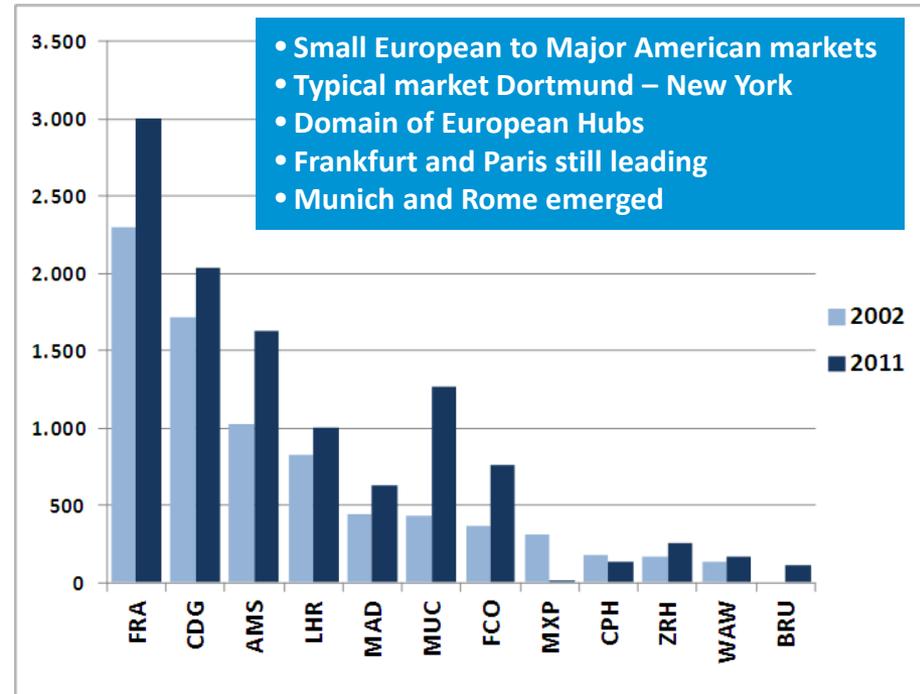
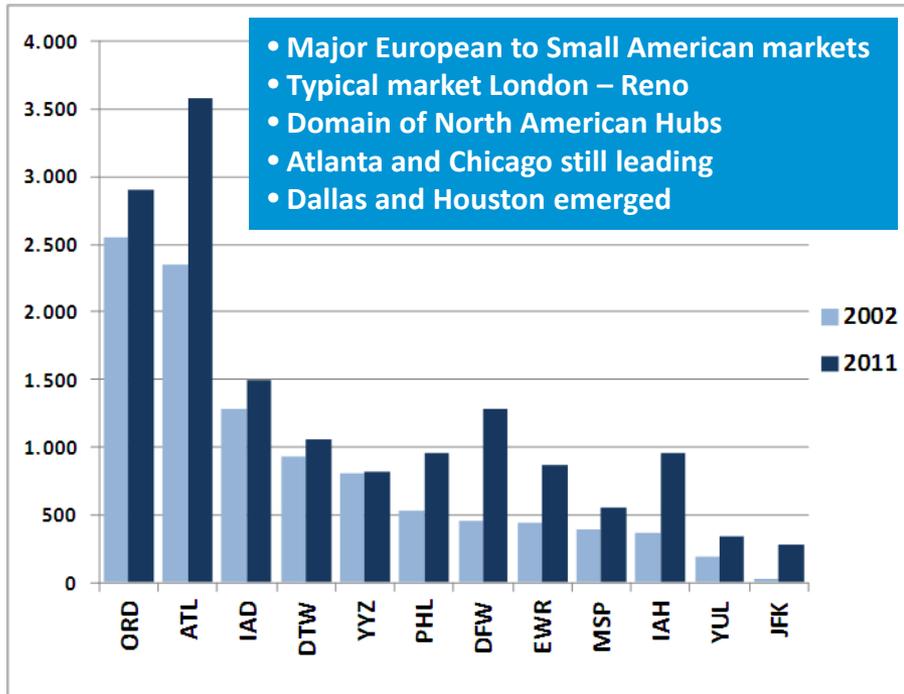
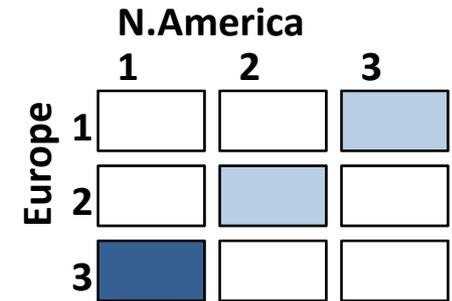
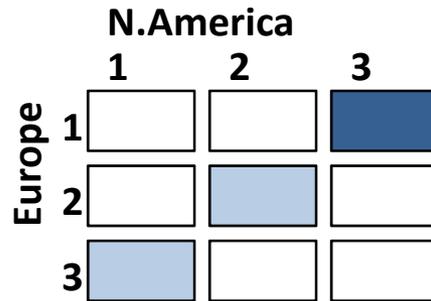
- Mid-size (cat 3) markets
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- Peak Hour Capacity needed

- Mid-size (cat 3) markets
- Many not direct connected
- Opportunities for hubs with direct flights to medium sized airports in both continents

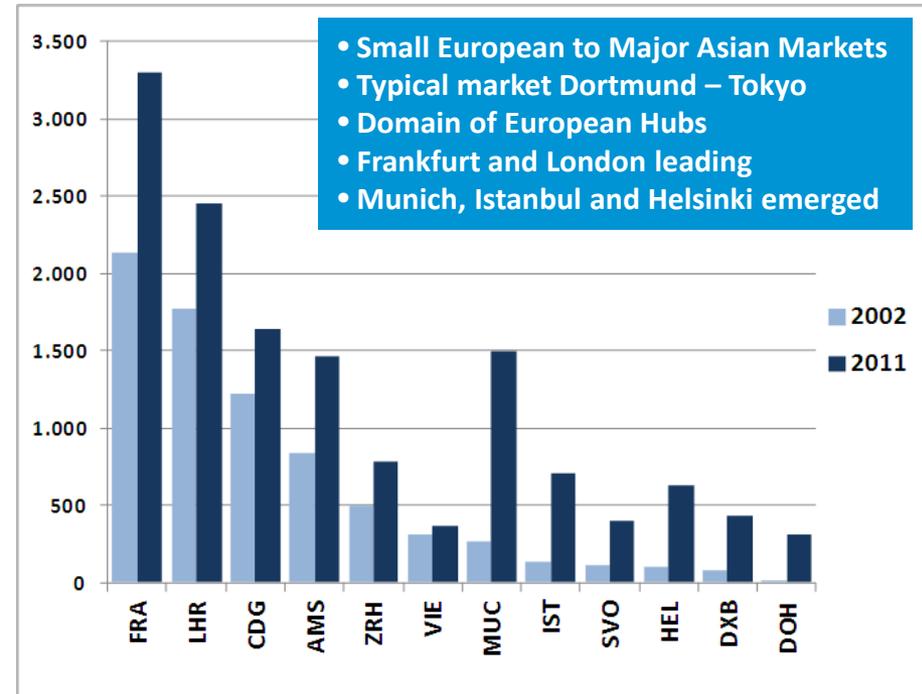
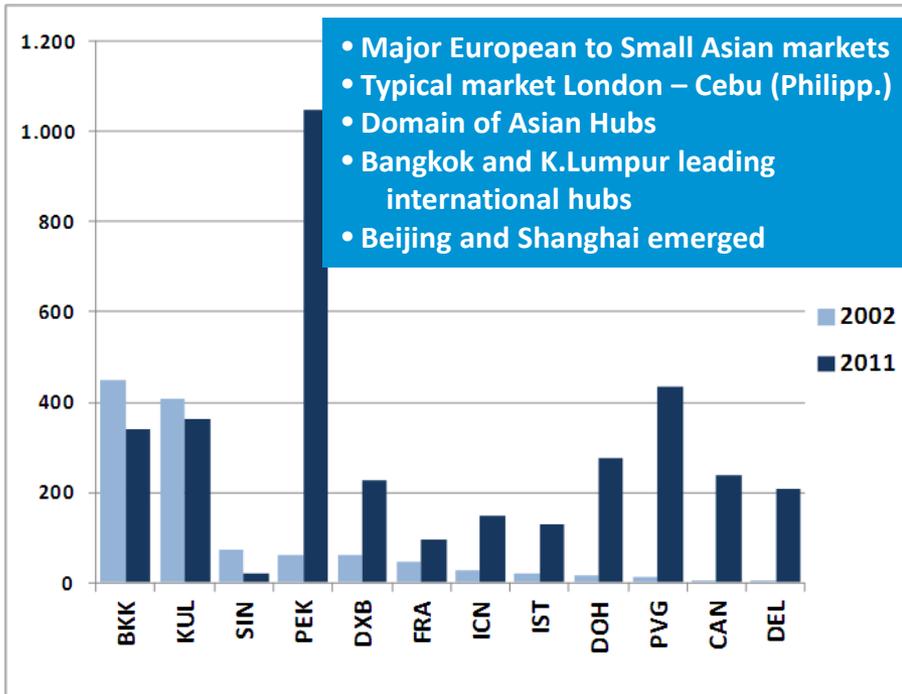
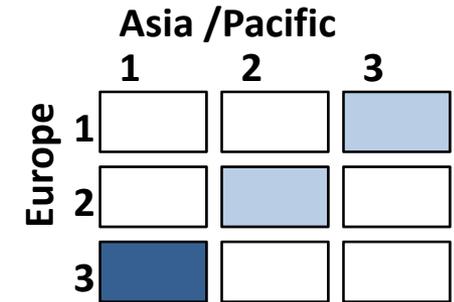
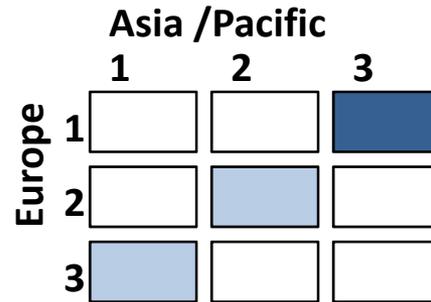
too Small

- Mid-size (cat 3) markets
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Emerging Hubs in Medium Sized markets: North Atlantic

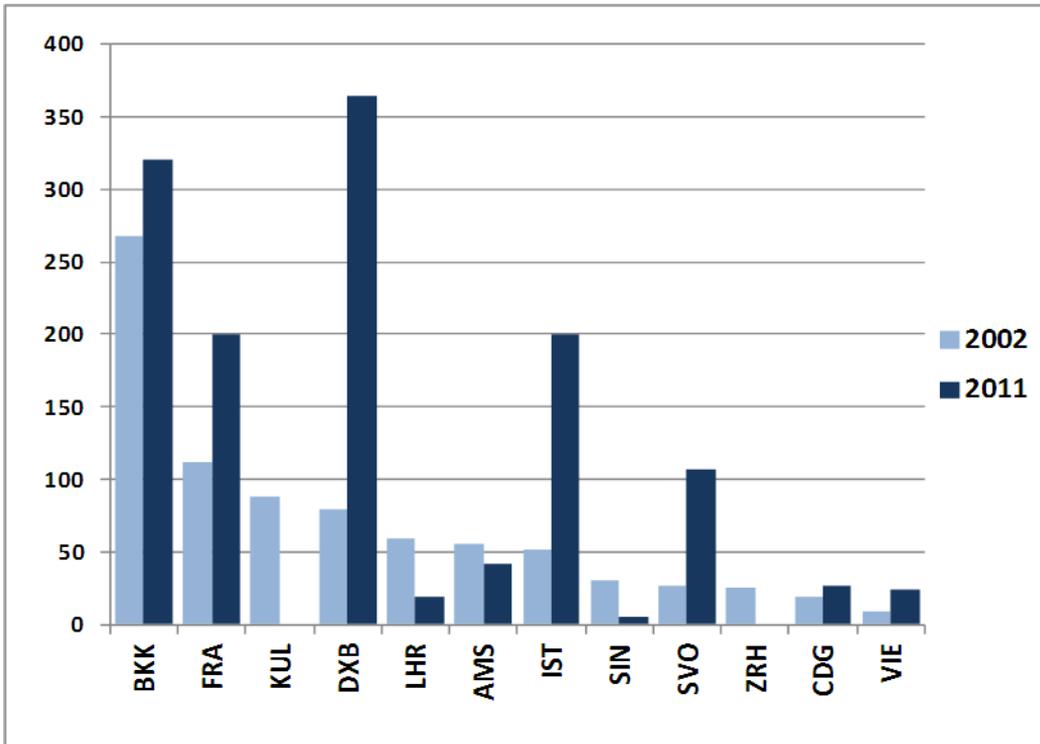


Emerging Hubs in Medium Sized markets: Eurasian markets



Emerging Hubs in Eurasian markets: Connecting secondary airports

		Asia/Pacific		
		1	2	3
Europe	1			
	2			
	3			



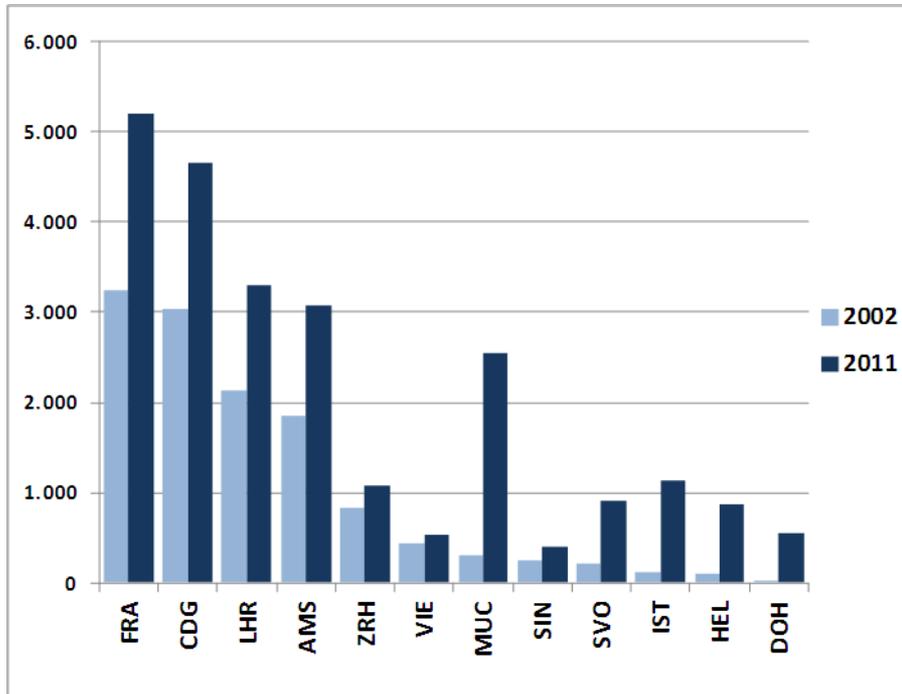
- Hubs connecting secondary airports at both sides
- Serving long haul markets with medium haul flights and hence..
- With smaller aircraft being able to focus on secondary airports
- Gulf hubs can serve both sides with 6 to 7 hours flights
- Bangkok was leading
- Dubai, Istanbul and Moscow have emerged

“Top Sectors” and required network portfolio of Schiphol

- **Identification of nine potential new economic clusters**
- **Requirement of network portfolio in specific growth regions:**
 - Mexico, South Africa, Russia, Gulf Area, India
 - Vietnam, China, South Korea, Indonesia, Australia
- **Particular need for secondary destinations in these areas**
 - Guadalajara, Durban, Novosibirsk, Abu Dhabi, Bangalore
 - Da Nang, Xiamen, Busan, Medan, Brisbane
- **Hubs with flights to these destinations are well positioned to connect Europe with these destinations**

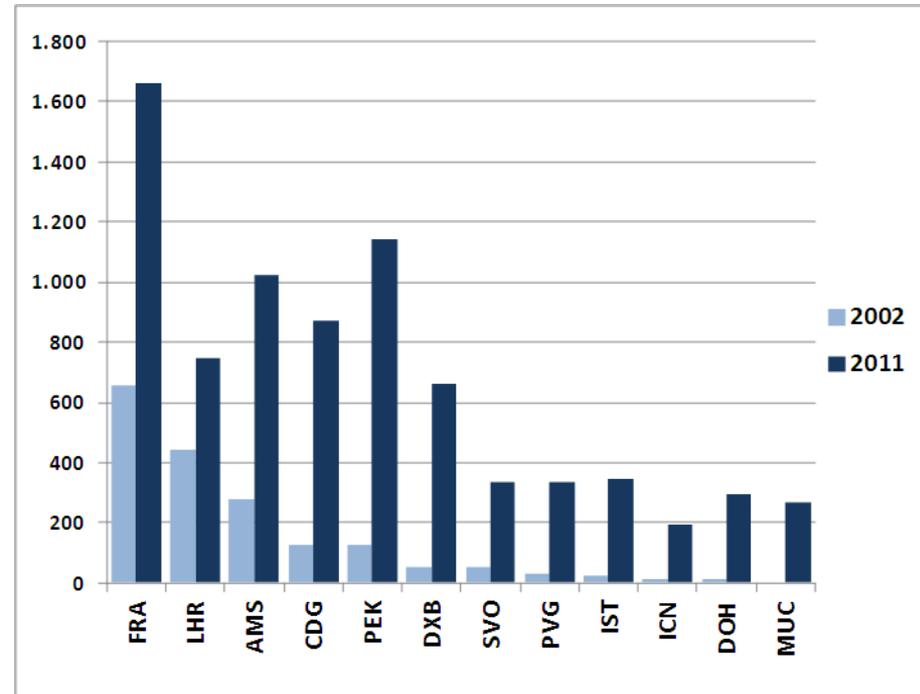
Emerging Hubs in specific “Growth markets”

Markets between Europe and **Primary** destinations in Growth Areas



- Main four European hubs still leading
- Munich and Istanbul have emerged

Markets between Europe and **Secondary** destinations in Growth Areas



- Frankfurt still leading
- Beijing has emerged as natural hub to secondary Chinese destinations
- Amsterdam has emerged by several new destinations and code share agreements in China

Conclusions

- **Leading Hubs Today:**

The main ones of ten years ago have still the lead

- **Emerged Hubs in the last decade:**

Munich, Istanbul and Dubai

- **Which type of markets ?**

Small markets more attractive than the major markets

- **Where is the economic potential for hubs?**

Not only in the usual BRIC's