# Accommodating growth and hub development: experiences from Amsterdam and India

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# Outline

- Some important notions about hubbing
- The critical success factors for hubs
- The Amsterdam experience
- The India experience
- Concluding remarks

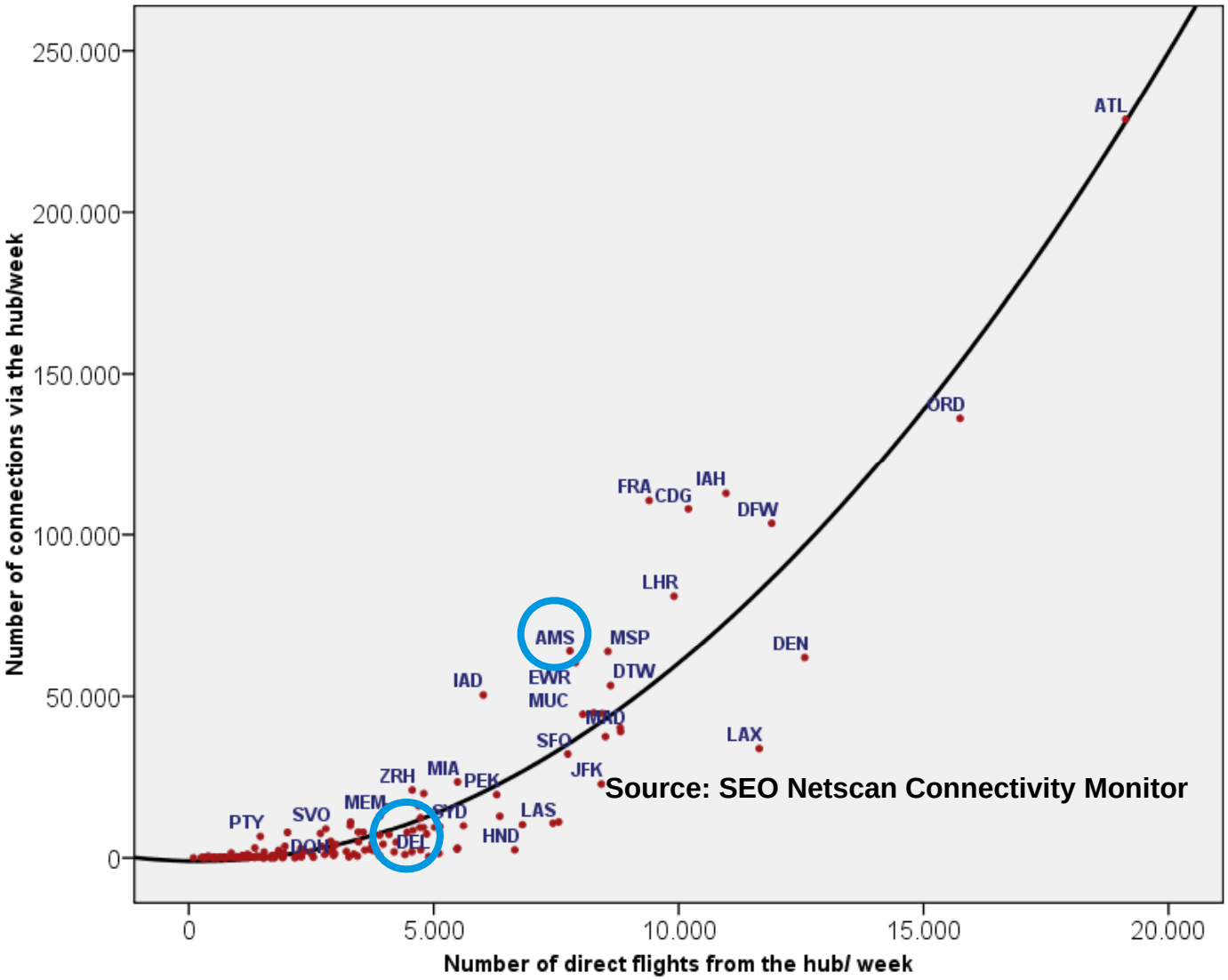
# Some important notions about hubbing

- **Hubs are factories to create route density**
  - Consolidation of traffic flows from different origins and destinations on a single flight creates scope and density advantages for airlines
  - Resulting route density allows hub airline to serve O-D markets directly that otherwise would not have enough traffic for direct service
  - Route density allows to increase frequencies and achieve competitive advantage (S-curve effect)
  - Connectivity is key to achieve route density and competitive advantage
  - Leverage of hubs: above a certain network scale and with an efficient wave-system, connectivity increases exponentially

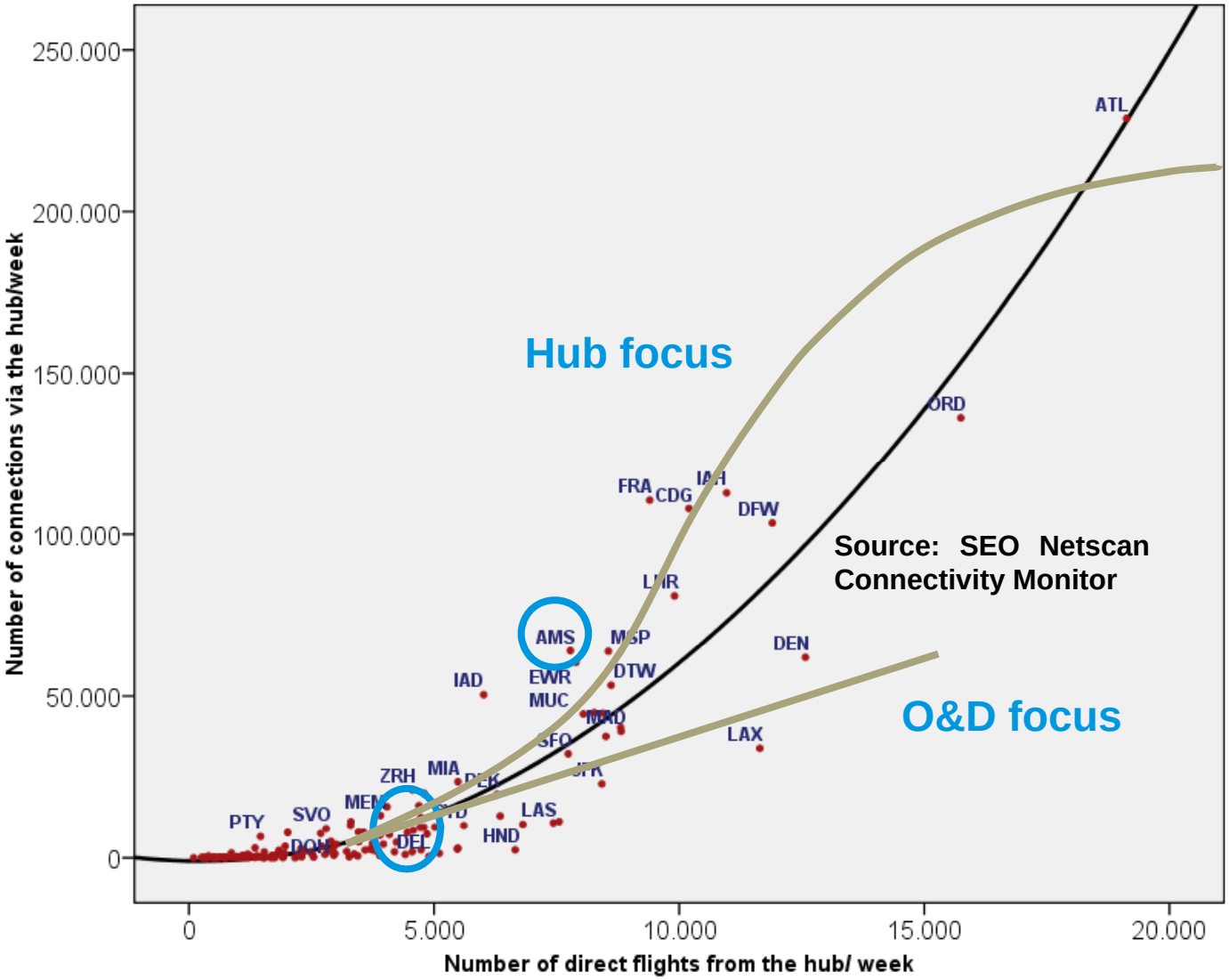
- **In the non-integrated cargo business, hubbing involves the development of a strong "market place":**
  - network forwarders + airlines+ other logistic service providers + road feeder network (logistic hub)

- **Important synergies between passenger and cargo hubbing, including:**
  - Belly cargo adds importantly to profitability of ICA passenger flights
  - High pax belly ICA frequencies + flexible full freighter capacity deliver attractive market place for network forwarders

# The relationship between hub connections and number of direct flights



# At succesful hubs, number of hub connections increases exponentially as number of direct flights grows



# Wider economic benefits of hubbing

- **Hubbing creates strong base for network quality:**
  - Direct service on long haul markets
  - Direct service in small short haul markets
  - at high frequencies
- **Reduce ‘leakage’ to foreign hub carriers**
- **Reduces travel costs for consumers and business:**
  - Less need for making connections, reduced elapsed times, higher frequency=more flexibility
  - welfare gains
- **Improved business climate:**
  - Bel & Fageda (2008): 10% growth in intercontinental flights = 4% growth in large firms’ headquarters
- **Regional economic effects: employment, agglomeration effects, “market place”**

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# Critical success factors for hubbing

1. **Location, location, location**
2. **Large and affluent catchment area:**
   - stable and high-yield local market
3. **Short Minimum Connecting Times**
   - Maximizes connectivity, reduces hassle for passengers
4. **High peak-hour capacity**
   - to facilitate efficient bank system
5. **Reliability of runway system**
6. **Availability of bilateral traffic rights**
7. **Strong hub carrier, part of global airline alliance**
8. **Uniqueness of the hub carrier network**
9. **Visit costs**

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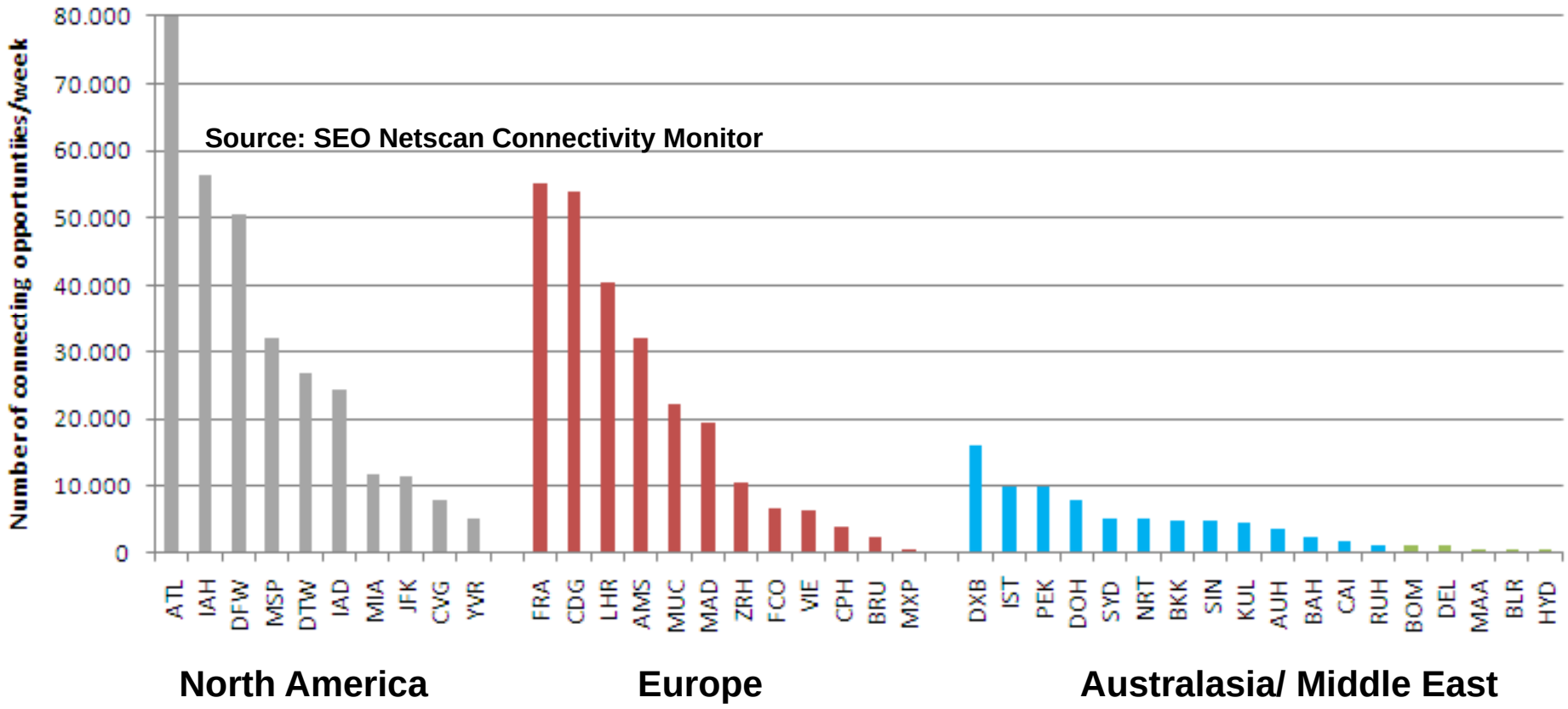
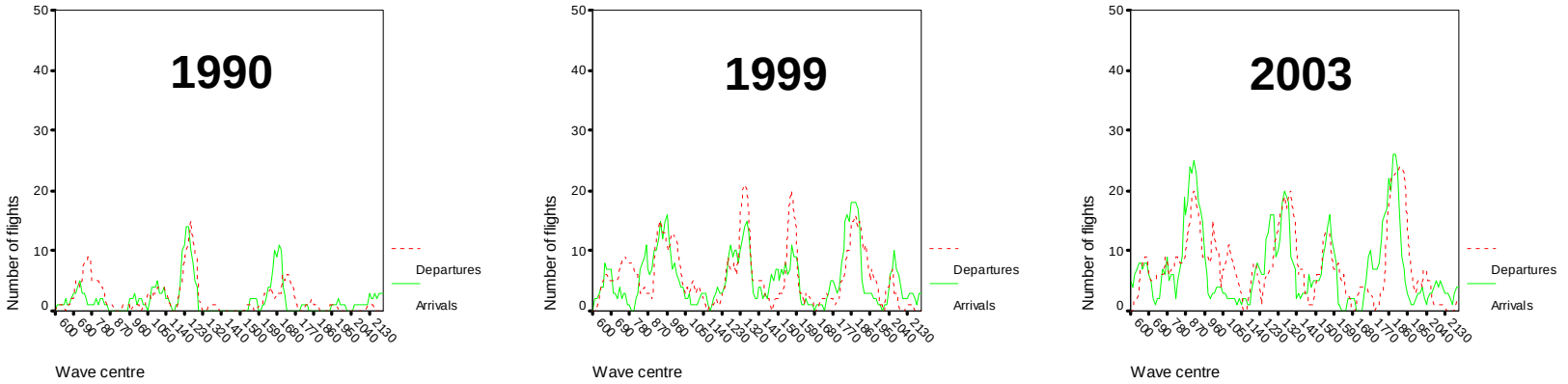
# Hub performance from a global perspective: # hub connections/ week



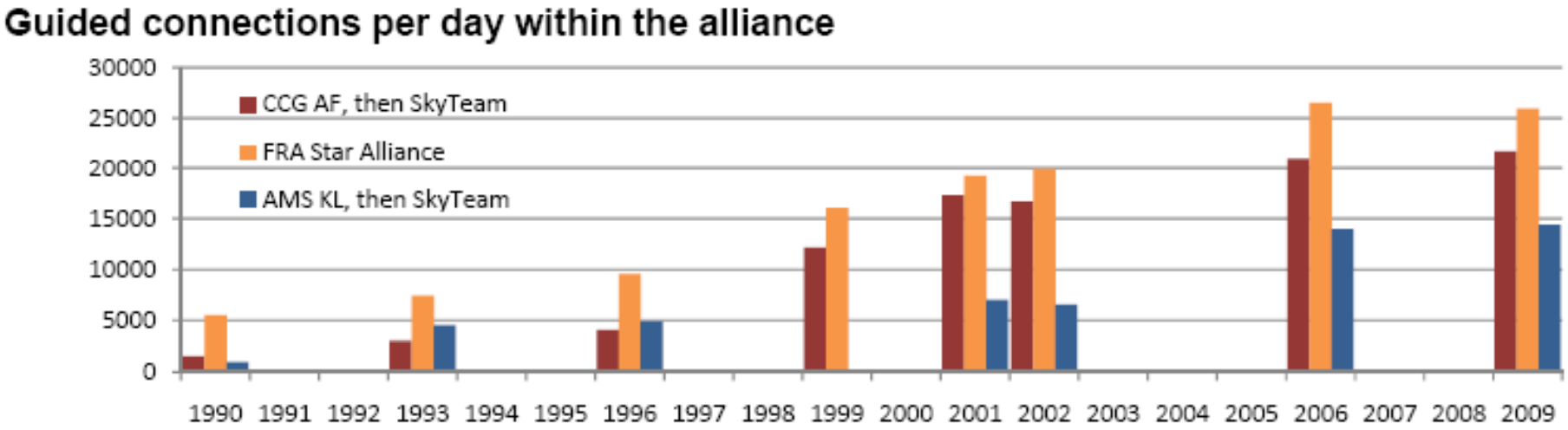
# The Amsterdam Schiphol experience

- **During 1990s, fast growth of KLM hub system at Schiphol:**
  - **Expansion European feeder network**
    - Facilitated by liberalization European aviation market
    - Partnerships with regional carriers (e.g. Eurowings, Braathens, Air Dolomiti)
  - **Implementation of 3 and 5 bank-system in 1993 and 1997**
  - **KLM-Northwest partnership: NL-US Open Skies, anti-trust immunity, development of AMS-DTW/MSP "dogbone" network**
- **Accommodating growth:**
  - **Investment in terminal, landside accessibility and runway capacity at Amsterdam Schiphol airport**
  - **Bilateral air service negotiations by Dutch government**
  - **Investments in bagage handling**
- **Air France-KLM merger and entry into SkyTeam alliances further boosted hub connectivity**

# Hub development Amsterdam: implementation of wave-system and connectivity growth




Source: Burghouwt (2007)




Source: Stumpf (2009), airneth.nl

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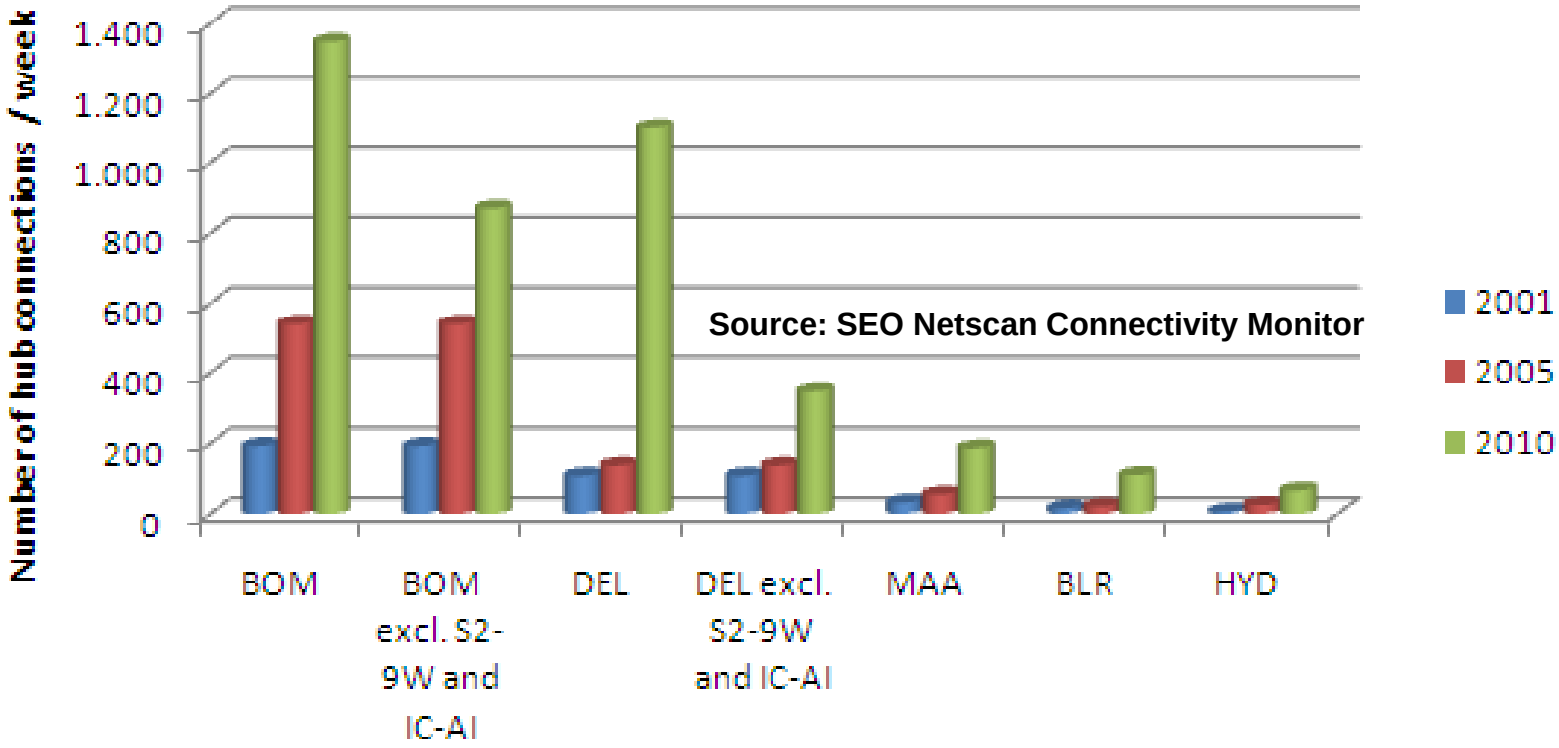
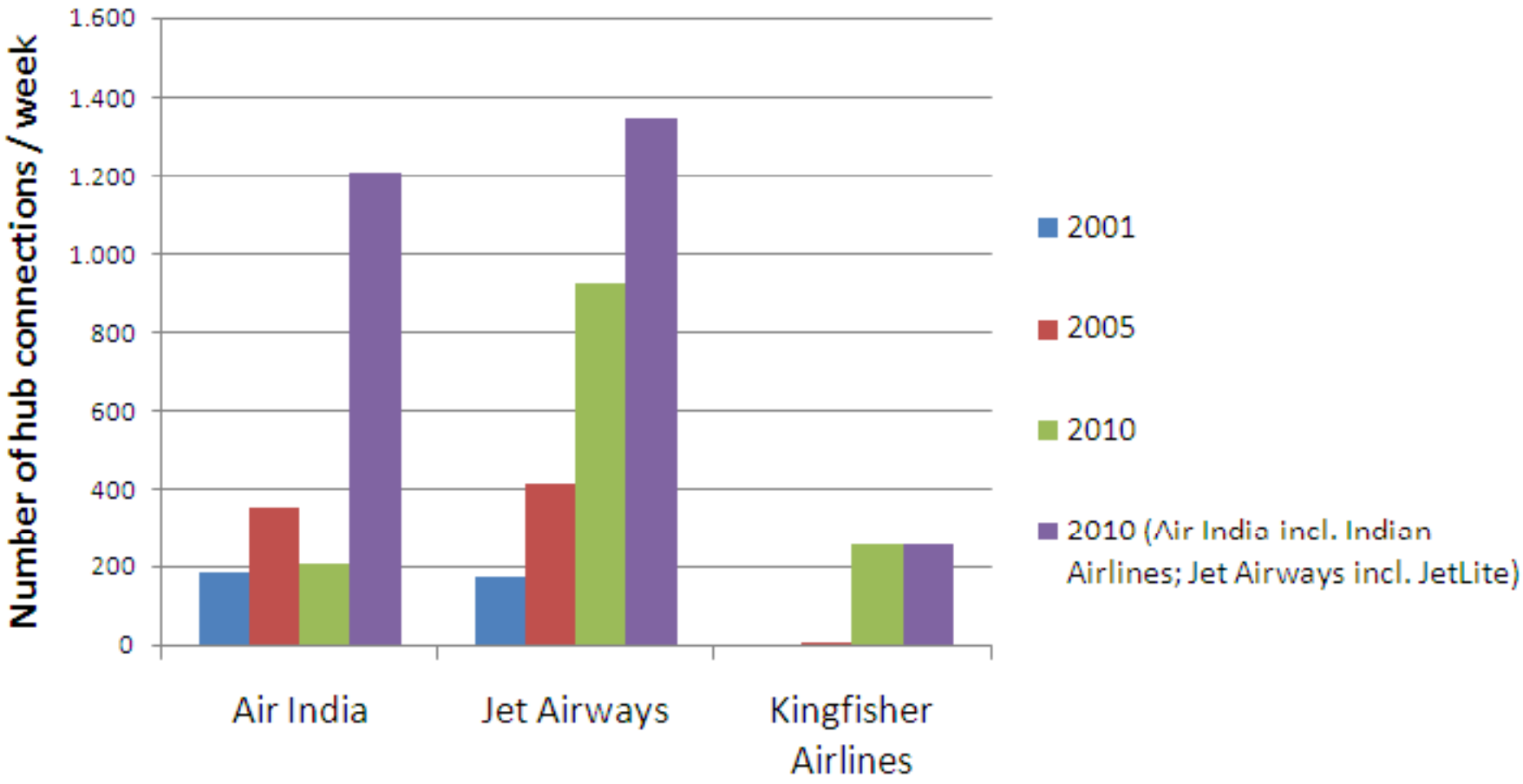
# Substantial growth of hub connectivity in last decade, mainly on Mumbai and Delhi

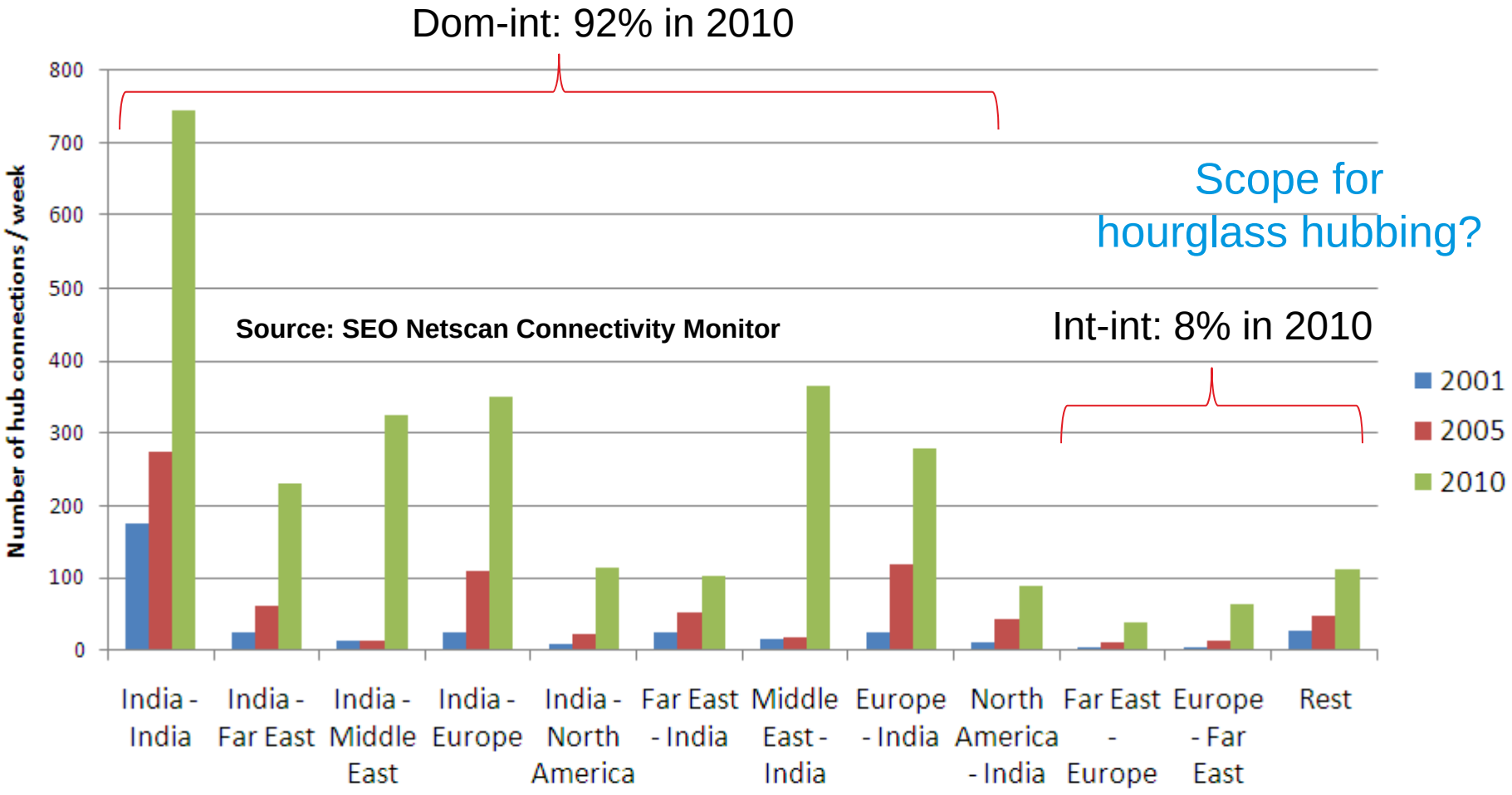


# Air India and Jet Airways pave the way for hub development. Jet Airways and Air India largest hub carriers in terms of connectivity



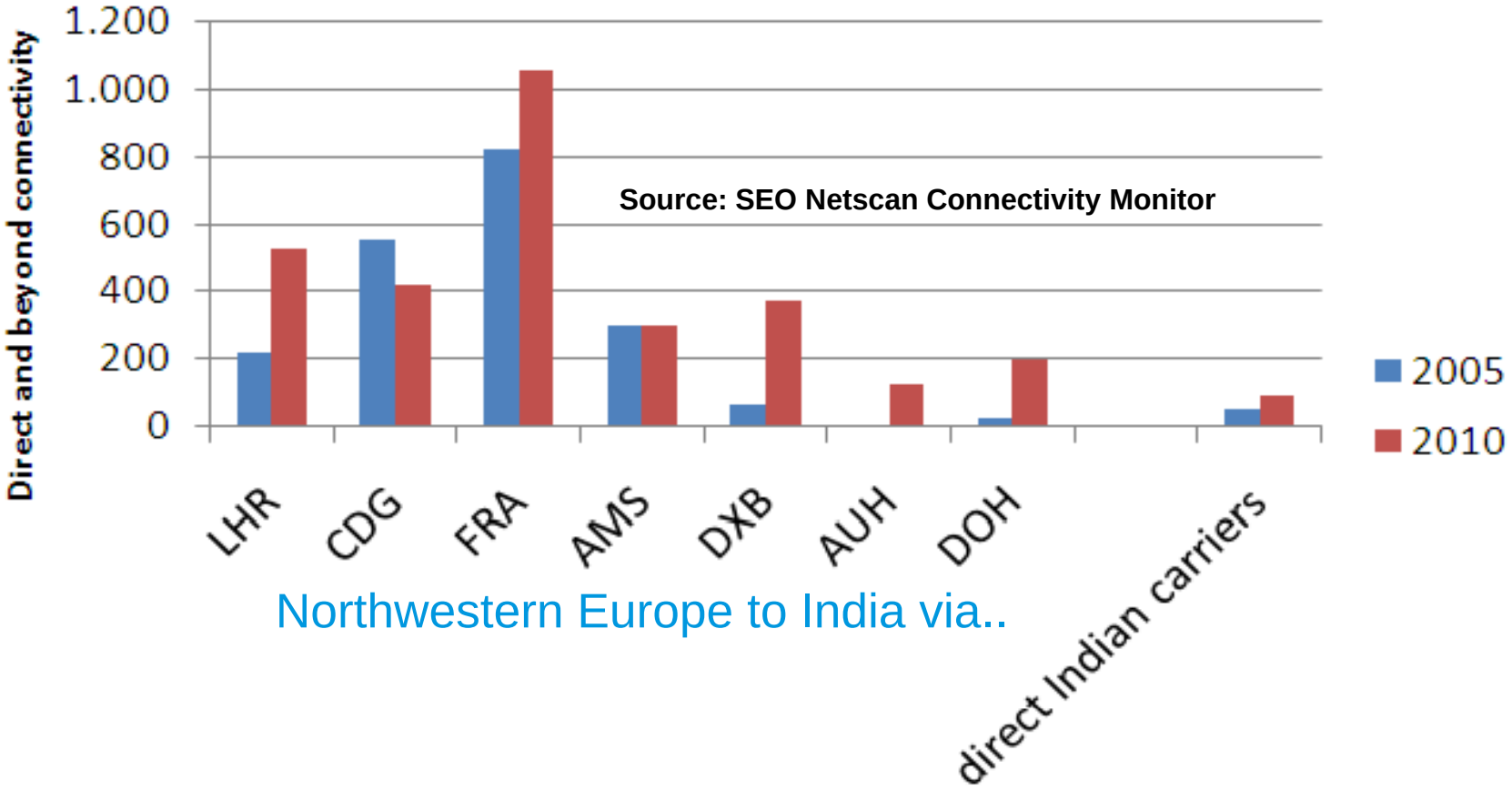

**Source: SEO Netscan Connectivity Monitor**

# Indian hubs mainly orientated towards connecting domestic market and connecting India with rest of the world



# Share of foreign hubs in “beyond” connectivity between Northwestern Europe and India quickly increasing, in particular via Dubai and Heathrow

## Direct connectivity by Indian carriers to Northwestern Europe lower growth rate



# Amsterdam-India air service level lagging behind surrounding hubs

| | | 2001 | 2010 | 2011 | Change '01-'11 |
|---|---|---|---|---|---|
| AMS | India | 21 | 14 | 14 | -7 |
| BRU | India | 5 | 21 | 21 | +16 |
| FRA | India | 22 | 61 | 45 | +43 |
| CDG | India | 16 | 23 | 24 | +8 |
| LHR | India | 31 | 101 | 108 | +78 |
| | | | | | |
| AMS | China | 19 | 35 | 45 | +26 |
| BRU | China | 2 | 3 | 7 | +5 |
| FRA | China | 39 | 49 | 62 | +23 |
| CDG | China | 34 | 49 | 66 | +32 |
| LHR | China | 44 | 81 | 91 | +47 |

# Some issues to be discussed during this seminar

- Liberalization, growth and opportunities for hubbing in India and the Netherlands
- The creation of logistic hubs and “market places”
- Accommodating growth:
  - solving capacity bottlenecks, innovation, governance and aeropolitical relations
  - regulatory challenges
- The India-Netherlands air service levels