

Schiphol part of multi hub system

Airneth 28 October 2005

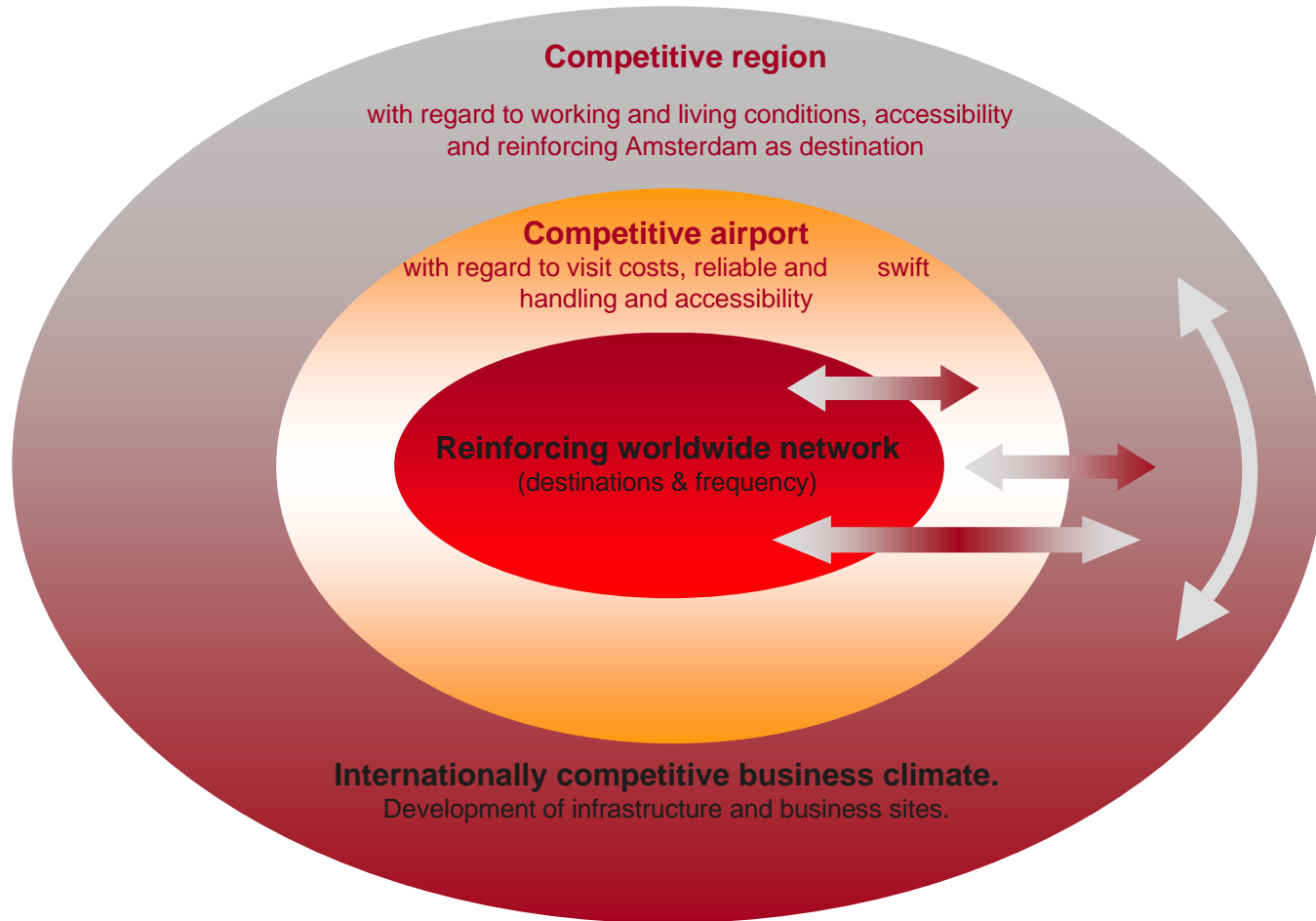
Wim O. Kranenburg sr advisor Airport Development

Schiphol Group

Schiphol Group



Hub is heart of mainport is driver of Dutch economy





Vision Dutch aviation sector on mainport development

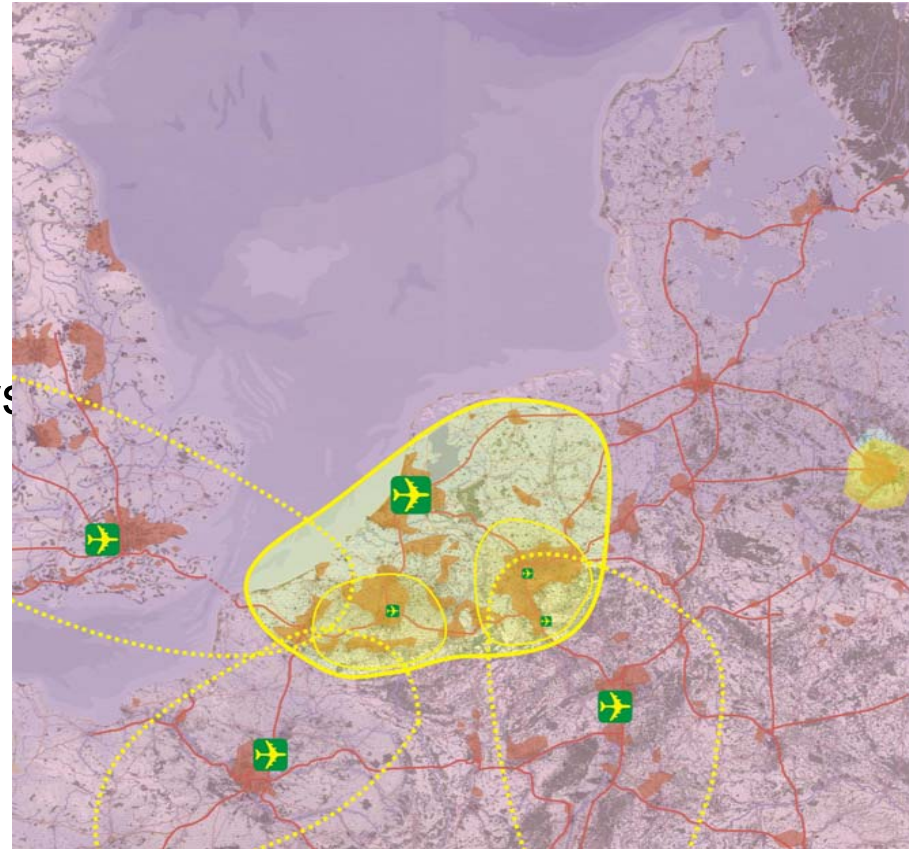
- Maintain primary hub and top position in Europe
- # intercontinental destinations and frequencies determines strength of network
- High quality through connections (connectivity) needs a strong network carrier (SkyTeam)
- Connectivity “best in class” due to small home market
- Accommodation growth (4-5% per year) and cost level at a minimal comparable level in multi-hub system with CDG

Competitive position of hubs

Position determined by:

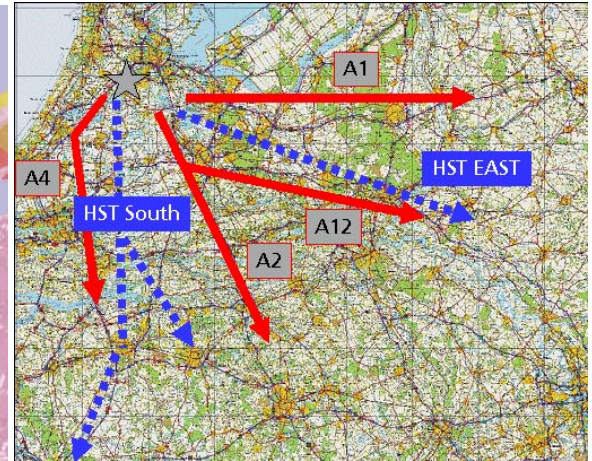
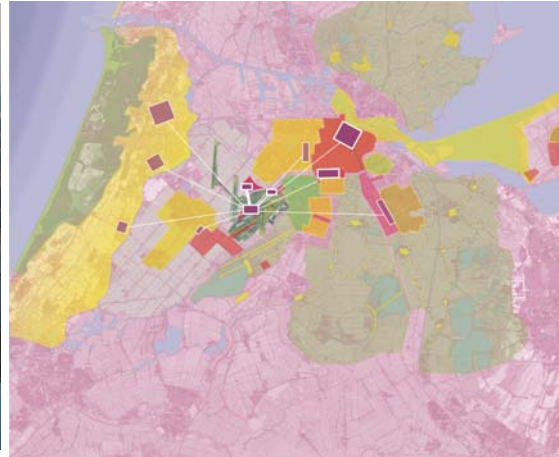
- Home market (O/D passengers)
- Home carrier network
- Position within main traffic flows
- Available capacity

Growing importance of visit costs



Lack of big home market

- KLM in comparison with AF and BA more dependent of transfer passengers
- Emphasis on preservation catchment area
- Need to strengthen Amsterdam as destination





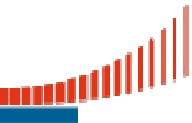
Home carrier network *base for primary hub*

- Improvement of connectivity in worldwide network of SkyTeam
 - 150 direct connection (SkyTeam)
 - 125.000 city pairs (one stop x frequency/week)
- Network and passengers
 - Growth in # connections and passengers
 - Slight specialization of networks
- Discussion about use and allocation of capacity

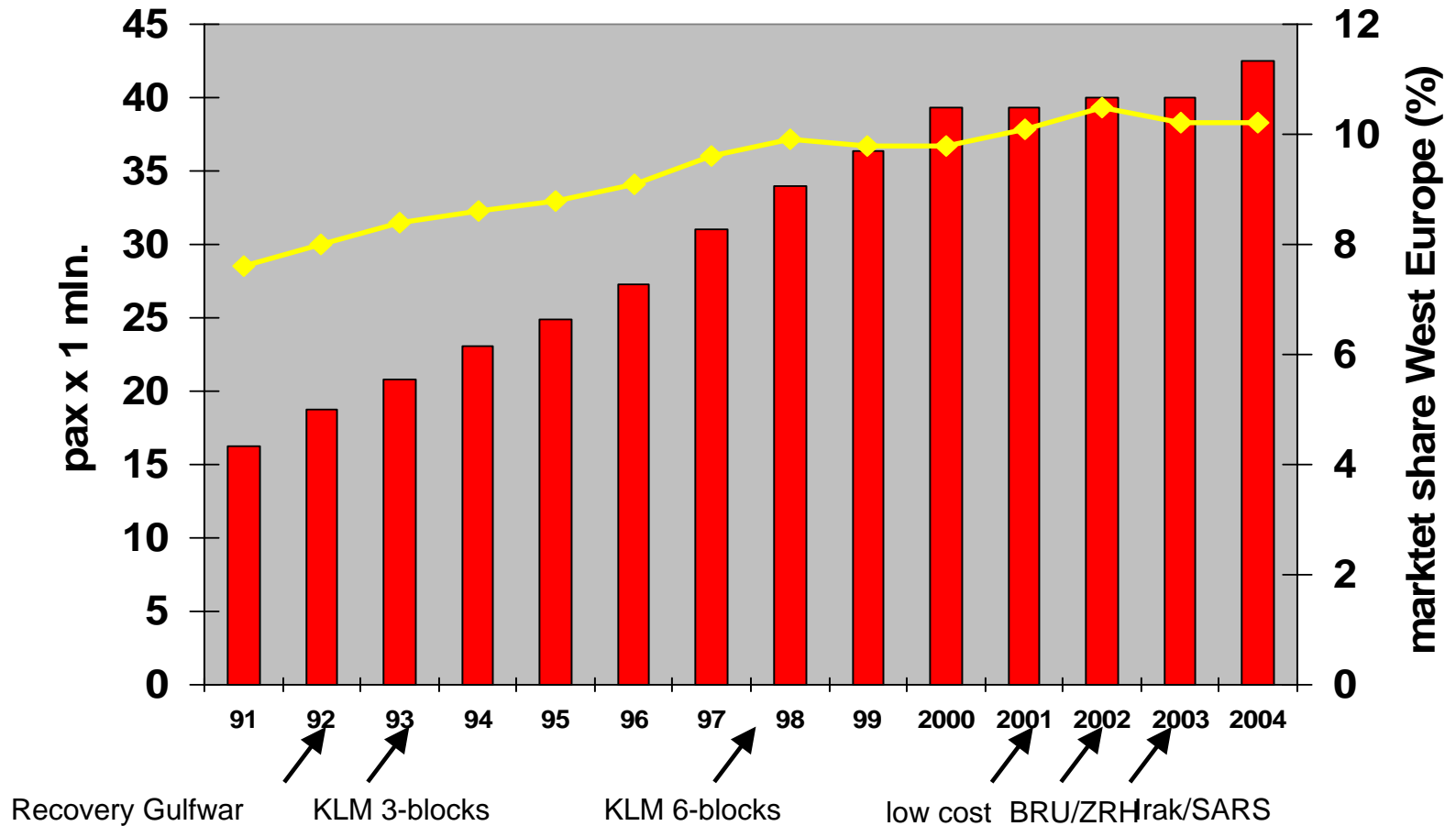
Air France – KLM: “one airline – two hubs”



- Network:
 - complementary hubs
 - Primary European and ICA routes via AMS en CDG
 - Specialization AMS on North-Europe, CDG on South-Europe
 - Specialization on secondary ICA routes, based on geography and history
- Assurances
 - Concentration on complete network at CDG impossible due to capacity, geography and other competitors
 - ‘assurances’ KLM for 5 years, government/Schiphol 8 year
 - AFKL is guarantee for development Schiphol as a primary hub
 - Risk spreading (trunk routes, low cost carriers, non aviation) part of business concept Schiphol Group

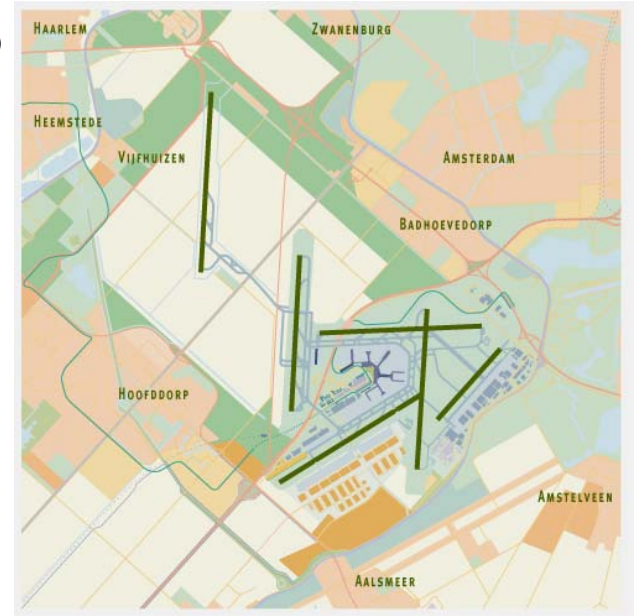
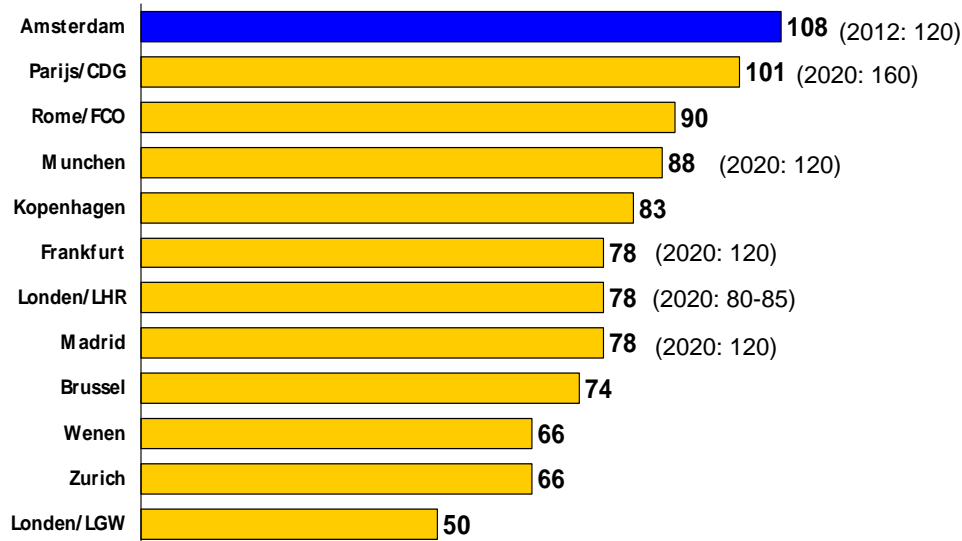


Market share AMS stabilizes



Capacity is key...

- Essential for hub: peak hour capacity
- Existing configuration runway system due to:
 - geographical setting
 - weather conditions: 40-90 days
- Essential for future: solve unsuitable environmental restrictions



Requirements for the hub

Requirements	Indicator	2008	2012
1. Capacity Runway system	Year capacity (mvt/year)	500.000	600.000
	Peakhour capacity (mvt/year)	115	120
2. Reliability	Availability peakhour Capacity	>90%	>95%
3. Air space capacity	Holding capacity	In accordance with physical runway capacity	
4. Environmental capacity	External safety	In accordance with physical Runway capacity	
	Air pollution		
	Noise		
5. Terminal capacity	# passengers	50 mln	60-65 mln

Future of the hub: Aircraft technology long haul

Longer distances and smaller... than Boeing 767/777, Airbus

A330/340

New generation long range aircraft
with 250-300 seats

- Boeing 777ER/LR, Airbus A340-500/600
- **hub AMS by-passing**
 - Dubai – New York
 - Singapore – Los Angeles
- **but also more non-stop from AMS**
 - AMS - Manila
 - AMS – Cape Town

Latest generation long range aircraft with 200-
250 seats from 2008

- Boeing 787, Airbus A350
- **hub AMS by-passing**
 - New York – Oslo
- **but also more non-stop from AMS**
 - AMS – Phoenix

Result: “Battle of the Continents”



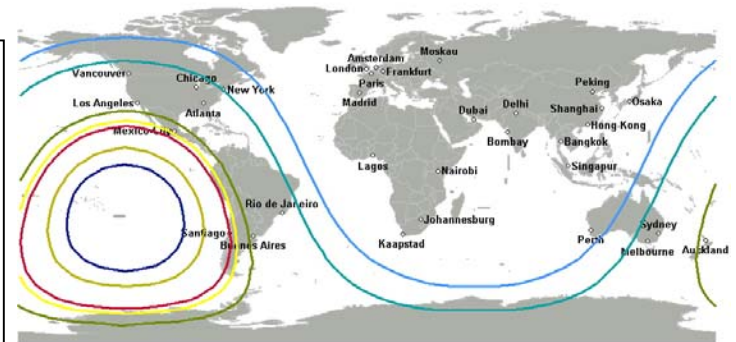
Future of the hub: Aircraft technology long haul

Longer distances and larger... than Boeing 777/747 and Airbus A340

Current generation long range aircraft with maximum 400 seats such as Boeing 747-400ER

Latest generation long range aircraft with 450-550 seats from 2008

- Airbus A380, Boeing 747-400Advanced
- **concentration on large volume markets**
 - Paris/CDG – Montreal
 - Kuala Lumpur – London/LHR
 - Dubai – New York
- capacity of airports (e.g. London, New York, Tokyo, Frankfurt)
- no more time windows for extra frequency
- new on-board service dimensions
- conclusion: A380 **no revolution but evolution** (+25% seats)



Future of the hub: Aircraft technology short haul

Longer distances, smaller, more frequent, more comfort...

Current generation regional aircraft with 35-80 seats

- Embraer EMB134/145;
- Bombardier CRJ100/700/900

Latest generation regional aircraft with 80-120 seats from 2005

- Embraer EMB170/190
- Bombardier Cseries*
- **hub AMS by-passing**
 - Manchester – Geneva
- **but also more non-stop from AMS**
 - AMS – Tallinn, AMS – Bordeaux

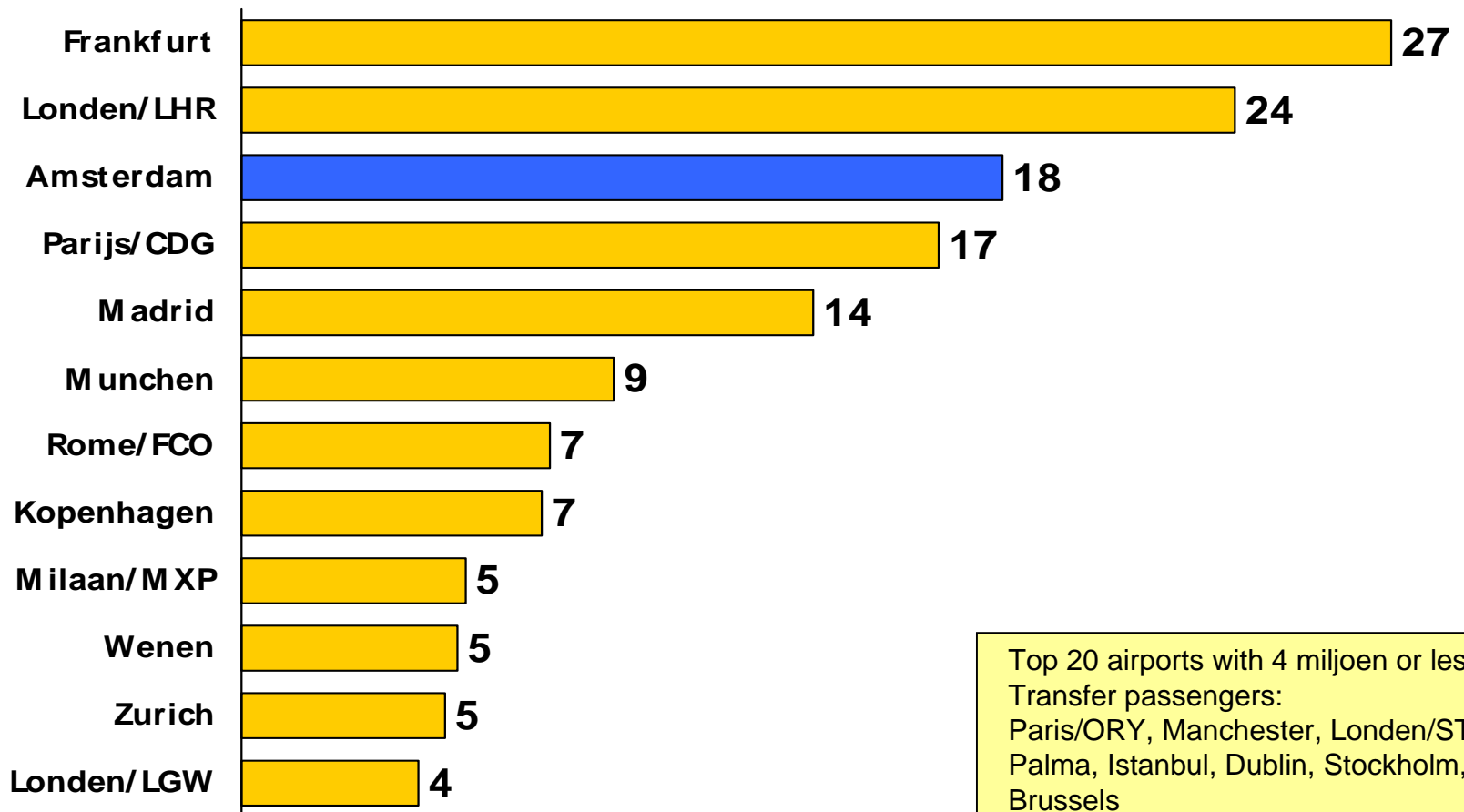




Multi hubs and competition

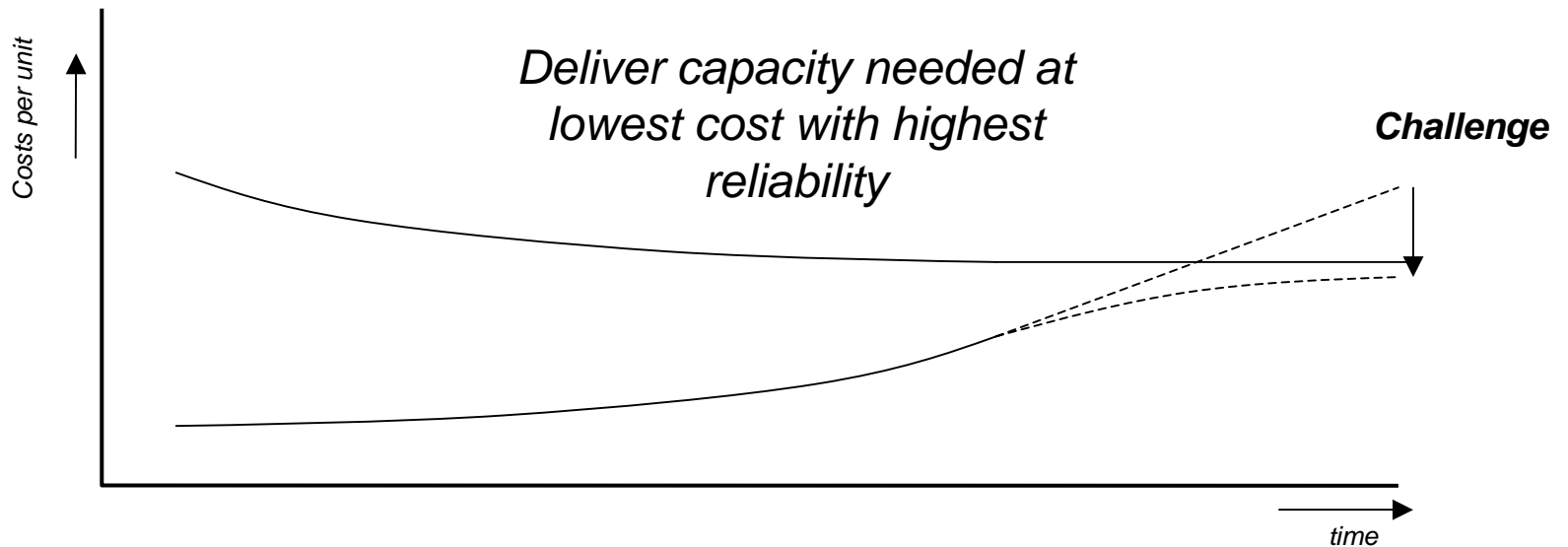
- Overcapacity in the air and on the ground
- Scarce hub capacity in Europe
- Competition in transfer passengers
- Competition with en within multi hubs
- Key factors:
 - Home market
 - Costs
 - Quality
 - Capacity
- Note: Level playing field for fair competition

Concentration at 12 transfer airports in Europe



Top 20 airports with 4 miljoen or less
Transfer passengers:
Paris/ORY, Manchester, Londen/STN
Palma, Istanbul, Dublin, Stockholm,
Brussels

Airports have to change their business model



- Capacity** → **To accommodate network**
- Productivity** → **Competitive airport charges**
- Reliability** → **Minimizing non-quality costs**
- Automation** → **Reducing staff costs**



Cost reduction and value creation

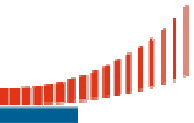
Lower visit cost by

- Better productivity and use of assets
- Less complexity by standardization
- More efficiency by self service and automation

Higher revenues by

- Better retail revenues/pax
- Value creation of airport location
- Participation in regional development

Terminal plan 2010: hassle free, efficient process, pax in control



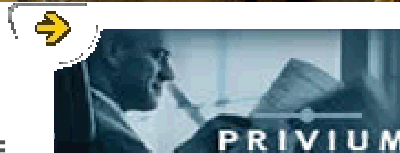
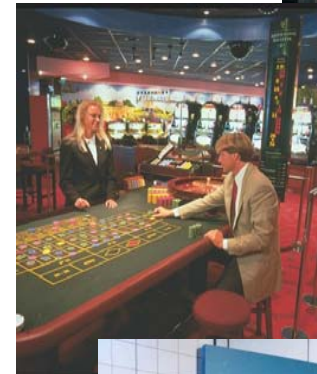
Automation to increase customer satisfaction and reduce staff-costs



- More than 15,000 members
- Fast and secure border passage
- Fast check-in
- Priority parking

Customer satisfaction: feel good

- Rijksmuseum Schiphol
- Casino's: shake, rattle and roll
- Over 60 shops and 140,000 items
- Enjoy liquid assets...
- Experience the smallest rooms...
- Make sure you're connected
- Be like 007 – be part of Privium
- Grab some shut-eye
- Get Back to Life





Cooperation multi hub CDG-AMS

- CDG and AMS are competitors to maintain their worldwide network
- Evolution of multi hub may lead to:
 - Harmonisation handling SkyTeam
 - Joint interest in EU (environmental) issues
 - Participation in international projects (SkyTeam based)
 - Cooperation in HST connection

Schiphol Group. Creating AirportCities

