



Cargo handling at Cologne airport Is nighttime operation a must?

G.A.R.S workshop “Aviation and the Environment”

Prof. Dr. Karsten Leibold

Cologne, November 28, 2006

Agenda

- Scope of the study
- Facts and figures about Cologne airport
- Cargo operations at Cologne airport
- Is nighttime operation a must?

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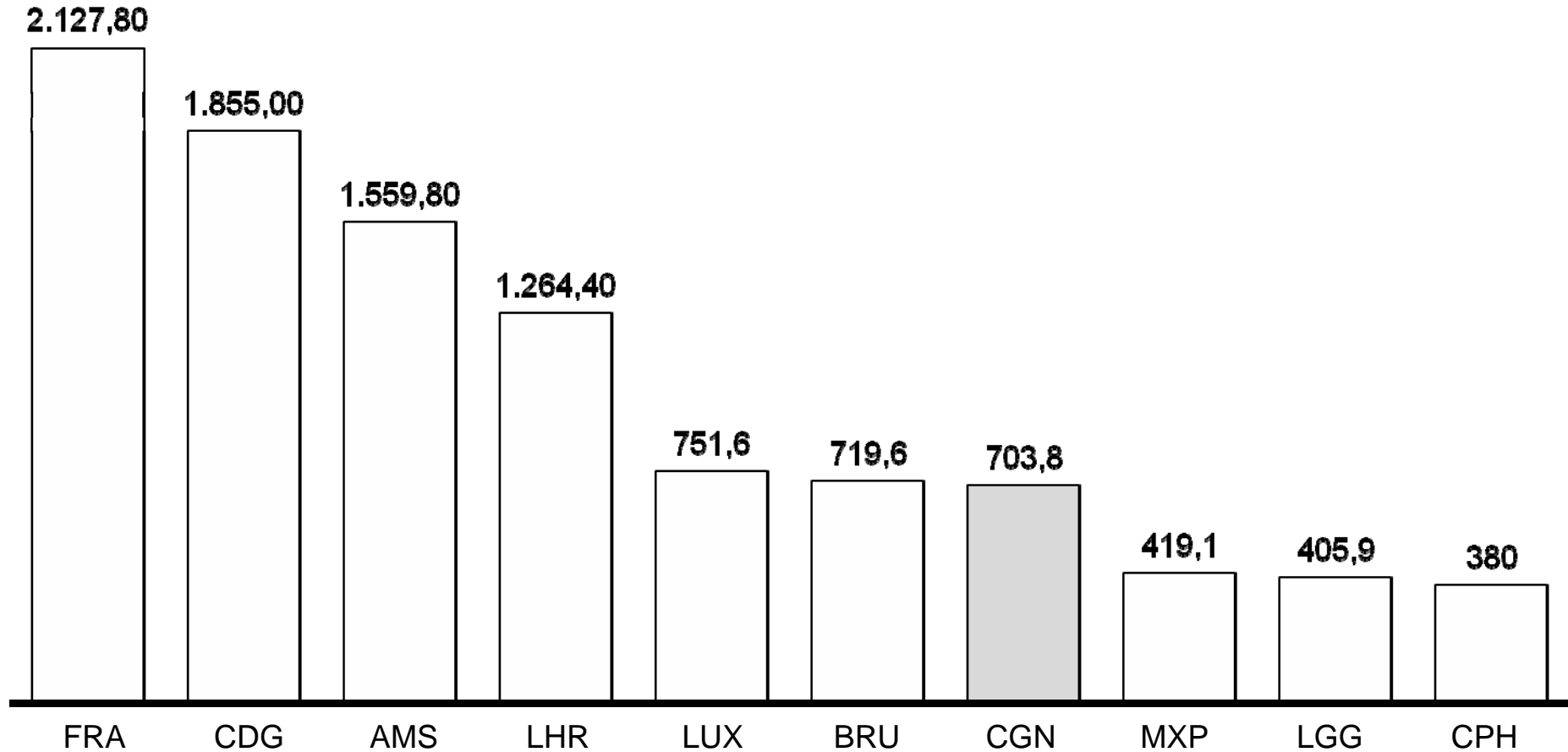
- The Rhein-Sieg county assigned the International University of Applied Sciences Bad Honnef to investigate the possibilities of shifting nightly flight movements between 00:00 and 05:00 at Cologne Airport to daytime operations
- It was claimed that these shifts should not have any negative impact on the economical development and the employment figures of the Rhein-Sieg region
- The study was supported by the City of Cologne and Cologne airport
- The final results were presented to the transport committee of the Rhein-Sieg county on September 18, 2007

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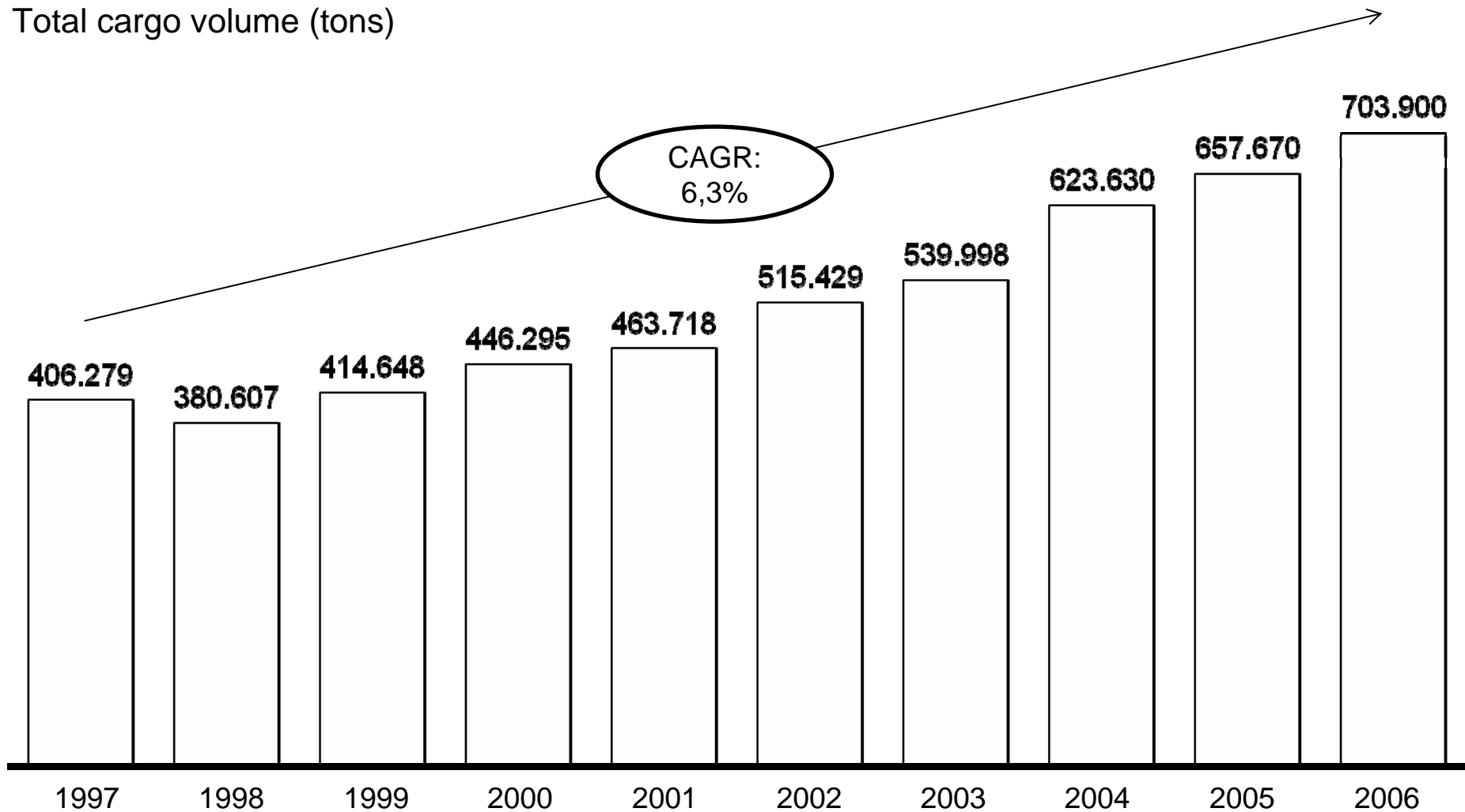
Cologne airport is among the top seven European cargo airports

Annual Cargo volume at European airports 2006 (1.000 tons)



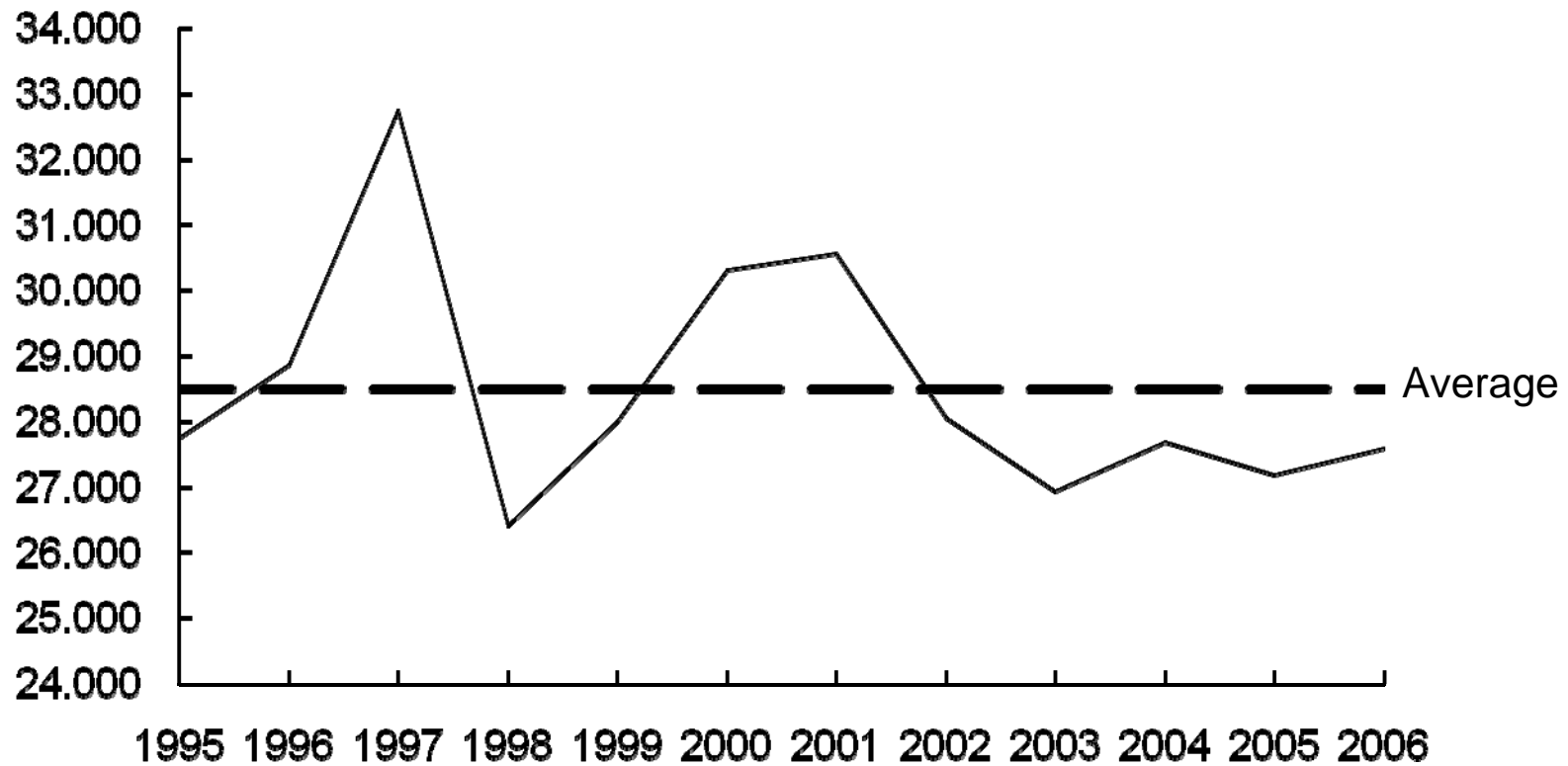
The cargo volumes at Cologne airport grew nearly constantly over the last few years

Total cargo volume (tons)



Compared to the increase in volume the number of full freight aircraft movements developed below average

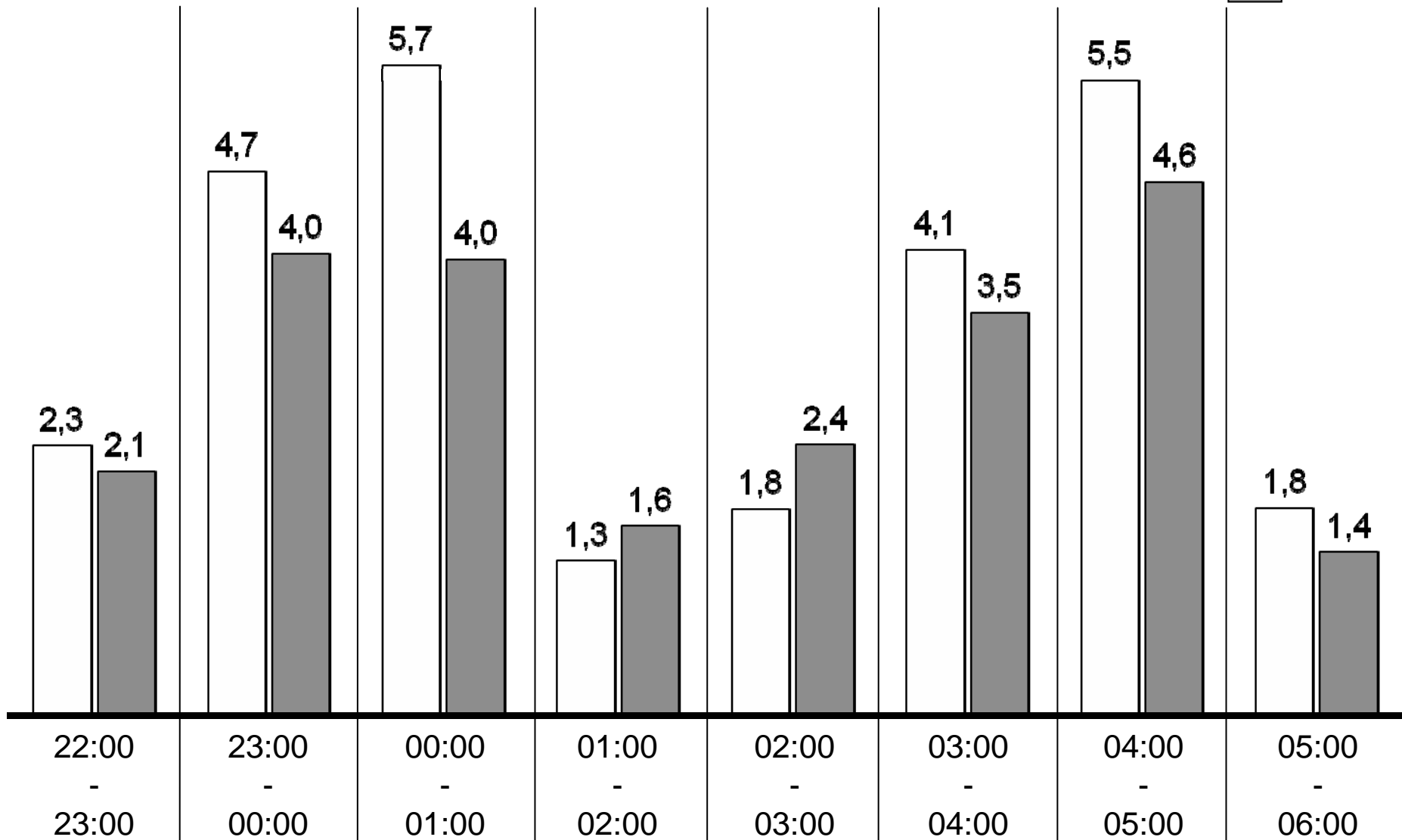
Number of annual movements of full freighter aircraft



Comparing the years 2000 and 2006, cargo flight movements increased only between 01:00 and 03:00

Number of annual cargo flight movements (Thousand)

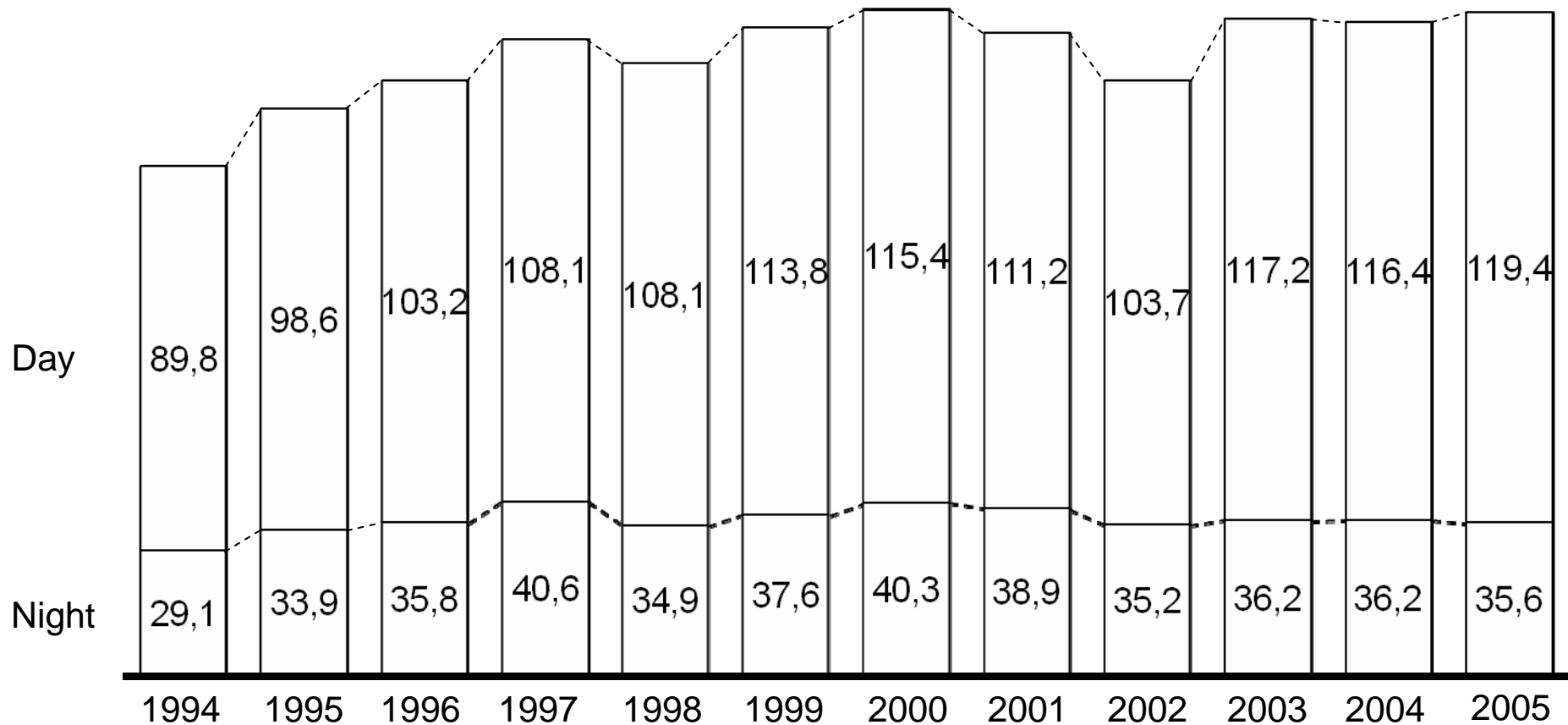
2000
2006



Source:Cologne airport, landing fees 2006

Even though total flight movements at Cologne airport developed erratically the number of nightly movements stays relatively stable since 2002

Number of total flight movements (Thousand)

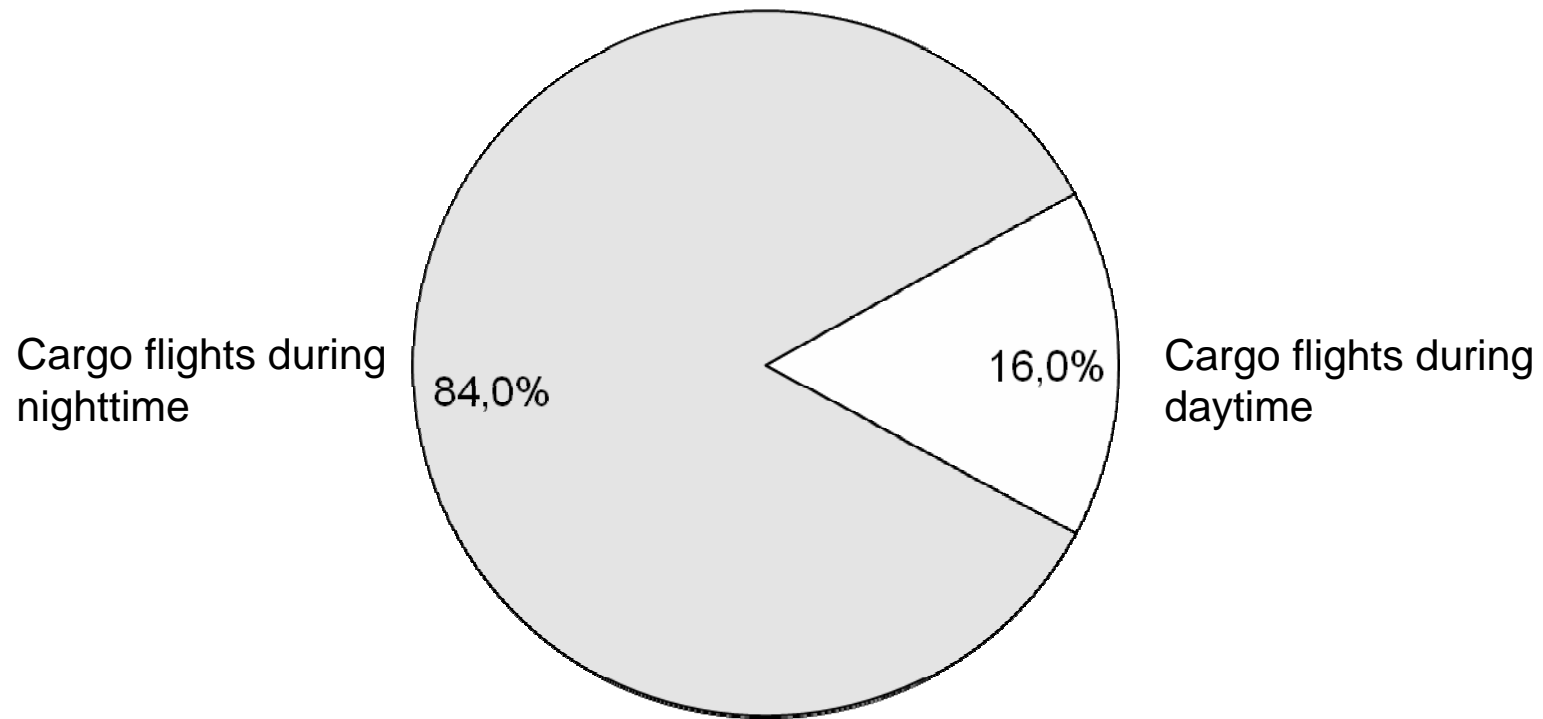


* Footnote

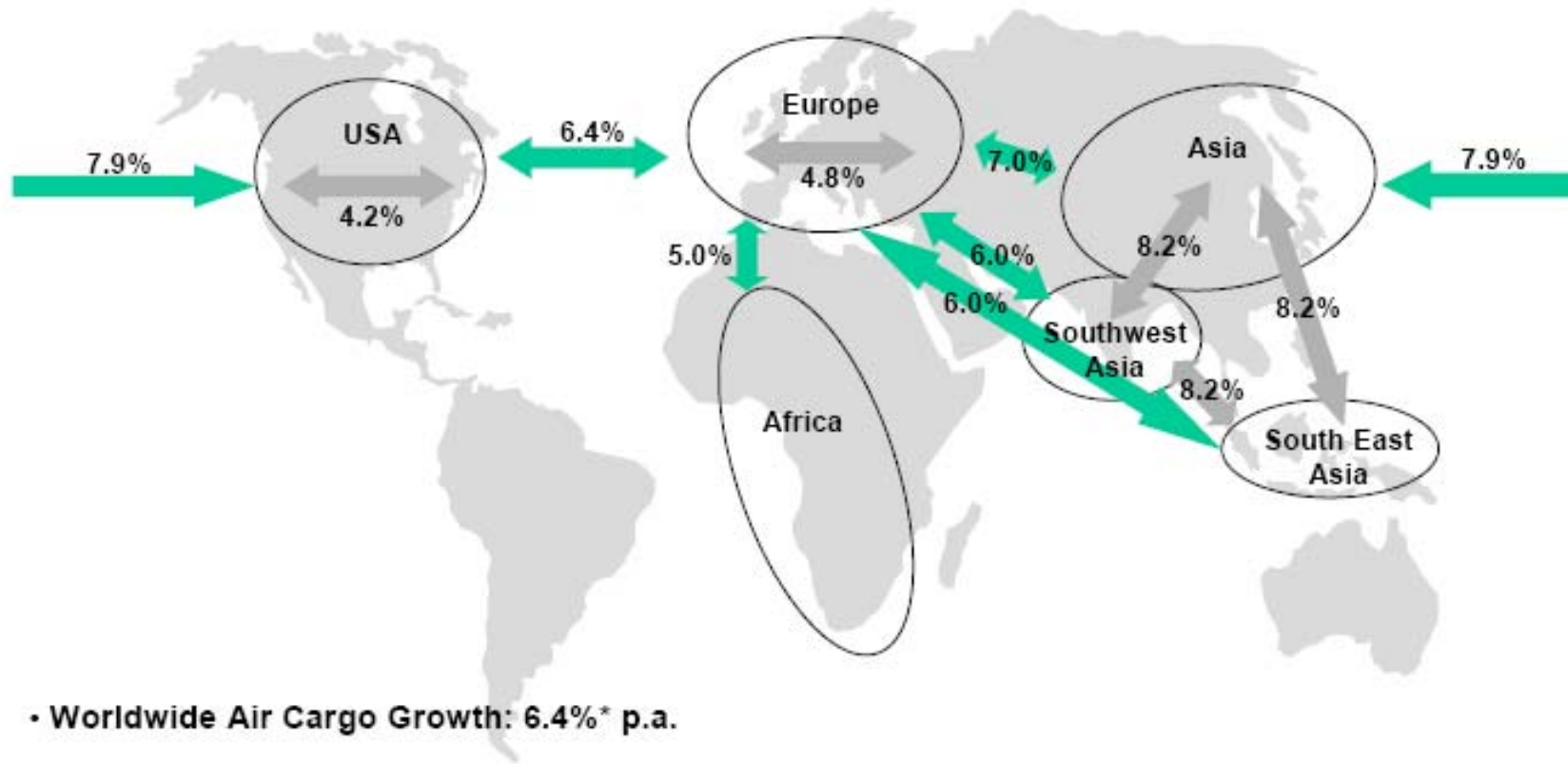
Source:Cologne airport

The majority of all cargo volumes at Cologne airport are transported during the night time

Proportional share between daily and nightly cargo flight movements (Percent)



Asia's cargo markets will continue leading industry growth

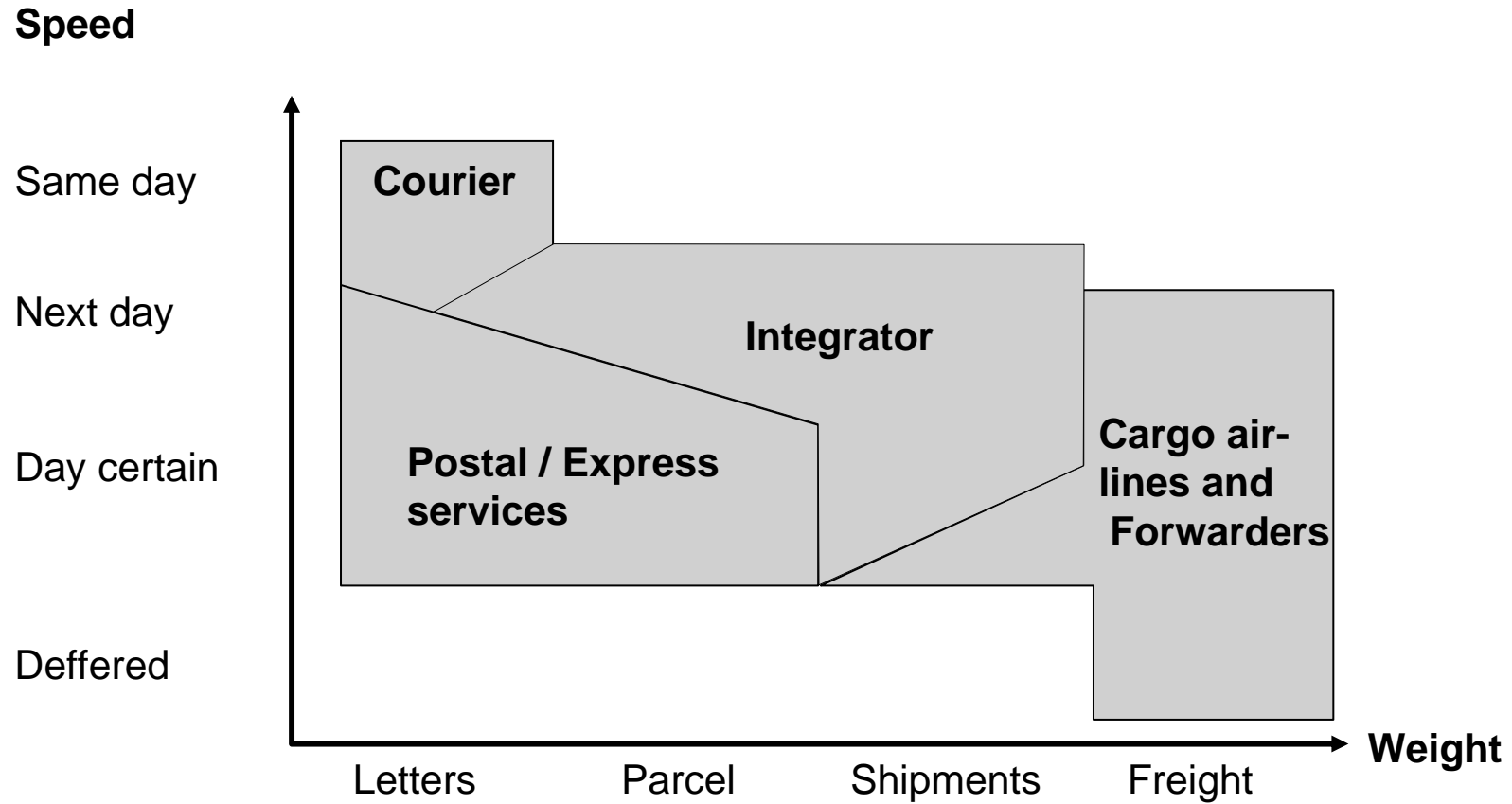


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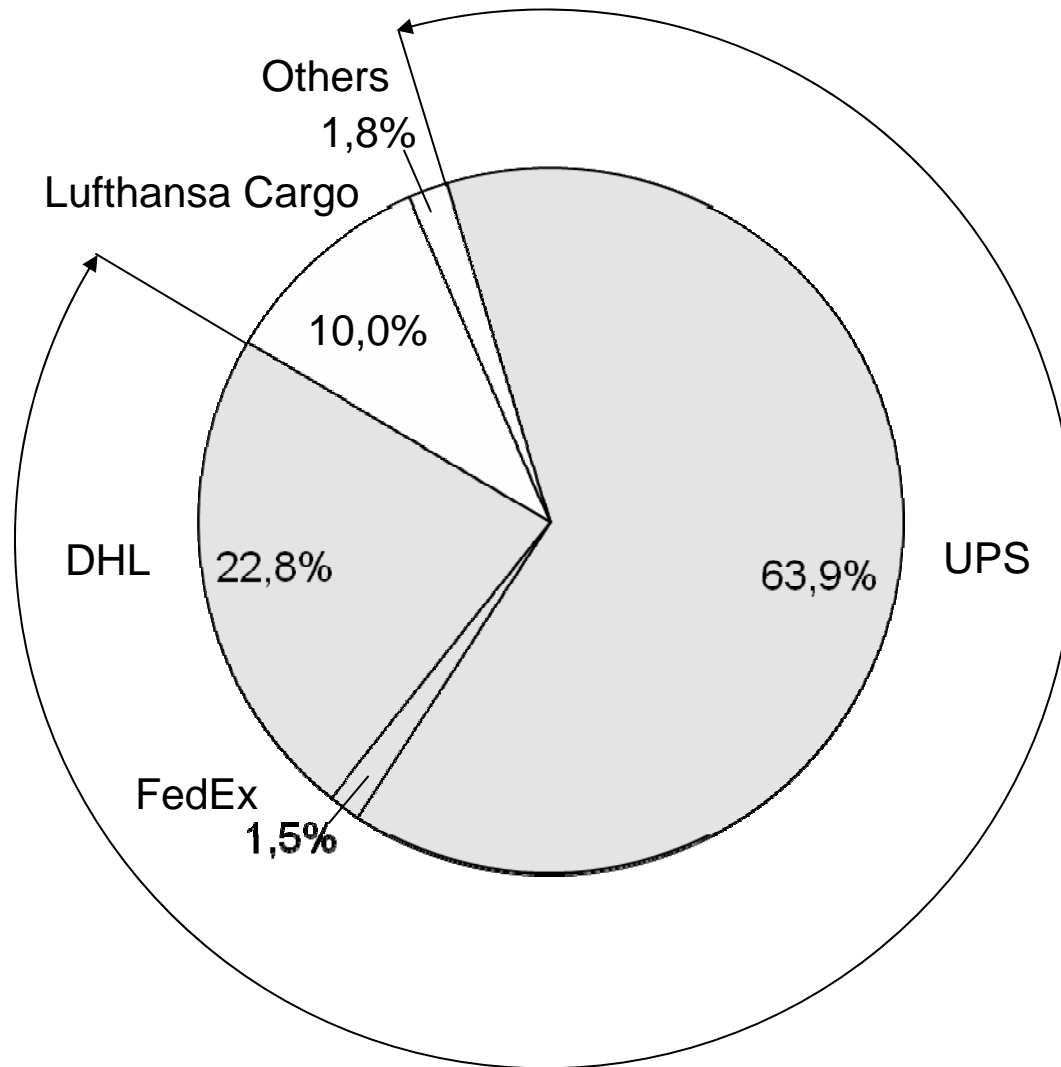
The cargo market can be segmented along the axes of speed versus weight

ILLUSTRATIVE



Nearly vast majority all cargo movements at Cologne airport are caused by integrators

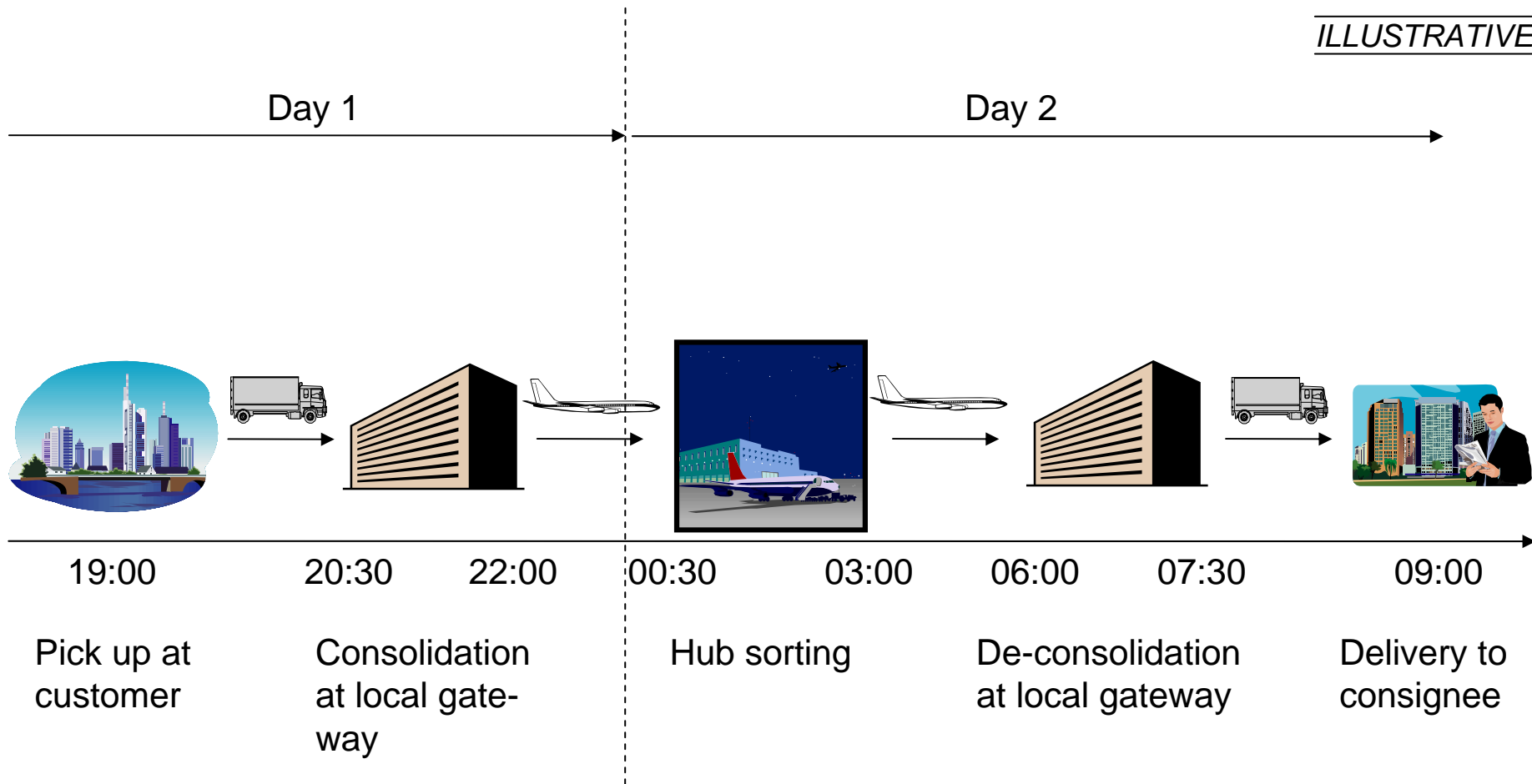
Distribution of cargo movements in 2006 (Percent)



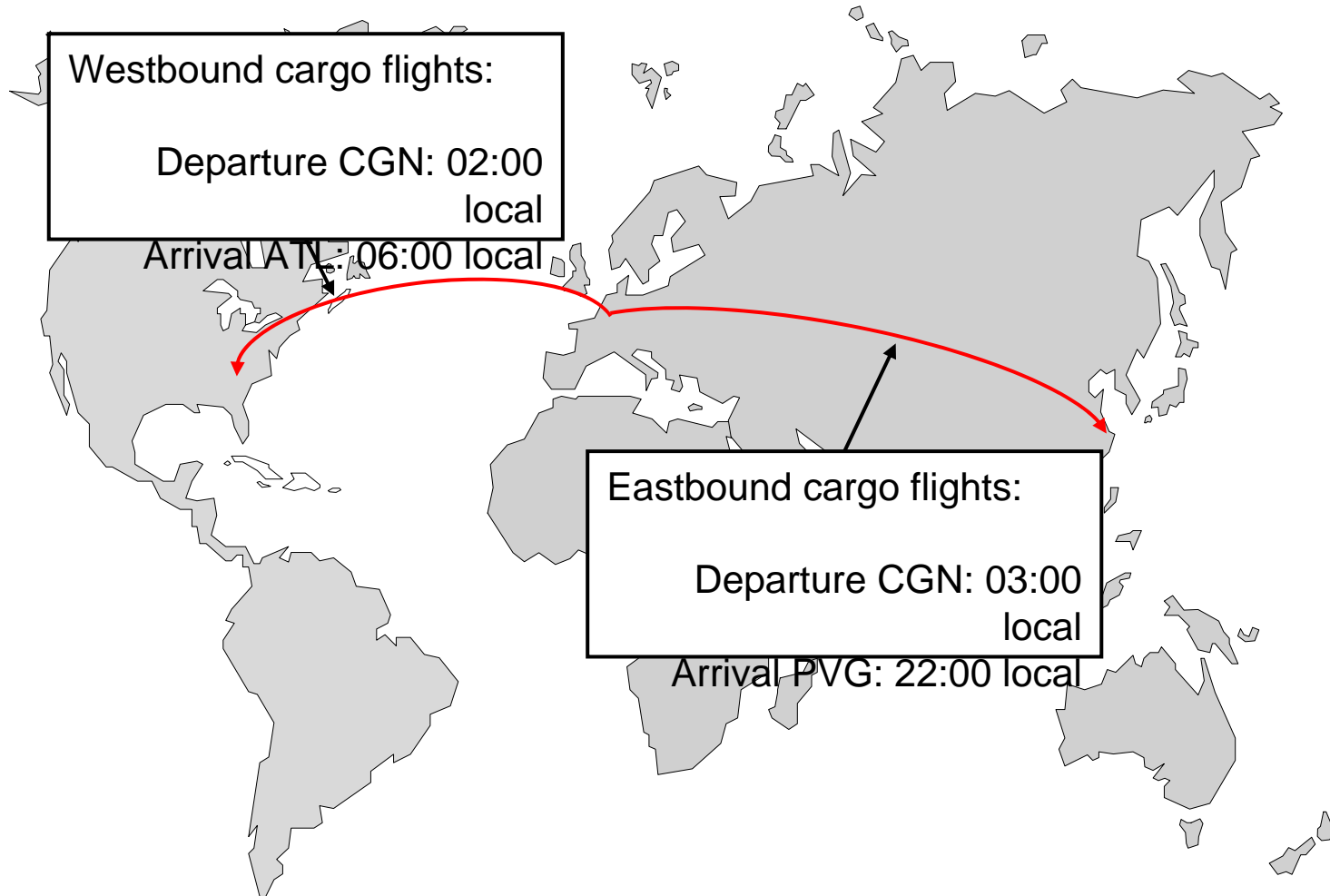
- Currently 88,2% of all cargo movements are caused by integrators
- Roughly 30% of 2006 cargo movements vanishes by the end of 2007 when Lufthansa Cargo and DHL will transfer majority of their flights to LEJ

Today's integrator networks are designed to enable continental deliveries within 14 hours

ILLUSTRATIVE

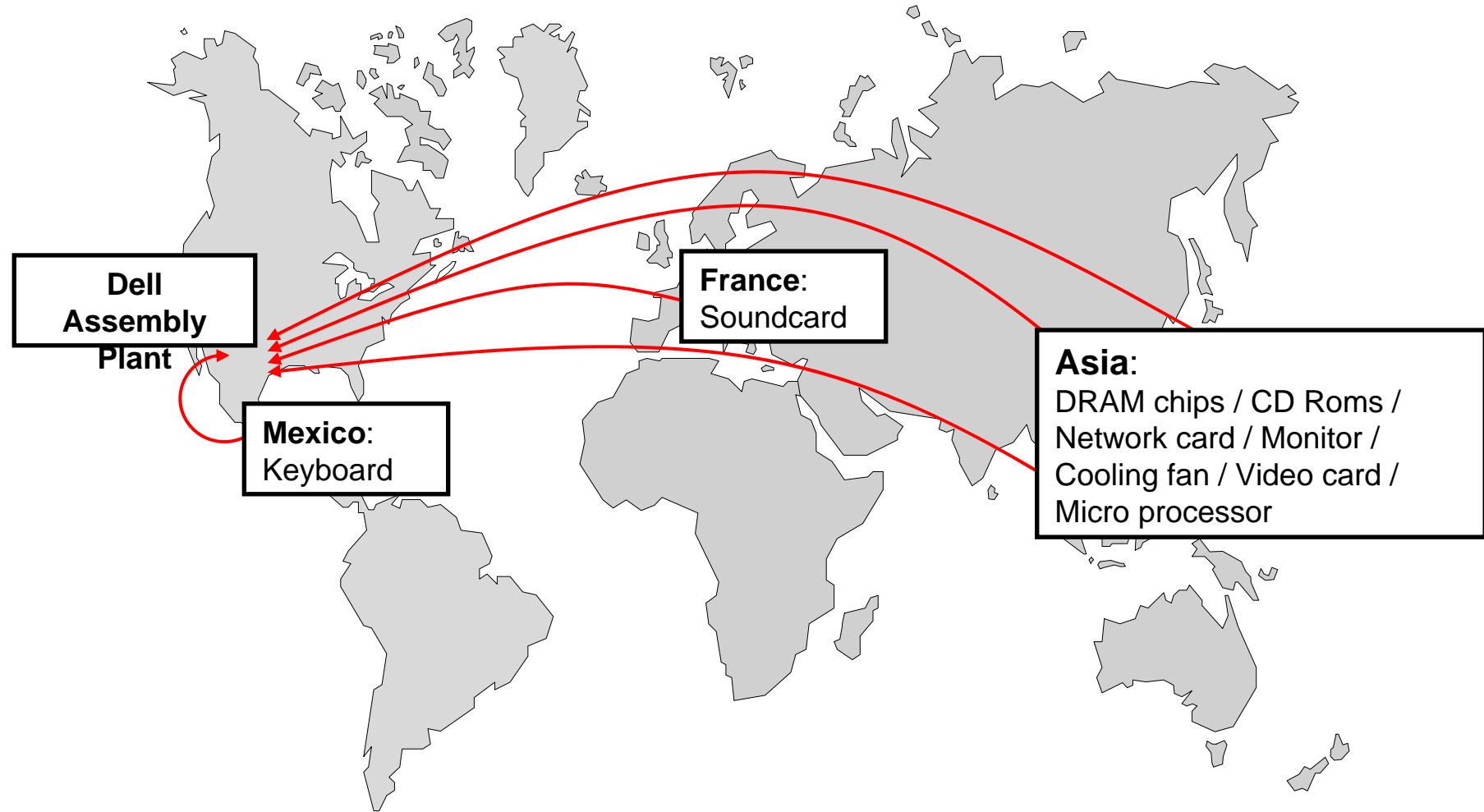


Also on intercontinental connections the nighttime operations of European integrator hubs is an essential component of the value chain



Global supply chains demand for worldwide integrated transport networks

Global supply chain Dell Computers

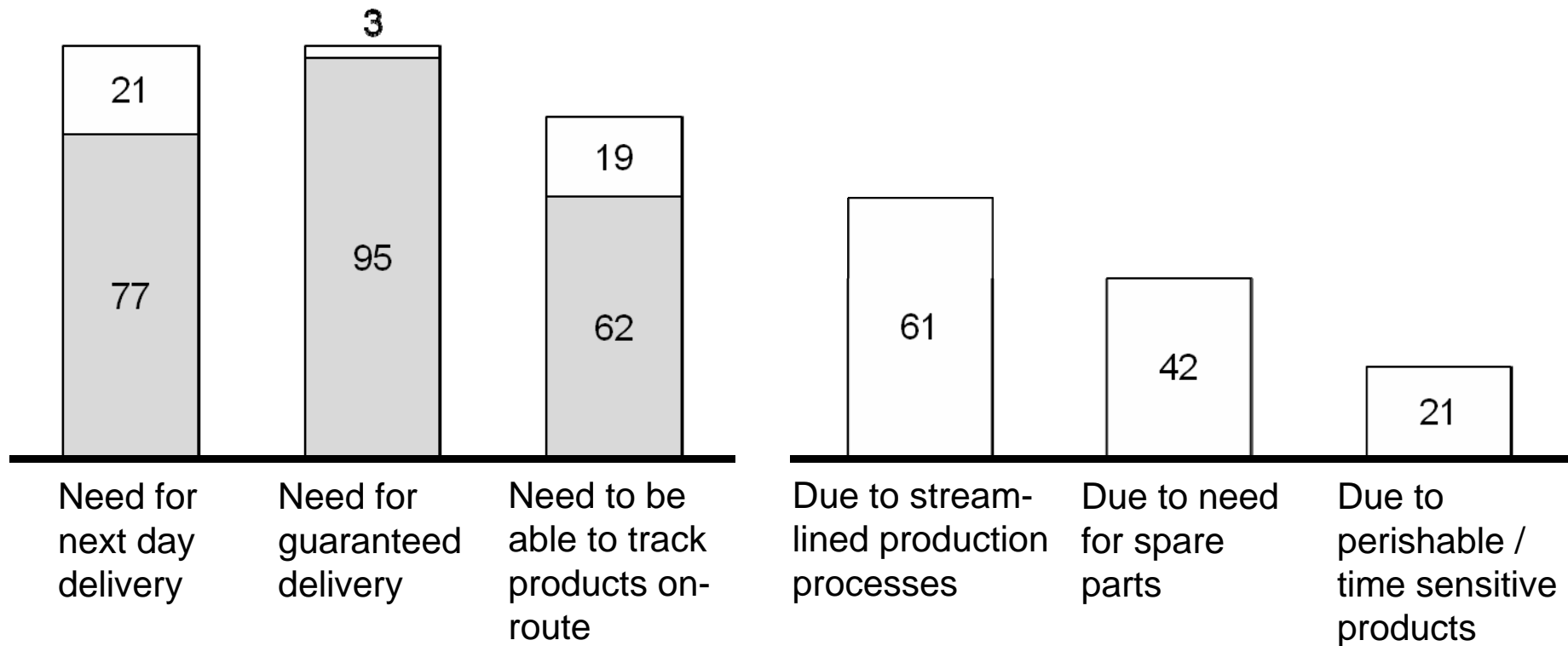


The globalized production systems rely heavily on seamless global transport networks

Reasons for using express services (Percent)

Why is next day delivery important (Percent)*

Sometimes important
 Very important

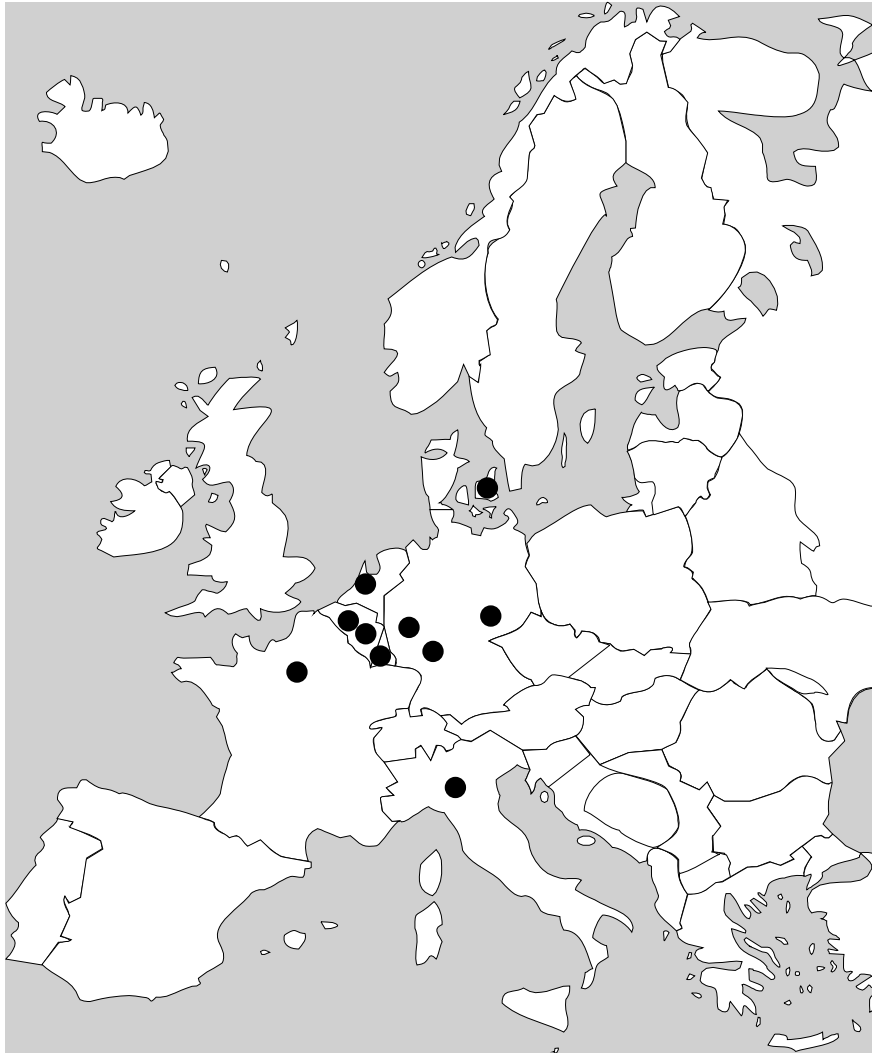


* % of respondents reporting next-day delivery is important because ...

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In vicinity to Cologne airport many other airports with significant Cargo operations are located



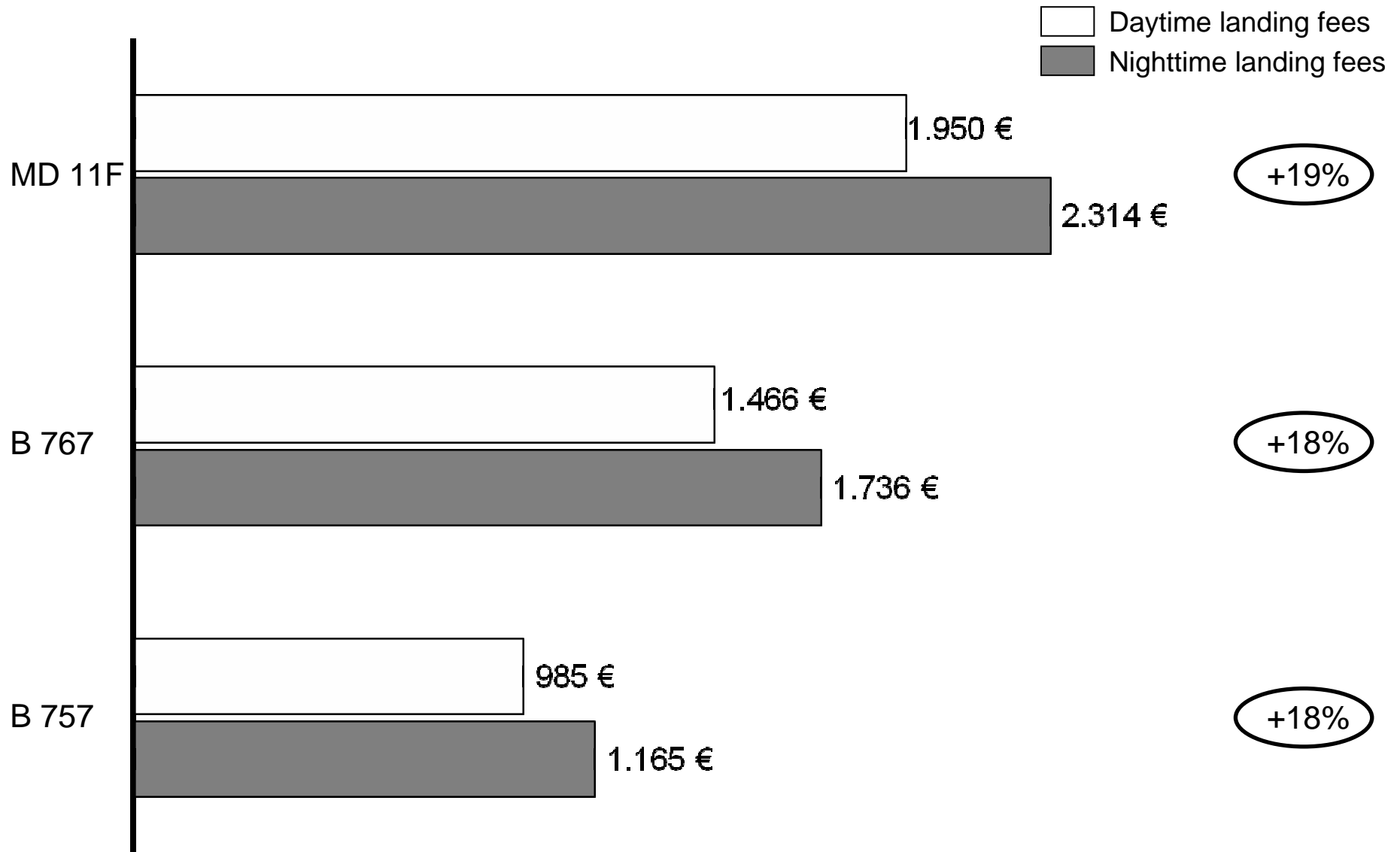
Cologne's competitor airports for cargo operations are:

- Frankfurt
- Amsterdam
- Paris Charles de Gaulles
- Brussels
- Liège
- Luxembourg
- Copenhagen
- Bergamo
- Leipzig

Competitive levers are

- Infrastructure
- Opening hours
- Transport connections
- Fees

For nighttime operations airlines must pay a premium on landing fees of nearly 20% compared to daytime



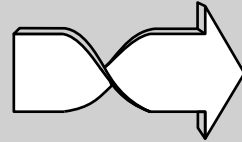
Source:Cologne airport, landing fees 2006

Cargo handling at Cologne airport - Is nighttime operation a must?

Questions

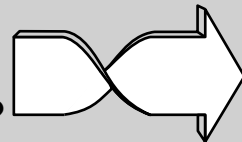
Answers

Are nightly flight movements only caused by cargo airlines?



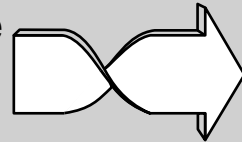
No – many cargo airlines even decreased flight movements between 2000 and 2006, while low cost carriers increased flight movements

Is it likely that cargo movements increase at the same rate as demand?



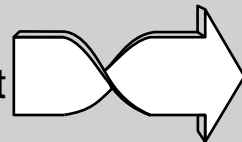
Experience shows that integrators at CGN covered the majority of the historical growth by upgrades to bigger aircraft

Do cargo movements have to take place during night time?



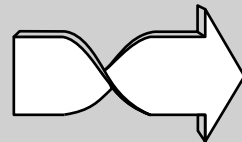
Global competition clearly demands for night movements at cargo airports. Limitation at a single airport will not change the system but scare airlines away

Is it advisable to increase airport fees to reduce night operations?



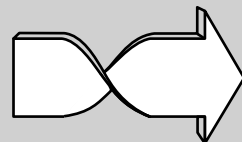
Can be a pretty effective steering tool, but also a dangerous or the development of an airport if fees are not competitive any more

Which other steering measures exist?



A noise quota system could favor quite aircraft while limiting the usage of noisy aircraft

Will the DHL and LCAG gap immediately be closed by competitors?



FedEx will take over parts of the released capacity, however it is unlikely that the gap is closed short term

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