ACI
Airport Environmental Colloquium

Cairo, 26-27 November 2008

Noise,
Europe's airports' perspective

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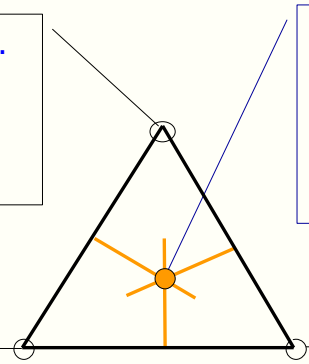
ACI EUROPE

- European branch of the Airports Council International (ACI), based in Brussels
- Represents the interest of some 440 airports in 45 countries
- Our members account for over 90% of commercial air traffic in Europe each year, welcoming 1.5 billion passengers
- Working with the European Union institutions, ECAC and EUROCONTROL

The overall Challenge

Economy (incl. pricing & financing)

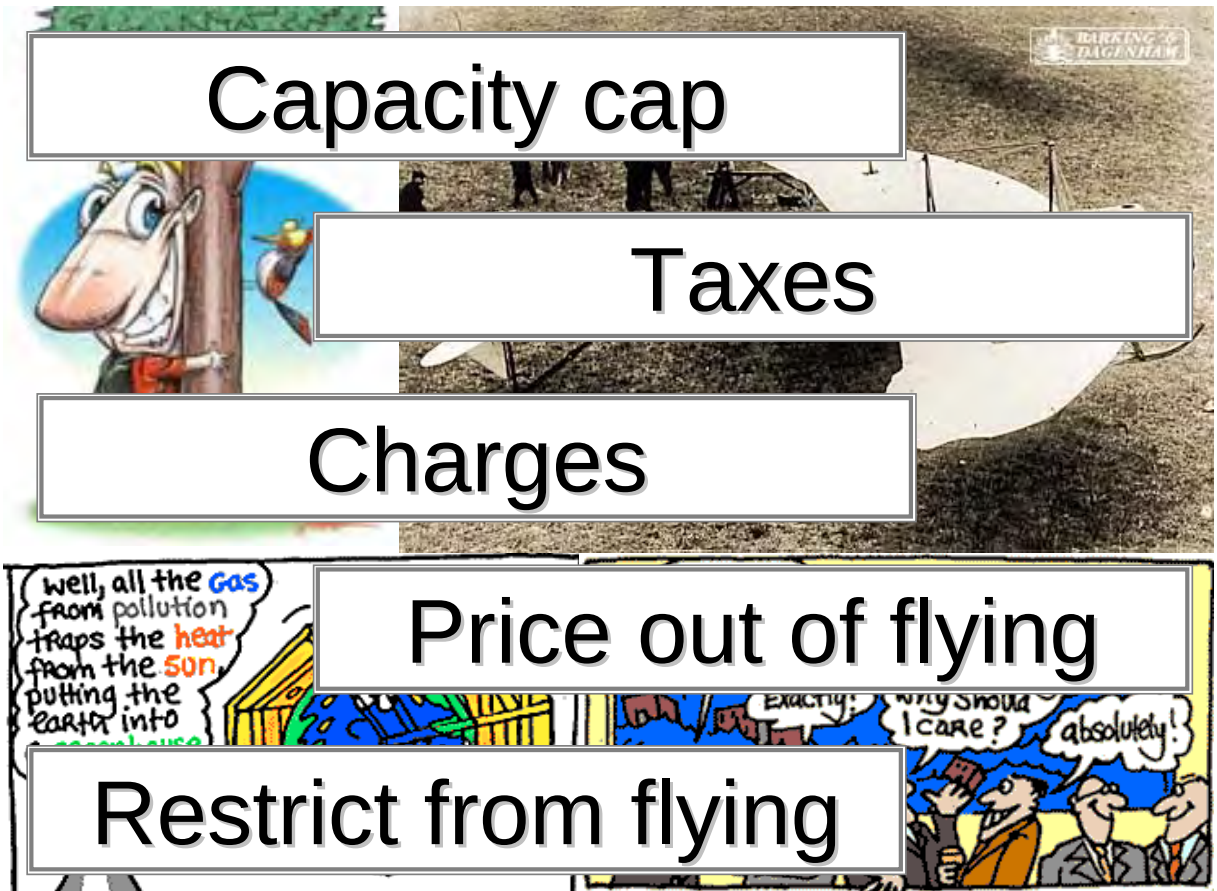
Sustainability, profitability and growth is the result of the balancing of the performance in the 3 domains



Capacity

Environment

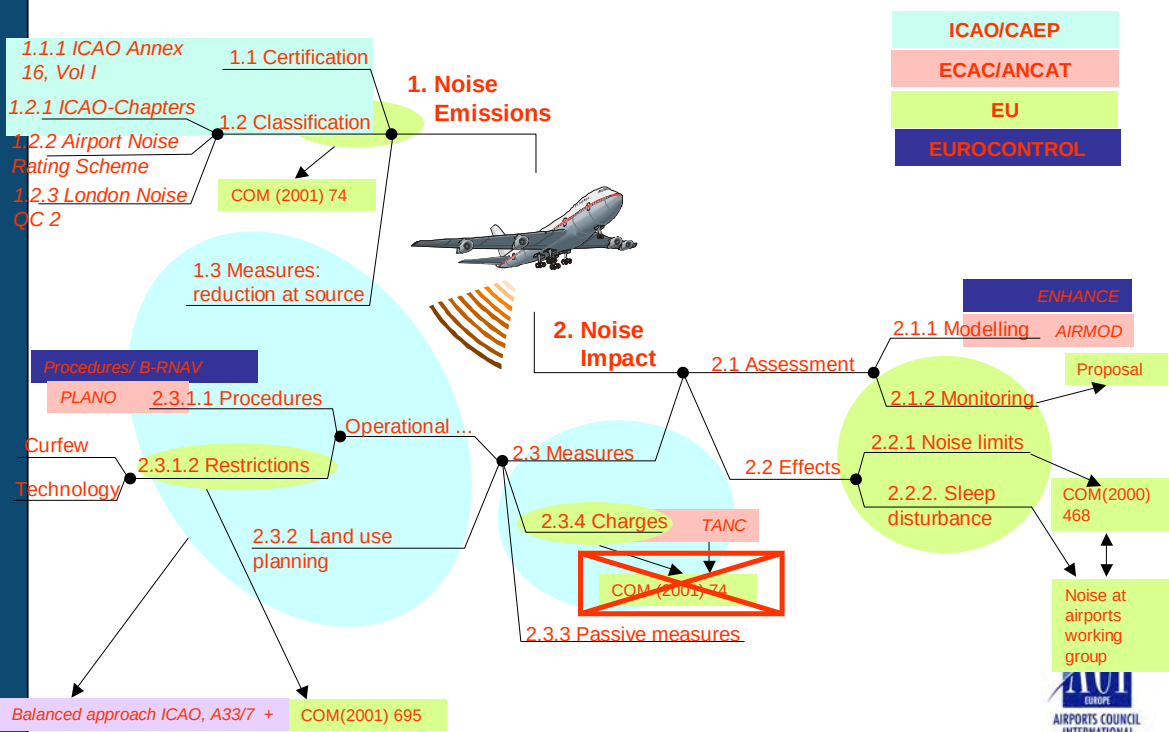
- **Noise concerns are still a dominant environmental issue at EU airports..**



An Extensive Legal Framework

- Legislators and regulators have set the tone for the future:
  - Quieter
  - Cleaner
- Noise is already the subject of voluminous legislation
- Gaseous emissions were somewhat behind, but the legislator is catching up

complex 'NOISE PICTURE'



Environmental Management
It comes at a Price..

Small Eastern Europe airport: € 61,000 p.a.

- Staff, procurement of materials, energy (for noise monitoring system)
- Procurement of environmental services:
  - air quality protection
  - water resources and waste water protection
  - waste management
- underground water protection

Environmental Management
It comes at a Price..

Major Western European Hub: € 4-5m p.a.

- Staff, procurement of materials, energy (for noise monitoring system)
- Construction of a new Runway:
  - Upto € 1billion – noise insulation, buyback, compensations
  - high extra operational costs – each year

Noise at airports: 5 core elements

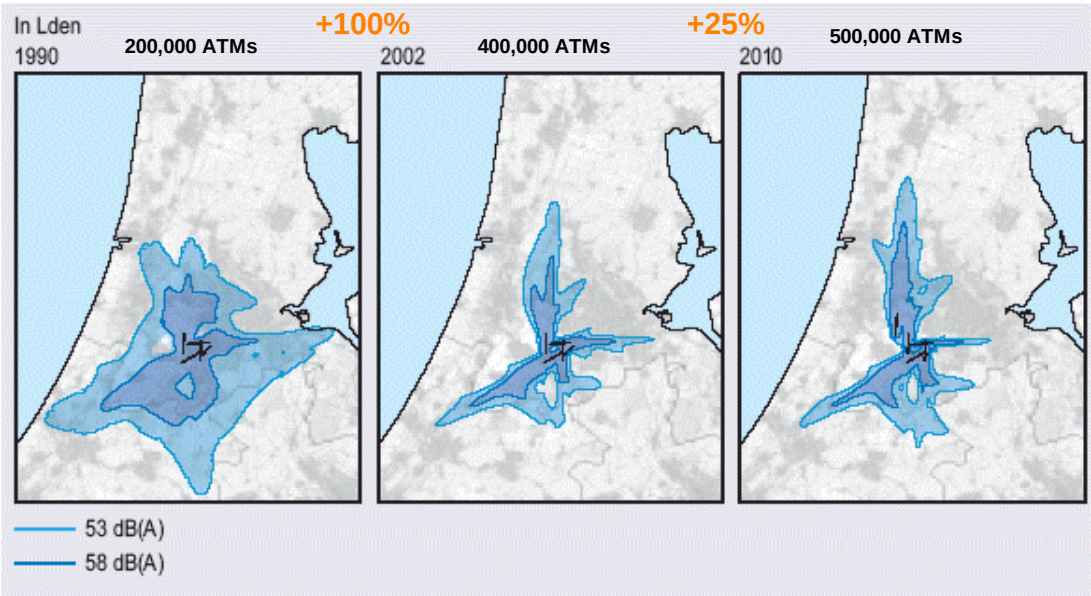
The <u>acoustical</u> side - ICAO Balanced approach

- **Reduction at Source**
- **Land Use Planning**
- **Operational Procedures**
- **Operational Restrictions**

The <u>non-acoustical</u> side:

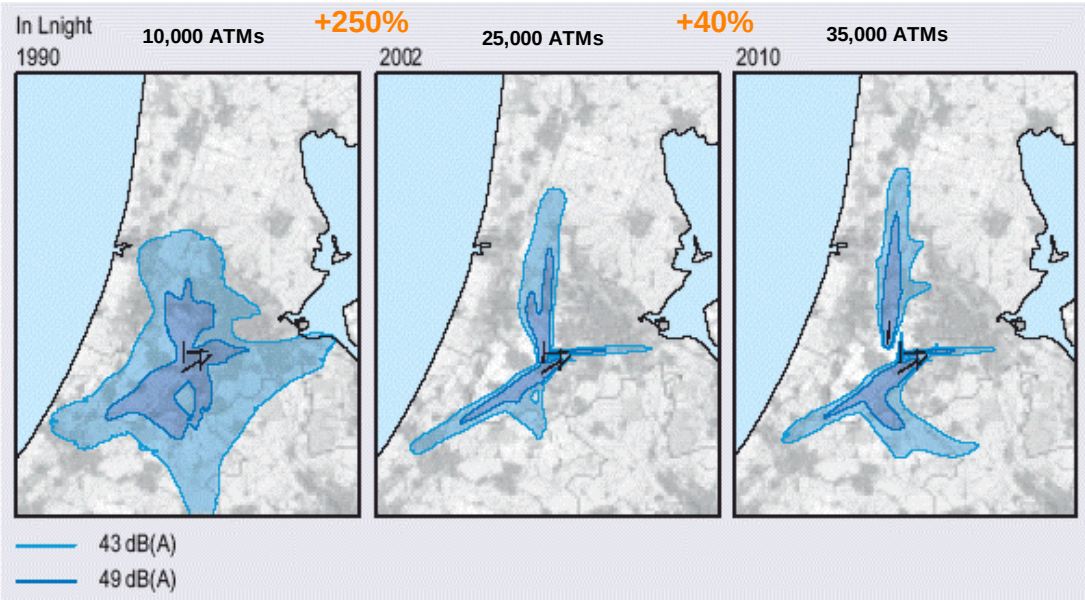
- **Communication, Consultation & Mediation**

Development of noise at EU airports:
"shrinking" of Lden-contours will stop



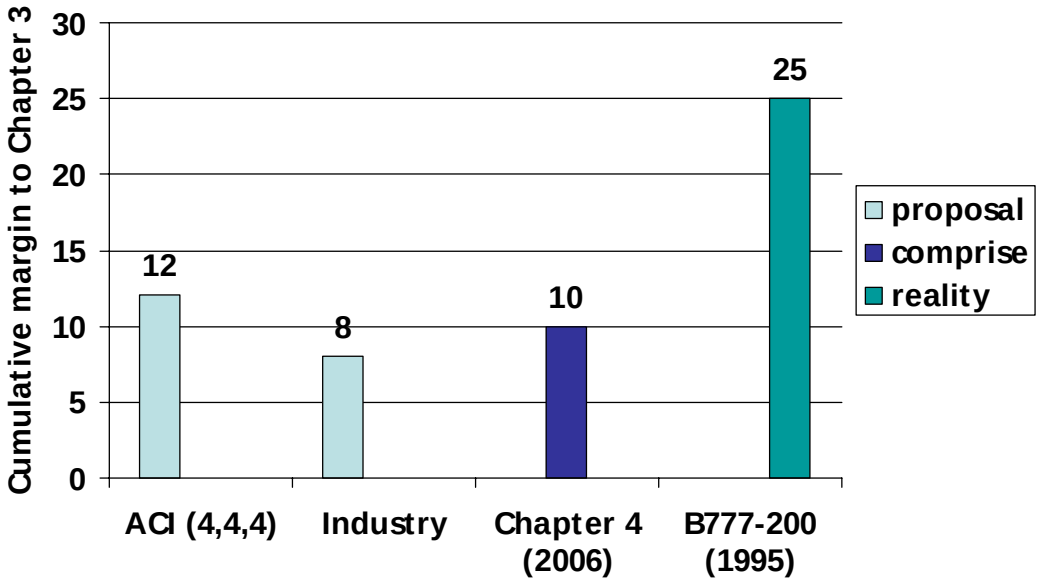
- **Phase out of old / noisy aircraft improved total noise picture, while doubling traffic**

Development of noise at EU airports:
increased number of night-flights is an issue



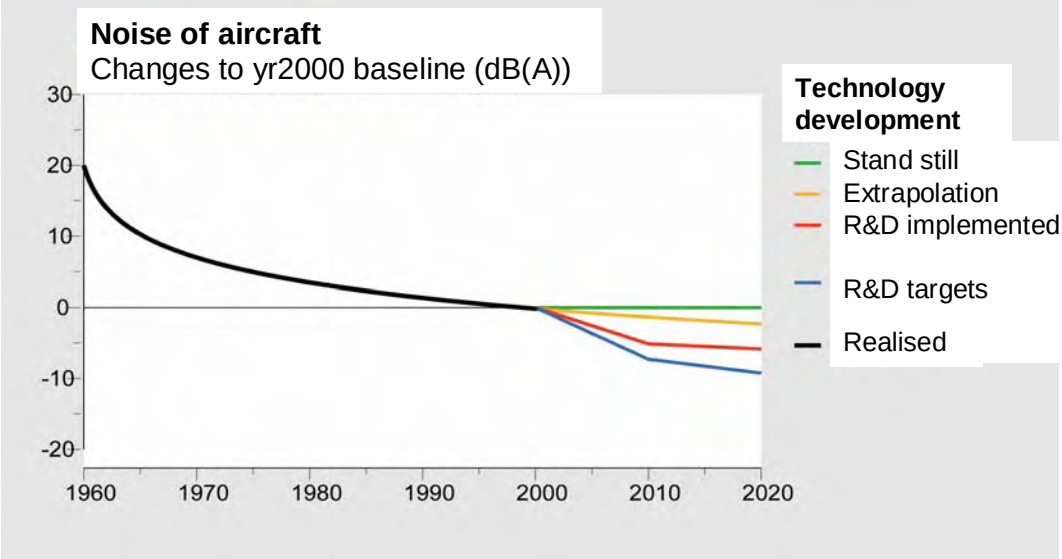
- **Number & type of night flights (23-7 or 22-6) very sensitive in local debate**

1. Noise reduction at source
ICAO Annex 16 standards: not enough



- **ICAO (noise) standards are 'underpinning' existing technology, not driving quieter ac**

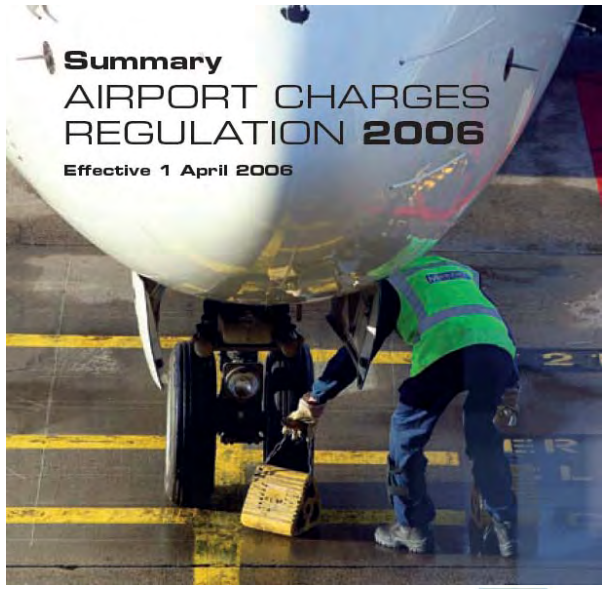
1. Noise reduction at source
Expected technology development



- **Stated research targets are ambitious, but 'compromises' once implemented**

1. Noise reduction at source
noise-incentive charging shemes

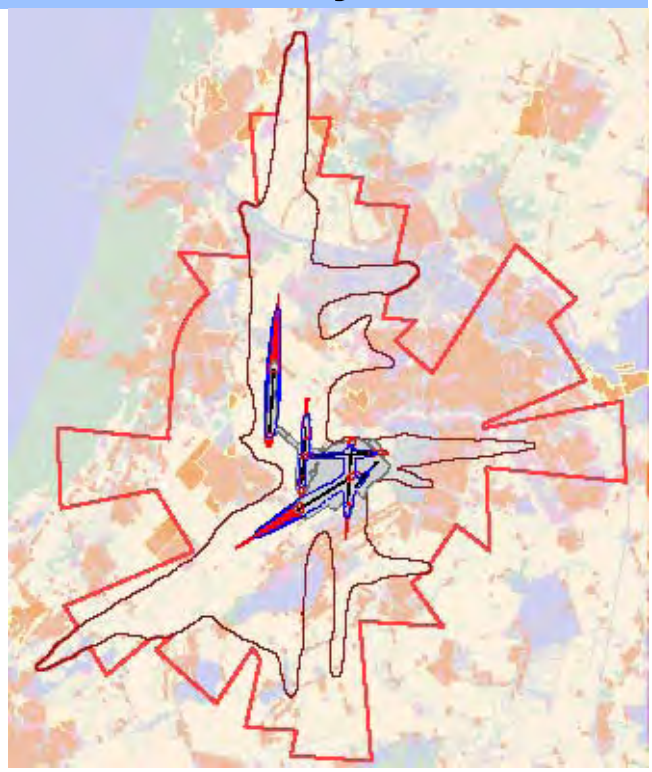
- **difference** in airport charges to **stimulate quieter** aircraft and **discourage** the **noisiest** aircraft
- Based on ACI Noise rating index or national scheme



2. Land use planning (by government)
prevent encroachment & safety issues

Demolition zones 3rd part risk
Demolition zones noise
Restrictions for new buildings
Height restrictions

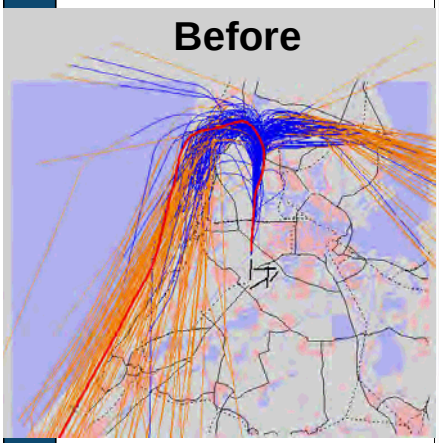
Physical planning restrictions in the airport area

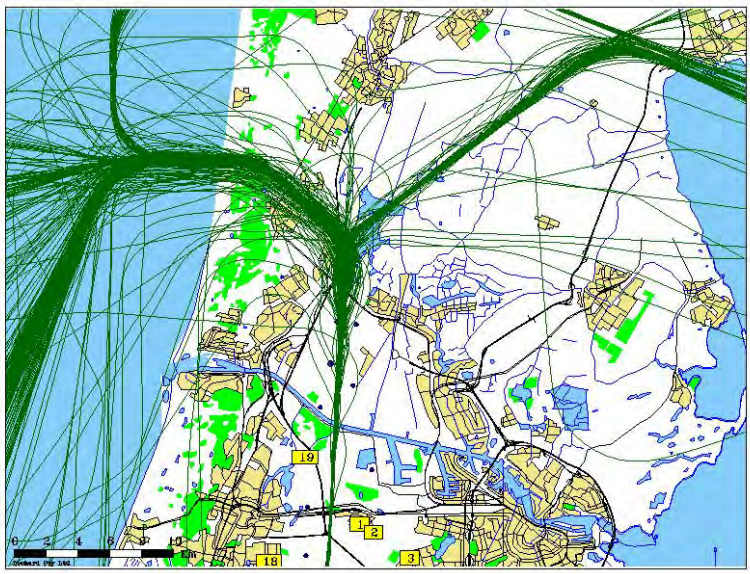


3. Operational Procedures
shift routes to less populated areas

CDA´s over the sea at night

Before





After

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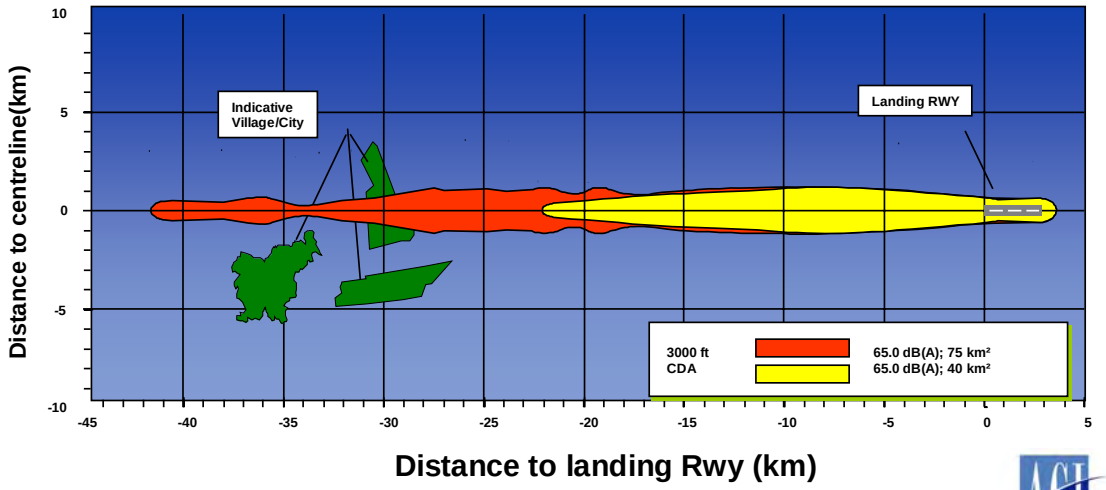
3. Operational Procedures
introduce continuous decent approaches

difference of a single B747-4 noise footprint
3000 ft approach vs. CDA approach

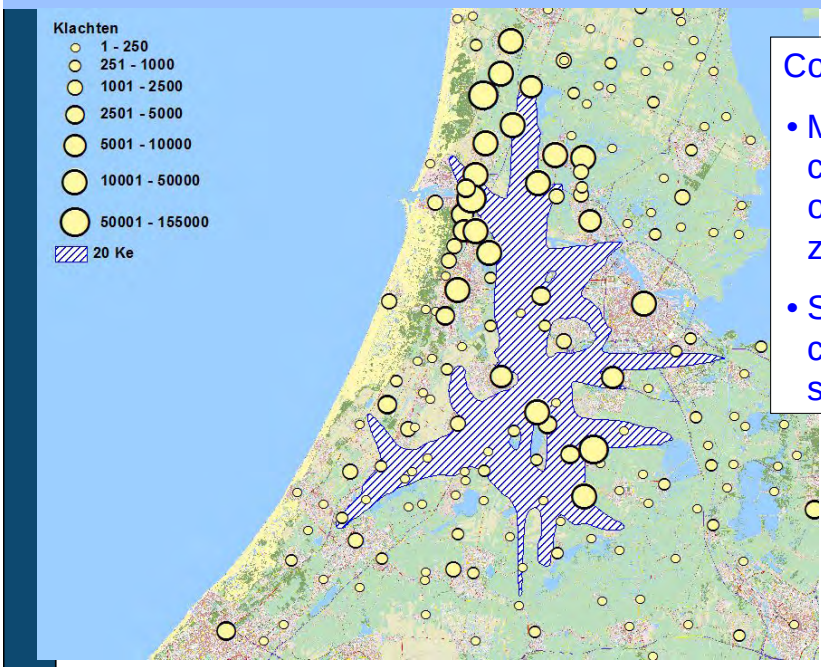


- **Reduce noise impact, fuel use / emissions**

4. Operational Restrictions
last resort, difficult to implement

- Directive 2002/30/EC
- Limited to marginal Chapter 3 aircraft
- Partial or full ban
- Lengthy procedure, with full impact assessment & consultation process
- Implemented / in progress at a number of EU airports

Noise impact differs from noise disturbance!

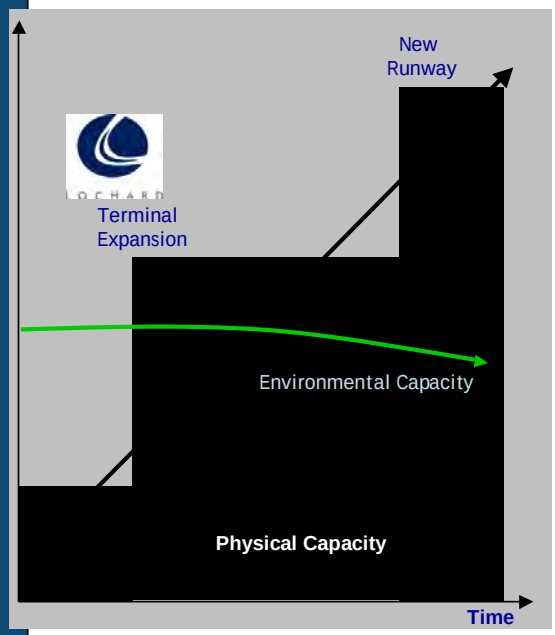


Conclusions:

- Most of the complaints are from outside official noise zones
- Shifting traffic will create new "hot spots"

5. The non-acoustical side of noise

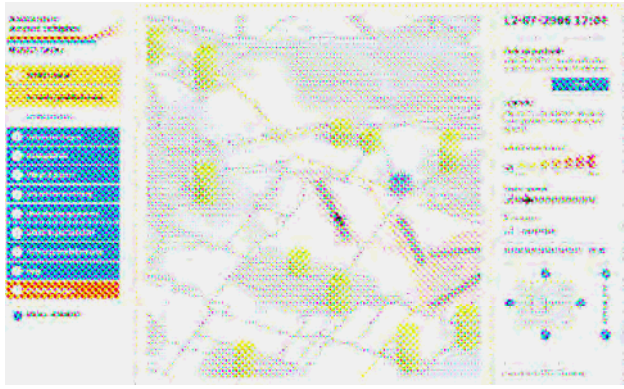
Communication, Consultation & Mediation



- Tolerance enhancement
- Why: impact ALARA
- When: continious proces, dependent on current (local) situation
- Who: joined actions by all responsible parties
- What:
  - Communication
  - Consultation
  - Mediation

5. The non-acoustical side of noise
open, honest information is crucial

example: using online websites for actual flighttrack, altitude and noise event information



www.dfs.de

www.schiphol.nl/nomosonline

- **Noise & flight track monitoring around airports is a valuable starting point**