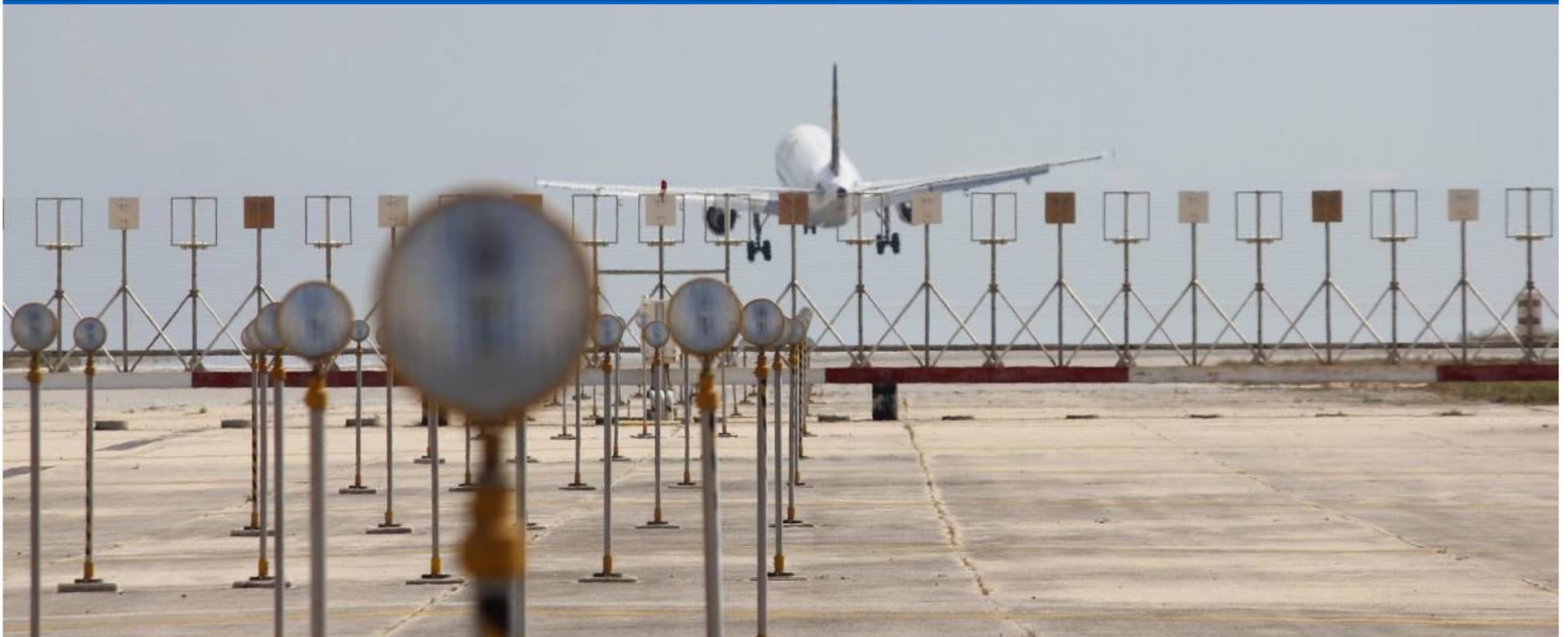


Airports and GHG reduction

D-Air Project

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We'll look at ...

- Why? - Reasons for airports to reduce GHG emissions
- What? - Sources of emissions related to airports
- How? - Managing GHG emissions
- How? - Types of measures that may be adopted
- A word on EU GHG emissions legislation and airports
- Airports and energy demand/surface access

Why reduce GHG emissions?

- Regulatory drivers (direct / indirect)
 - Obligations or targets set out in legislation;
 - EU ETS/ESD/EE/RES.
- Financial/economic reasons
 - Co-benefits of actions to reduce GHG emissions (e.g. savings in energy consumption).
- Environmental credentials (CSR / PR)
 - “Green” airports; carbon certification schemes (e.g. ACI-Europe Airport Carbon Accreditation).

Sources of emissions (1)

Aircraft operations

Airport

Other
associated activities



- Airport operator may contribute to reducing emissions from: e.g. landing/taxiing/APU emissions.
- Emission sources under regulatory control:
 - EU: Avt-EU ETS;
 - ICAO: future MBM(s).
- Aircraft operators demand efficient airport operations to reduce their compliance costs.

Sources of emissions (2)



- Influence of airport operator varies:
 - Direct control (Scope 1): e.g. own power/heating/cooling sources, airport-owned fleet vehicles;
 - Off-site (3rd party) energy generation (Scope 2);
 - Airport-related activities not controlled but influenced by airport operator (Scope 3A): e.g. 3rd party airside equipment.
- Regulatory control varies:
 - Scope 2: EU ETS (indirect);
 - Scope 1/3A: national GHG emissions targets (unilateral/EU Effort-Sharing Decision)

Sources of emissions (3)

Aircraft operations

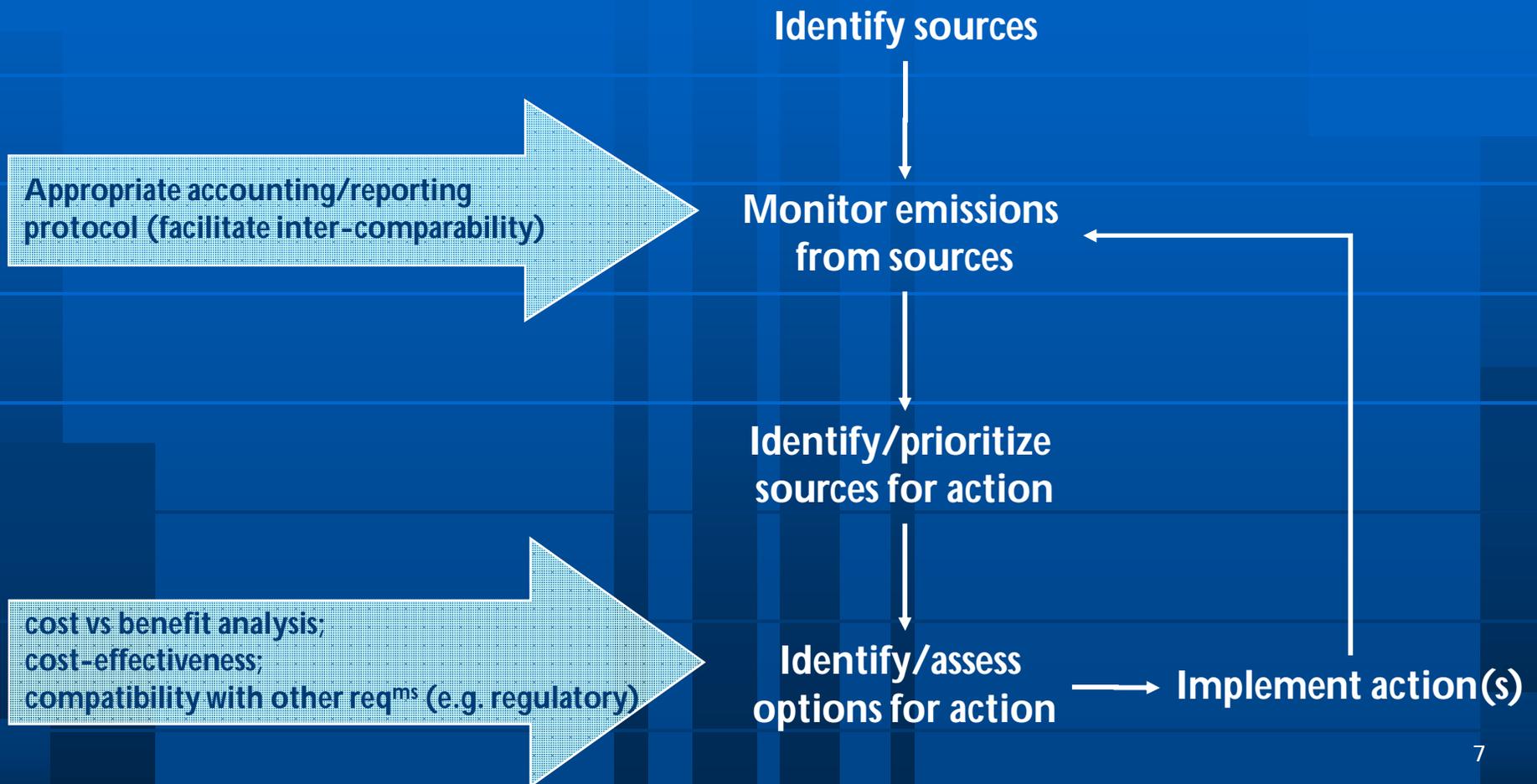
Airport

Other
associated activities



- Influence of airport operator minimal to nil (Scope 3B): e.g. transport to/from airport site (road/rail networks), off-site waste disposal, airport hotels
- Regulatory control varies:
 - national ghg emissions targets (unilateral/EU Effort-Sharing Decision)

GHG emissions management programme



Categories of measures

Regulatory

(command-and control):

- Externally imposed;
- Setting emission standards or prescribing procedures
- E.g. emission limits.

Technical:

- (usually) Internally adopted;
- Solutions using technical devices;
- E.g. RES, energy efficient equipment.

Regulatory

(economic/MBMs):

- Externally imposed;
- Economic incentive ("reward") for emission reductions achieved;
- E.g. emissions trading.



Operational:

- Internally adopted; (possibly externally imposed)
- Changes in operation of emission sources and/or airport practices;
- E.g. traffic/runway mgt.

Airports and EU GHG legislation

- the EU ETS -

- Aircraft operators (gate-to-gate emissions covered)
 - aircraft emissions at airports are important cost-element for AOs.
- Airports may be covered if operating combustion units of total rated thermal input >20MW (probably rare situation).
- Airports sourcing energy from 3rd party providers falling under the EU ETS are (very likely) subject to pass-through of EU ETS compliance costs
 - Alternative energy sources/energy efficiency measures become an important consideration for airport operators (esp. with full auctioning).

Airports and EU GHG legislation

- the Effort-sharing Decision -

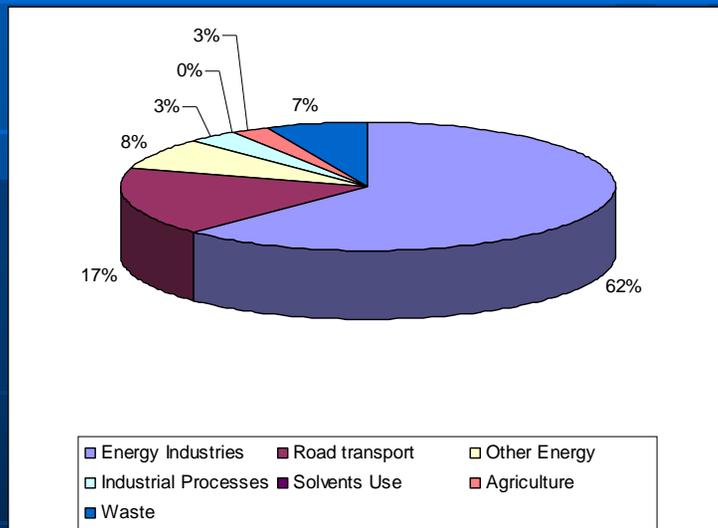
- Sets national targets for GHG emissions not covered by EU ETS
 - Includes *inter alia* emissions from transport, waste mgt, use of HFCs;
 - Compliance onus on Member State;
 - But gov'ts may want to enact national legislation targeting specific sectors/activities.
- Airport emissions directly covered by ESD
 - Vehicles and other ground equipment, buildings, own (non-EU ETS) power generators, own waste incineration/treatment.
- Activities associated with airports also covered
 - Emissions from road network, off-site waste management.

Airports and energy demand

- Energy costs for airport operators
 - Sourcing to meet demand of airport and its customers;
 - Environmental costs (e.g. direct or indirect EU ETS compliance costs).
- Sourcing options
 - Conventional (fossil fuel based) vs alternatives (e.g. RES, biofuels).
- Energy use efficiency is of primary importance
 - Reduce demand = reduce sourcing needs = reduce costs.
- To consider further ...
 - Can airports become energy providers (e.g. renewables)?

Airports and surface access

- Road transport is often second highest contributor to national GHG emissions footprint – thus of major concern to national gov'ts from a regulatory perspective!



- Surface access to/from airports is crucial...
 - for passengers;
 - for airport staff/service providers;
 - airports as centres for other commercial activities (retail/office space);
- Efficient transport networks ...
- Do airports have a role in surface access management?

Useful resources ...

- **Greenhouse Gas Protocol, a Corporate Accounting and Reporting Standard**, World Resource Institute (WRI) & World Business Council for Sustainable Development (WBCSD), 2004
- **Report 11 – Guidebook on Preparing Airport Greenhouse Gas Emissions Inventories**, Airport Cooperative Research Program (ACRP), 2009
- **Guidance Manual: Airport Greenhouse Gas Emissions Management**, Airports Council International (ACI), 2009
- **Report 56 – Handbook for Considering Practical Greenhouse Gas Emission Reduction Strategies for Airports**, Airport Cooperative Research Program (ACRP), 2011

Thank you ...

And have a nice flight ...
to environmental sustainability!

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