CARBON FOOTPRINT
Malta International Airport

D-AIR is an EU funded project where local governments together with airport operators work on converting airports into ecological and sustainable transport hubs, helping to reduce CO2 emissions. D-AIR is founded in part by Interreg IVC through the European Regional Development Fund (ERDF).
Scope of Assignment

- A base line estimation of the carbon emissions established for the carbon footprint of the MIA, its environs, its activities as well as the ancillary activities related to its operations
- An action plan to render airport operations cleaner and as carbon neutral as possible
- A proposed plan recommending how Maltese citizens and foreigners can be persuaded to make more use of public transport connections to and from the airport rather than use of private transport
Outline of Methodology

- Airport Carbon Accreditation
- Defining the Boundary
- Identification of Stakeholders
- Identification of carbon emitting sources
- Conclusion
Recognises and accredits the efforts of airports to manage and reduce their carbon emissions

http://www.airportcarbonaccreditation.org
ACI Europe Accreditation scheme

- 77 European airports accredited, between them account for 58% of Europe's air traffic

<table>
<thead>
<tr>
<th>Mapping</th>
<th>Reduction</th>
<th>Optimisation</th>
<th>Neutrality</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 Airports with 12.7% of European passenger traffic</td>
<td>21 Airports with 12.9% of European passenger traffic</td>
<td>13 airports with 27.6% of European passenger traffic</td>
<td>14 airports with 5.3% of European passenger traffic</td>
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<tr>
<th>Albania</th>
<th>Tirana</th>
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<td>Austria</td>
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<td>Cologne/Bonn</td>
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<td>Prague</td>
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<td>ENontekio Airport, Ivalo Airport, Kemi-Tornio Airport, Kittilä Airport, Kuusamo Airport, Rovaniemi Airport, Vantaa</td>
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<td>Stockholm-Arlanda Airport, Stockholm-Bromma Airport, Umea Airport, Göteborg Landvetter Airport, Malmö Airport, Åre Östersund Airport, Lulea Airport, Ronneby Airport, Visby Airport, Kiruna Airport</td>
</tr>
</tbody>
</table>
GHG Protocol

- **Direct emissions** come from sources that are owned or controlled by the reporting entity.
- **Indirect emissions** are a consequence of the activities of the reporting entity, but occur at sources owned or controlled by another entity.
Emission Scopes

**Scope 1:** All direct GHG emissions

**Scope 2:** Indirect GHG emissions from consumption of purchased electricity, heat or steam

**Scope 3:** Other indirect emissions, such as:
- The extraction, production and transport of purchased materials and fuels
- Transport-related activities in vehicles not owned or controlled by the reporting entity
- Outsourced activities
Malta International Airport (2013)

- Over 80% of aircraft movement is accounted by the top eight airlines
- Caters for 40 Airlines
- Caters 16 Million kgs of Cargo
- 4 Million Passenger Movements
- 50% - Airmalta
- 22% Ryan Air
Malta International Airport
Malta International Airport

Yearly passenger movements for 2013:

<table>
<thead>
<tr>
<th>Peak</th>
<th>Passenger Movements</th>
<th>Date</th>
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<tbody>
<tr>
<td>1st</td>
<td>19,663</td>
<td>17-Aug-13</td>
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<tr>
<td>2nd</td>
<td>19,574</td>
<td>18-Aug-13</td>
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<tr>
<td>3rd</td>
<td>19,256</td>
<td>28-Jul-13</td>
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</tbody>
</table>
IDENTIFICATION OF STAKEHOLDERS
Identification of Stakeholders

Airport Terminal
- MIA
- Non-MIA

Main AirField
- MIA
- Non-MIA

External
- Non-MIA
Identification of Stakeholders

The Airport Terminal Building
MIA: MIA’s own offices at Level 2
Other Tenants: Various retail outlets, catering establishments and offices

The airfield
MIA is responsible for airfield operations related to flights such as the control tower, airfield lighting, security, fire and rescue services, etc.
Other Tenants: Flying Schools, Hangars, Customs, Fuel Supplier, etc.

External
Skyparks and retail
Aircraft Maintenance Firms
Aircraft Catering
CARBON EMITTING ACTIVITY
Collection of Data

- Water and Electricity Bills
- Fuel Bills
- Gas
- Number of employees
- Passenger movement
- Aircraft movements
- Frequency of public transport

Base Year → 2013
Stakeholder Meetings

- Malta International Airport
- SkyParks
- AirMalta
- Lufthansa Technic Malta
- Medavia
- SR Technics
- Sky Gourmet
- Enemalta
- GlobeGround Malta
- World Aviation Services
Estimation of Emissions

MIA
- Electricity
- Water
- Fuel

Non-MIA
- Electricity
- Water
- Fuel
Estimation of Emissions

TRANSPORT

Employees
- MIA
- Non-MIA
  - Own Car/Car Pooling/Motorcycle

Visitors
- Outgoing Tourists
  - Own Car/Taxi
- Incoming Tourists
  - Couch/Taxi/Car Hire

Passengers
  - Hire

Public Transport
Estimation of Emissions

Aviation

- Taxing
- Auxiliary Power Units
- Engine Testing
Conclusion

• The methodology allows us to identify the activities which emit the most CO$_2$e emissions
• Nature of activities allows us to determine whether and to what extent the activities can be addressed to reduce carbon emissions.