

Airport Carbon Accreditation General Issues Committee July 8th 2019



Reducing carbon & increasing airport sustainability



**airport
carbon
accreditation**

MAPPING | REDUCTION | OPTIMISATION | NEUTRALITY



The only independent,
institutionally-endorsed
global standard for
carbon management at
airports

**Airports
not
airlines**

<https://www.airportcarbonaccreditation.org/>

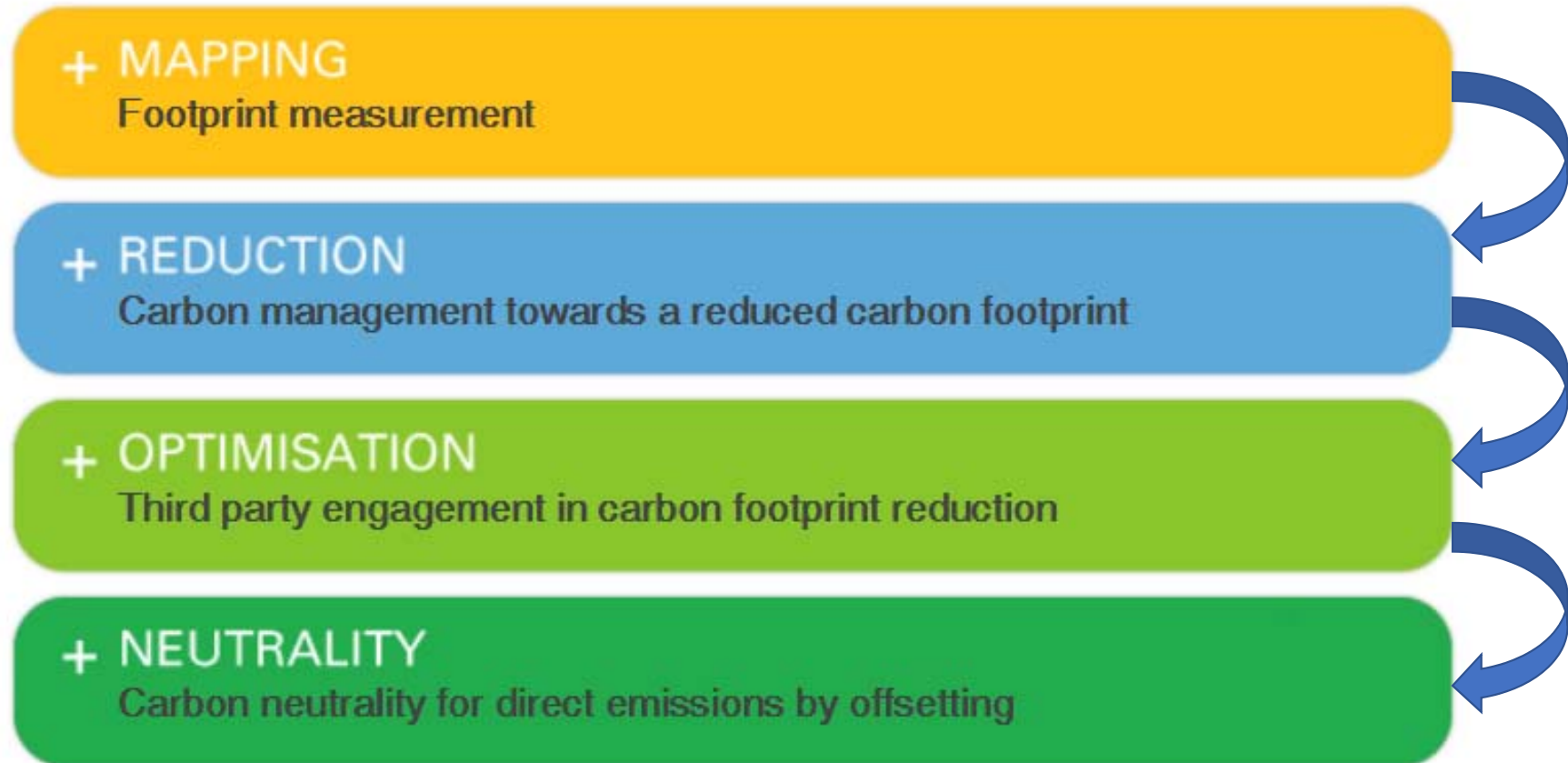
Why do it?

- Hamilton has declared a climate emergency with a goal of reducing emissions to net zero by 2050
- Airport operations and related activities are significant sources of emissions
- All industries must play a part

What is it?

- A process for managing, reducing and ultimately neutralizing the carbon footprint of airports.
- It was created in 2009 by Airports Council International – the global trade representative of the world's airport authorities. Initially in Europe, it was adopted in North America in 2014

Four levels of accreditation



Who's doing it?

Airports
In Canada / In the World

+ MAPPING

Footprint measurement

7 / 91

+ REDUCTION

Carbon management towards a reduced carbon footprint

2 / 76

+ OPTIMISATION

Third party engagement in carbon footprint reduction

5 / 56

+ NEUTRALITY

Carbon neutrality for direct emissions by offsetting

0 / 52

Who's doing it in Canada?

1st step

+ MAPPING
Footprint measurement

Charlottetown, Kelowna, Edmonton,
Fredericton, Regina, Victoria, Winnipeg

2nd step

+ OPTIMISATION
Third party engagement in carbon footprint reduction

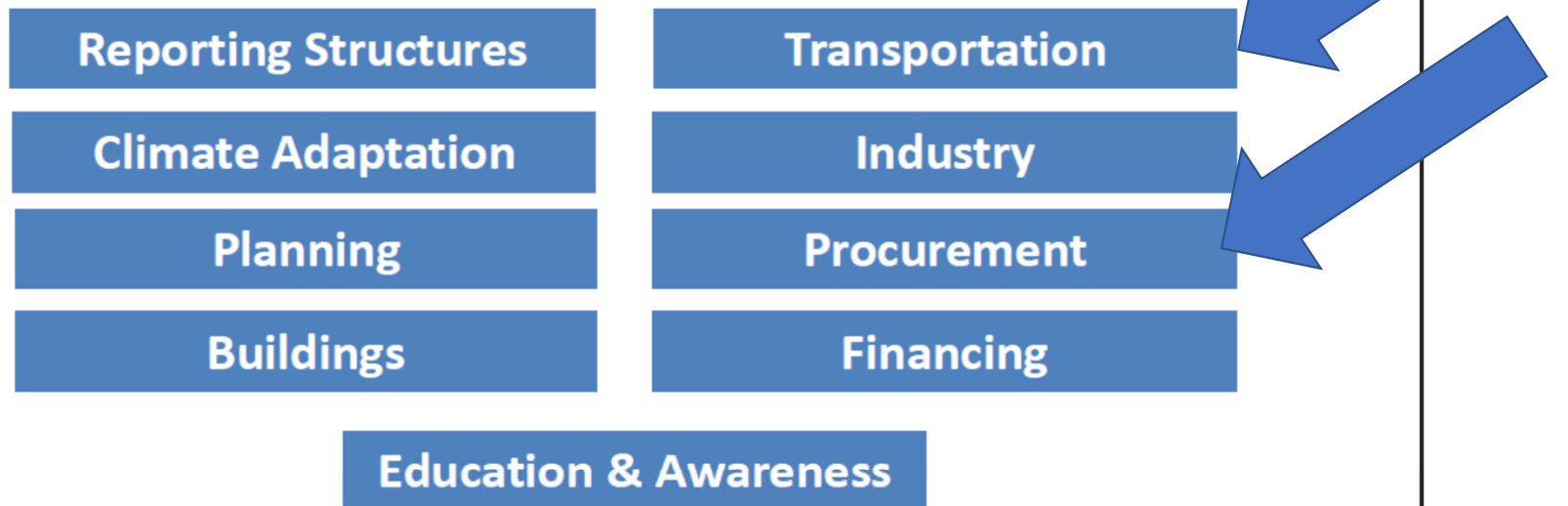
Quebec, Halifax

3rd step

+ REDUCTION
Carbon management towards a reduced carbon footprint

Greater Toronto Airport Authority, Montreal
Monckton, Ottawa, Vancouver

Corporate Climate Change Task Force Framework



6

Background information

+ MAPPING

What is it?

The 'Mapping' step of *Airport Carbon Accreditation* requires carbon footprint measurement.

How to achieve it?

To achieve this level of accreditation, an airport has to:

- Determine its 'operational boundary' and the emissions sources within that boundary which are Scope 1 and Scope 2 sources, as defined by the [Greenhouse Gas Protocol](#)
- Collect data and calculate the annual carbon emissions for the previous year for those sources
- Compile a carbon footprint report
- Engage an independent third party to verify the report before submission, to ensure that the carbon footprint calculation is in accordance with ISO14064 and accreditation requirements.

+ REDUCTION

What is it?

The 'Reduction' step of *Airport Carbon Accreditation* requires carbon management and progress towards a reduced carbon footprint.

How to achieve it?

To achieve this level of accreditation, an airport has to:

- Fulfil all the requirements of 'Mapping'
- Provide evidence of effective carbon management procedures including target setting
- Show that a reduction in the carbon footprint has occurred by analysing the carbon emissions data of consecutive years.

+ OPTIMISATION

What is it?

The 'Optimisation' step of *Airport Carbon Accreditation* requires **third party engagement** in carbon footprint reduction. Third parties include airlines and various service providers, for example, independent ground handlers, catering companies, air traffic control and others working on the airport site. It also involves engagement on surface access modes (road, rail) with authorities and users.

How to achieve it?

To achieve this level of accreditation, an airport has to:

- Fulfil all the requirements of 'Mapping' and 'Reduction'
- Widen the scope of its carbon footprint to include a range of Scope 3 emissions. ([GHG Protocol](#))
Scope 3 emissions to be measured include:
 - landing and take-off cycle emissions
 - surface access to the airport for passengers and staff
 - staff business travel emissions
 - any other Scope 3 emissions which the airport chooses to include.
- Presentation of evidence of engagement with third party operators to reduce wider airport-based carbon emissions.

+ NEUTRALITY

What is it?

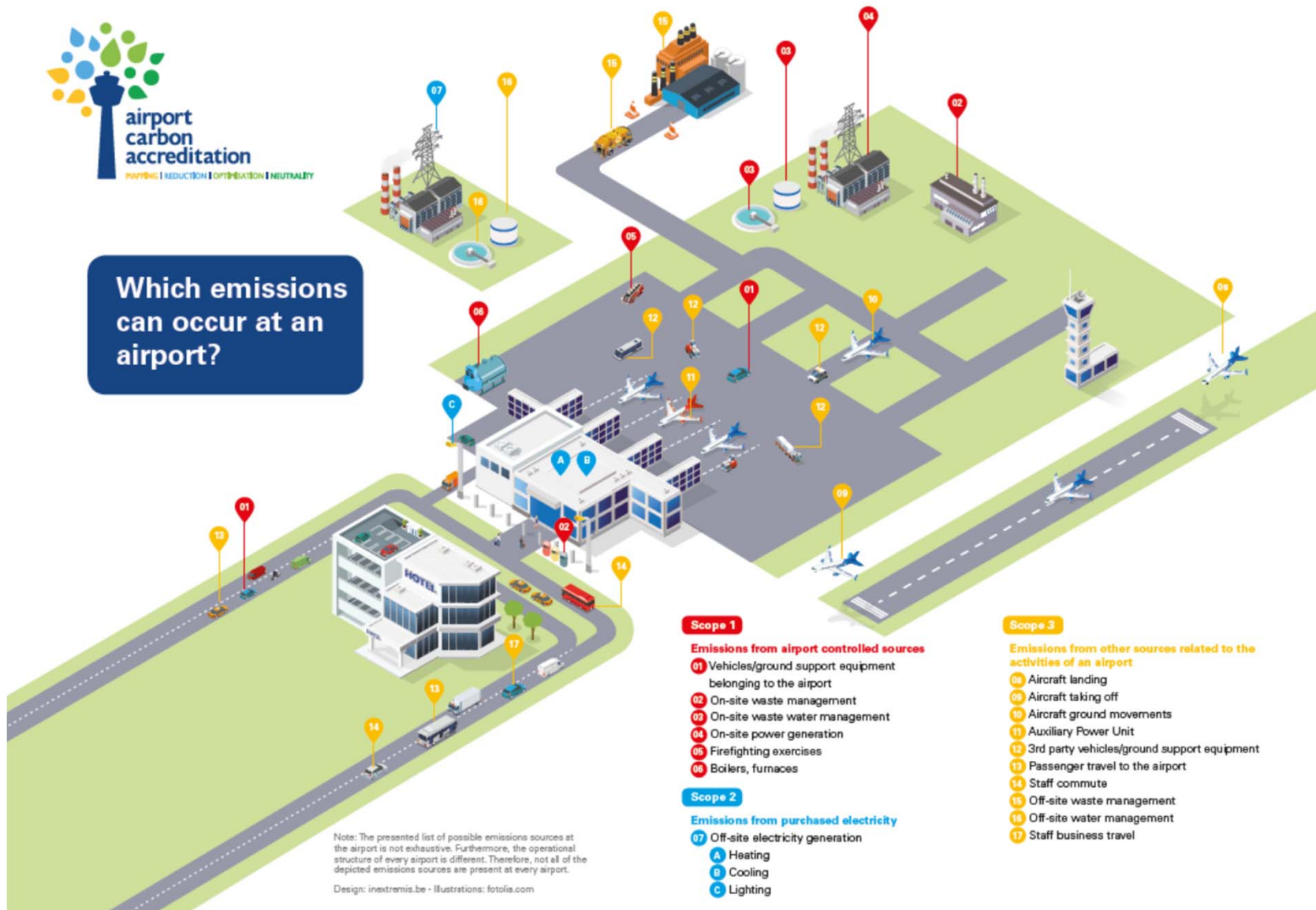
The 'Neutrality' step of *Airport Carbon Accreditation* requires neutralising remaining direct carbon emissions by offsetting.

How to achieve it?

To achieve this level of accreditation, an airport has to:

- Fulfil all requirements of 'Mapping', 'Reduction' and 'Optimisation'
- Offset its remaining Scope 1 and 2 carbon emissions ([GHG Protocol](#)) to show its commitment to achieving carbon neutral operations for all direct emissions and indirect emissions over which the airport has control, using internationally recognised offsets.

Which emissions can occur at an airport?



Airports addressing their CO₂ emissions

CHOOSING SMARTER ON-SITE TRANSPORT
On an airport site, there are many vehicles facilitating airside services such as runway and apron maintenance, ground handling, and passenger transport, all of which only operate within the perimeter of the airport. A concerted effort is being made by airports big and small (including airports in Amsterdam, Bologna, Cork, Dublin, Oslo, Trondheim, Zurich and many more) to replace these mainly diesel-powered vehicles with electric, hybrid or gas powered ones. The distances travelled by these vehicles may be small when compared with the average road vehicle, but by moving to more sustainable sources, the CO₂ emissions associated with on-site transport are falling.

CONVERTING TO ECO-EFFICIENT LIGHTING
As public spaces, airports have to provide well-lit facilities and naturally this is a substantial part of their energy consumption. In recent years, the benefits of LED (Light-Emitted Diode) technology have led a lot of airports to invest in replacing their lighting systems with LEDs, resulting in a significant drop in their energy consumption (and associated CO₂ emissions). For example, lighting at part of Helsinki Airport improved and energy consumption decreased by 85% when they replaced 2,100 old light fixtures with LED lighting.

INVESTING IN SUSTAINABLE ENERGY
A growing number of airports are now seeking to become more energy independent and more than that, to use sustainable energy sources such as wind, hydro and solar. Athens International Airport was one of the pioneers in harnessing the abundant sun in its location, through its €20 million investment in a photovoltaic park. The park produces approximately 11 million kWh a year - that's 20% of the airport operator's energy needs (equivalent to a reduction of 10,000 tonnes of CO₂). Other airports in Europe and Asia-Pacific are making similar investments, each helping to lower their part of the industry's carbon footprint

HELPING THE PASSENGER TO HAIL A BETTER TAXI
While rail intermodality is now a must for capital city airports, we are already seeing several airports in Europe which are working with their taxi partners, to lower the taxi-related CO₂ emissions at the airport site. Stockholm-Arlanda was one of the first, by giving exclusive priority to hybrid and electric cars – a move which quickly saw all the airport taxis voluntarily move to these technologies. At Amsterdam-Schiphol, the airport company revised its taxi partnership, making cleaner taxis as a key objective. The airport is now served by a substantial fleet of 167 zero-emission Tesla Model S taxis.

INITIATING BETTER COLLABORATION WITH AIR TRANSPORT PARTNERS
Air transport is collaborative effort between airports, airlines, ground handlers, air traffic controllers and others. One action that is helping lower CO₂ emissions is the implementation of something called Airport Collaborative Decision-Making (A-CDM). By sharing real-time updates on operations, over 15 major European airports including Heathrow, Paris CDG, Frankfurt, Munich and Brussels are lowering waiting times for landings and takeoffs, resulting in less fuel burn, less CO₂ emissions and better punctuality.

INVESTING IN SUSTAINABLE ENERGY – PART 2
A growing number of airports are now seeking to become more energy independent and more than that, to use sustainable energy sources such as wind, hydro and solar. Paris CDG and Keflavik Airport in Iceland are examples of airports which use geothermal energy to power their facilities – an entirely natural and sustainable energy source. In 2011, Aéroports de Paris commissioned a geothermal power plant at Paris-Orly, and a biomass power plant at Paris-Charles de Gaulle in 2012, significantly increasing its production of renewable energies. To date, the geothermal energy plant at Paris-Orly has enabled Aéroports de Paris to reduce GHG emissions by 9,000 tonnes of CO₂ per year and the biomass plant by 18,000 tonnes of CO₂.

Airline emissions are separately targeted and are not part of Airline Carbon Accreditation

Targeted by IATA (International Air Transport Association)

- An average **improvement in fuel efficiency** of 1.5% per year from 2009 to 2020
- A cap on net aviation CO2 emissions from 2020 (**carbon-neutral growth**)
- A **reduction in net aviation CO2 emissions of 50%** by 2050, relative to 2005 levels

A multi-faceted approach: the four-pillar strategy

IATA is determined to be part of the solution but insists that, in order to achieve these targets, a strong commitment is required from all stakeholders working together through the four pillars of the aviation industry strategy:

- Improved **technology**, including the deployment of sustainable low-carbon fuels
- More efficient aircraft **operations**
- **Infrastructure** improvements, including modernized air traffic management systems
- A single **global market-based measure**, to fill the remaining emissions gap