Selection of mitigation measures

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Recap: Five basic elements of an Action Plan (minimum requirements)

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1**. Contact information**.

2**. Baseline** (without action) fuel consumption CO2 emissions and traffic (from the latest available year to 2050).

3. **Measures to mitigate** CO_2 emissions.

4. **Expected results** (fuel consumption, CO2 emissions and traffic with the actions in 3 being taken from the latest available year to 2050).

5. **Assistance** needs.

Selection of mitigation measures

- The selection of Mitigation Measures can be challenging:
  - Cost associated?
  - CO_2 abated?

- To facilitate the selection, ICAO has developed a **Marginal Abatement Cost (MAC) Curve**

Selection of mitigation measures

Top-down approach	Bottom-up approach

Top-down approach

Decide upon an environmental objective to be reached from the implementation of measures

Identify and prioritize measures

Aggregate expected results of measures selected

Meets intended objective?

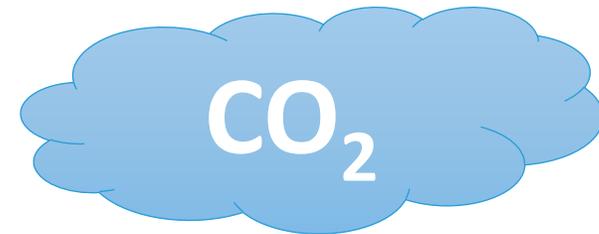**Bottom-up approach**

Identify and prioritize measures

Aggregate expected results of measures selected
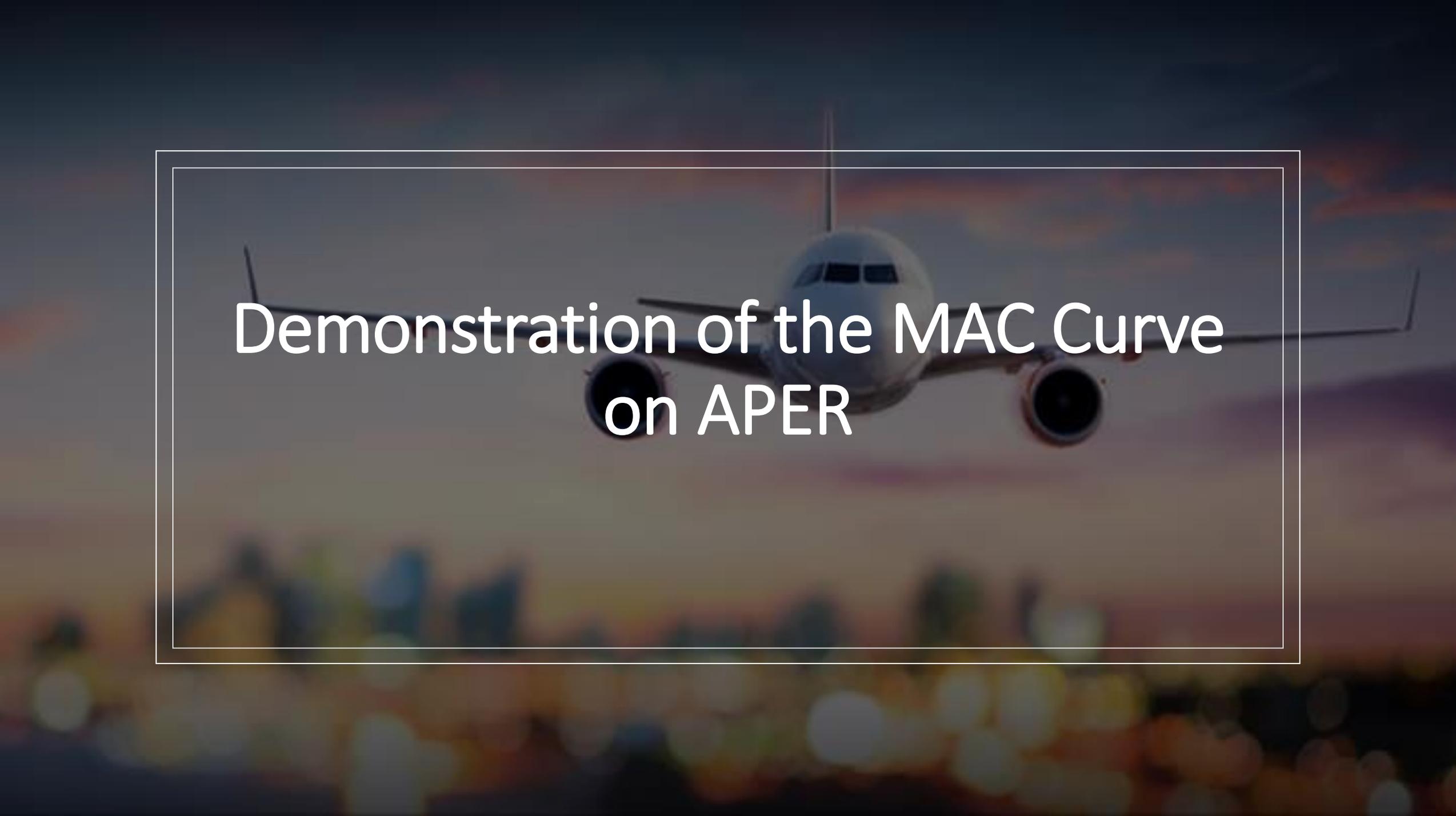
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Prioritization of mitigation measures

- The prioritization of mitigation measures consists of ranking the selected mitigation measures based on criteria, such as:
  - Emissions reductions;
  - Economic feasibility;

- **Example** (for economic feasibility):

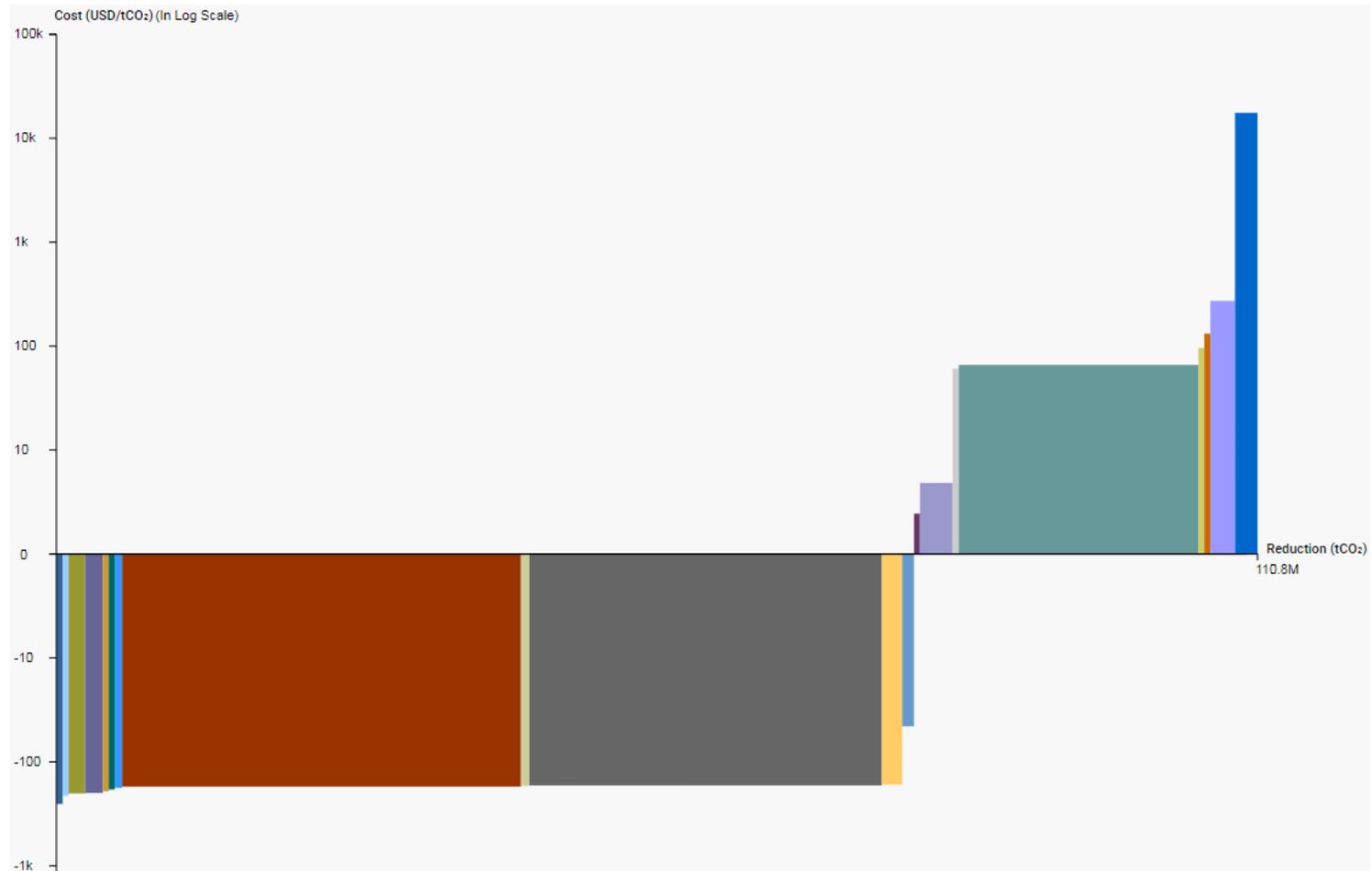Specific Budget   Maximize the CO_2 reduction

Demonstration of the MAC Curve on APER

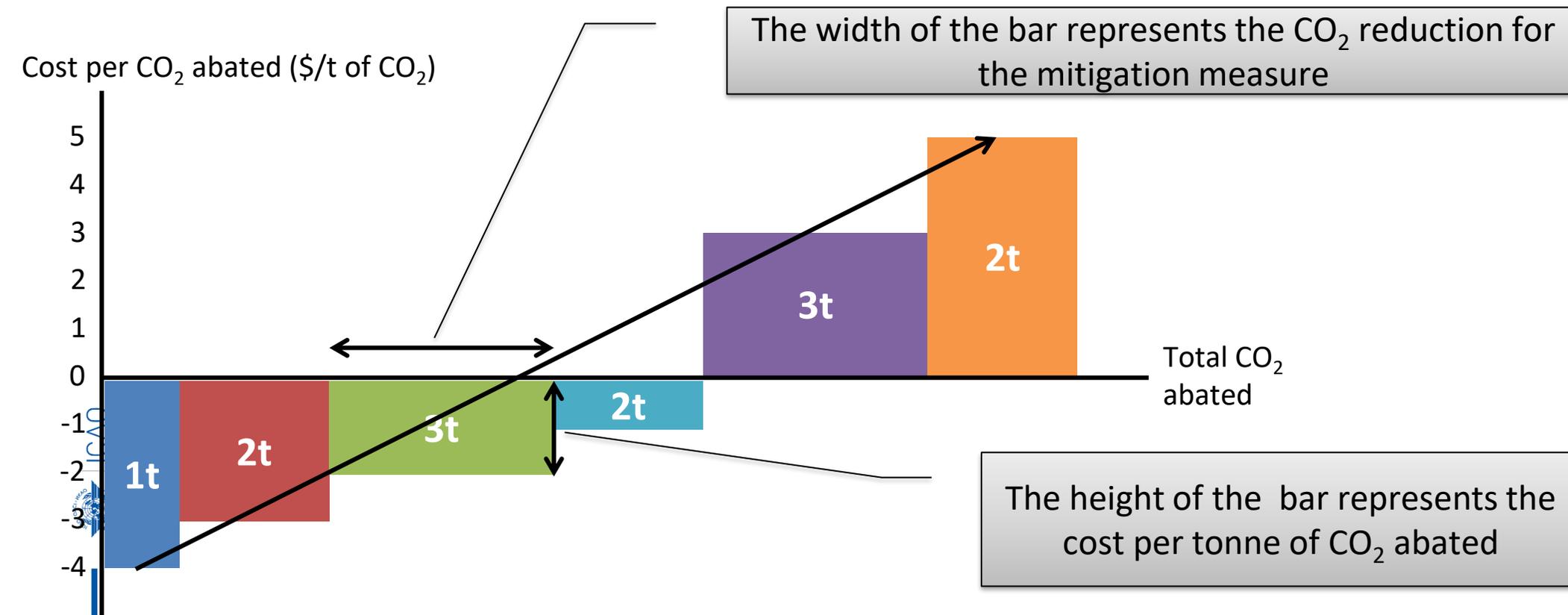# Function and Representation of a MAC curve

Function: A MAC curve **helps to select and prioritize** mitigation measures.

Representation: - - - - - - - - ->
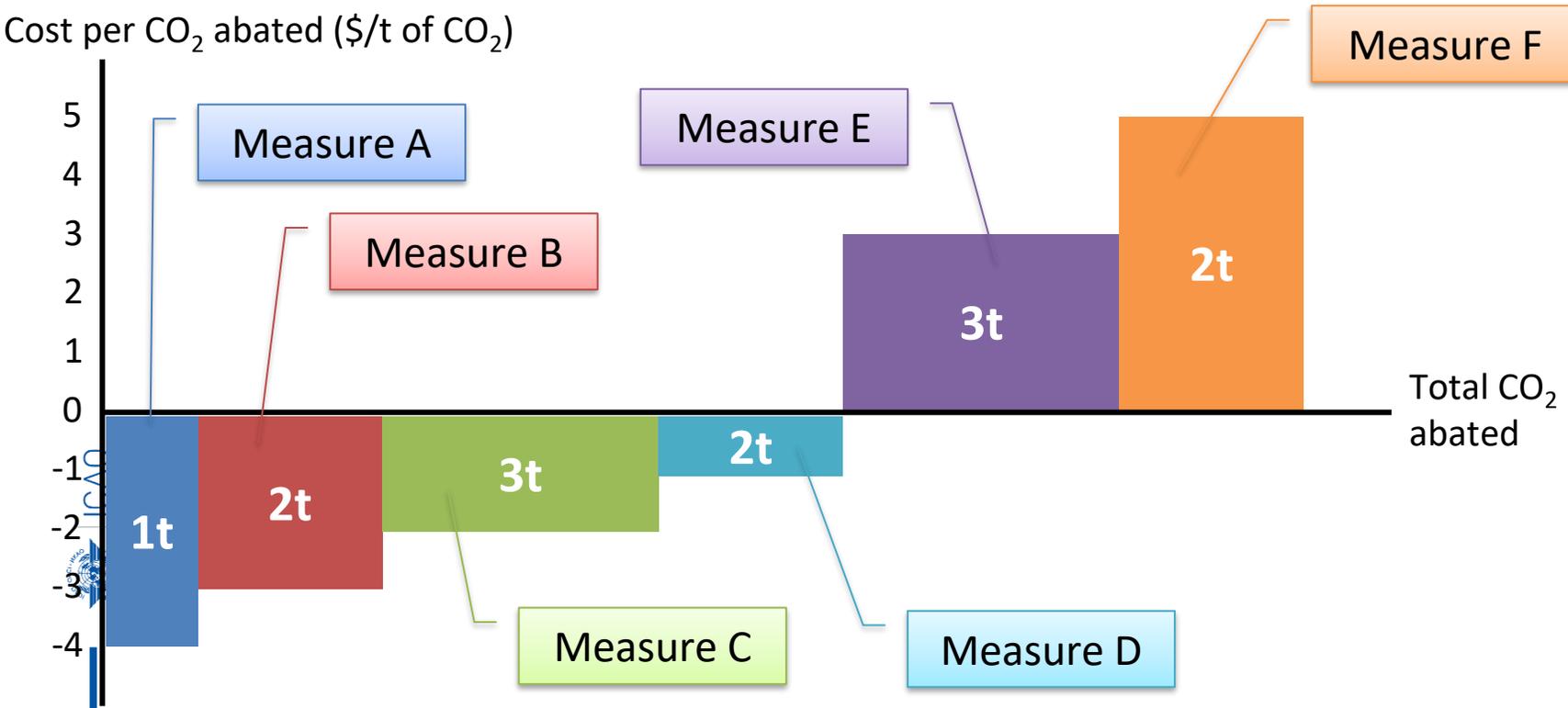
How to read a MAC curve?

Cost per CO_2 abated (\$/t of CO_2)

The width of the bar represents the CO_2 reduction for the mitigation measure

The height of the bar represents the cost per tonne of CO_2 abated

Total CO_2 abated

How to use a MAC curve – Example

Scenario	Maximize the CO_2 abated by setting the total cost at $0 or lower

Cost per CO_2 abated ($/t of CO_2)

Measure A
Measure B
Measure C
Measure D
Measure E
Measure F

Total CO_2 abated

#	Cost per tonne ($/t)	CO_2 abated (tonne)	Total cost ($)
A	-4	1	-4
B	-3	2	-6
C	-2	3	-6
D	-1	2	-2
E	3	3	9
F	5	2	10
Total		13	1

How to use a MAC curve – Example

| Scenario | Maximize the CO_2 abated by setting the total cost at $0 or lower |

Cost per CO_2 abated ($/t of CO_2)

Total CO_2 abated

Measure A
Measure B
Measure C
Measure D
Measure E
Measure F

#	Cost per tonne ($/t)	CO_2 abated (tonne)	Total cost ($)
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F	5	2	10
Total		13 --> 11	1 --> -9

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Thank You!