

Dfid-SLoCaT Project on State of Knowledge Study on Low Carbon, High Volume Transport



John Rogers, Senior Climate Change Specialist,
Workshop on Capacity Building Strategy for the Implementation of
Low Carbon High Volume Transport in Asia

Pre-event to the 11th Intergovernmental Regional Environmentally Sustainable Transport (EST)
Forum in Asia, Ulaanbaatar, Mongolia

2 October, 2018



WHAT IS A POLICY, WHAT IS A TARGET

What is:

**25% of Urban travel to be on Public Transport
(Buses + Metro) by 2025**

- A policy?
- A target?

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WHAT IS A POLICY, WHAT IS A TARGET

What is:

Minimum Fuel Efficiency Standard of 20 km/L for cars in 2020

- A policy?
- A target?

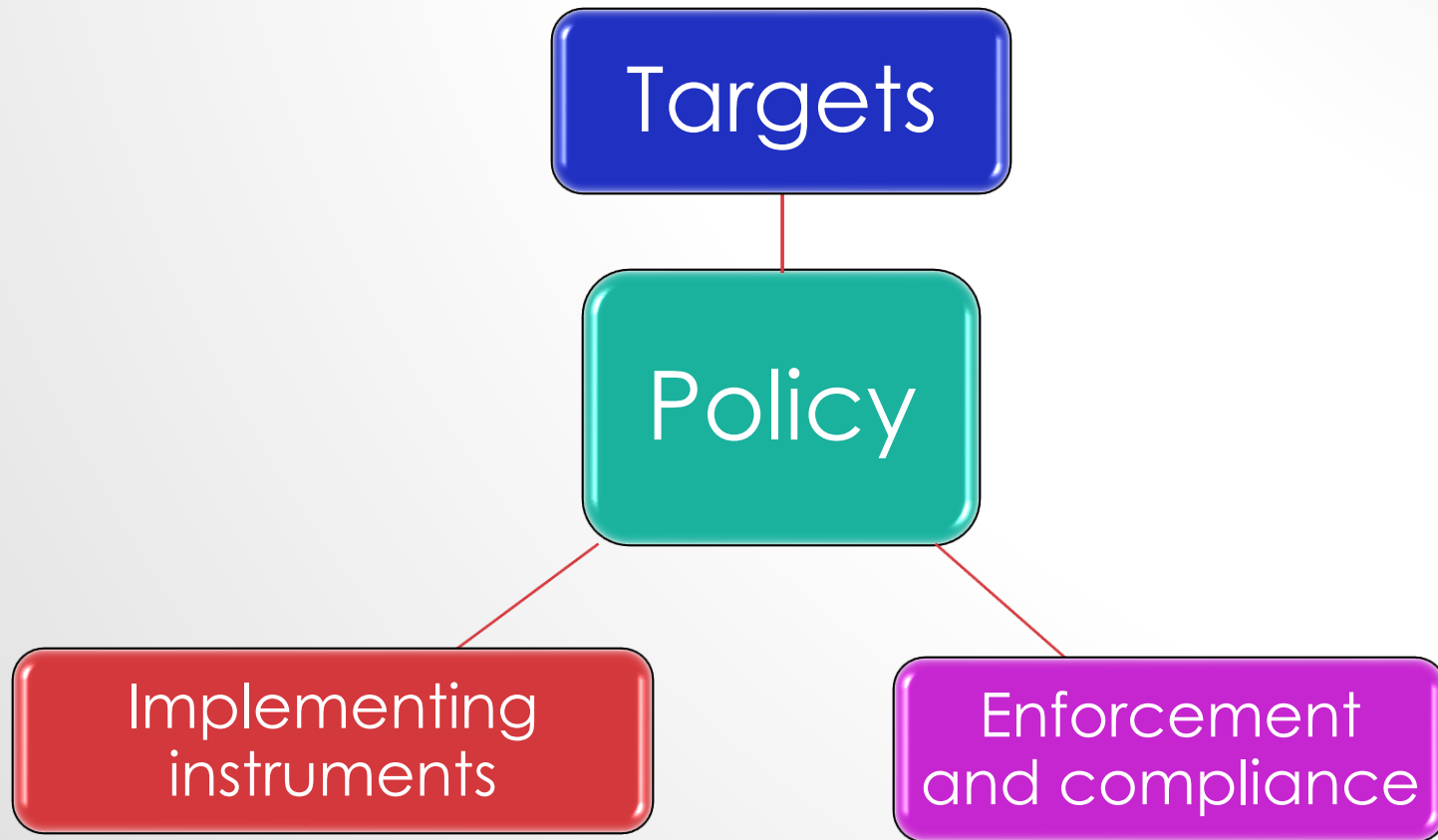
WHAT IS A POLICY, WHAT IS A TARGET

What is:

Minimum Fuel Efficiency Standard of 20 km/L for cars in 2020

- A policy?
- ✓ A target

INGREDIENTS OF A COMPLETE POLICY

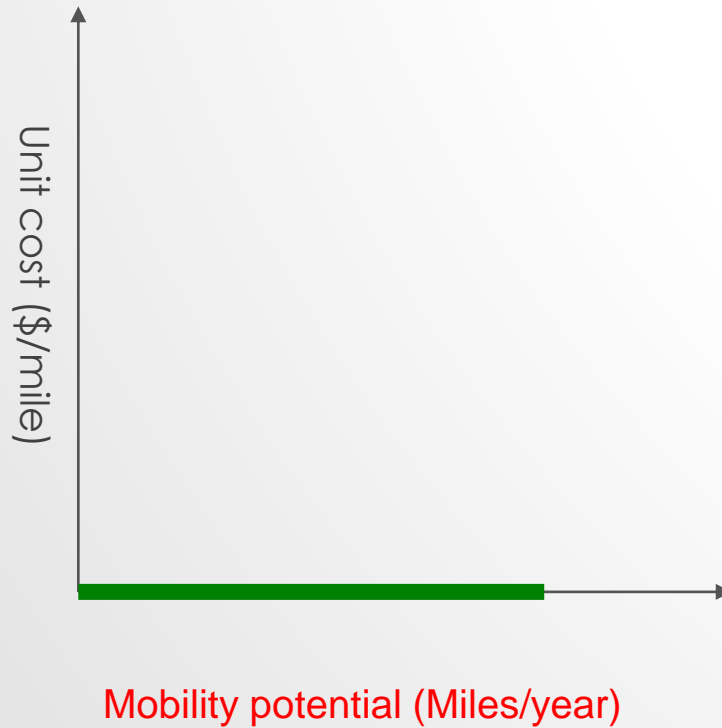


WHAT WOULD YOU BUY: TESLA OR HONDA?



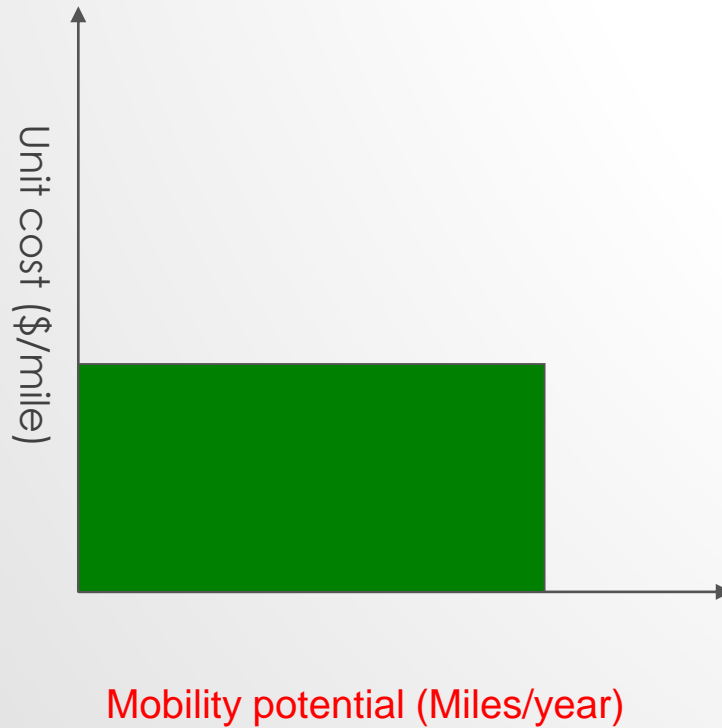
ADVANTAGES OF THE TESLA VS HONDA?

- Incremental mobility



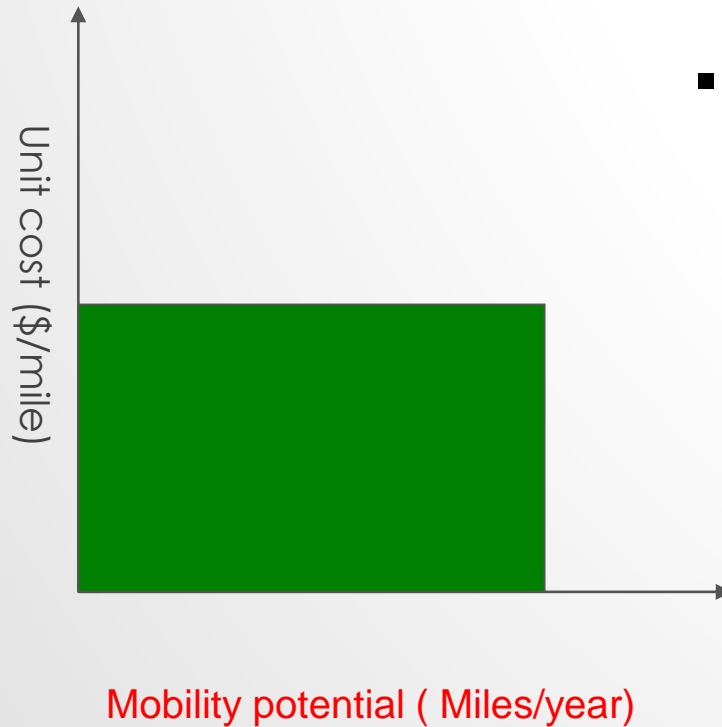
ADVANTAGES OF THE TESLA VS HONDA?

- Incremental mobility
- Incremental capex

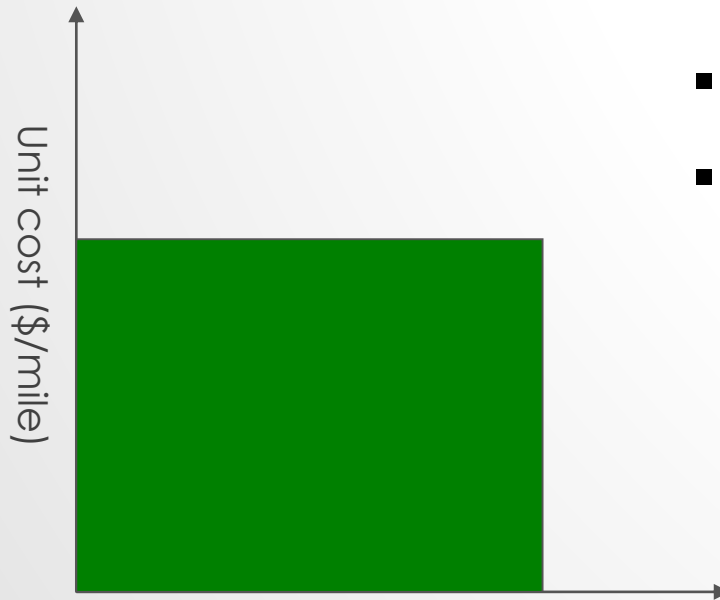


ADVANTAGES OF THE TESLA VS HONDA?

- Incremental mobility
- Incremental capex
- Fuel range anxiety



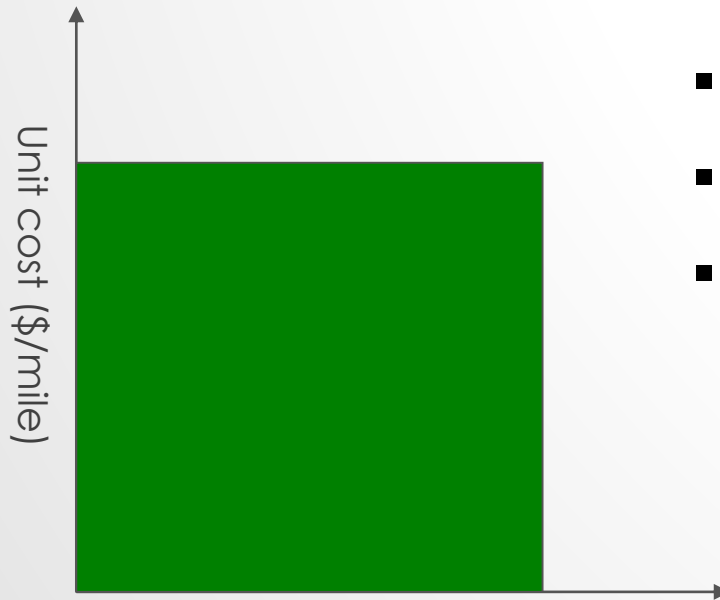
ADVANTAGES OF THE TESLA VS HONDA?



Mobility potential (Miles/year)

- Incremental mobility
- Incremental capex
- Fuel range anxiety
- Incremental maintenance cost

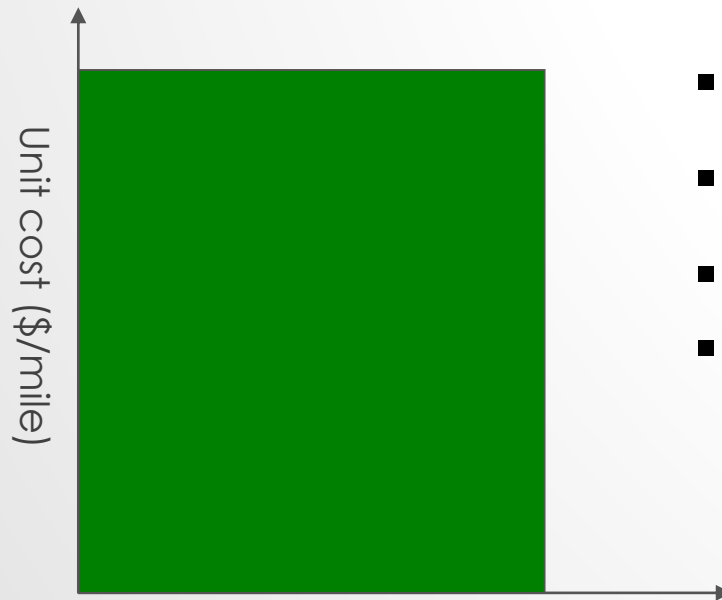
ADVANTAGES OF THE TESLA VS HONDA?



Mobility potential (Miles/year)

- Incremental mobility
- Incremental capex
- Fuel range anxiety
- Incremental maintenance cost
- Incremental taxes and fees

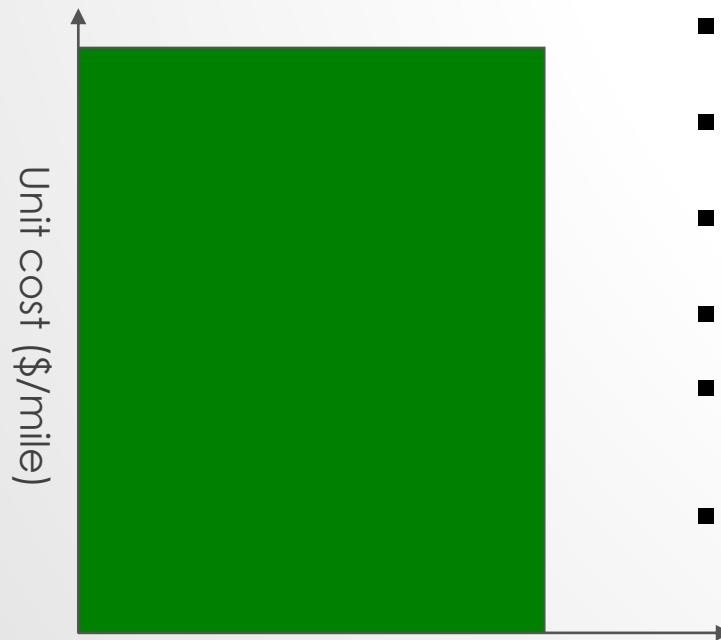
ADVANTAGES OF THE TESLA VS HONDA?



Mobility potential (Miles/year)

- Incremental mobility
- Incremental capex
- Fuel range anxiety
- Incremental maintenance cost
- Incremental taxes and fees
- Incremental risk premium (insurance)

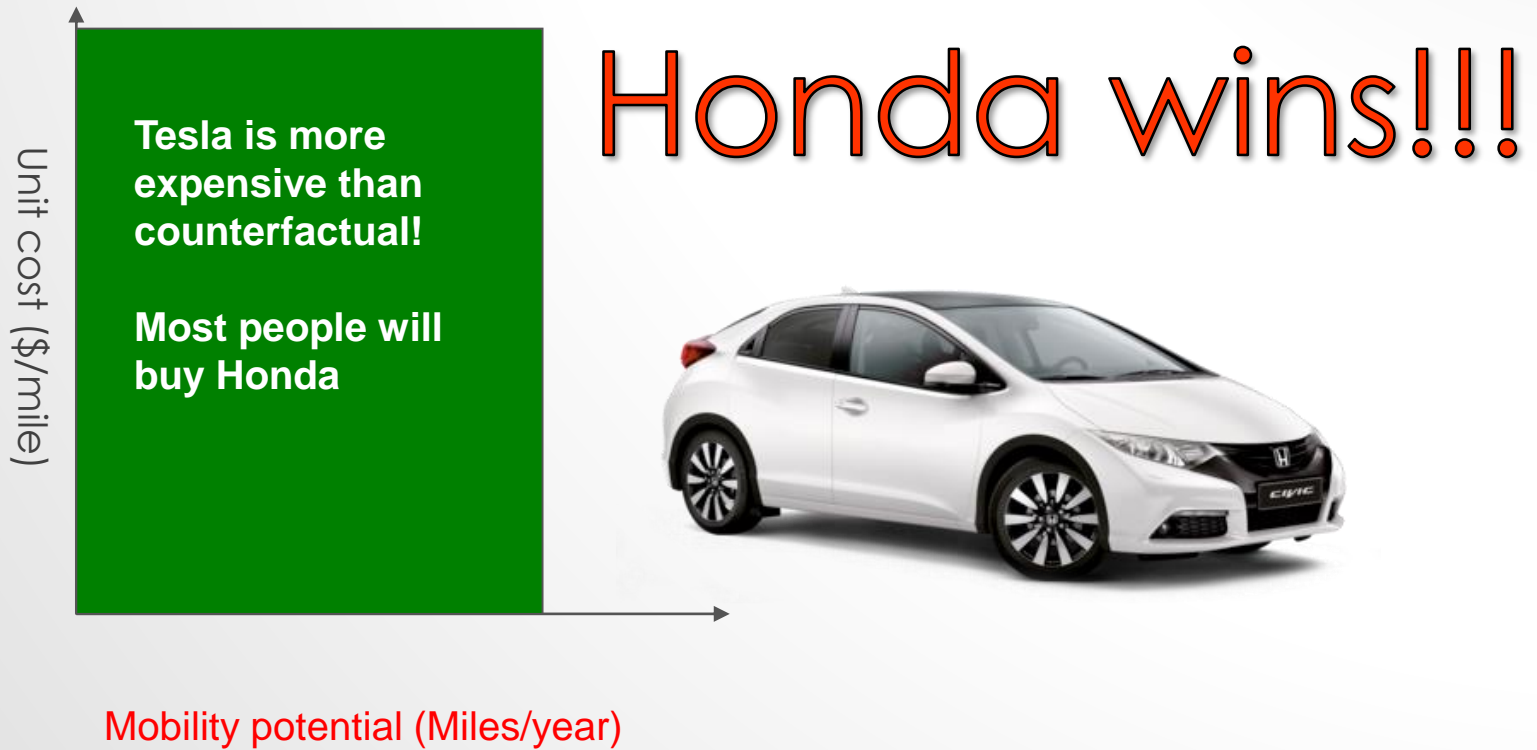
ADVANTAGES OF THE TESLA VS HONDA?



- Incremental mobility
- Incremental capex
- Fuel range anxiety
- Incremental maintenance cost
- Incremental taxes and fees
- Incremental risk premium (insurance)
- Incremental transaction costs (waiting, inspection etc.)

Mobility potential (Miles/year)

POLICY CONCLUSION?

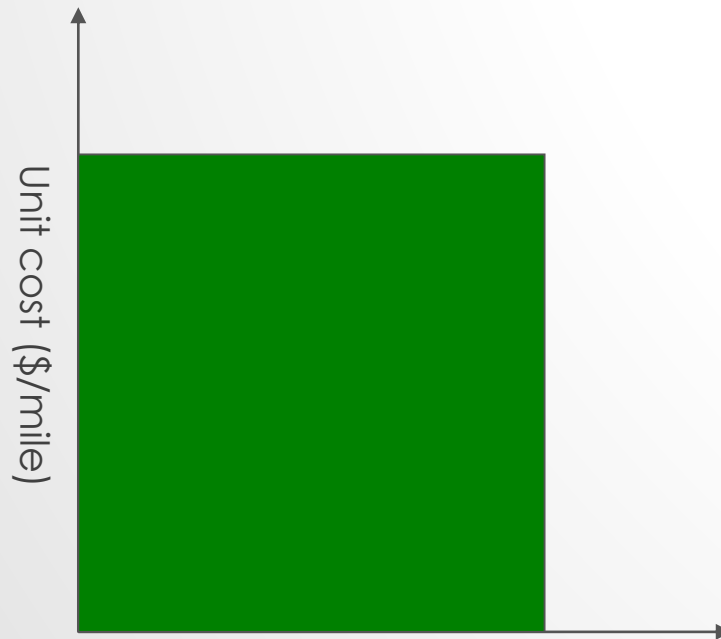


CAN POLICIES MAKE TESLA MORE ATTRACTIVE



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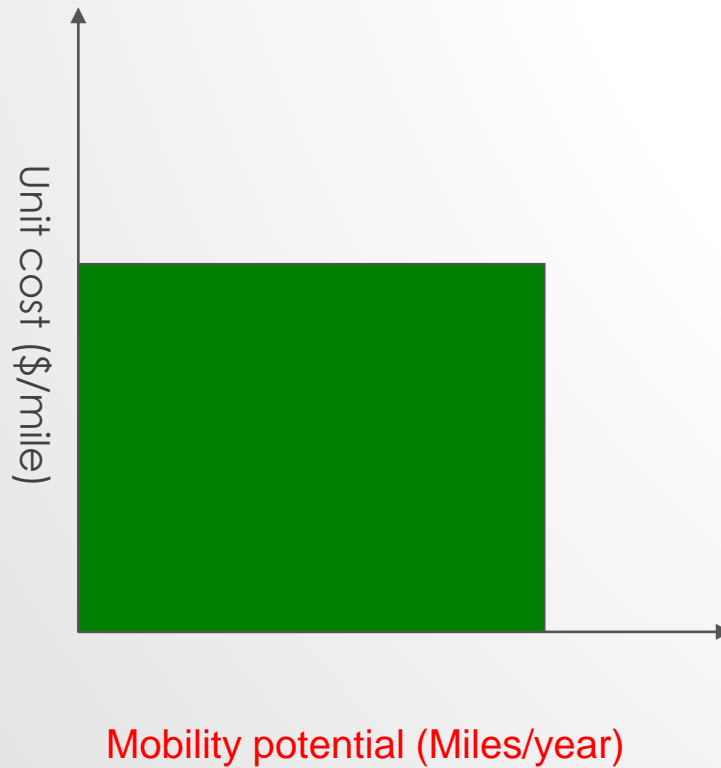
- Tesla-specific fuel pricing



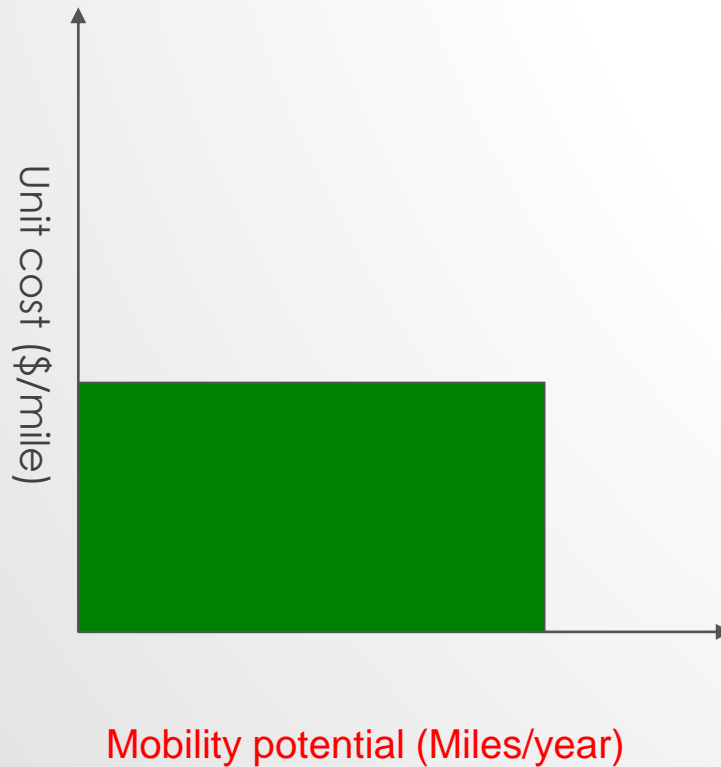
Mobility potential (Miles/year)

CAN POLICIES MAKE TESLA MORE ATTRACTIVE

- Tesla-specific fuel pricing
- Cash-back subsidy

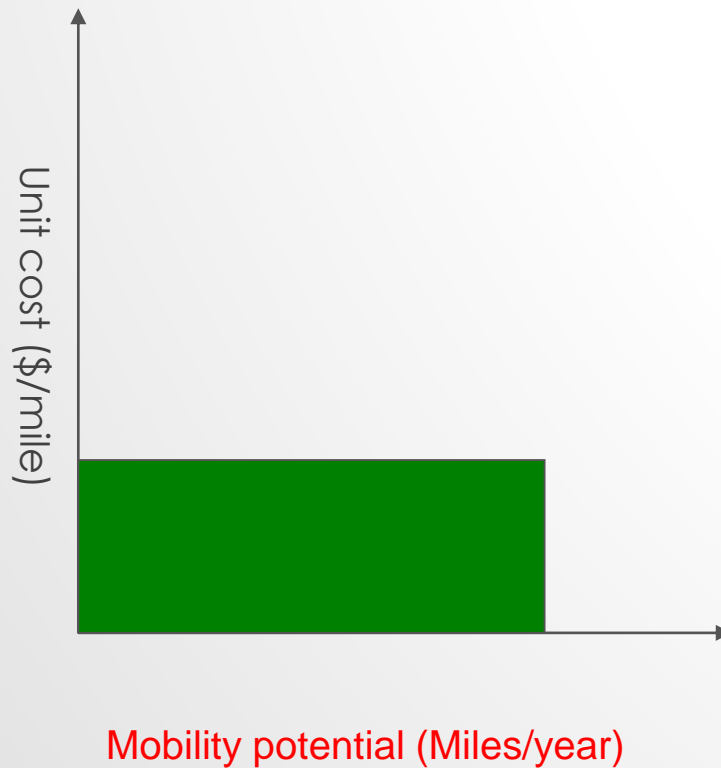


CAN POLICIES MAKE TESLA MORE ATTRACTIVE



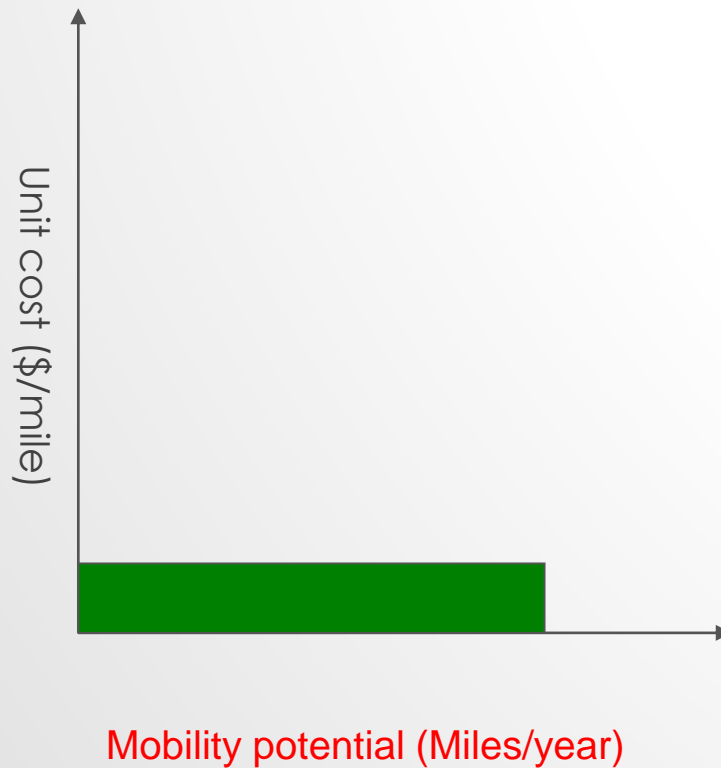
- Tesla-specific fuel pricing
- Cash-back subsidy
- Tax/fee waivers

CAN POLICIES MAKE TESLA MORE ATTRACTIVE



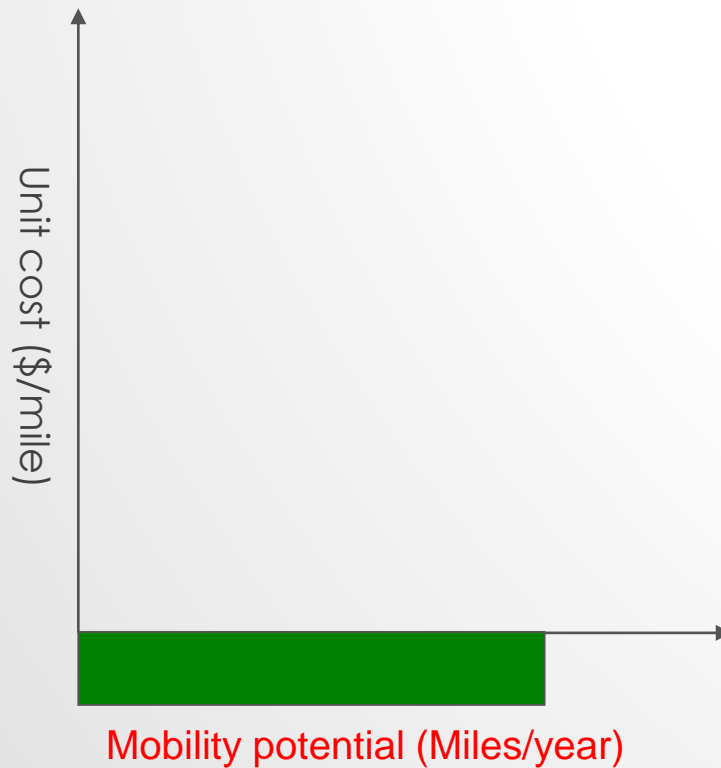
- Tesla-specific fuel pricing
- Cash-back subsidy
- Tax/fee waivers
- Guarantee to limit liabilities of insurance companies

CAN POLICIES MAKE TESLA MORE ATTRACTIVE



- Tesla-specific fuel pricing
- Cash-back subsidy
- Tax/fee waivers
- Guarantee to limit liabilities of insurance companies
- More service stations with competitive services

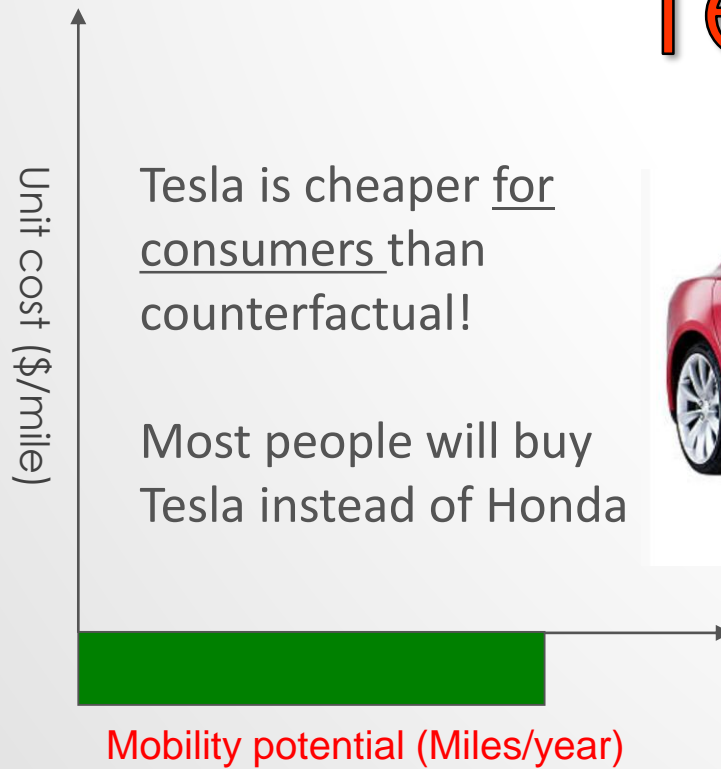
CAN POLICIES MAKE TESLA MORE ATTRACTIVE



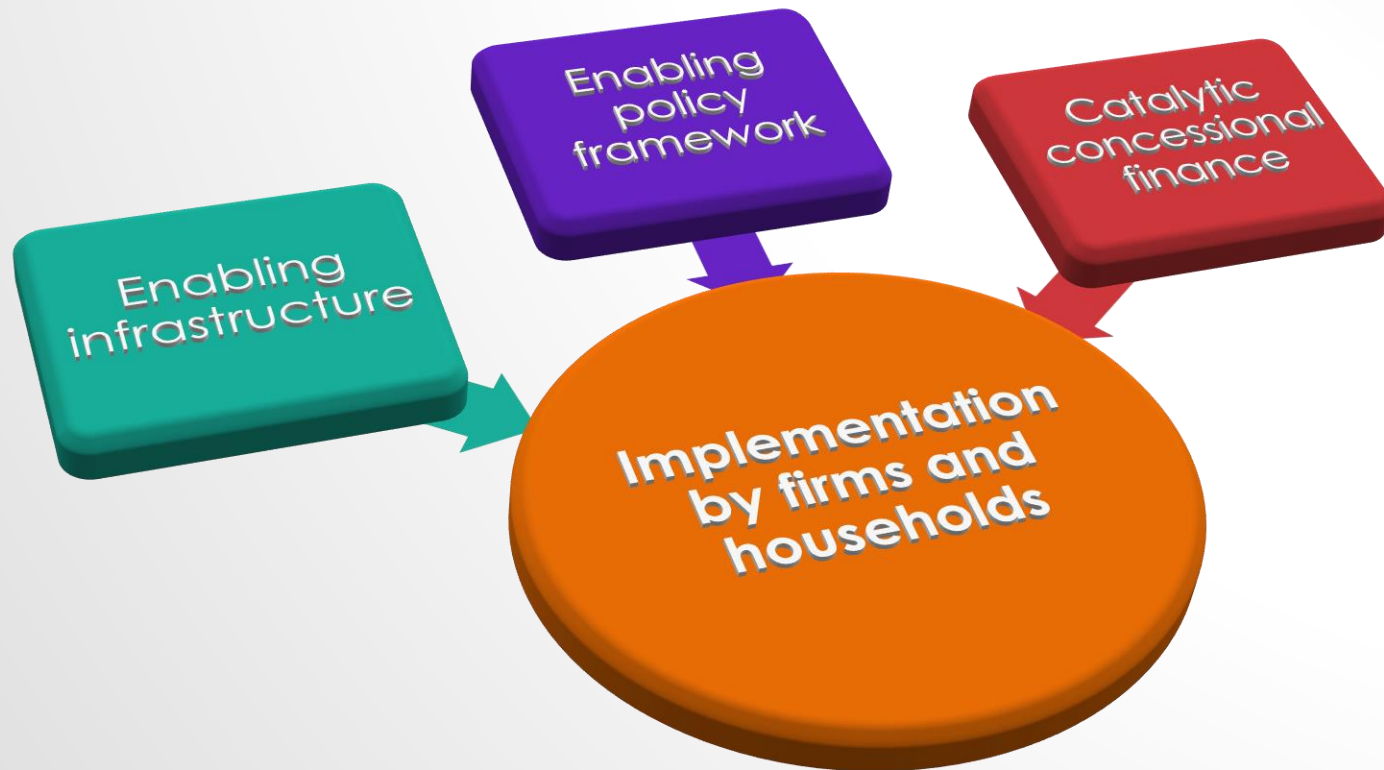
- Tesla-specific fuel pricing
- Cash-back subsidy
- Tax/fee waivers
- Guarantee to limit liabilities of insurance companies
- More service stations with competitive services
- Ego factor

POLICY CONCLUSION?

Tesla wins!!!



GOVERNMENTS' ROLE: CREATE ENABLING CONDITIONS FOR POLICIES



BRIDGING THE GAP BETWEEN TARGETS AND IMPLEMENTATION

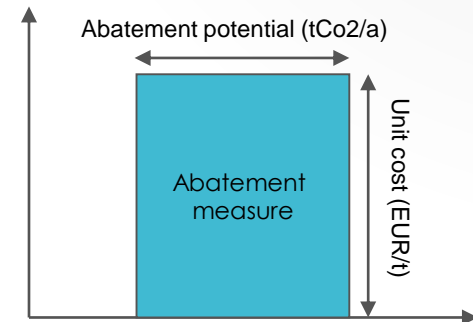
WHAT? → HOW?

- How to make people/firms behave consistently with government targets?
- How to attract investors to implement technical options?

MARGINAL ABATEMENT COST MODELS – BUILDING BLOCKS: A PRIMER

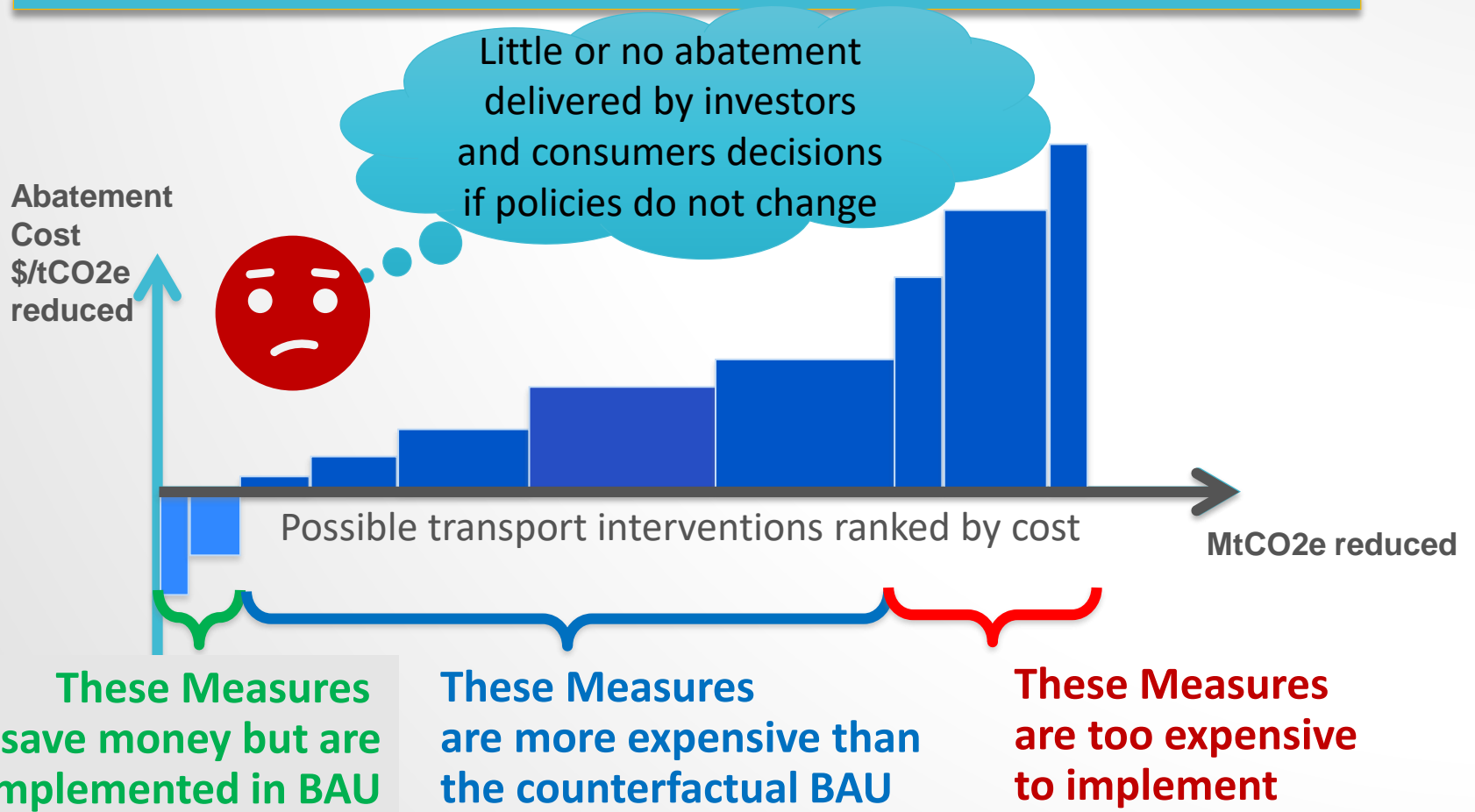
- Generate bottom-up, engineering marginal cost curves

- Height of a column (vertical axis) = difference between average unit lifetime costs of an abatement measure and counterfactual carbon intensive measure;

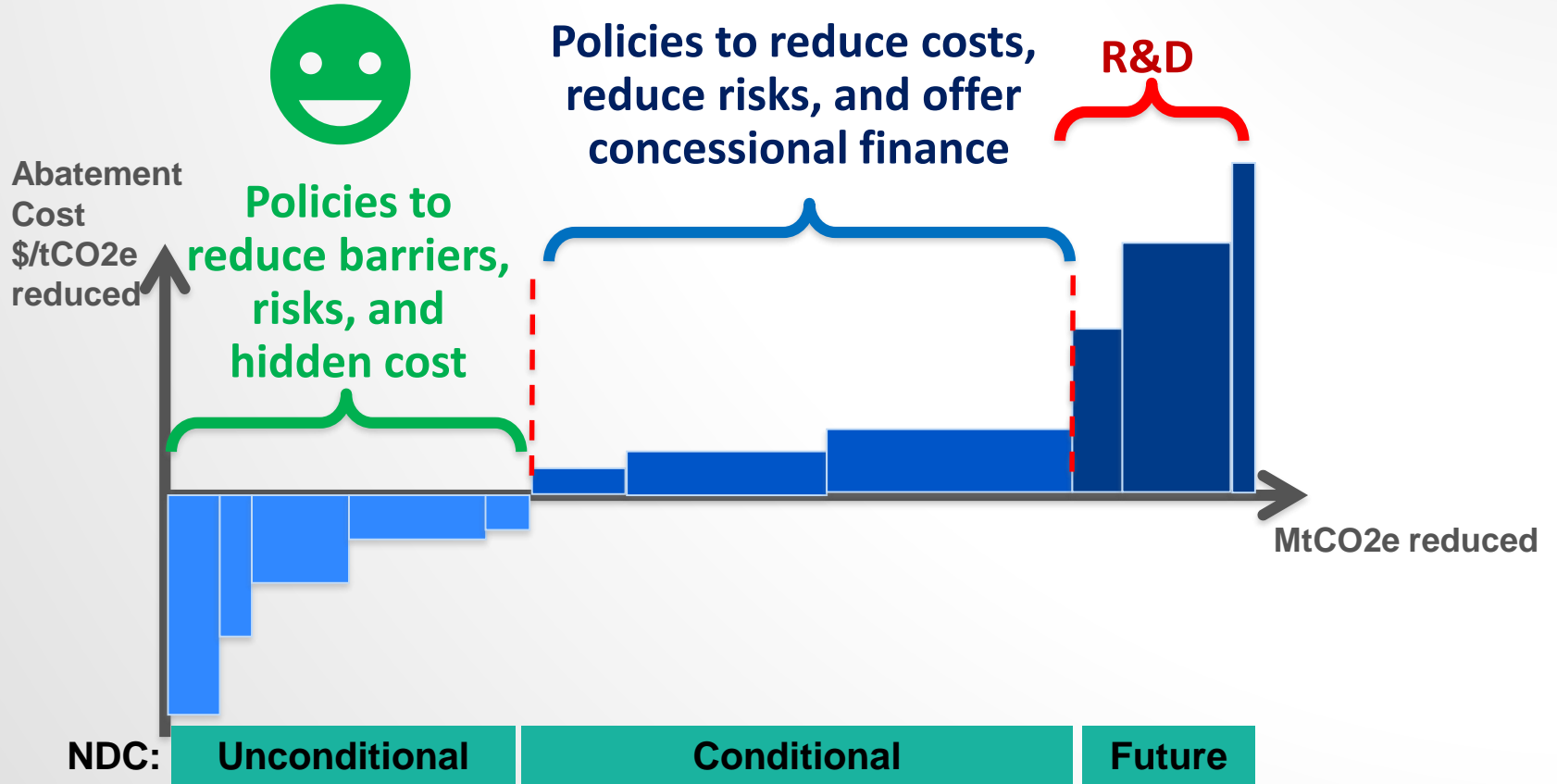


- Width of a column (horizontal axis) = abatement potential (difference between annual emissions of an abatement measure and counterfactual carbon intensive measure. Estimated as practically achievable technical/economic potential);
- Rebound effect, economy-wide feedbacks, price/demand impacts not endogenous

MARGINAL ABATEMENT COST OF POLICIES



APPLY ENABLING POLICIES



DESIGN ENABLING POLICIES

To design these enabling policies,

We need to:

- Prioritize measures that promote low carbon high volumen transport

What do we want to achieve? Which first?

- Define the risks, barriers, and hidden costs

What are the obstacles that we need to break-down?

- Identify how to reduce these risks, barriers, and costs

How to do it effectively?

The policies have to be acceptable and functional for all the involved stakeholders
(users, providers, and regulators)

BARRIERS, RISKS AND OPPORTUNITIES

Today, we want to discuss the following questions as they relate to your región / country / city:

- A. What priority does reducing GHG emissions have in local decisions that affect transport?
- B. Is it necessary and/or desirable to promote low carbon, high volume transport over the coming years? Why is it important (or not) to promote this? Do users/voters demand action?
- C. What are the principle barriers/obstacles that could make this difficult to achieve?
- D. What needs to be done to remove these barriers?

RISKS, BARRIERS AND HIDDEN COSTS

We would like to discuss the risks, barriers and hidden costs in each of the following 4 themes:

1. **Technical** – Insufficient or inadequate knowledge of available low carbon solutions
2. **Institutional** – Lack of an effective network of organizations that can achieve the specific low carbon transport objectives on a sustainable basis
3. **Political / Social** – Low priority, interest, or acceptance of developing low carbon high volume transport solutions
4. **Financial / Economic**—The presence of barriers to implementation that disincentivize public or private investment in the low carbon high volume transport solutions. May include lack of ready access to targeted funding.

RISKS, BARRIERS AND HIDDEN COSTS

And we want to look at them from the point of view of 4 cohorts of stakeholders:

- **National-Level Ministries**
- **Local-Level Authorities**
- **Private Investors / Transport Operators**
- **Research Organizations**

YOU HAVE 20 MINUTES FOR EACH QUESTION

Breakout Groups

National-Level Ministries

Local-Level Authorities

Private Investors / Transport Operators

Research Organizations

Themes

1. **Technical**
2. **Institutional**
3. **Political / Social**
4. **Financial / Economic**

Questions

- A. What priority does reducing GHG emissions have in local decisions that affect transport?
- B. Is it necessary and/or desirable to promote low carbon, high volume transport over the coming years? Why is it important (or not) to promote this? Do users/voters demand action?
- C. What are the principle barriers/obstacles that could make this difficult to achieve?
- D. What needs to be done to remove these barriers?

BREAKOUT GROUPS

You will be given a card for each question to write your opinions on. Please fill as many as you can. Answer separately for your region, country and city where the barriers are different

A From the point of view of the cohort of stakeholders represented by your group for your country/city: what priority does reducing GHG emissions have in local decisions that affect transport?

City / Country / Region _____

Priority High Medium Low or none

Experiences that illustrate this choice of priority

B From the point of view of the cohort of stakeholders represented by your group, is it necessary and/or desirable to promote low carbon, high volume transport over the coming years? Why is it important (or not) to promote this? Do users/voters demand action

City / Country / Region _____

Traffic Passenger Freight Sector Road Water Rail National air

What should be promoted and why

C From the point of view of the cohort of stakeholders represented by your group for your country/city What are the principle barriers/obstacles that could make this difficult to achieve?

City / Country / Region _____

Barrier	<input type="checkbox"/> Technical	<input type="checkbox"/> Political/ Social	<input type="checkbox"/> Financial/ Economic	Criticality
	<input type="checkbox"/> Institutional			<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low

Principle barriers/obstacles

Sector

Road
 Water
 Rail
 National air

D What needs to be done to remove these barriers? Who needs to do it?

City / Country / Region _____

Barrier	<input type="checkbox"/> Technical	<input type="checkbox"/> Political/ Social	<input type="checkbox"/> Financial/ Economic	Criticality
	<input type="checkbox"/> Institutional			<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low

What needs to be done and by who

Sector

Road
 Water
 Rail
 National air

PLENARY SESSION

- Each group will elect a representative to report back to the plenary.
- The reporting should address each of the questions.
- The report by each group should be no more than **one powerpoint slide and no more than 10 minutes** to allow time for discussion

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