



Eco-Driving Promotion by Eco-Mo Foundation

Hirotsugu Maruyama
General Manager

E-Leader Tokyo, January 4-6, 2019

What is Eco-Mo Foundation

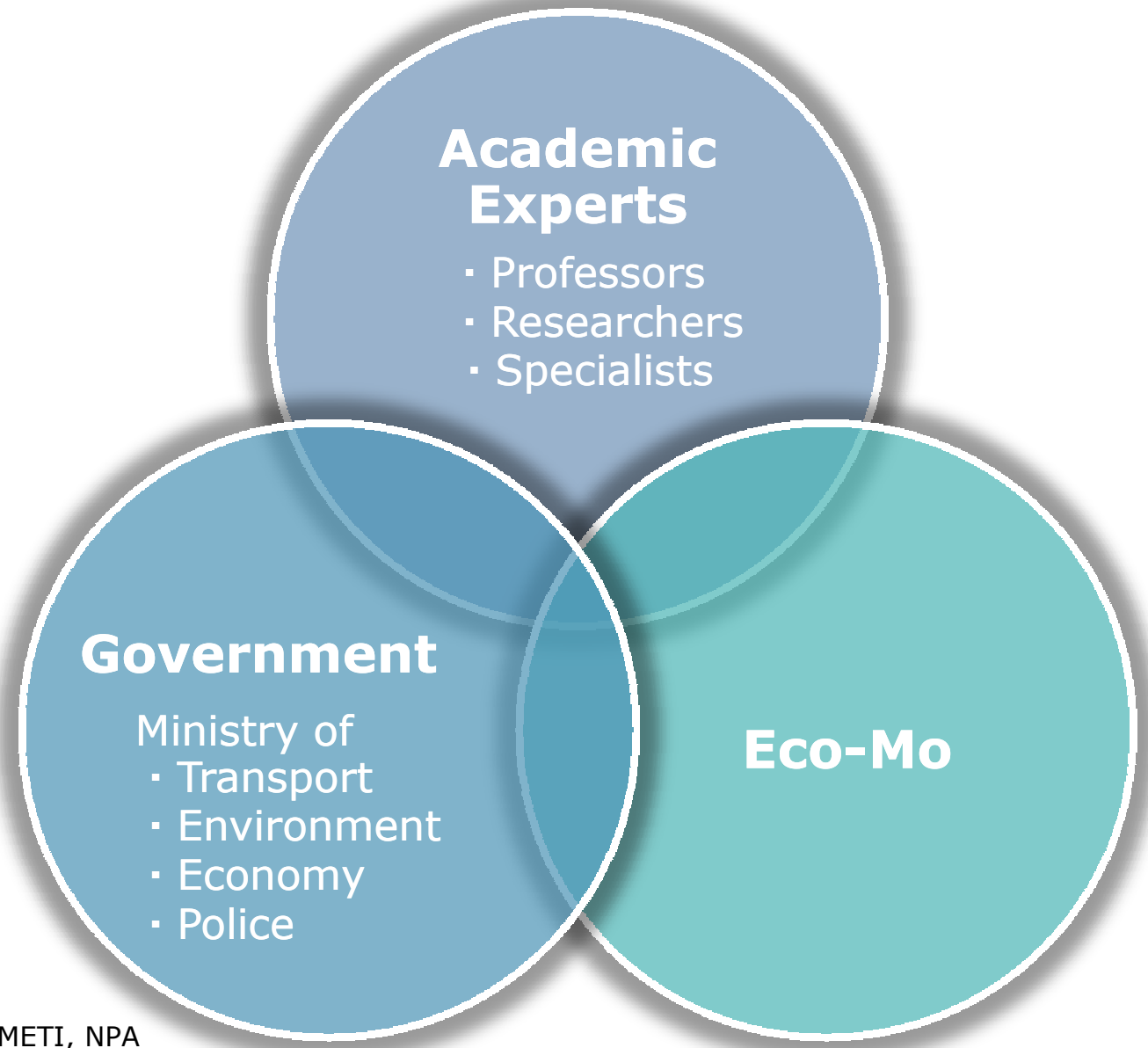
HISTORY

- In **1994**, Minister of Transport approved the **establishment** of the Foundation for Promoting Amenities of Transport.
- In **1997**, **renaming** of the organization to "**Foundation for Promoting Personal Mobility and Ecological Transportation**" was approved by Minister of Transport.
- In **2012**, the Prime Minister accredited and **transitioned to** the **Public Interest Incorporated Association**.

MISSION

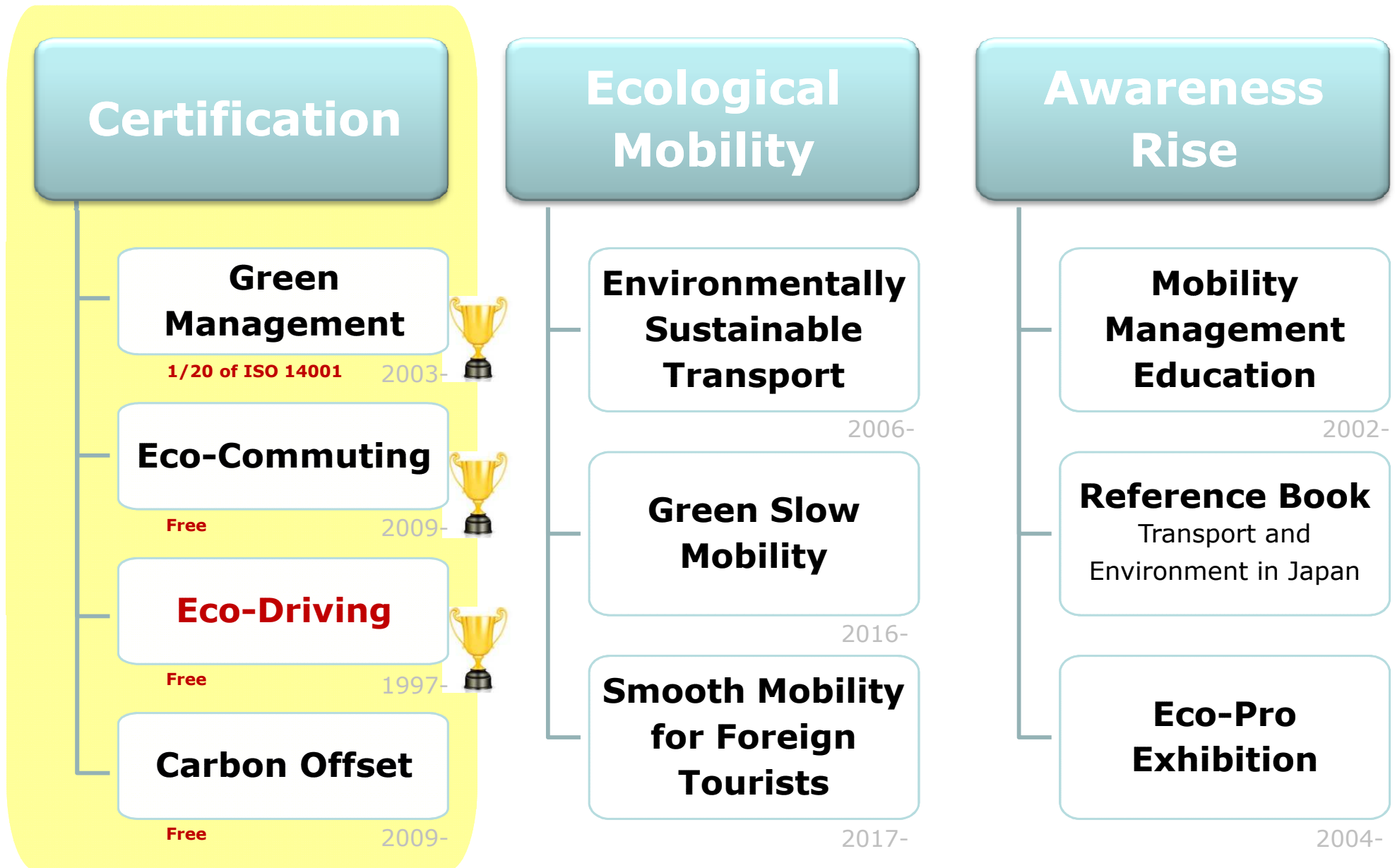
- **Better life for all people** through **sustainable mobility** with **less CO2** and **no barrier**

National level Committee

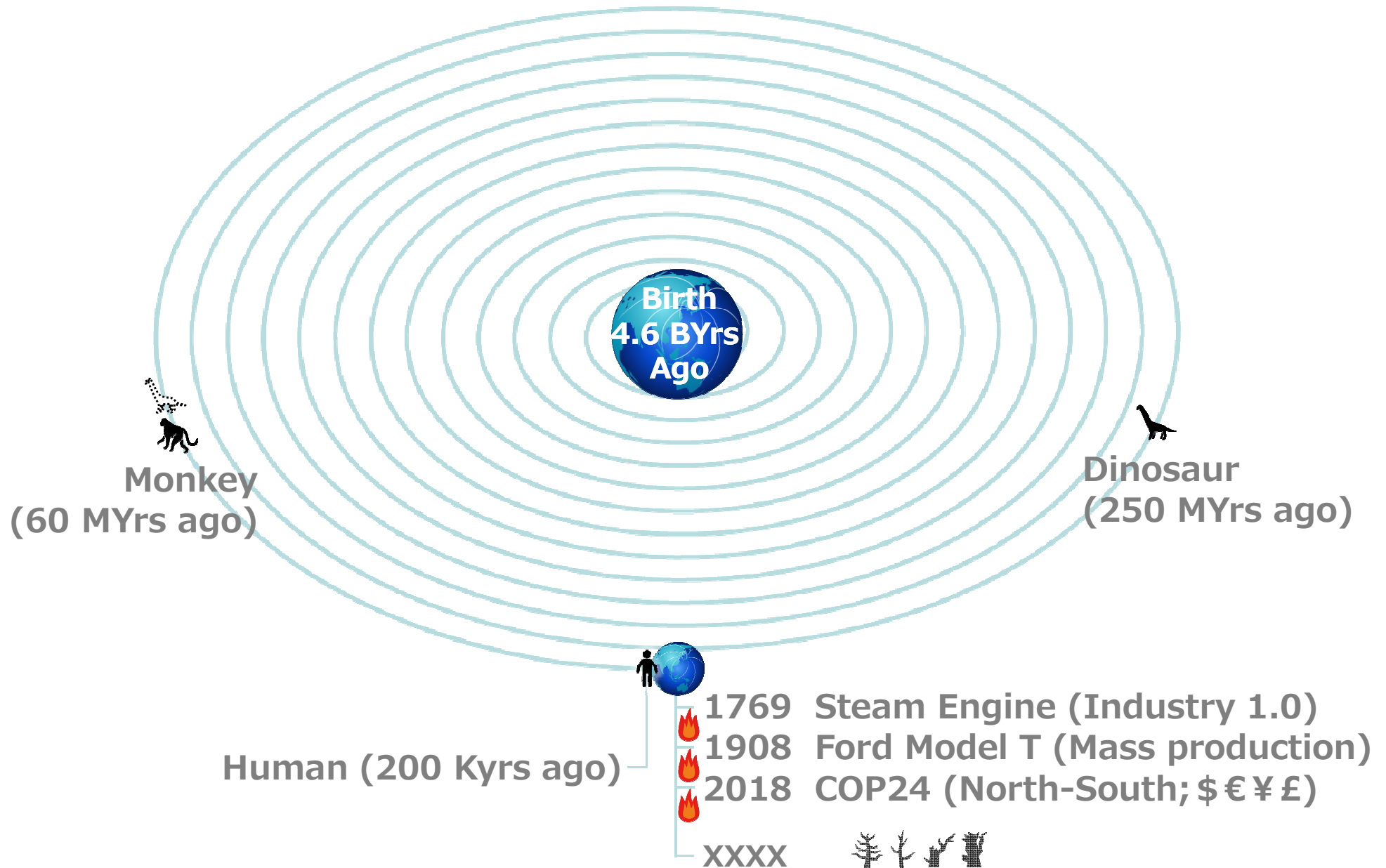


MLIT, MOE, METI, NPA

10 Projects of Environmental Transport Promotion Division



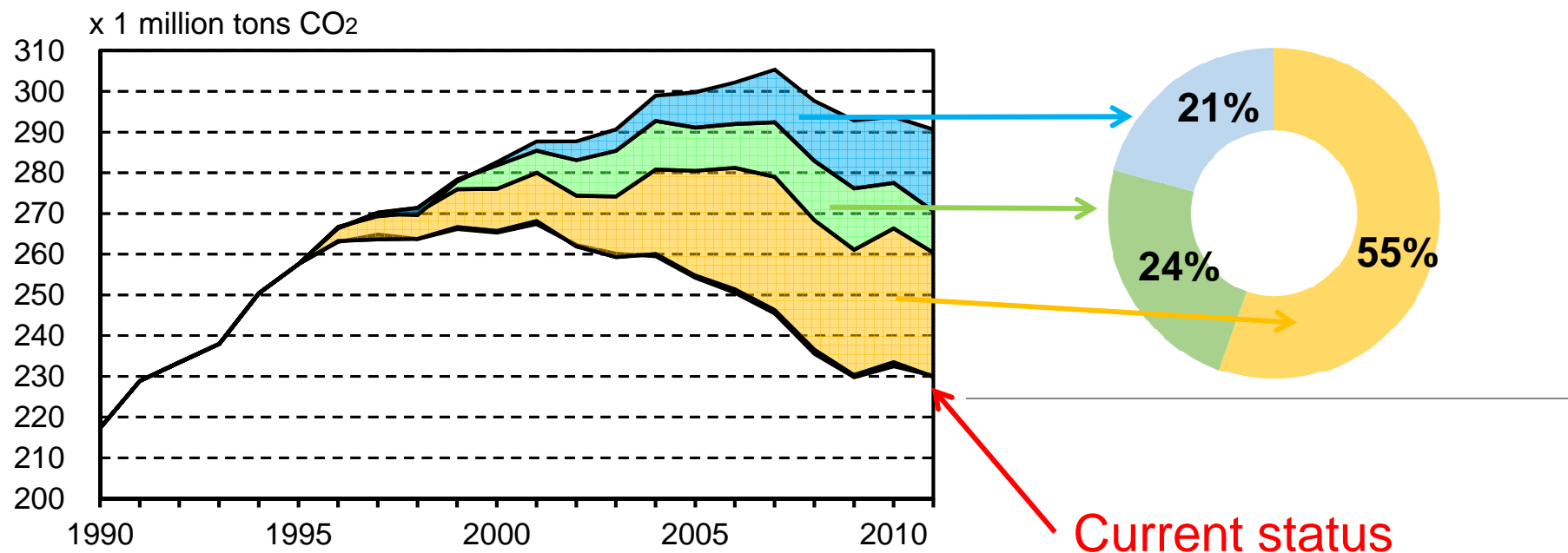
History of the Earth



Factors Contributing of CO₂ Reduction by Integrated Approach



Main factors to reduce CO₂ in the road transport sector in Japan.



Passenger cars

- Improved vehicle fuel efficiency
- Improved traffic flow (reduced congestion)

Trucks

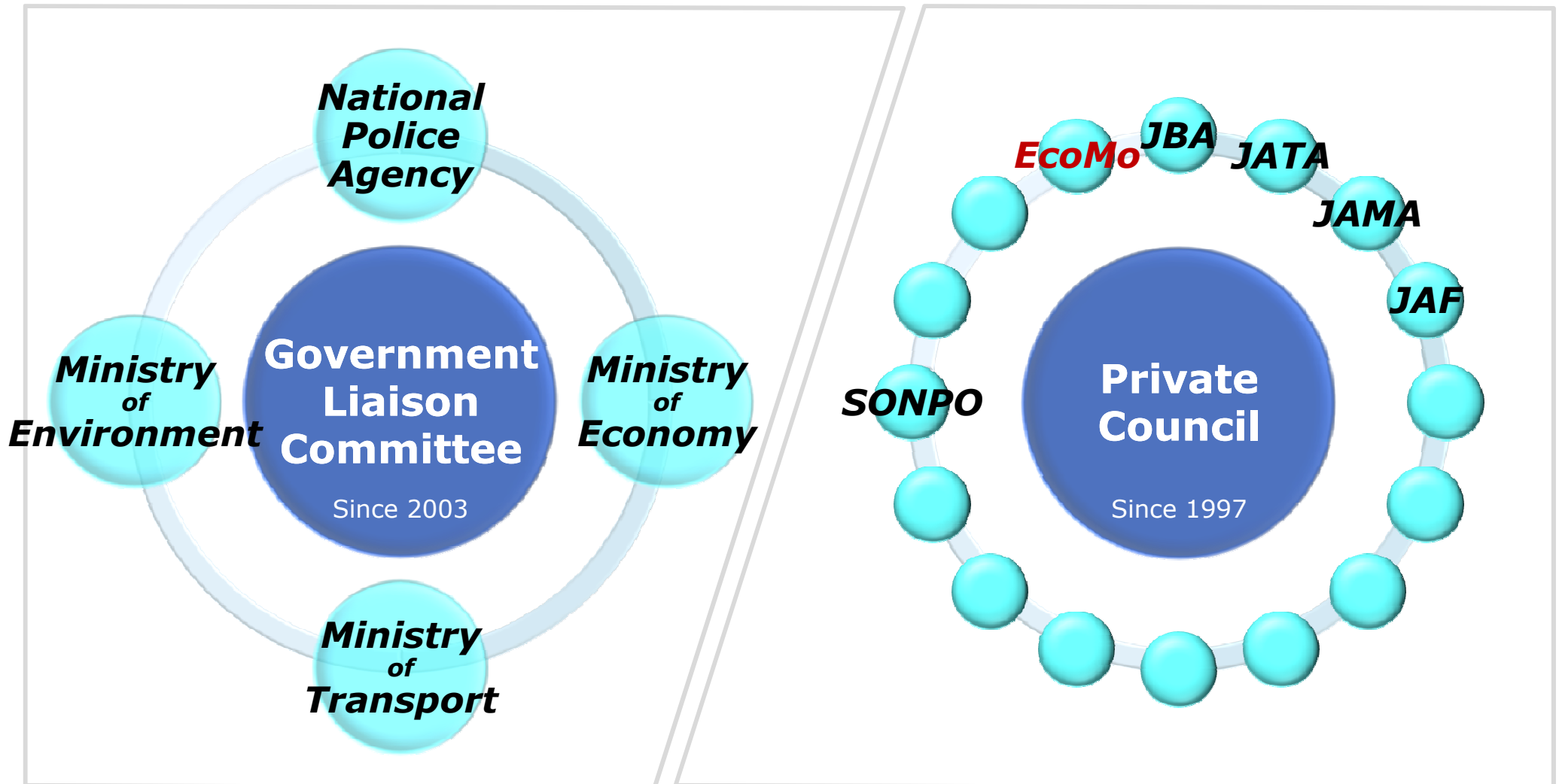
- Improved load efficiency in truck use

Trucks

- **Eco-driving**
- Improved traffic flow

Source: JAMA

Eco-Driving Promotion Platform



10 Tips for Eco-Driving (Since 1998)
Eco-Driving Special Month: November

10 Tips for Eco-Driving

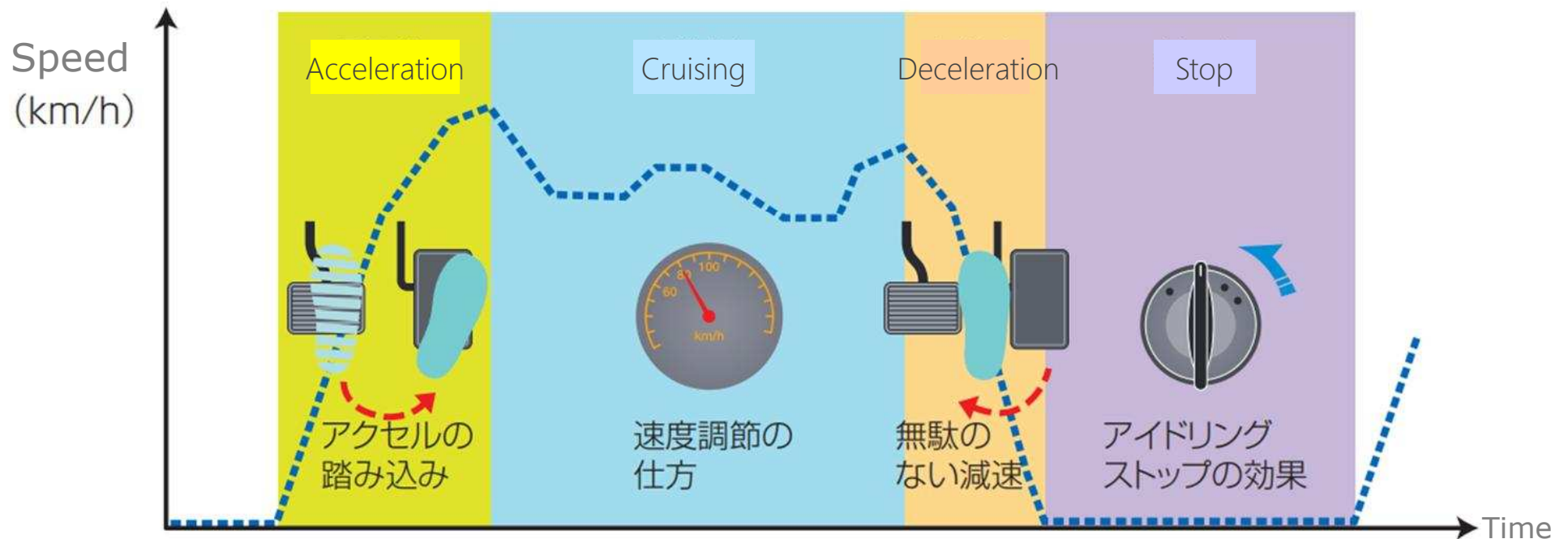
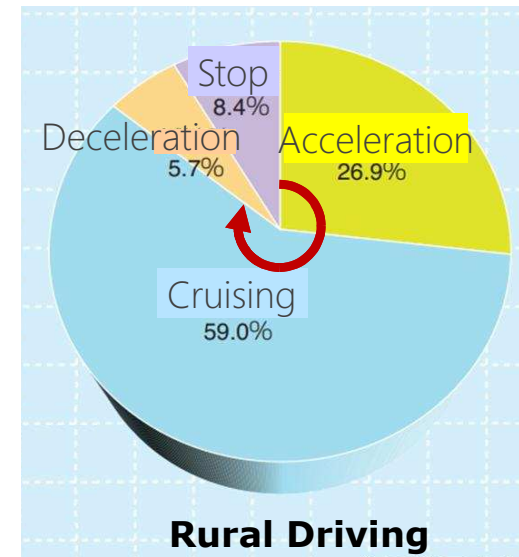
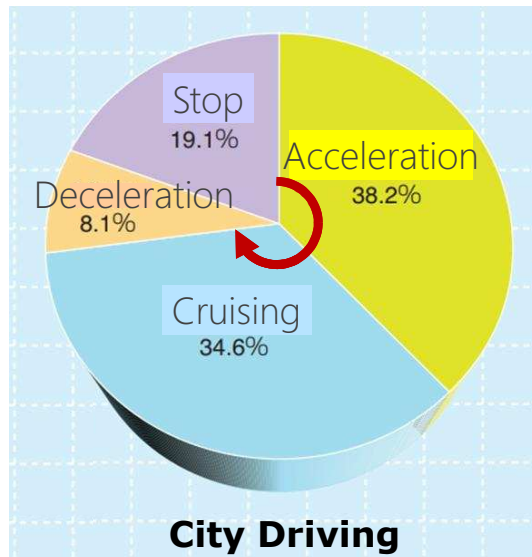


- 1) Accelerate gently
- 2) Maintain a steady speed
- 3) Decelerate by earlier accelerator release
- 4) Limit the use of your air conditioner
- 5) Don't idle your engine
- 6) Provide your itinerary
- 7) Check your tire pressure regularly
- 8) Reduce your load
- 9) Don't make congestion by parking
- 10) Note your fuel economy regularly



Source:
Government Liaison Committee
on eco-driving promotion

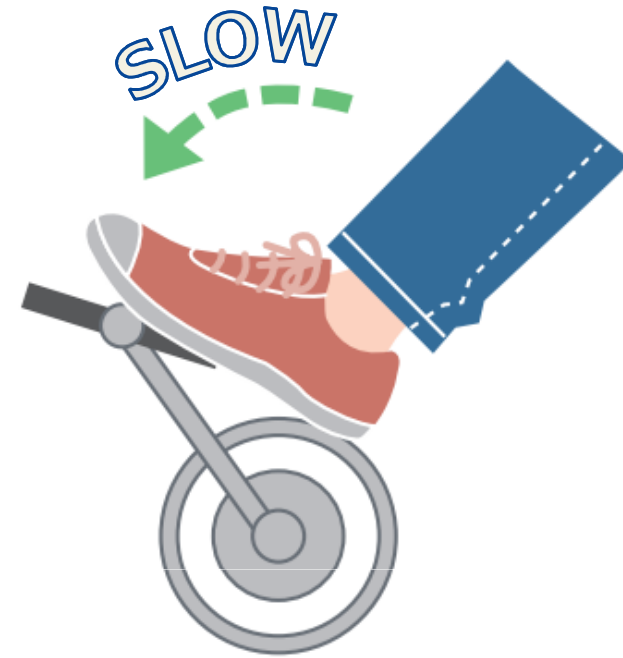
Fuel at each Drive Event



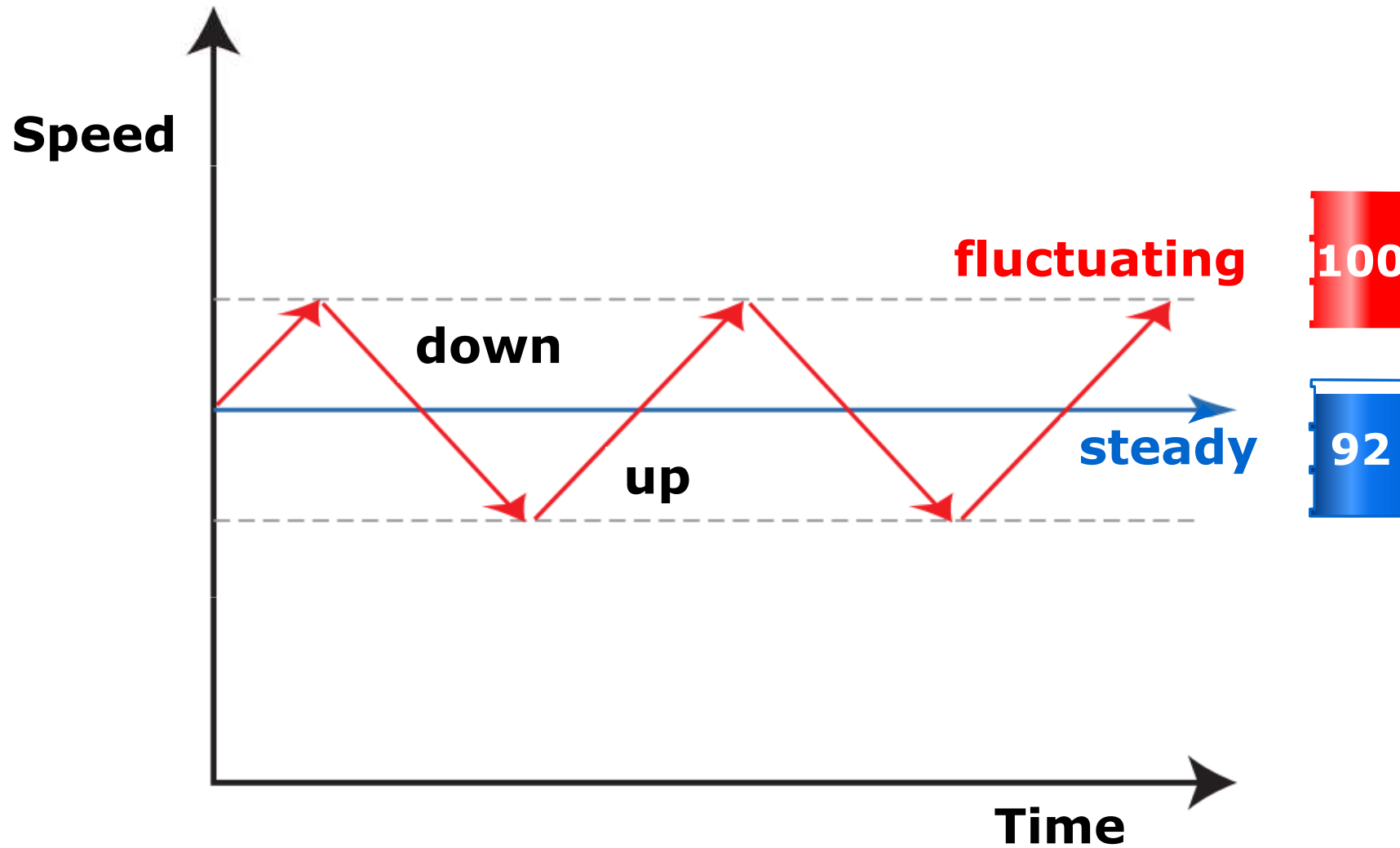
1) Accelerate gently



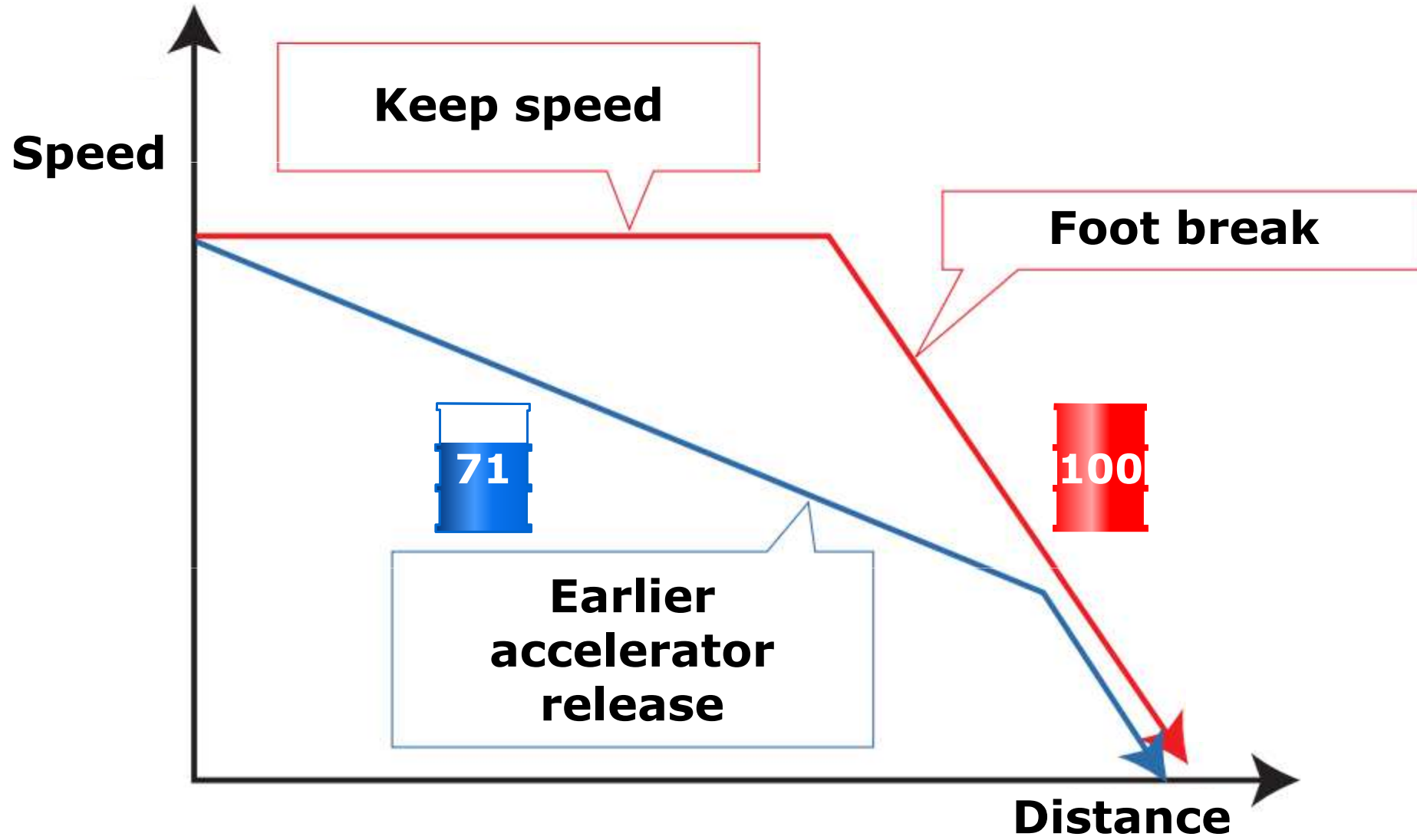
**The acceleration time
from 0 to 20 km/h: 5 sec**



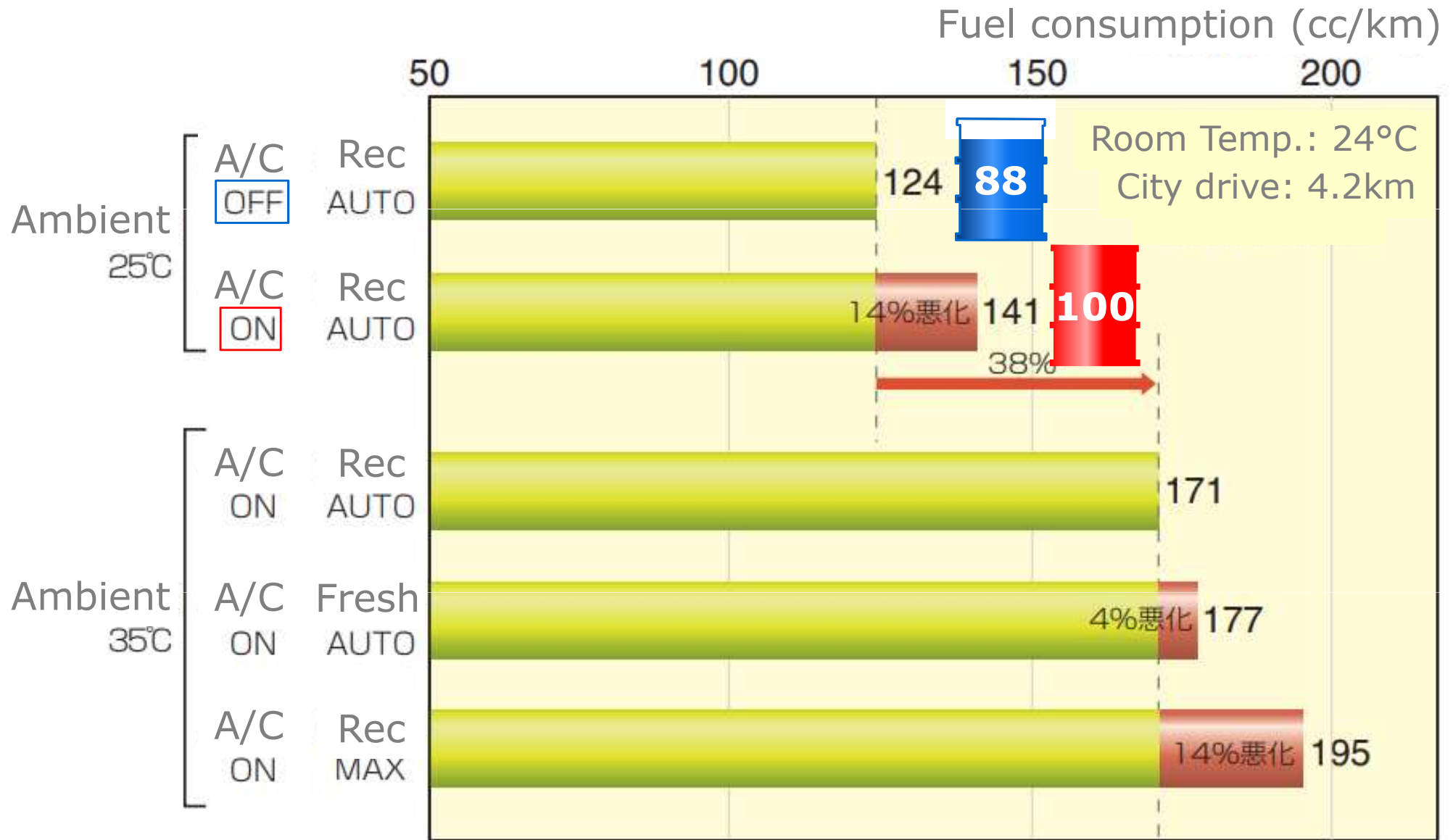
2) Maintain a steady speed



3) Decelerate by earlier accel. release



4) Limit the use of your air conditioner

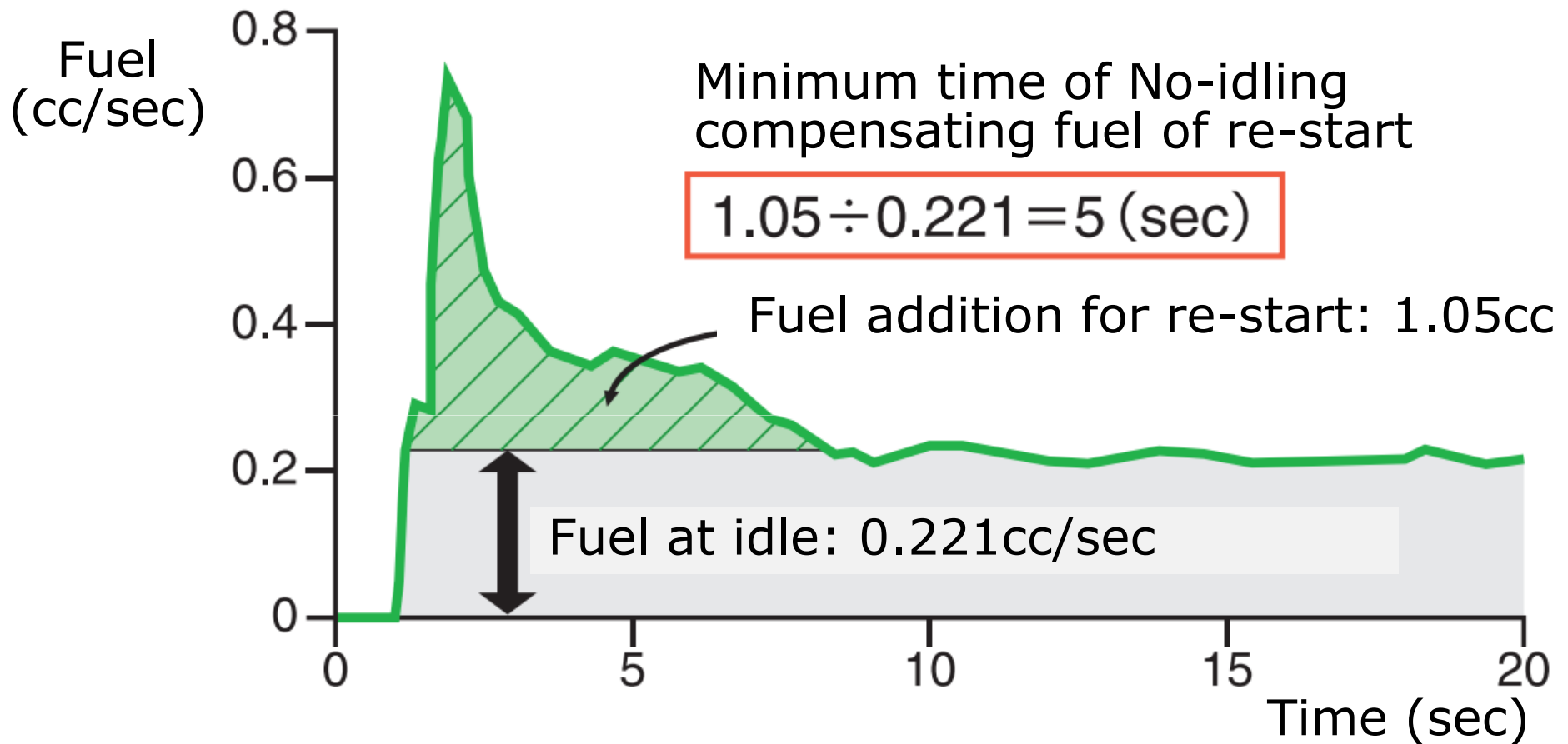


Source: ECCJ

5) Don't idle your engine



	Normal	No Idling
City trip	100	87

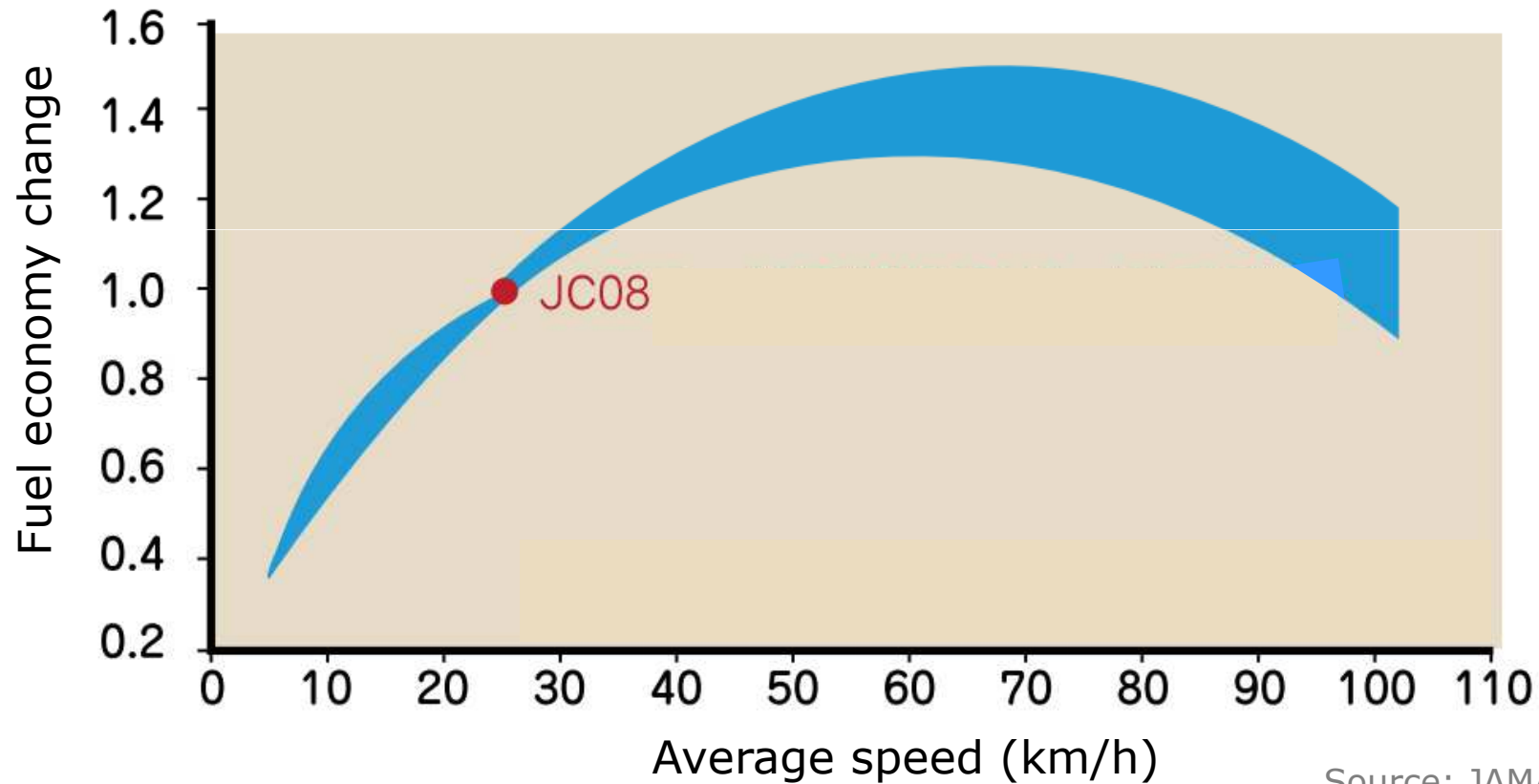


Source: ECCJ

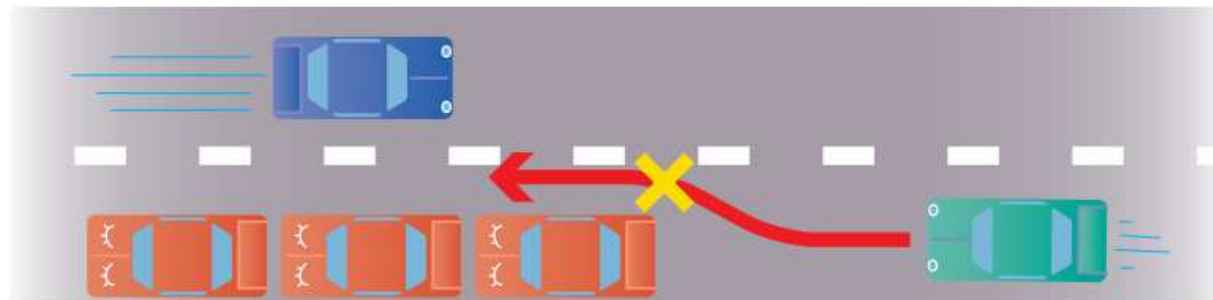


6) Provide your itinerary

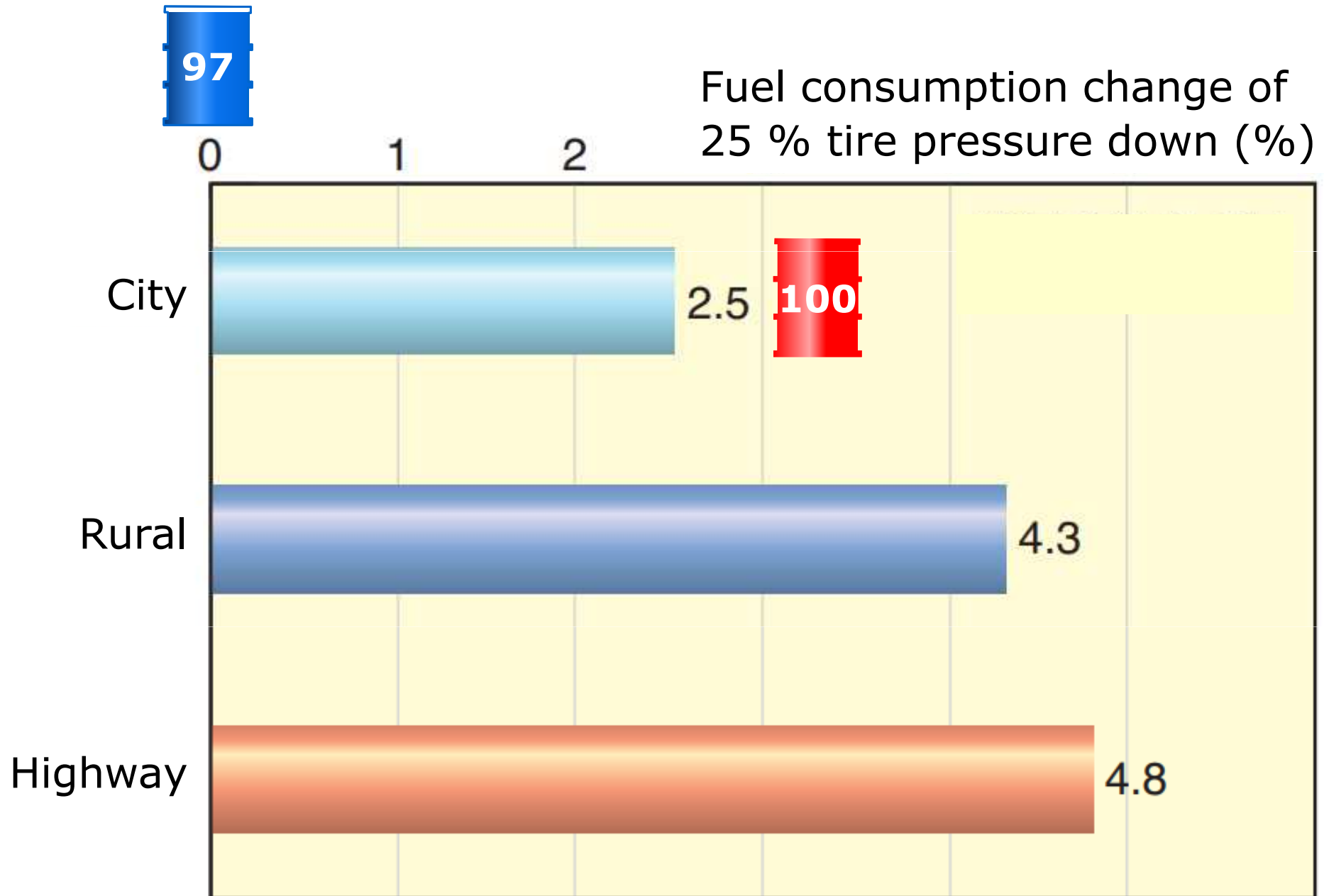
9) Don't make congestion by parking



Source: JAMA

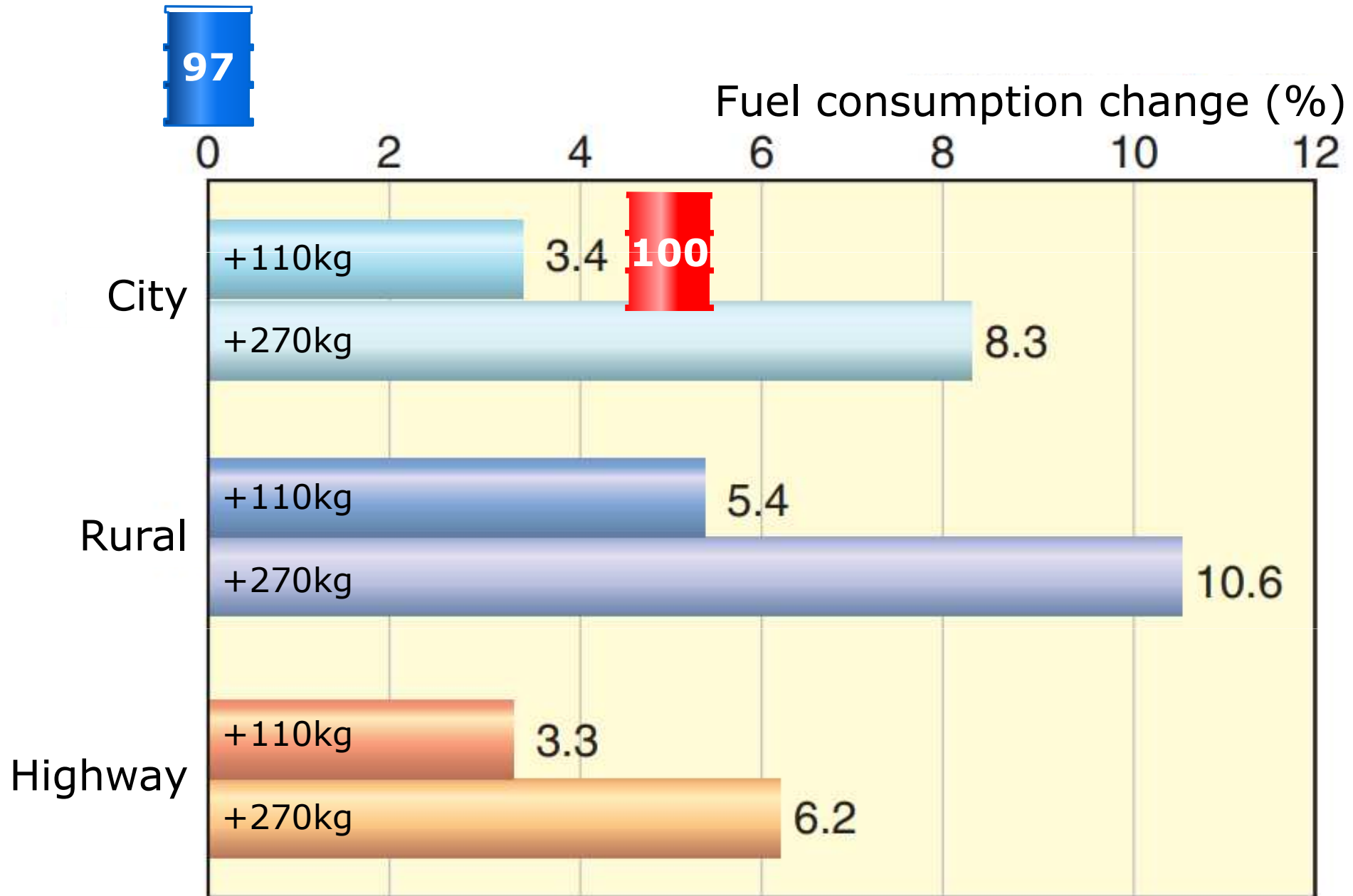


7) Check your tire pressure regularly



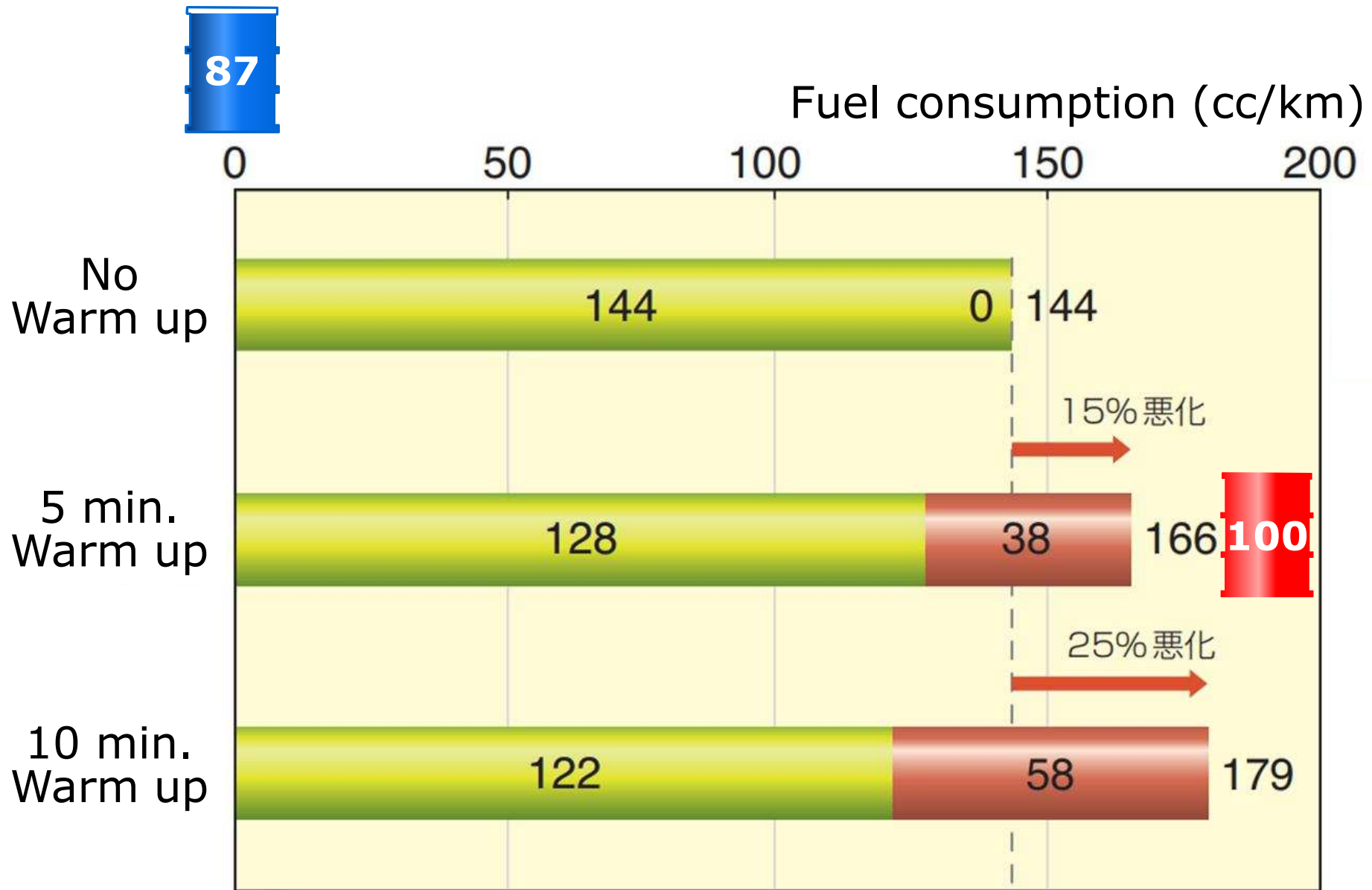
Source: ECCJ

8) Reduce your load



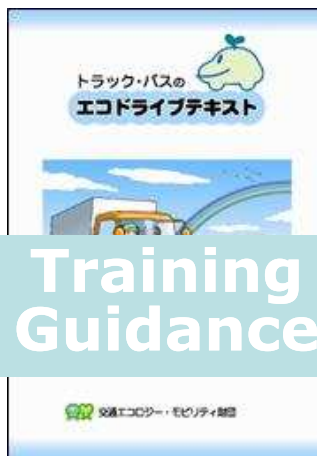
Source: ECCJ

Extra) Proper Engine Warm Up



Source: ECCJ

- ◆ Certification for training programs of Eco-driving educational organizations (Truck manufacturers, Sales dealers, Local truck associations and Driving schools)
- ◆ Certification for education completion of students

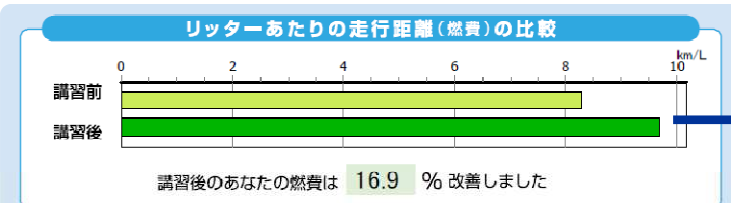




Performance Diagnosis

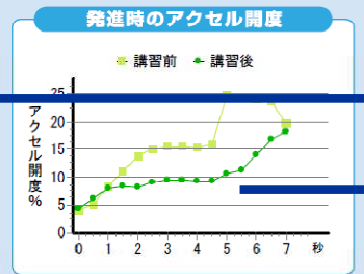
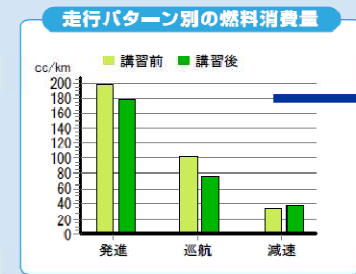
エコドライブ講習 診断書

受講者氏名	日下部 有香 様	実施日時	2010/07/10	受講者 No	0710-2
教官名	笠井 純一	実施場所	八丁堀		



走行データの比較

	講習前	講習後		講習前	講習後
燃費(km/L)	8.31	9.71	停止時燃料消費率(cc/sec)	0.19	0.12
燃料消費量(cc)	325.10	277.36	巡航時速度変動率(m/s ² /km)	734.73	539.07
走行距離(km)	2.70	2.69	停止時間(sec)	277.50	290.00
走行時間(sec)	632	682	停止回数(回)	11	11



CO₂削減効果

今回の講習で習得したエコドライブを実践し、1年間に1万kmを走行した場合、CO₂削減量は以下の通りです。

$$10000\text{km} \div (\text{講習前燃費 } 8.31 \text{ km/L}) - 10000\text{km} \div (\text{講習後燃費 } 9.71 \text{ km/L}) = 173.50 \text{ L}$$

ガソリン1Lで2.32kgのCO₂が発生しますので、1年間の削減量は $173.50 \text{ L} \times 2.32\text{kg} = 402.53 \text{ kg}$ とあります。

杉の木1本の年間CO₂吸収量は約14kgですので、 $402.53 \text{ kg} \div 14\text{kg} = 28.8$ 本を植えたことと同じ効果があります。

講評

Students realize real effect of 10 to 30% fuel economy improvement through their own eco-driving practice on road.

Fuel Economy

Measured Data

Each Event FE

Gas Pedal Angle

CO₂ Emissions



Before & After

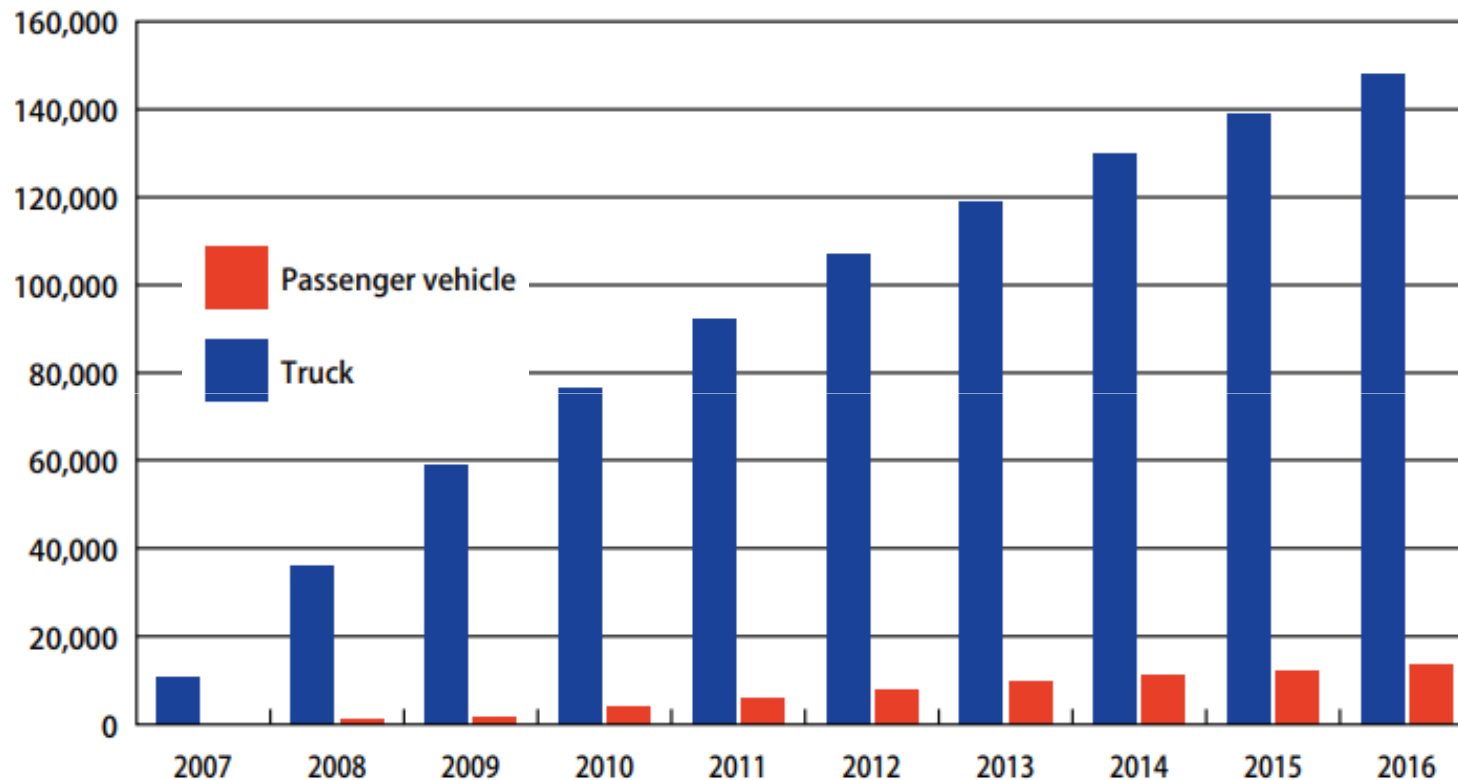




- **Number of Certified Organization (Mar 31, 2017)**

Truck and bus	Passenger cars
17	230

- **Accumulated Number of Certified Drivers**



2014~2016 ASUA, WAFUNIF, JAMA, Auto Alliance, ACEA

Guiding Principles of EcoDrive:

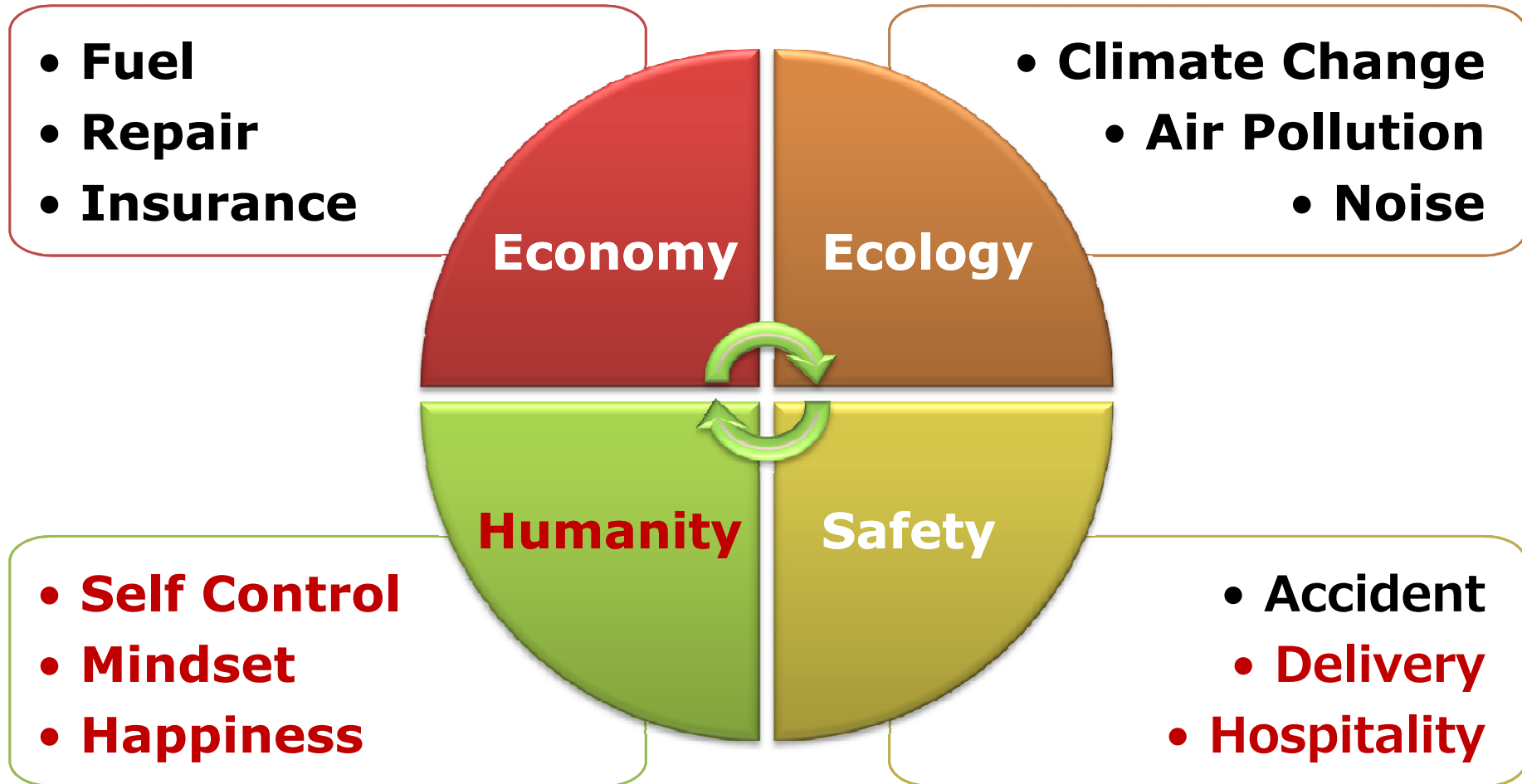
1. Reduces CO2 levels, which positively contributes to our future.
2. Saves lives by reducing accidents.
3. Preserves fuel resources.
4. Makes driving safer, more relaxed and convenient.
5. EcoDrive lowers stress, which improves health.
6. EcoDrive encourages courtesy and culture of respect, which strengthens a feeling of well-being among all of us.
7. EcoDrive can be done anytime, anywhere and by anyone.

Methodology:

1. Accelerate Gently.
2. Maintain a steady speed and keep a safe distance to the car in front.
3. Slow down by releasing the accelerator.
4. Make appropriate use of air conditioner.
5. Do not idle the engine while standing still.
6. Plan your trip to avoid congested route.
7. Check the tire pressure regularly.
8. Avoid unnecessary loads to reduce weight.
9. Respect Parking rules and regulations.
10. Monitor the Fuel Efficiency.

<http://www.asua.ne.jp/conference/declaration.pdf>

Value of Eco-Driving



Thank You