



# Success Stories of Sustainable Transport Policy Implementation

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# Policy Success Stories

- Urban Transport
  - Seoul: Public Transport & ‘T-Money’
  - Bangkok: BTS & pedestrian connections
  - Copenhagen: bike & pedestrian
    - Bangkok’s Siam Square
    - New York’s Time Square (Broadway)
  - Singapore: road pricing
  - Urban Transport Policy Considerations
- Vehicle Efficiency
  - China: fuel efficiency standards
  - Vehicle Efficiency Policy Consideration
- Freight
  - Guangdong: truck efficiency
  - Mexico: old truck removal
  - Freight Policy Considerations



# Urban Transport

Make the most efficient modes the most attractive modes:

How?:

Think like the user





# Seoul, Korea: Public Transport & ‘T-Money’

- Removal of elevated roadway and restoration of river
- Weekly ‘no-drive’ days
- Bus Rapid Transit & integrated transit (using T-Money)



Photo: preservenet.com



Photo: Treehugger.com

# Seoul: T-Money

- T-Money popular because convenient , so can collect royalties for the smart-chip



# The T-Money Bonus

T-Money acceptance on nearly all modes made it possible to control routes of privately-operated buses:

Data from T-Money let government learn demand and revenue information.

T-Money allowed changing to 'payment for service' from government, so can integrate into system.



# Another success story: Bangkok Skytrain and its pedestrian connections





# Copenhagen: Prioritizing biking and walking

Bicycling on a continuous & comprehensive network ...bike signals that turn green for bikes 6 seconds earlier than for cars



Photos: Gehl Architects





# Copenhagen's Bicycle Network

- By 2005, 36% of work trips were by bicycle (23% car, 33% public transport)



Photo: Gehl Architects

# Quality Criteria: Pedestrian Landscape

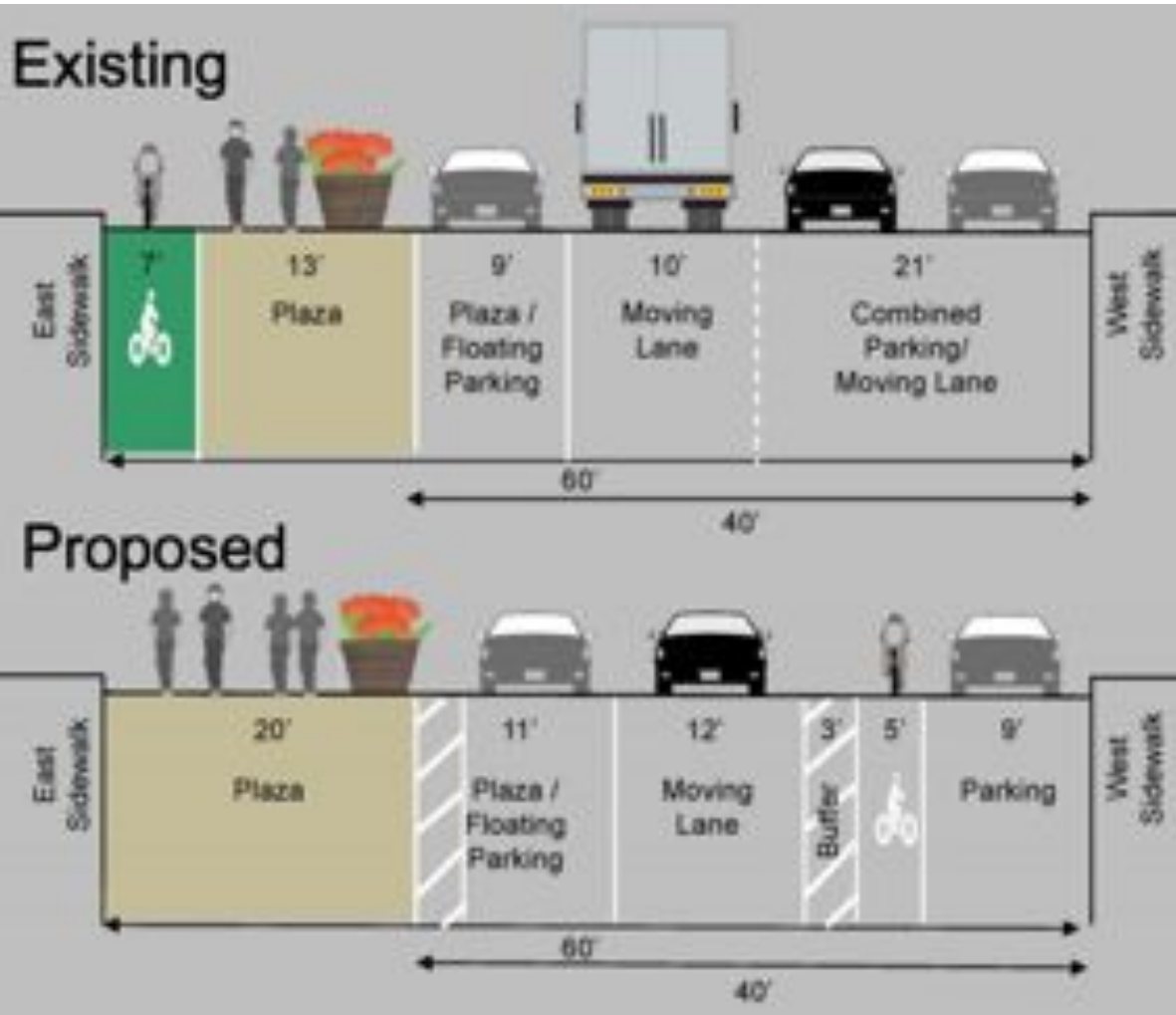
from Gehl Architects, Copenhagen, Denmark



<b>Protection</b>	... from traffic & accidents	... from crime & violence	... from weather, pollution, etc.
	<b>Comfort</b>	Walking possibilities	Standing / Staying possibilities
	Viewing possibilities	Hearing / Talking possibilities	Possibilities for play / unfolding activities
<b>Enjoyment</b>	Human scale	Positive aspects of climate	Aesthetics / positive sense experiences

Nyhavn, Denmark –  
Photo: Gehl Architects

# New York: Broadway



Images: New York Department of Transportation

# Bangkok: Siam Square



Photos: Alex Garner; Zee





# Manila Pedestrian Space



# Singapore: Road Pricing



- Price adjusts to ‘guarantee’ a minimum speed
- “ERP II” promises wider area coverage instead of gantry system

# London's Central Charge Zone

London sets a flat high price, to reduce the number of vehicles





*Chris Madden*







# Urban Transport Policy Considerations

- Overall Principle: Make most efficient modes most attractive
  - Travel time
  - Cost
  - Comfort
  - Aesthetic
- Can policies assist understanding of the public?
  - Give an answer for ‘Why this?’
- Step-by-step changes to pedestrian facilities can add up to a big difference
- Public transport, bicycle, & road pricing need a system approach

# Vehicle Efficiency

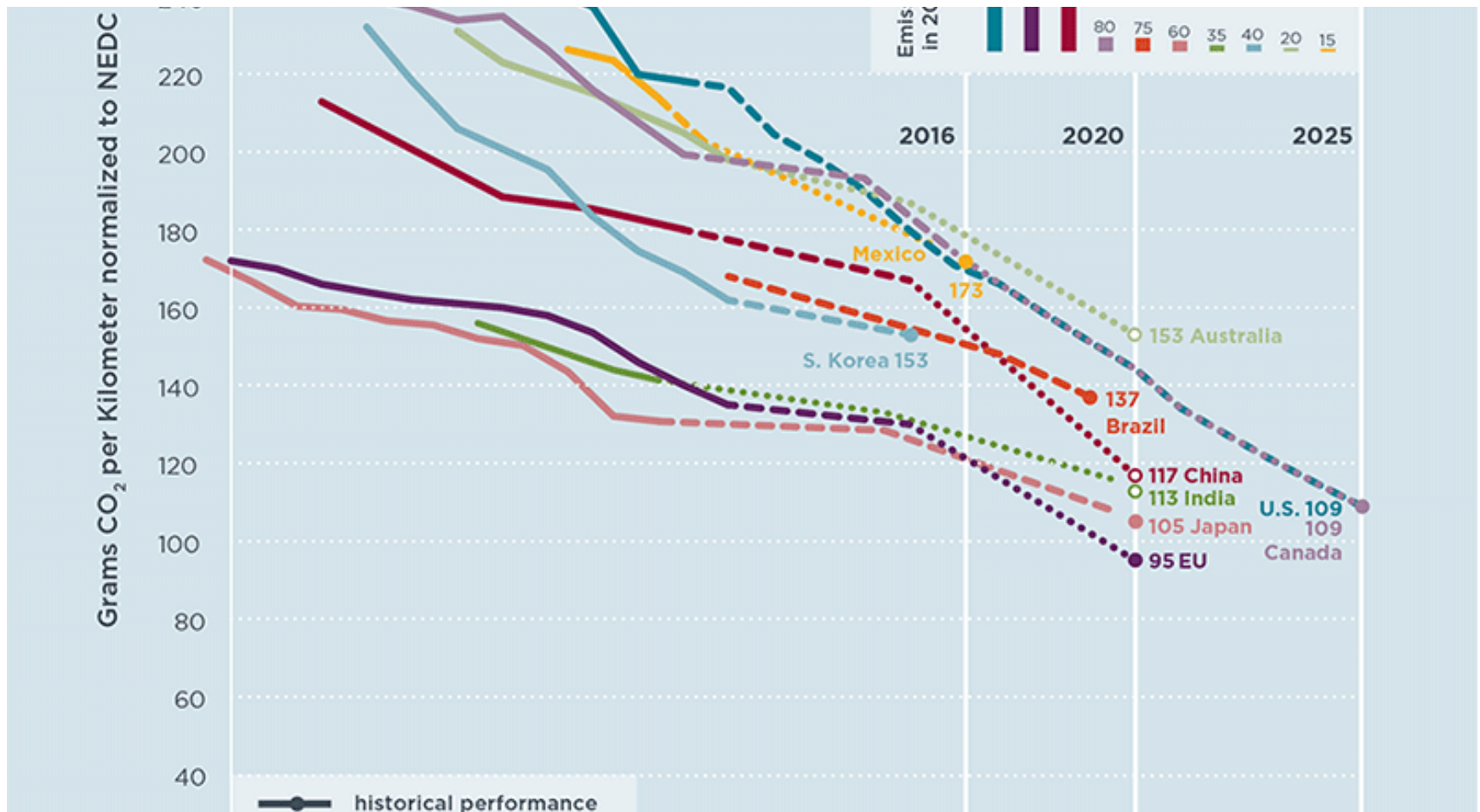
- Engines get more efficient over time – that can provide either less fuel consumption or more power & size
- China's CAFE (corporate average fuel economy) standards



Image: [cdn.tundraheadquarters.com](https://cdn.tundraheadquarters.com)

# Vehicle Efficiency Standards

Implementation of standards in China (and India) will affect market for Thailand manufacturers





# Vehicle Efficiency

- Principles to Consider:
  - Choose goal, not technology to meet it
  - Review other policies, i.e., vehicle duty rates
  - Consider price signal: more efficient cars make it cheaper to drive more



# Freight

## The Greener Way to Go

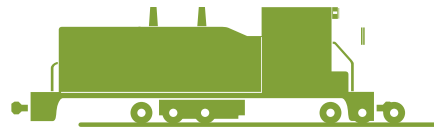
**Inland barges produce less CO<sub>2</sub> while moving America's cargoes.**

In terms of CO<sub>2</sub> produced per ton of cargo moved, inland barges have a significant advantage over trains and trucks.

28.2



39.3



104.5

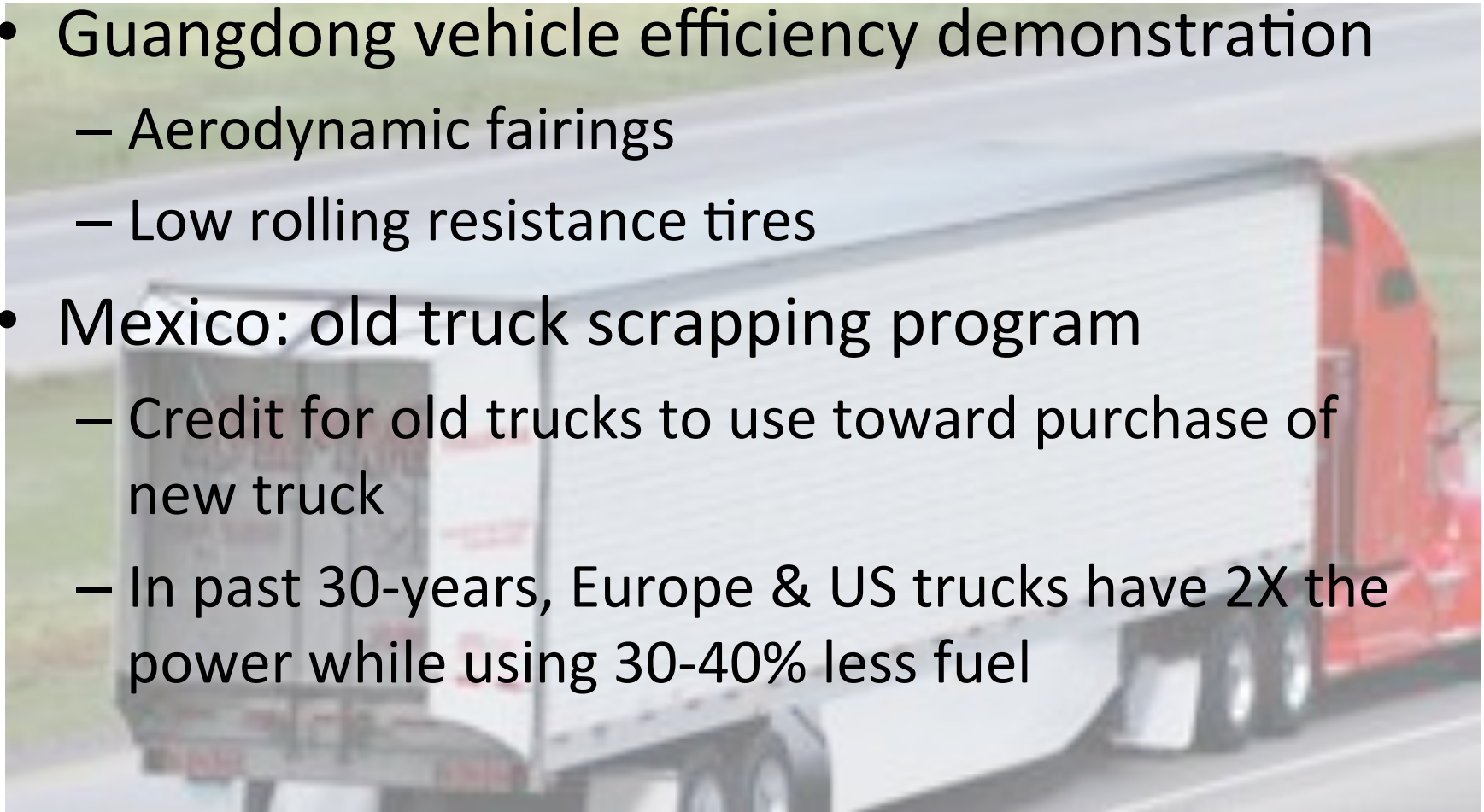


Tonnes of CO<sub>2</sub> per million tonne-km

Source: Commission for Environmental Cooperation, 2011. Adapted from The Journal of Commerce.

# Freight Truck Efficiency

- Guangdong vehicle efficiency demonstration
  - Aerodynamic fairings
  - Low rolling resistance tires
- Mexico: old truck scrapping program
  - Credit for old trucks to use toward purchase of new truck
  - In past 30-years, Europe & US trucks have 2X the power while using 30-40% less fuel





# Freight

- Policy Considerations:
  - Public investments can target efficient modes
  - Business benefits from reduced costs, so needs to be an active partner



# Summary

- Make the most efficient modes the most attractive
- Consider other policies in effect: vehicle taxation, fuel price
- Consider price signals: efficiency versus cost





# Further Information

- Seoul: Seoul Institute – [www.sdi.re.kr](http://www.sdi.re.kr)
- Singapore: Ministry of Transportation – [app.mot.gov.sg](http://app.mot.gov.sg)
- Copenhagen: Gehl Architects – [www.gehlarchitects.com](http://www.gehlarchitects.com)
- China Fuel Efficiency: Harvard  
[belfercenter.ksg.harvard.edu/files/  
2009 Oliveretal Impacts of Chinese Fuel Economy Standards.  
pdf](http://belfercenter.ksg.harvard.edu/files/2009%20Oliveretal%20Impacts%20of%20Chinese%20Fuel%20Economy%20Standards.pdf)
- Freight: Clean Air Institute - [www.greenfreightandlogistics.org](http://www.greenfreightandlogistics.org)

Thank-You