Reducing Vehicle Use in Megacities
Johanna Partin, N. America Regional Director
Transportation and Energy Conference
August 8, 2013
Megacities and Climate Change
Cities Act

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>City streets &amp; parking</td>
<td>87%</td>
</tr>
<tr>
<td>Outdoor lighting</td>
<td>80%</td>
</tr>
<tr>
<td>Transit</td>
<td>63%</td>
</tr>
<tr>
<td>Residential waste</td>
<td>66%</td>
</tr>
<tr>
<td>Landfills</td>
<td>60%</td>
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<tr>
<td>Building regulation</td>
<td>57%</td>
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<td>Water supply</td>
<td>60%</td>
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<tr>
<td>City planning</td>
<td>50%</td>
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</tbody>
</table>
What does C40 Do?

PEER-TO-PEER EXCHANGE

ON-THE-GROUND CITY SUPPORT

RESEARCH & KNOWLEDGE MANAGEMENT
# C40 Initiatives & Networks

<table>
<thead>
<tr>
<th>Energy</th>
<th>Finance &amp; Economic Dev.</th>
<th>Measurement &amp; Planning</th>
<th>Sustainable Communities</th>
<th>Transportation</th>
<th>Adaptation &amp; Water</th>
<th>Waste</th>
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</thead>
<tbody>
<tr>
<td>Cool Cities</td>
<td>Green Growth</td>
<td>Community GHG Protocol</td>
<td>Sustainable Urban</td>
<td>Bus Rapid Transit</td>
<td>Connecting Delta Cities</td>
<td>Sustainable Solid Waste</td>
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<tr>
<td>Private Buildings</td>
<td>Sustainable Infrastructure Finance</td>
<td>Protocol</td>
<td>Development</td>
<td>Transit</td>
<td>Delta Cities</td>
<td>Systems</td>
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<td>District Energy</td>
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<td>Climate Action Planning</td>
<td>Climate+</td>
<td>Electric Vehicles</td>
<td>Climate Risk Assessment</td>
<td>Innovative Policies</td>
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<tr>
<td>Municipal Buildings</td>
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<td>Hybrid &amp; Electric Buses</td>
<td>Urban Drainage &amp; Green Infrastructure</td>
<td>Waste-to-Energy</td>
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<td>Municipal Utilities</td>
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<td>Transportation Demand Mgmt.</td>
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<tr>
<td>Outdoor Lighting</td>
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<td></td>
<td></td>
<td>Non-Motorized Transport</td>
<td></td>
<td></td>
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<tr>
<td>Renewables</td>
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<td>Transportation-Oriented Development</td>
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</tbody>
</table>

- **C40 CITIES**
  - Climate Leadership Group

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Global Transportation Demand Trends

- 70% global population expected to live in cities by 2050.
- Roadway occupancy levels could increase sixfold in some countries.
- Energy needed to move these people around will double.
- Global transportation accounts for 20% of the world's energy use; 40% of this occurs in cities.
- Road traffic accidents are the leading cause of death among 15- to 29-year-olds. Overall, traffic mishaps cause 1.3 million deaths a year and cost more than $500 billion.
- World’s stock of motorized vehicles will double by 2050.
# Urban Policy Opportunities

<table>
<thead>
<tr>
<th>Improved Transit options</th>
<th>Incentives/ disincentives</th>
<th>Land Use policies</th>
<th>Other programmes</th>
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</thead>
<tbody>
<tr>
<td>Public transit improvements</td>
<td>Congestion pricing</td>
<td>Transit oriented development</td>
<td>Transportation Demand Management policies</td>
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<tr>
<td>Walking and cycling improvements</td>
<td>Parking pricing</td>
<td>Parking management</td>
<td>Freight management</td>
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<tr>
<td>Flexible and home working</td>
<td>Pay-as-you-drive vehicle insurance</td>
<td>Traffic calming</td>
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<tr>
<td>Car-sharing</td>
<td>Fuel and other tax increases</td>
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<tr>
<td>Ride-sharing</td>
<td>Distance based taxes/ charges</td>
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Paris

Expanded public transport; implemented Vélib bikeshare program; parking reform, road diets

- Vélib: 20,000 bikes in 1,800 stations
- Reduced street parking by 9% (14,300 spots) & began charging for 95% of spots
- 24% reduction in driving between 2001-2010
Seoul

Replaced 95% bus fleet (6,100 buses) with CNG & diesel hybrid buses; 142 km of BRT along 8 corridors

- Increased bus speeds by 33%-65% between 2003-04
- Increased daily passenger trips by 11% between 2003-04
- Decreased bus accidents by 23% and serious injuries by 43% by 2005
Mexico City

Installed parking meters in Polanco neighborhood
• Reduced trip times by 10:22 minutes per trip (6.73 million hours annually)
• Reduced vehicle-kilometers by 80.8 million km
• Saved 7.7 million liters gasoline
• Reduced GHGs by 18,000 tons annually
New York City

Closed Broadway to car and truck traffic in Times Square

- 11% increase in foot traffic
- 63% reduction in injuries to motorists and passengers
- 35% reduction in pedestrian injuries
- NO reduced by 63%
- NO$_2$ reduced by 41%
- 60% of workers, property owners and building executives supportive
- 70% of local retail managers supportive
Milan

“Area C” road pricing downtown
- 30.7% reduction in traffic
- 23.8% reduction in road accidents
- 10% increase in public transport speed during peaks
- 18% reduction in PM10, 10% reduction in exhaust, 18% reduction in NOX; 35% reduction in CO2
- 58% residents supportive
Singapore

100% private vehicle tax
• Only 15% of Singaporeans own a car
London

2012 Olympic Summer Games

• Reduced traffic flows in Central and Inner London by 16.3% (AM peak) and 9.4% (PM peak)
• Planning to make measures permanent
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