An Actionable Vision of Transport Decarbonization

Implementing the Paris Agreement in a Global Roadmap aiming at net-zero emissions Transport.
What is at Stake?

- Current Transport GHG emissions are **7.7 Gt**
- 2050 BAU emissions possibly **13-15 Gt**
- 2050 emission levels based on Paris Agreement well below 2 Degree Celsius target **2-3 Gt**
Time to Take Action Now

- Plan for mid/long-term disruptions towards a systemic transformation of the Transport sector (2020-2050+)
- Taking the short term decisions which the success of the Paris Agreement ultimately depends on (2016-2020)
- Leveraging existing GCAA Transport Initiatives and encouraging new ones
A Global Macro-Roadmap to decarbonize transport by 2050+

1. Synergistic urban transformation
2. Low-carbon energy supply strategy
3. Hybridize and electrify
   - Curb GHG emissions of HDV
   - Improve system efficiency
4. De-fragment + shorten supply chain
5. Reduce unwanted individual travel
6. Solutions for Rural Populations
7. Invest in Adaptation
8. Speed up economic instruments
Phased and Region Specific Macro Road Map

1. Synergistic urban transformation
2. Low-carbon energy supply strategy
3. Modal efficiency improvement
4. Shortened supply chains
5. Unnecessary travel reduction
6. Adapted solutions for ‘rural’ world
7. Investment in adaptation & offsetting
8. Financial & regulatory tools

Trailblazers/OECD: 2016, 2020, 2025, 2030, 2040, 2045, 2050, 2060, 2080
Fast Followers/Transition Economies: 2035, 2030, 2040, 2045, 2050, 2060, 2080
Quick Wins on transport, sustainable development and climate change to initiate immediate pre-2020 disruptive action

- Scaling up proven solutions
- Halting existing unsustainable practices and/or regulations
- Initiating without delay, and at relatively low cost, actions in preparation of full implementation of a global decarbonization roadmap
Linkage GCAA Transport Initiatives to proposed components of the Global Macro-Roadmap

<table>
<thead>
<tr>
<th>Urban</th>
<th>Energy Supply</th>
<th>Modal efficiency / intermodality</th>
<th>Supply chain efficiency</th>
<th>Avoid (commuting)</th>
<th>Rural Areas</th>
<th>Adaptation</th>
<th>Economic transition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport Carbon Accreditation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aviation’s Climate Action Takes Off</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C40 Cities Clean Bus Declaration of Intent</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global Fuel Economy Initiative</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global Green Freight Action Plan</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITS for the Climate</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Carbon Road and Road Transport Initiative (LCRTI)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobilise Your City (MYC)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Navigating A Changing Climate</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UIA Low-Carbon Sustainable Rail Transport Challenge</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UFP Declaration on Climate Leadership</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban Electric Mobility Vehicles Initiative (UEMI)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World Cycling Alliance (WCA) and European Cyclists’ Federation (ECF) Commitment</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worldwide Taxis4 Smart Cities Initiative</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZEV Alliance</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Current Transport initiatives offer a good base for key components of the Global Macro-Roadmap

- However,
  - Key gaps exist: Energy Supply and Economic Transition
  - Scale of initiatives not always large enough
Way Forward in Developing Global Macro-Roadmap

Analysis
- Mapping of other existing scenario and modelling efforts to potentially enrich the roadmap
- Assessment of Mitigation Potential
- Prioritizing Roadmap elements

“Europe” Roadmap
- “Latin America” Roadmap
- “Asia” Roadmap
- “Africa” Roadmap
- Validation Roadmap

Consultation
- Private sector consultations
- Sub-sector consultations
- Public sector consultations

- Energy Ministers
- Finance Ministers
- Transport Ministers
- Latin America Workshop
- Asia Workshop
- Africa Workshop