As the latest report of the Intergovernmental Panel on Climate Change (IPCC) clearly shows, time is of the essence: we should not only get to net zero Greenhouse Gas (GHG) emission to limit global warming below 1.5°C or 2°C, but also need to get there fast.

Achieving a resilient “net-zero-emission (NZE) economy” by 2050 requires us to collectively and successfully transform global mobility in a systemic manner over the next decades.

With transport emissions set to possibly increase by around 50% between now and 2050 (Reference Technology Scenario of the International Energy Agency), while they should decrease by over two thirds in a below 2°C scenario, rapid and transformational action is needed, as well as strong coordination.

This manifesto crafted by TDA is intended to serve as a call to action for Countries, Cities/Regions and Companies (the 3Cs) to join hands and kickstart the decarbonisation of the transport sector. The document proposes feasible solutions that the 3Cs can adopt to reach their objective. It seeks to act as the living backbone of TDA’s action. It will be enriched further, progressively, in the months and years to come.
The document identifies solutions and levers to reach net zero emission-mobility by 2050, and showcases best practices that can foster the adoption of the right combinations of solutions through collaborative approaches. Such best practices rely on:

**4 strategic imperatives** for reaching GHG-neutral mobility, guiding all actions synergistically and leveraging ASI (avoid-shift-improve) initiatives:

**Imperative 1** Move away from oil and other fossil fuels to focus on very-low-GHG energy

**Imperative 2** Lower the energy intensity of our mobility patterns (global economy & individual lifestyles)

**Imperative 3** Prepare the physical and IT infrastructure needed to accompany those changes

**Imperative 4** Inform, educate and train populations to embrace the transformation

**12 pillars of transformation** to activate levers in synergy and create favourable economic, technical and social conditions for the transition.

Those twelve pillars of transformation have to be phased in order to reach net zero emission-mobility. The illustration below highlights how they should complement each other in the next decades:

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**Creating an enabling framework**

1. Adapt economic rules to transformation
2. Accelerate energy mix transformation
3. Harmonise regulations related to charging/filling and to emissions standards
4. Develop new mobility and energy curricula in universities, with associated R&D, and workforce training

**Organising territories and changing behaviours**

5. Position Cities / Regions at the forefront of transformation implementation
6. Upgrade services of mass transit and promote its use (inter/ intra –city)
7. Catalyse movement towards long-distance nonmotorised mobility
8. Rely on energy decentralisation to develop decentralised mobility

**Fostering change and innovation as an impulse for GHG reduction**

9. Innovate beyond state-of-the-art and rapidly deploy innovation in mobility services and infrastructure
10. Impulse movement towards multi-modal solutions for freight
11. Rely on digital tools to create shorter and smarter supply chains
12. Reorganise commuting habits

**Iconic measures to reach net zero emission-mobility by 2050**

Aspirational track to reach net zero emission-mobility by 2050*

* This track represents an aspirational scenario to reach net zero emission mobility by 2050, taking into account the feasibility of the transformation, and the fact that negative emissions will be needed in addition to strong mitigation efforts. The trajectory reflects a probable increase of emissions until 2025, followed by a first decrease between 2025 and 2035, and a sharper decrease between 2035 and 2050, as more and more solutions become available and scalable. Approximately 20% of today’s emissions will have to be compensated by negative emissions, close to the IEA scenarios that estimate that around 15% of the effort will rely on negative emissions.
The manifesto also proposes a framework for the 3Cs to create and maintain an unprecedented level of coordination, and enable large scale initiatives. This framework is built around:

4 enabling prerequisites that represent the actions and attitudes necessary to act quickly and overcome existing or future roadblocks, bearing in mind that getting there is no easy task:

- **Prerequisite 1**: Anticipate shifting effects
- **Prerequisite 2**: Avoid inflexible approaches and make informed decisions
- **Prerequisite 3**: Challenge all arguments for postponement
- **Prerequisite 4**: Adapt the fiscal and regulatory environment to foster transformational investment

A five-step process to impulse change irreversibly, at the 3Cs level:

- **Step 1**: Establish a firm “net zero emission-mobility” target involving all stakeholders in a spirit of irreversible commitment
- **Step 2**: Develop 3C governance at the different scales to steer and monitor the transformation
- **Step 3**: Spread homogeneous, effective tools to orchestrate the transition at the local, national and international levels
- **Step 4**: Open up pro-business initiatives to foster new services and new products
- **Step 5**: Promote international efforts to speed up the transition globally

Those five steps have to be initiated quickly and orchestrated in time, in order to facilitate collaboration on the twelve pillars of transformation:

<table>
<thead>
<tr>
<th>Proposed process to facilitate joint action and risk alleviation</th>
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<tbody>
<tr>
<td>1. ESTABLISH FIRM NATIONAL NET ZERO EMISSION MOBILITY GOALS</td>
</tr>
<tr>
<td>2. DEVELOP NATIONAL 3C GOVERNANCE</td>
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<tr>
<td>3/4/5. START COOPERATION AT NATIONAL AND INTERNATIONAL LEVELS</td>
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</table>

Long term strategies

"Net zero emission Mobility Taskforce"

- 3. Homogenous tools
- 4. Business initiatives
- 5. International cooperation

NB:

These unmissable steps by 2025 focus on how to reduce absolute emissions. As developed in the manifesto, complementary actions need to be taken regarding negative emissions in order to reach net zero emission mobility, and resilient infrastructure and mobility systems have to be developed concomitantly.
Key takeaways emerge from this manifesto:

1. TDA members agree that **net zero emission-mobility by 2050 can be achieved**, if strong, structured action is launched now.

2. The key levers for reducing the GHG impact of mobility are **all the more effective when activated in synergy** - something missing until today - relying on active cooperation between the 3Cs to **create the favourable economic, technical and social conditions**, without which the **transformation will fail**, and helping focus efforts on finding ways to go the extra mile towards full success.

3. Adopting a **common process framework** in this “no return” journey towards net zero emission-mobility is a **sine qua non condition for success**. The four prerequisites and the five-step process proposed by the TDA, when adapted to local conditions, should immensely help decision makers foster collaboration and accelerate progress.

4. “Decarbonising transport” is no solitary endeavour. The TDA **urges other Countries, Cities/Regions and Companies to initiate and sustain cooperation**. It welcomes actors eager to embark on the transition to join as new TDA members or supporting organisations.

We look forward to welcoming you aboard.

This manifesto was developed by the Transport Decarbonisation Alliance, under the leadership of [ppmc-transport.org](http://ppmc-transport.org) with the support of the Climate Change & Sustainability team of [EY](http://www.eu.ey.com).

TDA members as of December 2018:

- Costa Rica
- Finland
- France
- Luxembourg
- Netherlands
- Portugal
- California

- Lisbon
- Gaia
- Rotterdam
- Matosinhos
- Porto

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http://tda-mobility.org