ForFITS: A monitoring and assessment tool "For Future Inland Transport Systems"
1. Allows the estimation/assessment of emissions in transport

2. Allows the evaluation of transport policies for CO₂ emission mitigation

Converts information on transport activity into fuel consumption and CO₂ emission estimates considering the influence of the demographic and socio-economic context, including policy inputs!
Passenger and freight transport services

Two different areas (e.g. to define the transport systems: urban, non-urban, non-spec.)

Nine transport modes: non-motorized transport, two wheelers, three wheelers, light road vehicles, medium and heavy road vehicles, rail, navigation (inland, short-sea and deep-sea/maritime), air and pipelines

Different vehicle subsets within each mode (organized in six vehicle classes – A to F) (figures)

31 powertrain technologies (e.g. internal combustion engines, hydraulic hybrids, electric hybrids, plug-ins, fuel cell, electric)

10 fuel blends, some of which are associated with specific modes and/or powertrains
ForFITS model Key modelling steps

1. **Policy Input**
   - Fuel characteristics (cost)
   - Vehicle characteristics
   - Fuel characteristics (emissions)

2. **GDP**
   - Passengers Data
   - Freight Data

3. **Demand Module**
   - Transport activity (pkm, tkm, vkm) and vehicle stock
   - Energy consumption
   - Vehicles by age and powertrain

4. **ASIF**
   - extended ASIF
   - CO₂ emissions evaluation
The implementation of ForFITS in the City of KAUNAS!
The case of Kaunas

Scenarios Analysis!
## The case of Kaunas

### Transport Policies

<table>
<thead>
<tr>
<th>Scenarios</th>
<th>Non-motorized transport systems</th>
<th>Development of bicycle paths</th>
<th>Postcards &amp; Leaflets</th>
<th>Bicycle marathon</th>
<th>Environmentally friendly public transport</th>
<th>Joint project with CHAMP</th>
<th>Campaign / rallies</th>
<th>Level of motorization</th>
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Overall CO2 emissions from passenger transport under different scenarios

- **7.6** per cent reduction by 2030 from shifting transport
- **5.8** per cent reduction from culture shift
- **4.4** per cent reduction from oil up
- **7.3** per cent reduction from 1.5% GDP growth
- **4.6** per cent increase with high fertility
- **19.9** per cent decrease with all scenarios together
Overall CO₂ emissions from freight transport under different scenarios

13.4 per cent reduction from oil up in 2030
34.1 per cent reduction from GDP growth of 1.5%
0.9 per cent reduction from high fertility scenario
43.4 per cent reduction with all scenarios
Thank you!