



PSA PEUGEOT CITROËN



PORSCHE



RWTHAACHEN

AVL



TÜV NORD

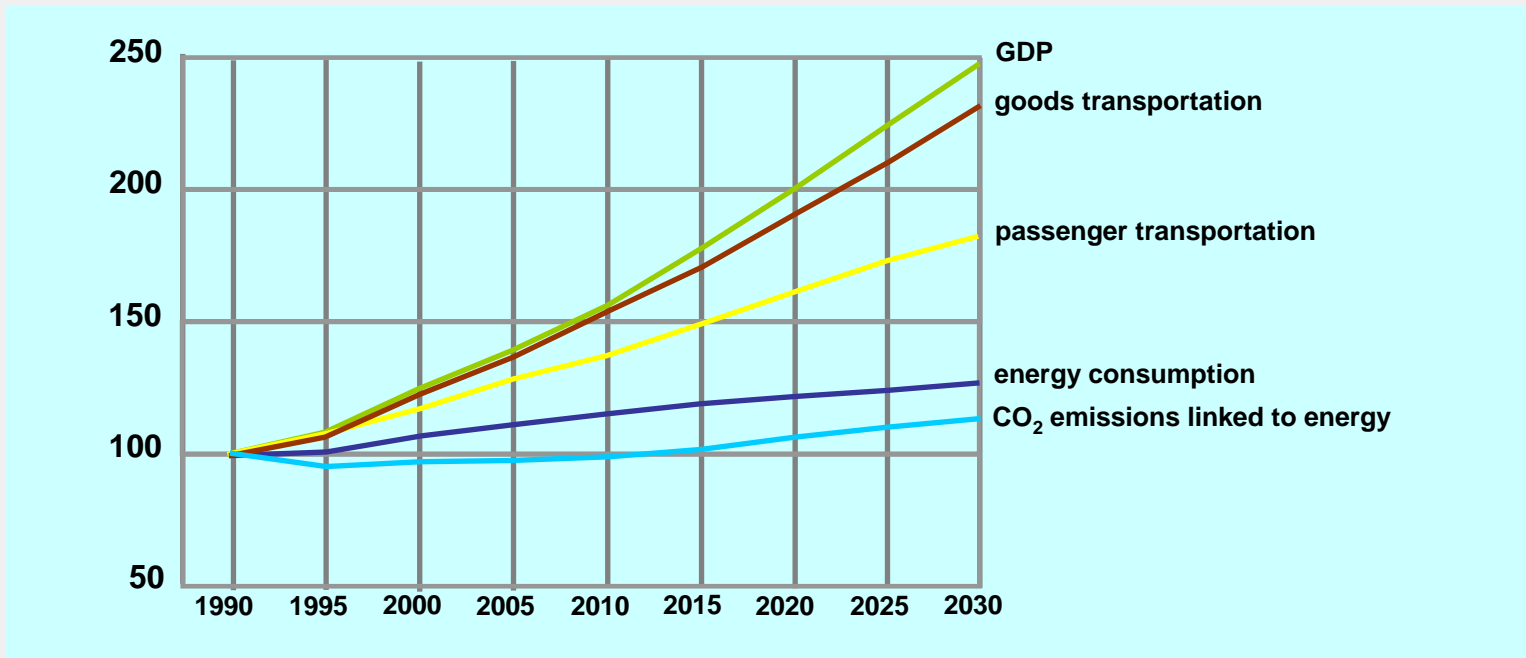




Background

Noise annoyance for people has been increased during the last years.

The reduction of noise level standards for motorized vehicles was counteracted by the increase of the traffic volume.



Forecasts of growth in relation to GDP for transport energy consumption and emissions of CO₂ (EU-25)

Source: DG TREN, Energy&Transport Report 2000-2004





Why is there a need for a new simulation model?

Background

The approved noise perception calculation models are not suitable to deliver information that is detailed enough neither for the assessment of alternative scenarios nor for the ranking of different measures.

The modeling of the noise emission is not detailed enough with respect to

- ▶ fleet composition,
- ▶ vehicle performance
- ▶ temporal variations in traffic conditions and source contributions.

This gap has been closed by the ROTRANOMO-Project.



What are the requirements for such a new simulation model?



Requirements

The needs for the ROTRANOMO-Simulation model arose from the gaps of the existing ones:

A noise calculation model that point the way ahead should be used

- ▶ in the decision making process in concerned areas (communities, agglomerations)
- ▶ for the development of effective (and economic) noise reduction measures for action plans
- ▶ for the assessment of noise reduction strategies

within the frame of the environmental protection policy of the EU and their member states.





What is the ROTRANOMO simulation model able to cover?

Performance

We started the project in order to provide a simulation tool for scenario-calculation which should cover variations of

- ▶ vehicles, vehicle fleets
 - ▶ tyres and road surfaces,
 - ▶ traffic management related measures,
 - ▶ driving behaviour influencing measures,
 - ▶ environmental planning and structural changes
- ... within an open architecture of the model.

ROTRANOMO considers as well

- ▶ different vehicle categories,
- ▶ different emission stages of vehicles within a given category
- ▶ temporal variations of traffic and driving conditions

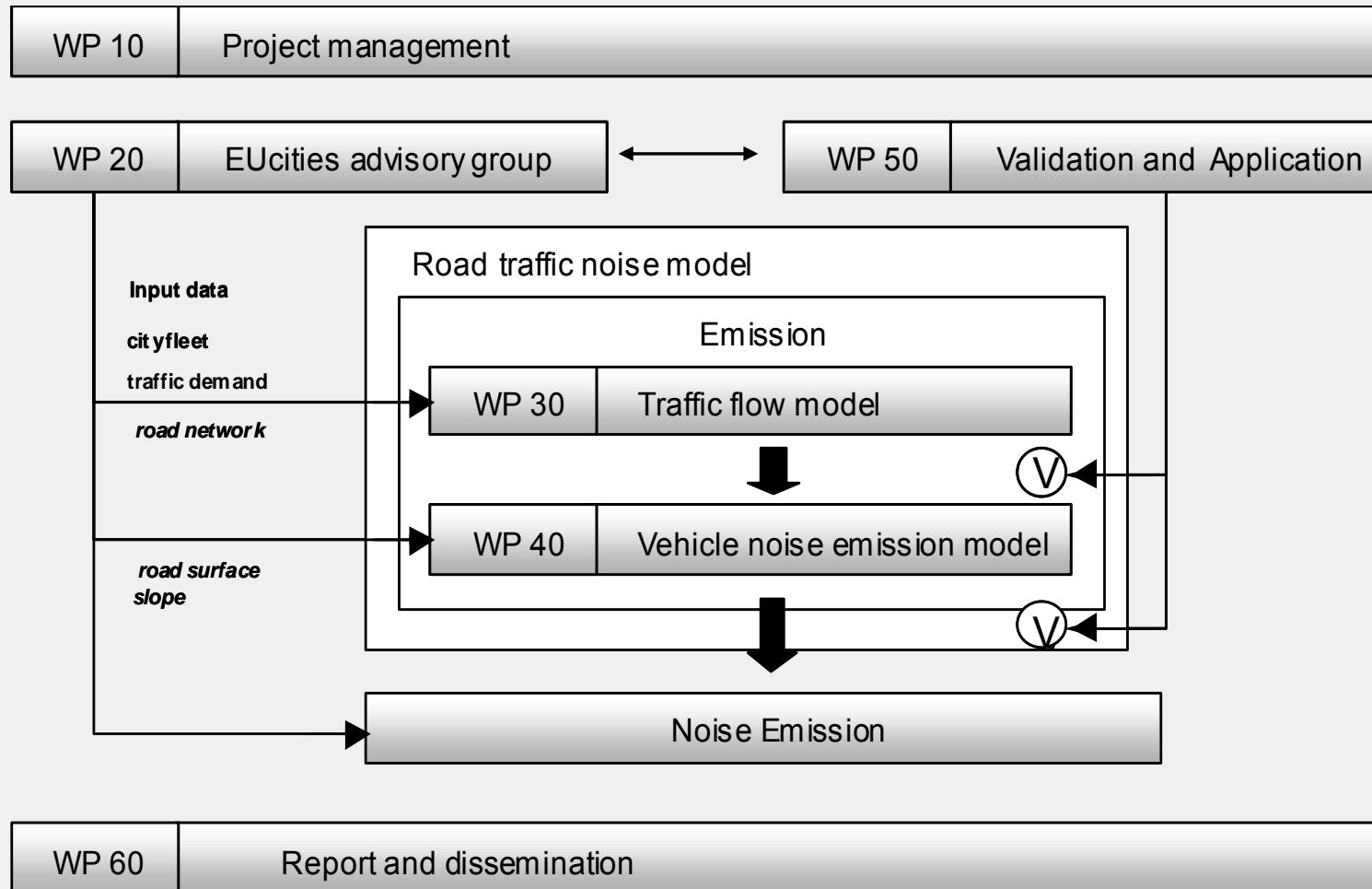


Road Traffic Noise Modelling



What was the approach to tackle the tasks?

Approach



Ⓟ = Validation