



PSA PEUGEOT CITROËN



RWTHAACHEN



AVL





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- |                |  |
|----------------|--|
| <b>10:00 h</b> | <b>Welcome</b>   |
| <b>10:05 h</b> | <b>Intention of the ROTRANOMO-Project (Henning Volkmar)</b>        |
| <b>10:15 h</b> | <b>Presentation of the Work packages</b>                           |
|                | <b>- WP 20 European Cities Advisory Group (Jim Fleming)</b>        |
|                | <b>- WP 30 Traffic Flow Model ( Thomas Benz)</b>                   |
|                | <b>- WP 40 Vehicle Noise Emission Model (Heinz Steven)</b>         |
|                | <b>- WP 50 Validation/Pres. of first results (Thomas Beckmann)</b> |
| <b>12:00 h</b> | <b>Lunch</b>   |
| <b>13:00 h</b> | <b>Discussion about the Simulation model</b>                       |
| <b>15:00 h</b> | <b>Conclusion</b>  |
| <b>15:00 h</b> | <b>Coffee / Time for further communication</b>                     |
| <b>15:45 h</b> | <b>End of the Workshop</b>   |

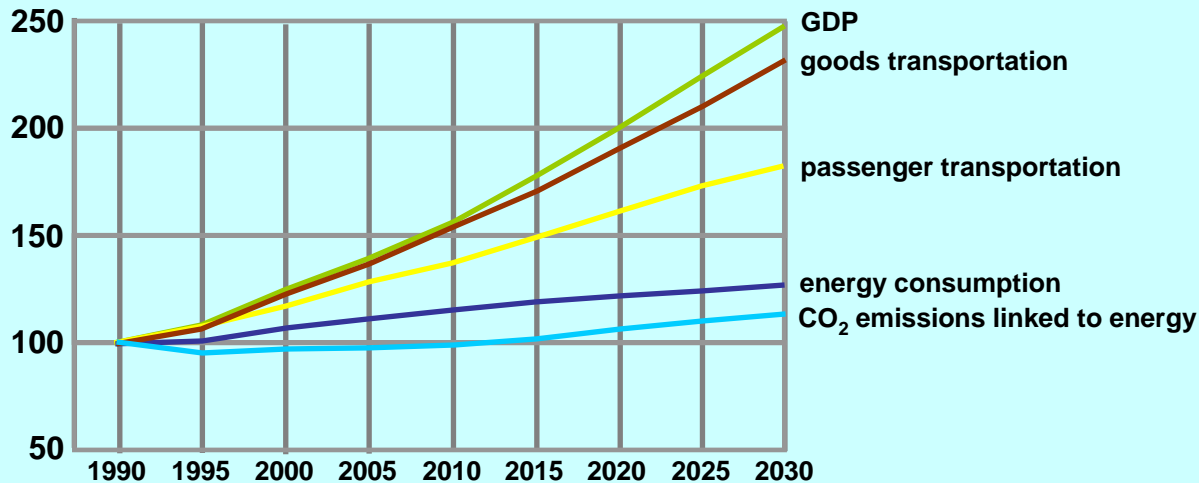




## Background

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

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



Forecasts of growth in relation to GDP for transport energy consumption and emissions of CO<sub>2</sub> (EU-25)

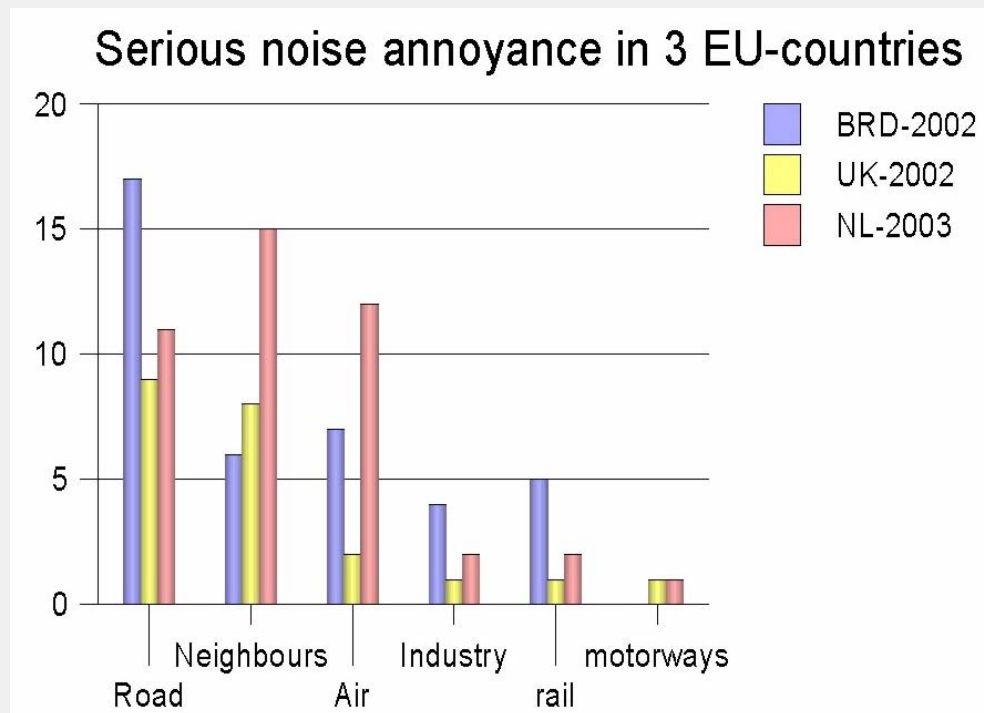
Source: DG TREN, Energy&Transport Report 200-2004





## Background

This led to the situation that people feel annoyed at noise, especially in urban areas. Directive 2002/49/EG was generated in order to reduce peoples noise annoyance in agglomerations.



Source: Health&Socio  
Economic Aspects,  
Calm Workshop 2004,  
v.d.Berg

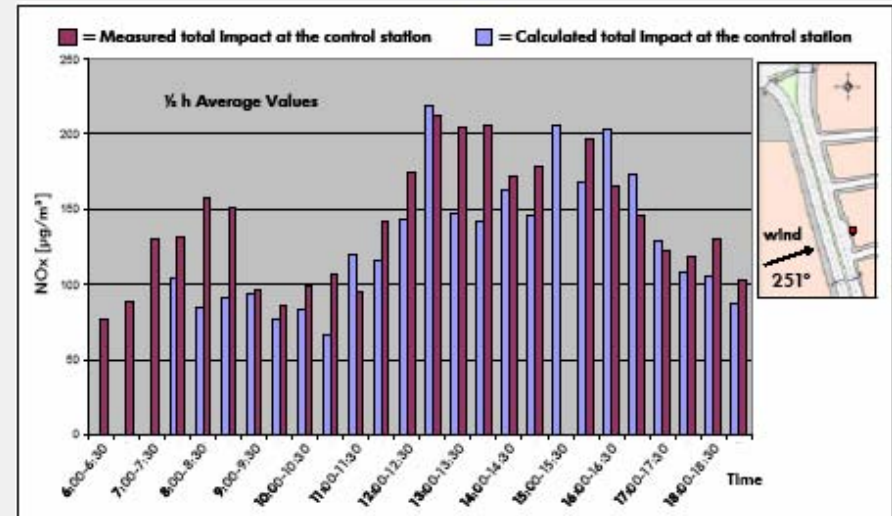
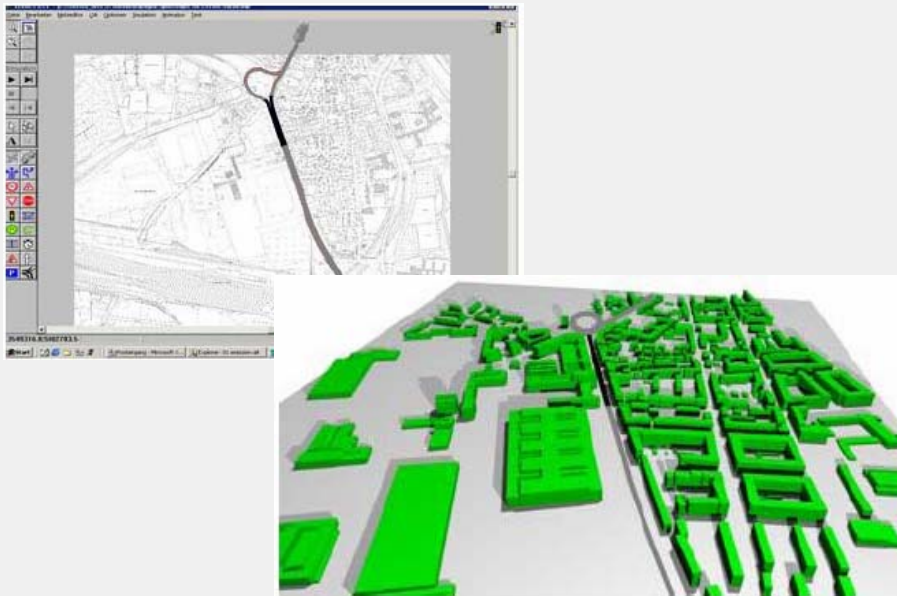




## Background

The upcoming EU-Noise Directive 2002/49/EG gave the starting signal to build up a qualified consortium in order to tackle the noise related tasks.

PTV AG and VW have experience in road traffic simulation tools dealing with exhaust emissions ...





## Background

... Mr. Steven is well known expert in the field of noise simulation and elaborated a detailed noise simulation tool for the Federal environment office in Germany.

It was the idea to build up a combined tool for Road traffic noise modelling – ROTRANOMO, because ...





## 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
- diurnal variations in traffic conditions and source contributions.

This gap is going to be closed by the ROTRANOMO-Project.





## Consortium



SCANIA



OPEL

PSA PEUGEOT CITROEN



PORSCHE



RENAULT



RWTHAACHEN



COMUNE DI GENOVA



Glasgow



POLIS

RWTH

AVL



traffic mobility logistics.





## Requirements

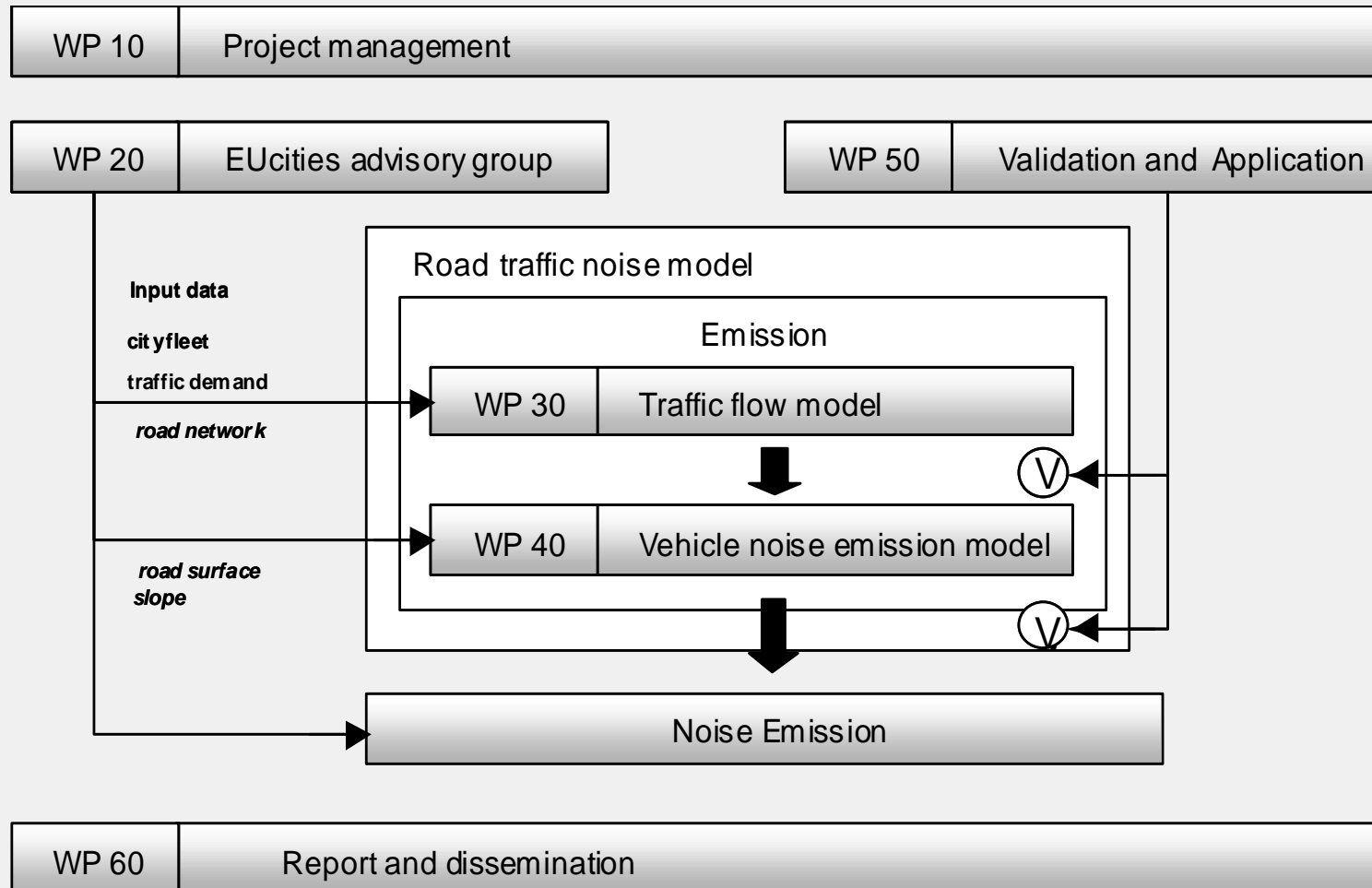
**The needs for the ROTRANOMO-Simulation model arose from the gaps of the existing models:**

**A future noise calculation model should be used**

- as a basis for decision making on the level where problems occur (communities)**
- 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.**



## Approach



Ⓟ = Validation



The model will cover special items in order to calculate different scenarios

- vehicles,
- tyres and road surfaces,
- traffic management related measures,
- driving behaviour influencing measures,
- environmental planning and
- structural changes.

The model will consider

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



## Applications I:

- The effects of any kind of noise reduction measures can be evaluated and quantified with respect to spatial and temporal distribution.
- The implementation of improved noise emission stages allows future prospect scenarios (easy update).
- Estimation of further effects of type approval noise limit reductions for tyres as well as for vehicles (and road surfaces).
- Scenario simulation of future changes in traffic composition, technology and infrastructure.



## Applications II:

- Prediction of the effects of traffic management measures on the noise emission.
- The model provides reliable information for the ranking of noise reduction measures for a specific starting situation.
- Support of the target definition for the further development of vehicles, tyres and road surfaces with respect to their noise characteristics and priorities for the conversion.