

Summary:

# NTM 5 - The Norwegian National Transport Model - Version 5

NTM 5 represents a development of the long distance part (trips > 100 km) of the existing version of the Norwegian national transport model, NTM 4 (phase 4). The model system consists of logit models calculating the demand for car and passenger transport.

Development of the NTM 5 can be summarized as three main tasks:

- *Data preparation* – National travel survey analysis and preparation. Transport network updates in EMME/2 (road and public transport). Establishing zonal data and level of service at a finer zonal detail.
- *Model formulation and estimation* – Alogit estimation utilizing the new national travel survey, level of service and zonal data.
- *Establishing the application system* – Sub-model programming and integration. Data flow and a simple user interface.

Mode and destination choice is formulated as one nested multinomial logit-model for each travel purpose (size variables representing zonal attraction). Binomial frequency models is then estimated separately for each of these four travel purposes and linked with the mode-destination models through a logsum parameter. Car availability enters into the car utility functions as dummy variables representing five different “levels“ of car availability. For the application system, the population is segmented with respect to this car availability classification, using a separate “segmentation model”.

Applying the model system implies altering cost and income assumptions, demographic variables, or generating level of service scenario matrices through the use of EMME/2.