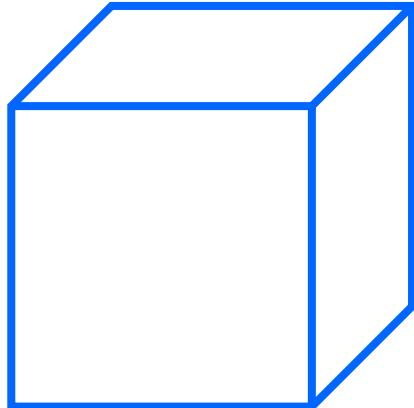


## Line source dispersion model (HIWAY/SSCM)

- Meteorology
- Transport
- Traffic emissions
- Plume dispersion

## Street environment box

- average line source emissions
- entrainment of background air

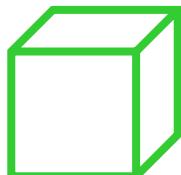


Kerbside

## Jet plume model

[Vignati et al., 1999]

- Traffic-generated turbulence
- Plume dispersion
- No emissions



## Sub-scale box

- ca. 1-2 s after release
- nucleation concluded
- initialization with background

ambient environment

Dilution stage 2

Dilution stage 1

Movement of Lagrangian air parcel

emission source

## Aerosol dynamics box models

Gas phase chemistry

Aerosol dynamics:

- Coagulation
- Condensation
- Evaporation
- Dry deposition

Traffic emissions:

- particles
- gases

Plume dispersion:

- dilution
- plume height