# Introduction

The integrated model is a way usually used in estimating traffic pollution.

# Literature review

Lagrangian stochastic (LS) particle models are usually accepted to be the most powerful tools for study dispersion from passive non-buoyant releases (Wilson and Sawford 1996). However the using of Lagrangian stochastic requires a large number of particles (of the order of 105, according to De Hann and Rotach 1998; De Hann 1999). Consumption of data collecting is tremendous, although the application of Internet of Thing's (IoT) sensors are relevantly cheap, but these are yet to be proven in the roadside setting (Forehead et al., 2017). With the development of data collecting technologies, the availability of Lagrangian stochastic will definitely rapidly increase. But till now, because of data scarcity establishing integrated model to solve the distribution of pollution is still domain trend

Integrated model usually composed by traffic model, traffic emission model, and also dispersion model. Resolution of integrated model can depict the air pollution distribution in and around highway/street.

# Methodology

Gaussian model is mostly used to describe concentration distribution of pollutant. There are two main types, plume and puff. Plume model is appropriate for steady-state conditions. On the contrary, concentration distribution of instantaneously released emission, within a short time after release, can be approximated by a Gaussian puff shape.

In this paper, there is very strong correlation between time and concentration. To give expression to time variation, considering reflection from ground surface, Gaussian puff model (Equation1) is employed to depict pollutant concentration distribution.

 (1)

In Equation 1,  and  are dispersion coefficients in the downwind, crosswind, and vertical direction respectively, with the downwind direction taken as the *x-axis*, crosswind as the *y-axis*, and vertical as the *z-axis*, and *x, y* and *z* are relative distance to the centre of puff along each axis, at time *t*. *H* in equation 1 is the height of emission source. *u* represents the speed of wind.

# Data and processing

# Conclusion

# Reference