

RESEARCH EXPO 2015

Motorcycles for Last-Mile Delivery

Scenarios	Truck	Truck + Motorcycle
Total time	11:36	11:08
Distance traveled	60 km	Truck: 43 km Motorcycle: 17 km per day
Number of employees allocated in delivery	Driver + 2 helpers	Driver + 2 helpers + motorcycle Truck: 90%

Methodology

- Urban Logistics
- Literature Review
- Research Process
- Conclusions and recommendations
- Analysis of the data after the simulation
- Application of "Scale-Net" cost analysis

Initial Results

Considering the data provided by Coca-Cola and the data collected by the research team, a simulation was conducted using the Monte Carlo Method. The results show that the use of motorcycles is more efficient in terms of CO2 emissions.

It is assumed that under normal conditions the combination of truck and motorcycle with more efficient in terms of CO2 emissions.

Using the combination of truck and motorcycle it was possible to cover a larger distance with a lower expense in CO2.

Each simulation using the Monte Carlo Method shows to be a promising way in the transportation planning.

Expected Contribution

- For 10 years, the use of motorcycles in last mile delivery can reduce CO2 emissions by 15%.
- It is significant difference in terms of total time and cost.
- This study could be used as a parameter to other companies in the industry.



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JAN 21 2015 4:30-8:00
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