**Reconfiguration of Manhattan Bus Stopping Frequency**

**Objective:** Perform research and field studies that evaluate the energy and cost saving impacts of reducing the stopping frequency of Manhattan buses from every two blocks to every four blocks, culminating in a proposal to the MTA for a funded pilot program to test the concept.

**Background:** In 2007, New York City unveiled its PlaNYC, a 25-year strategic vision aiming for “a greener greater New York.” The plan challenges citizens to generate ideas that will contribute to sustainable urban practices with respect to the general spheres of land, water, transportation, energy, air, and climate change. In the realm of sustainable transportation, one promising response to this challenge would be a well-researched proposal—focused on the operation of public buses in Manhattan—that describes a way to improve transportation effectiveness while simultaneously reducing air pollution. Currently, most Manhattan buses make stops along their route every two blocks—resulting in an average of approximately 400 feet between stops. Such frequent stopping can be correlated with higher fuel consumption, more atmospheric pollution, and slower times to passenger destinations—especially when aggregated over all the bus routes in Manhattan. There is a need for a rigorous study, backed by sufficient supporting data, to evaluate the impact of halving the bus-stopping frequency from every two blocks to every four blocks.

**Suggested Approaches:** Contact the Metropolitan Transportation Authority (MTA) to begin gathering data on bus models and manufacture, daily fuel consumption, route run times, and certain existing limited-stop routes. Follow up with contacts to bus manufacturers as needed. Select two typical Manhattan bus routes, ride the bus during selected times, and collect data on rider numbers, loading/unloading times, traffic light stops, and total route times. Analyze the collected data to estimate (i) daily fuel consumption and carbon footprints for the regular (2-block) stop frequency and the reduced-stop (4-block) frequency; and (ii) projected annual cost savings with the reduced-stop scenario, taking into account factors including energy savings, route times, buses needed per route, and revenues from additional parking meters. Prepare a questionnaire to evaluate public attitudes toward reduced-stop bus routes, survey a representative sample of riders, and analyze the results. Design an experimental program that will equip two buses with instruments for ongoing data collection on fuel consumption and exhaust gas rate/composition, for the regular and reduced-stop cases. Prepare a proposal to the MTA and other potential funders for a grant to support the experimental program on a trial basis.