CIS 9440 - Data Warehousing for Analytics

Final Project Milestone 2

**Group Number - 17** 

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New York City needs an efficient and effective system in bicycle operations. As we highlighted the business justification for this project, it is expected to revise the current system more advanced by warehousing related data which is an important factor to analyze the operation correctly and finally upgrade the operations. To provide a guideline for a data-driven decision, we refine our KPI's more in detail. For your information, some of KPIs are not introduced from the initial document submitted.

# (1) Bicycle count frequency

We would like to know how often the maintenance team checks each bicycle service site by counting the daily frequency that the number of bicycles is counted because the service facility located in the outskirt would require more maintenance. From this analysis, we can balance the frequency according to the number of residents, and when we hire a new employee, the hiring manager also can refer to this index.

# (2) Bicycle count by location

The bicycle count by location will display the total number registered in the system by location. Understanding the total number is important in that the summation is the basis of the asset appraisal value in the fixed asset account of the financial statement. Each location displayed pinpoint on the map will intuitively help your understanding of the operations.

# (3) Bicycle service map location

This will assist your planning on the system update and upgrade along with KPI (2). The BI system will read each altitude and latitude of the entire service site simultaneously from our data warehouse and deliver visual information.

#### (4) Population by zip code

The bicycle usage will proportionally increase to the population in the region. Therefore, this supplementary information will assist business planners when electing accounting policy such as the appropriate depreciable years, depreciation method, and so forth.

### (5) Bicycle per person by zip code

This is the primary index to efficiently optimize the system operation and is worth always displaying on a visual aid. The management will allocate a budget to actively decrease the ratio, especially in a densely populated area.