

Houston Neighborhood Quality Dashboard

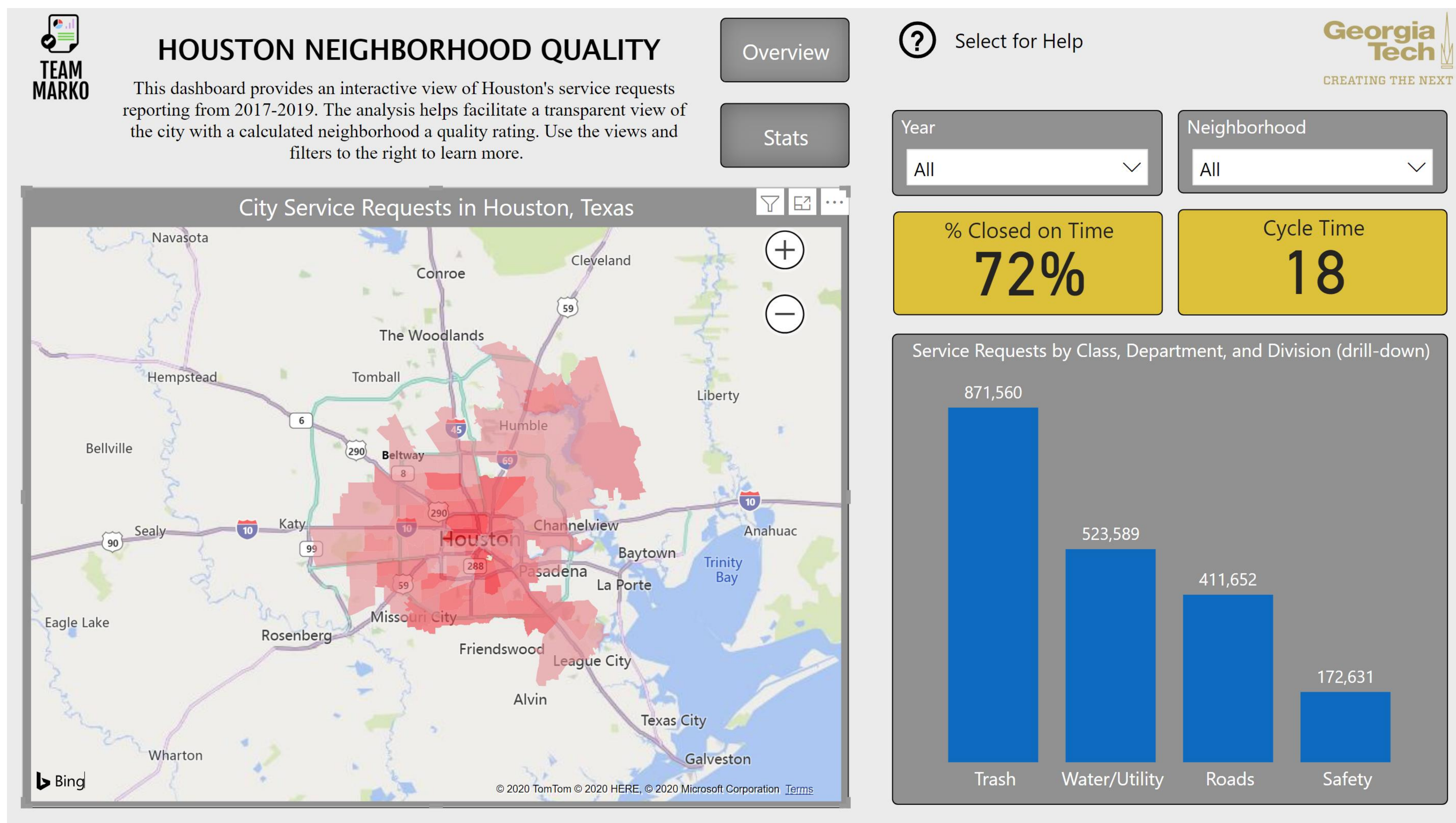
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SUMMARY

We have created a *user-friendly* and *interactive* dashboard with visual statistics of **over 2M** service requests filterable by Houston neighborhoods to *revitalize* an existing rudimentary dashboard as provided by the city.

The dashboard informs current and prospective residents of the quality of neighborhoods based on **objective measurements** of **publicly available** data from the city of Houston spanning years 2017-2019.

95% of trial users found the dashboard easy to navigate.

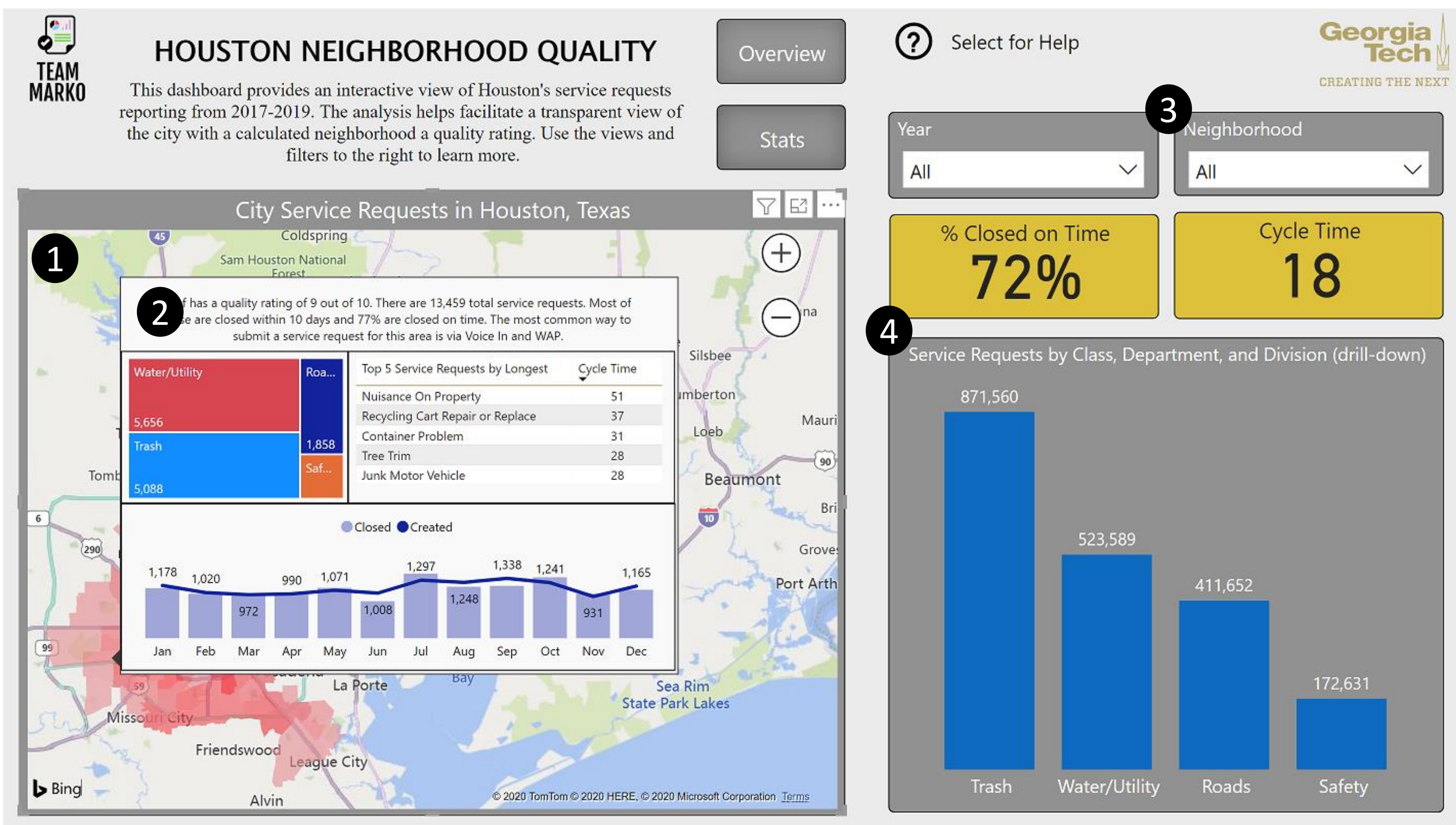


Searching for a new home?

Whether you are evaluating moving to a **new city** for a job, moving to a **new area** for a significant other, or **buying a home** for an expanding family... our dashboard can help provide the answers to the hard questions about your neighborhood.

Not Just *Apartments.com*

Repurposing data historically intended for city administrators' consumption, our dashboard presents a **fresh** and **transparent** view of Houston neighborhoods to current and prospective residents in order to enable them to make **more informed decisions**.

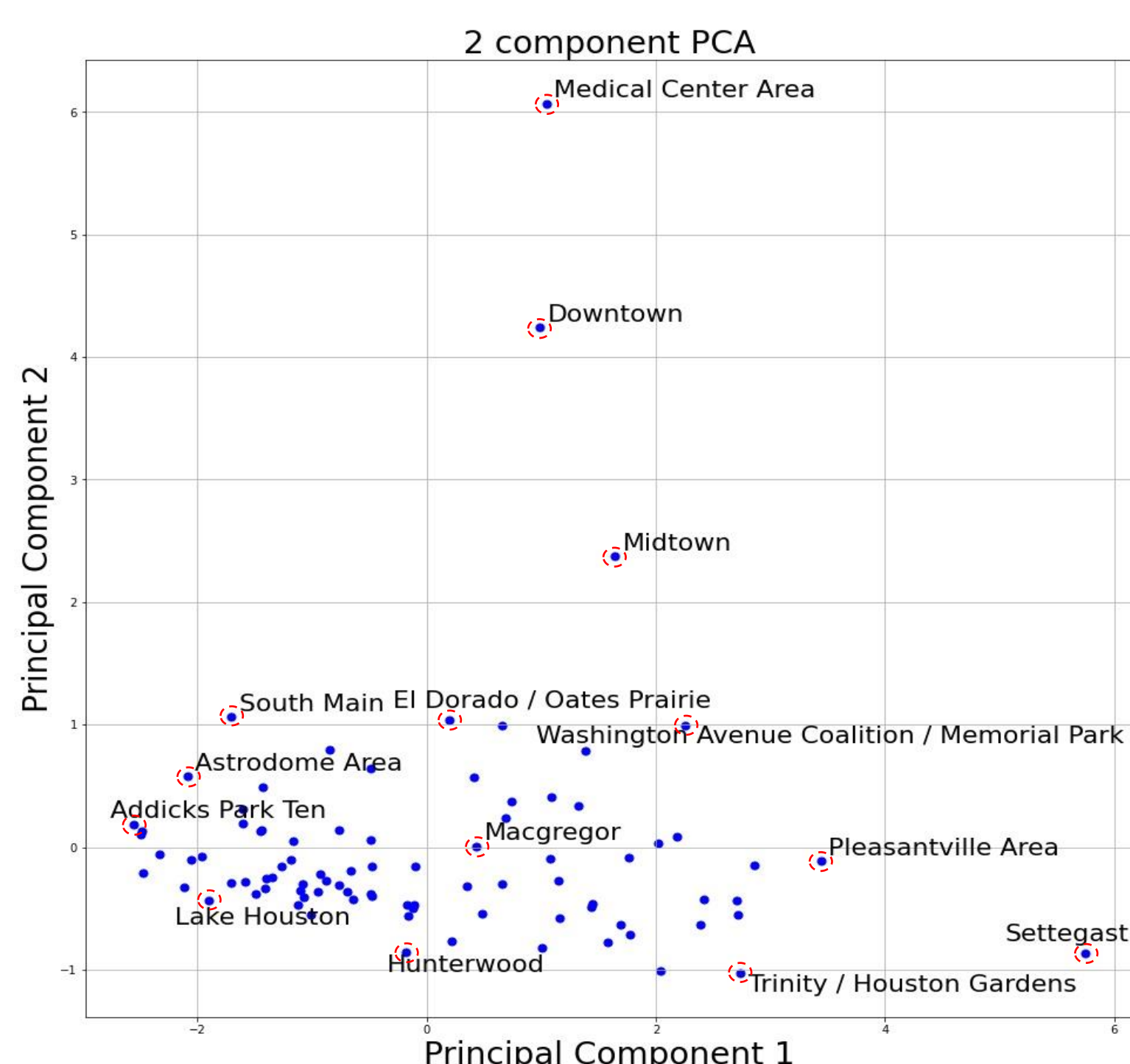


DASHBOARD COMPONENTS

- Map** – interactive (drag, zoom) with heatmap color density assigned by number of service requests per neighborhood
- Tooltip** – details of neighborhood including calculated quality rating, total number of service requests, request cycle time, percent of requests closed on time, and most common way to submit a service request
- Filters** – filter the dataset based by year and by neighborhood to update the map, tooltip, and statistics
- Statistics** – info on filtered selection including count of requests by class, department, and division

The Analysis

We calculated a neighborhood quality rating via **PCA**. Service request data was cleaned and weighted by neighborhood population then grouped by request class. The first principal component value, which **explained 66%** of the data variability, was transformed into a neighborhood quality rating with 1-lowest and 10-highest.



The Results

A survey of **20 trial users** was conducted to evaluate the user experience of navigating the dashboard. Each user was posed a set of **6 questions**. Responses were recorded and user feedback was leveraged to implement dashboard improvements. At the completion of the survey 95% of trial users responded that the dashboard was **easy to use** (>3 on 1-5 scale).

