Weekly Scrum Report - 1 10/07/23 - 10/13/23

We had 2 team meetings - on 10/11/23 and 10/13/23

10/11/23
Members in attendance - Gaurav, Jason, Haokun, Alex

Everyone gave their input based on their understanding of the problem statement and their exploration of the data.

I took inspiration from the official budget websites of Arlington, Oakland and Philadelphia and proposed that for our use case we can do visualisations similar to the following 4 graphs.

1. Histogram
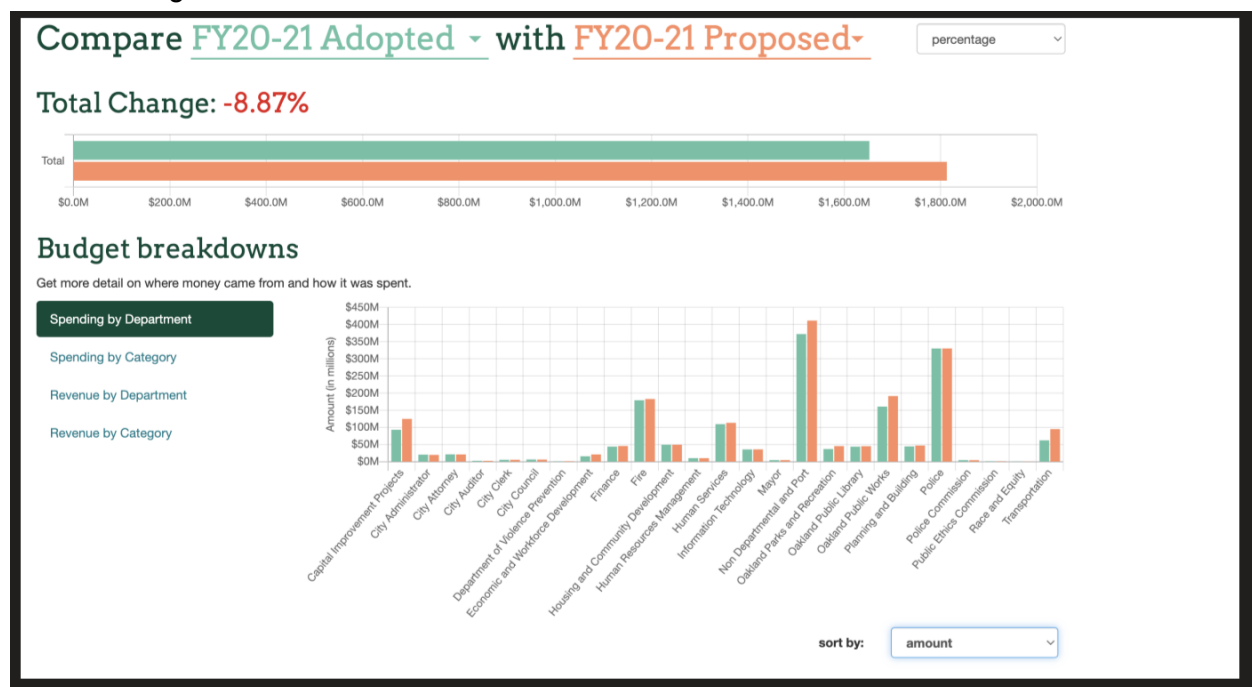
The histogram will be suitable to show the distribution across different - in fields which have around 10 columns like Expense Category in Capital Budget Dataset

```
df.ExpenseCategory.unique()

array(['Personnel Services', 'Contractual Services',
       'Supplies & Materials', 'Current Charges & Obligations',
       'Equipment', 'Other Expenses', 'Fixed Expenses'], dtype=object)
```

2. Bubble Graphs
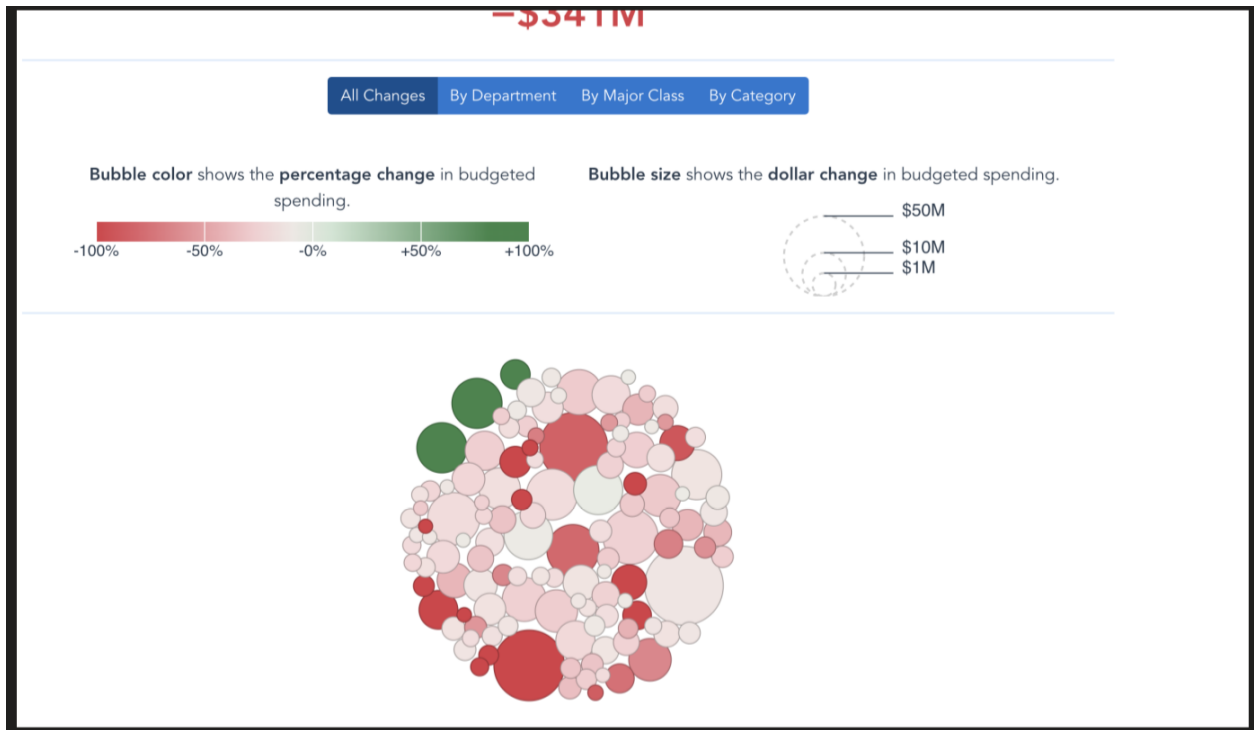
This graph is suitable to show the distribution across the attributes where the number of unique values is very large like the 'Program' attribute in Capital Budget dataset - which has 220 unique values. Through the colours we can also show if the allocation is increasing/decreasing through the years.
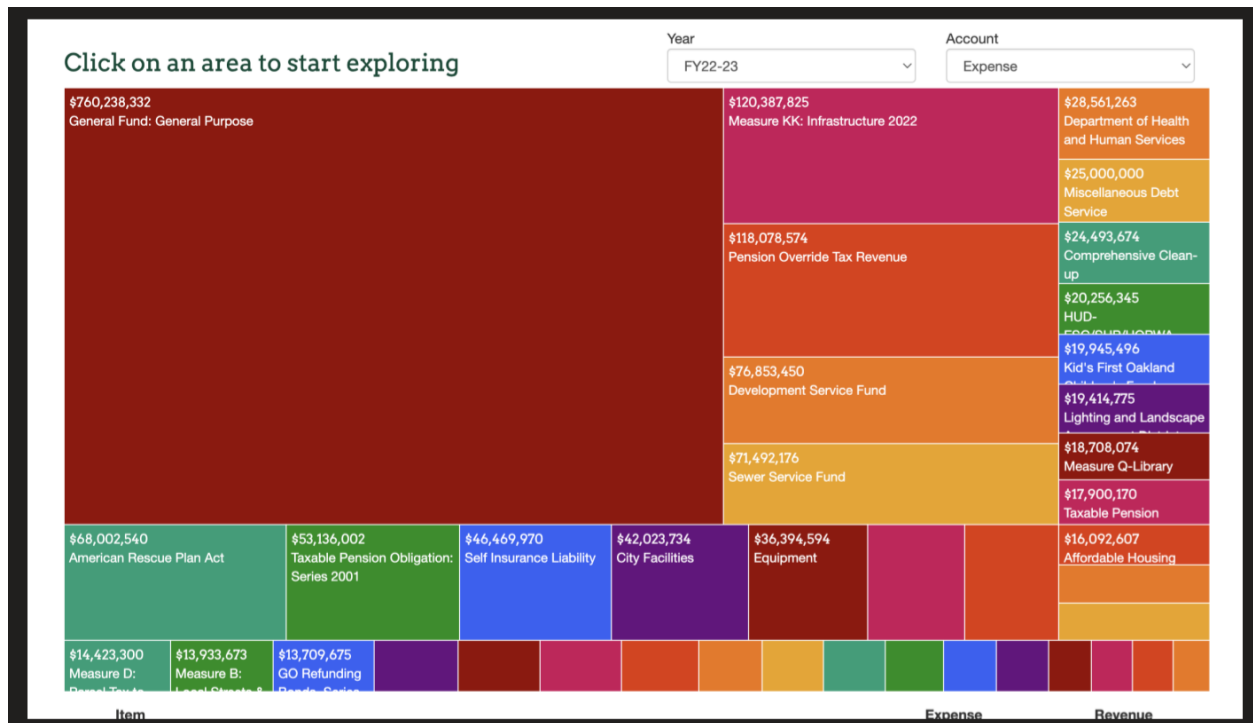
3. Heat Map

Heat Map will be useful in categories like Department where there is a stark difference between the distribution across 'different departments'. The area can represent the budget allocated to the department and the colors can be used to represent another dimension.

4. Stacked Bar Chart
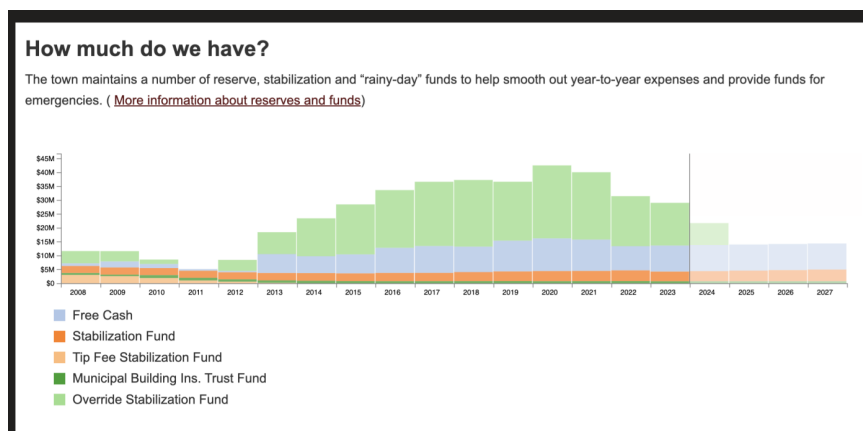
This can be used to show the picture of division of budget across various types of an attribute and sub-division within it.

In the meeting we finalized the 4 graphs. We planned to work on it in the next week.

10/13/23
Members in attendance - Gaurav, Naima
Asked PM for help regarding the issue stated below and allocated tasks for the next week.

<mark>WHERE DO WE NEED HELP</mark>
Asked PM about the discrepancy in the Departments in both the data sets - Capital and Operational Budget. Capital budget also has 2 department columns. PM informed that a separate slack channel will soon be set up where we can ask questions to the clients.

<mark>TASKS FOR NEXT WEEK</mark>
1. Perform data cleaning across all 3 data-sets
2. Finalise data cleaning methods that we'll use across the project so that there is no discrepancy
3. Start making visualisations and discuss wherever we fave any issue.

TASKS ALLOCATION for next week
Gaurav - Data Cleaning for Operating Budget
Naima - Data Cleaning for Capital Budget
Sophia - Data Cleaning for Revenue
Alex - Capital Budget Graphs - Histogram, Stacked Bar chart
Jason - Operating Budget Graphs - Histogram, Stacked Bar chart
Haokun - Revenue Grpahs - Histogram, Stacked Bar chart

Dataset descriptions (Naima)

Dataset 1: FY24 RECOMMENDED CAPITAL BUDGET PLAN
https://data.boston.gov/dataset/capital-budget/resource/c62d666e-27ea-4c03-9cb1-d3a81a1fb641

The provided dataset details Boston's FY24 Recommended Capital Budget Plan, outlining various infrastructure projects, their statuses, scopes, and budget allocations. Key columns include the department responsible, project name, scope of work, current status, and budget details, such as authorizations, grants, and total budget. For instance, the dataset includes projects like BCYF Security and Technology Upgrades with a total budget of $2,000,000, and BCYF North End Community Center with an $88,000,000 budget, indicating the city's diverse investment in infrastructure developments.

Brief descriptions of the columns:

1. Department: Indicates the city department managing the project.
2. Project Name: The title or name of the specific infrastructure project.
3. Scope Of Work: A brief outline of the project's objectives and tasks.
4. PM Department: Department overseeing project management.
5. Project Status: The current status or phase of the project.
6. Neighborhood: The city area or neighborhood where the project is located.
7. Authorization Existing/FY/Future: Funds allocated currently, in the fiscal year, and anticipated in the future.
8. Grant Existing/FY/Future: Grant funds allocated currently, in the fiscal year, and anticipated future grants.
9. GO Expended: The amount of Government Obligation funds already spent.
10. Capital Year 0/1/25: Projected capital expenditures for the current, next, and 25 years ahead.
11. Grant Year 0/1/25: Projected grant expenditures for the current, next, and 25 years ahead.
12. External Funds: Funding from non-city budget sources.
13. Total Project Budget: The combined total of all funding sources for the project.

Dataset 2: FY24 RECOMMENDED OPERATING BUDGET

https://data.boston.gov/dataset/operating-budget/resource/8f2971f0-7a0d-401d-8376-0289e3b810ba

The dataset outlines the FY24 Recommended Operating Budget for the city of Boston, totaling $4.28 billion, a 6.8% increase from FY23. It contains detailed records of projected expenses for various city departments and programs, derived from the City's General Fund, for the fiscal year starting July 1, 2023, and ending June 30, 2024. Each row represents a unique combination of department, program, and expense category, showcasing a clear breakdown of where and how funds are allocated and spent. The data allows for a detailed analysis of the financial planning and allocations across different city departments and services.

Here's a brief description of each column in the dataset:

1. Cabinet: The top-level organizational unit, often associated with city governance.

2. Dept: The specific department within the cabinet responsible for a program or service.
3. Program: Individual programs or initiatives managed by the department.
4. Expense Category: The type of expense, such as personnel services, contractual services, etc.
5. FY21 Actual Expense: The actual expenses incurred during Fiscal Year 2021.
6. FY22 Actual Expense: The actual expenses incurred during Fiscal Year 2022.
7. FY23 Appropriation: The budget allocated for expenses in Fiscal Year 2023.
8. FY24 Recommended: The proposed budget for expenses in Fiscal Year 2024.