The Visualization of the St. Paul's City Budgets Through Using Effective, Interactive Techniques

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CSci 5609: Visualization

Introduction

Fig.1 Example of budget data

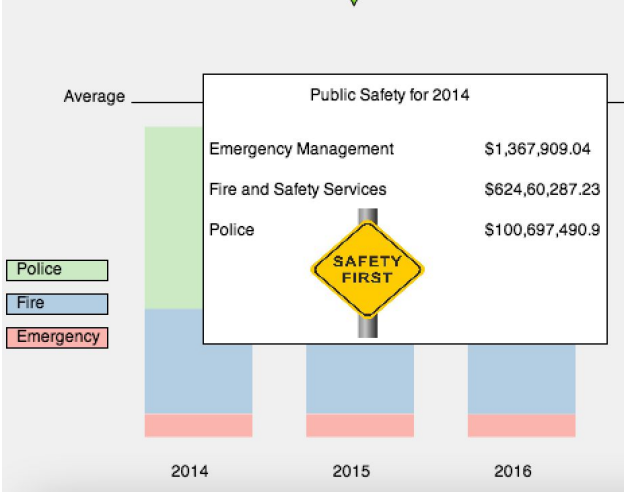I want to understand the budget, but not from this table.

—*Tom*
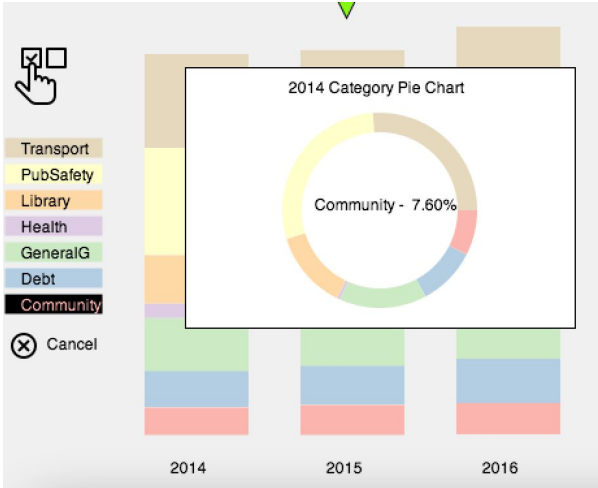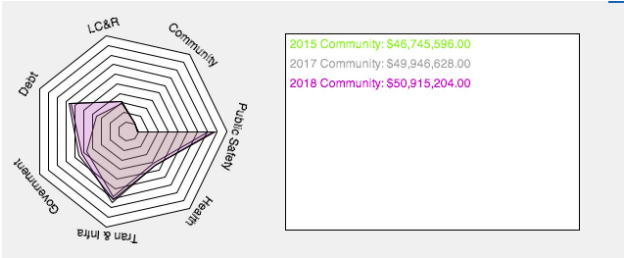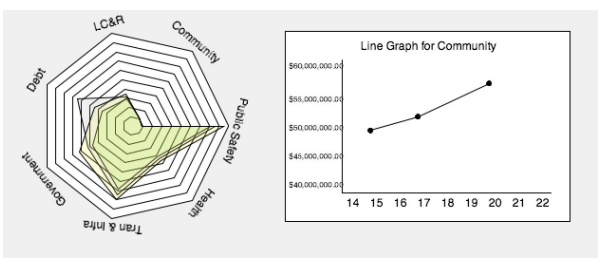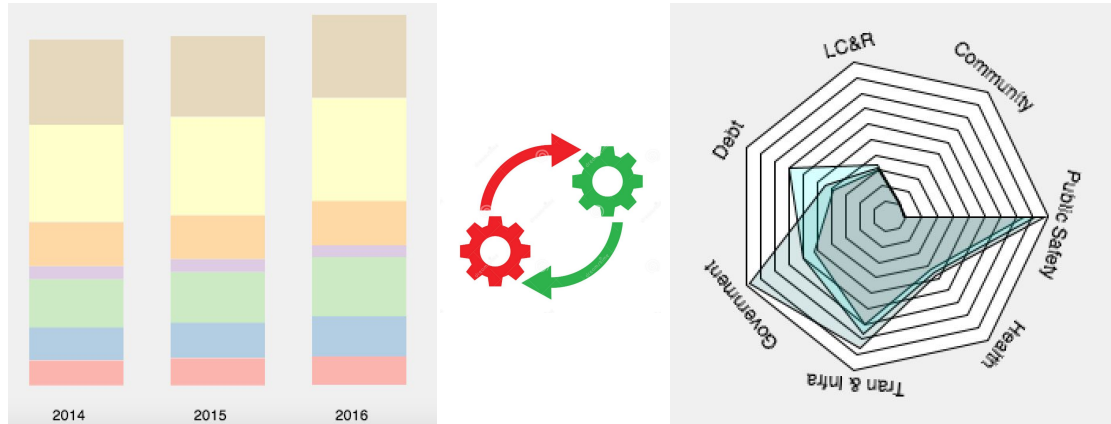
GUI Overview
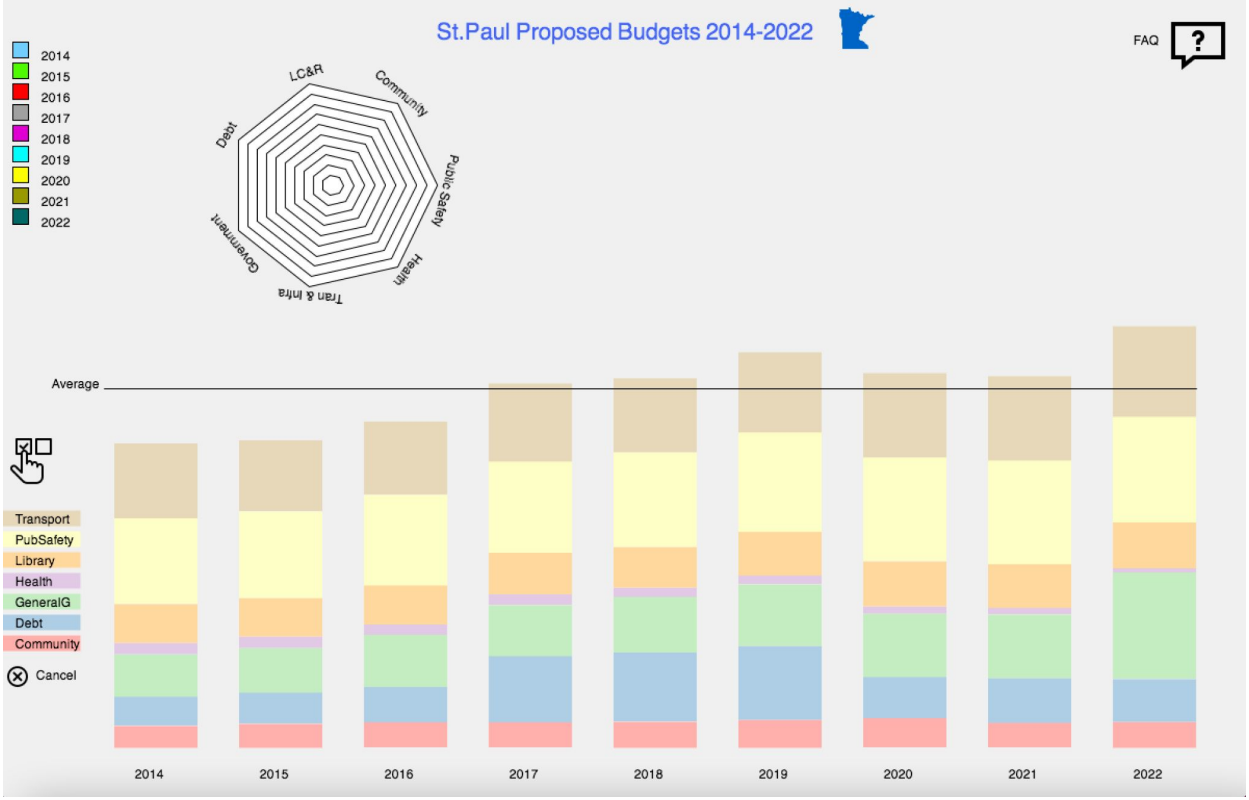
Radar Graph

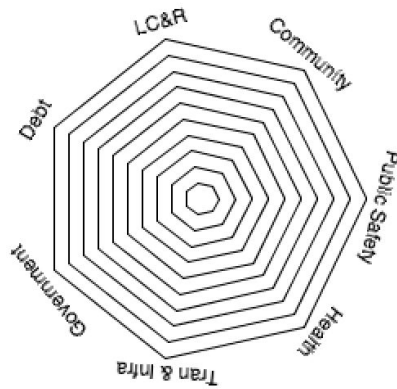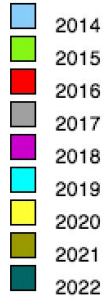Bar Chart

Summary

Future Work

1. The software generates radar graph and bar chart based on the input

2. More interaction operation between radar graph and bar chart

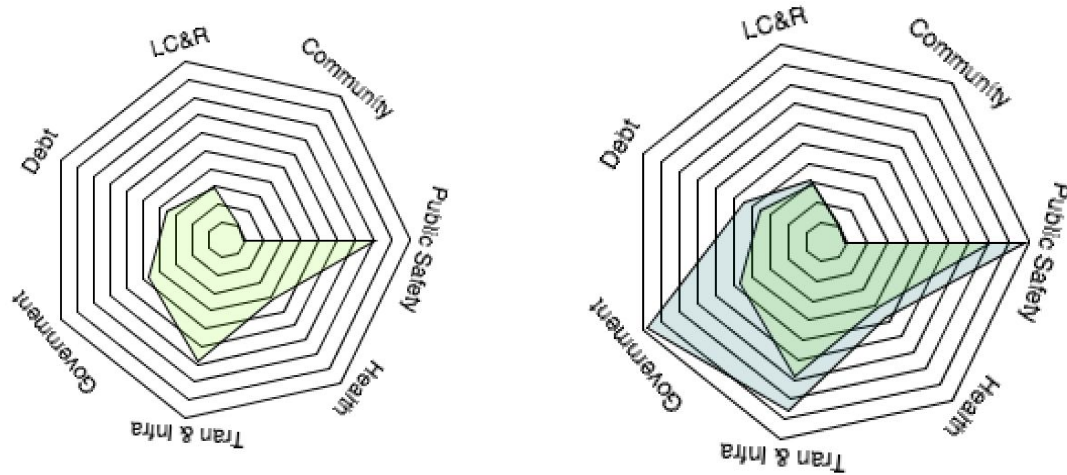# Thank You for Watching!

Radar Graph 1

Original States:

The radar graph is empty.

Action 1: You can select the year from legend by left-click on the mouse.
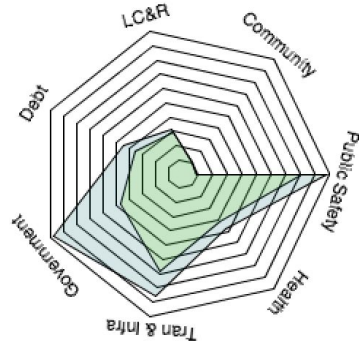
Radar Graph 2

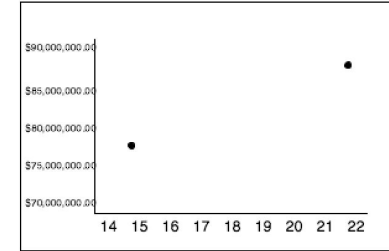State: radar graph shows the year of 2015, and 2022

Step2: moving the cursor nearby the categories, you can see the window which contains the

detailed information of that category.

Radar Graph 3
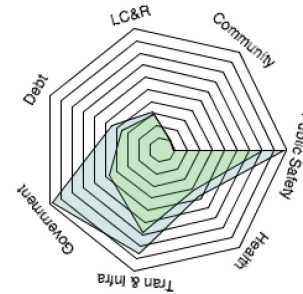
State: 1. see the amount of budget in list/ plot graph in the category by selected years (2015, 2022) in order.

Action 3: typing keyboard "c" change mode to plot graph (line graph) / list

Radar graph 4
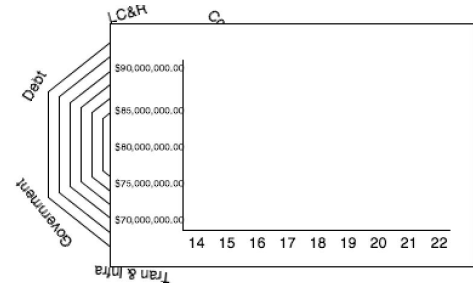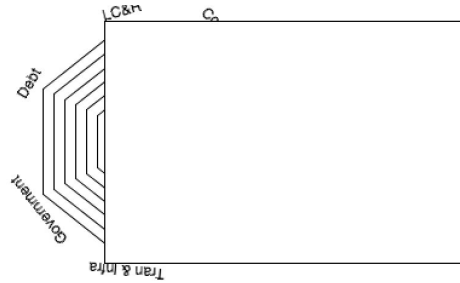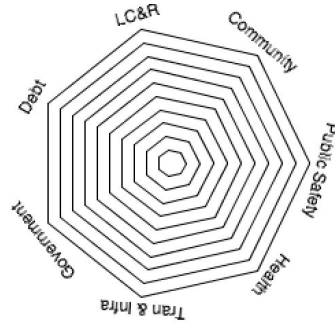
State: Removing the selected years / restart the visualization.

Action 4: By pressing keyboard "r" to reset the visualization.

Radar graph 5
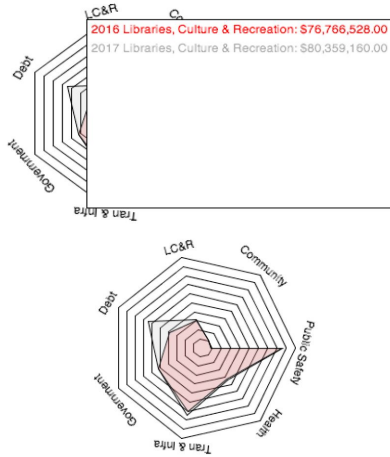
State: Interaction with categories images.

Action 5: When the cursor move to the categories, at the right corner should show the related images for this categories.

Bar Chart 1
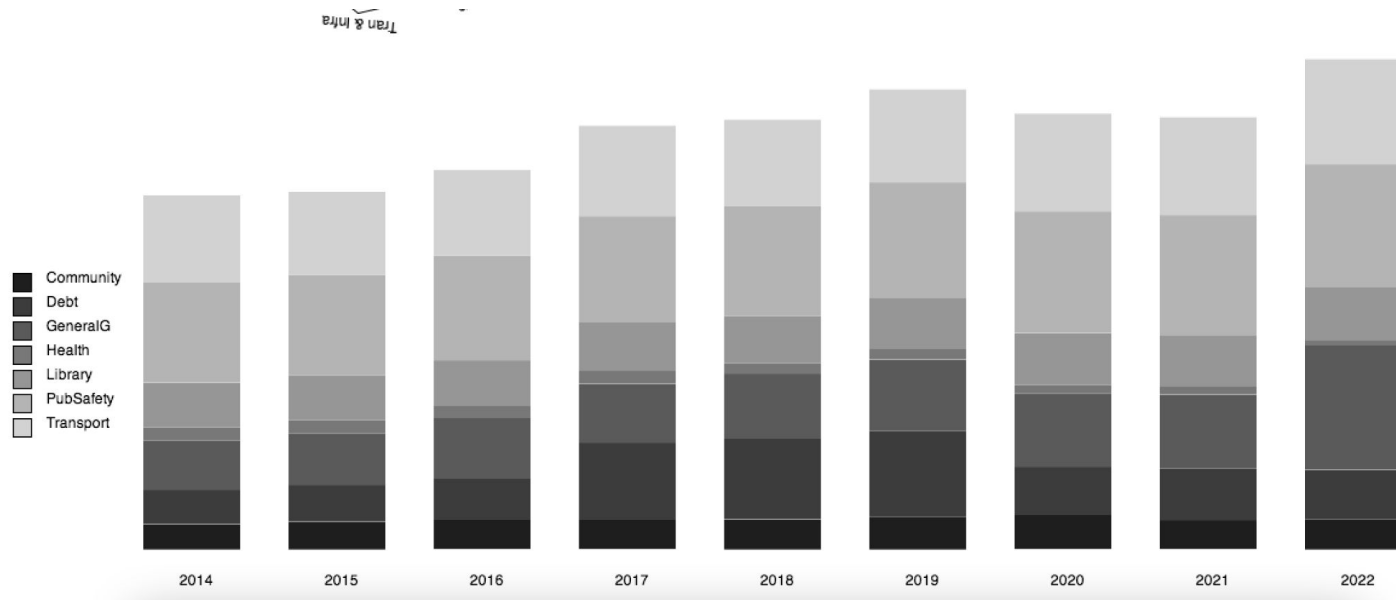
- The bar chart is for the total values. There is 7 categories for each year.
- Different color in the bar can make users have a rough understanding of distribution.
- Current color design is not very easy for users to figure out, but we will balance users experience and beauty in the following work.

Bar Chart 1 - User Interaction
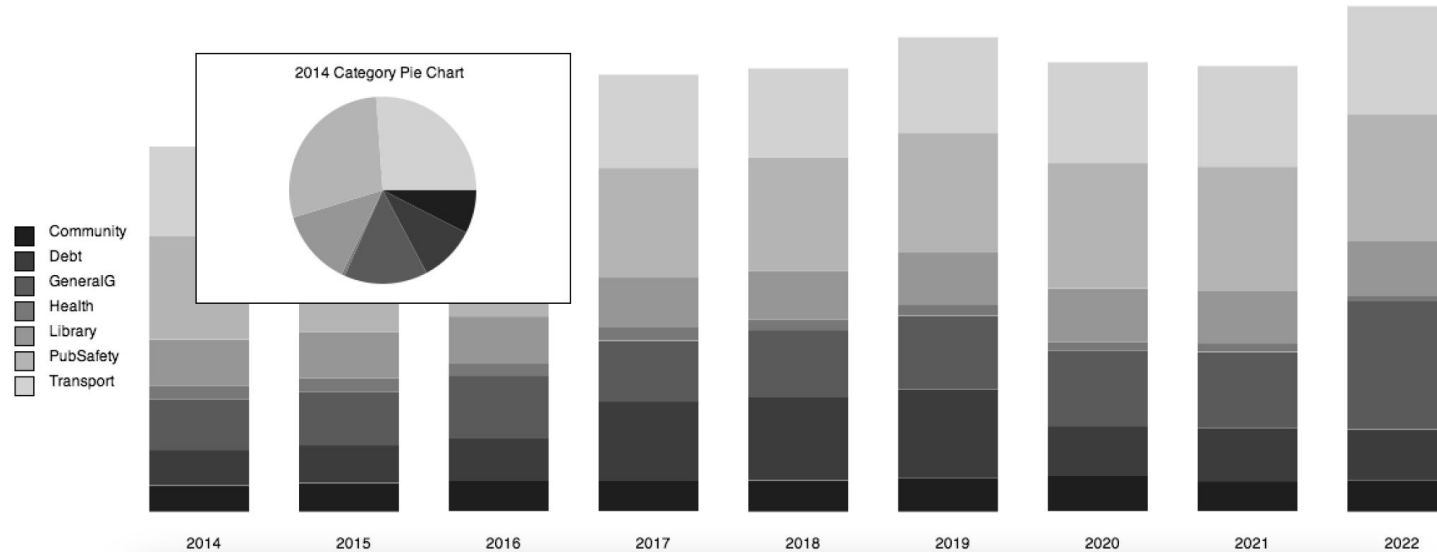
- When the cursor over a bar, it will show the pie chart of all the categories. The color are corresponding to the legend.
- In the following work, we will show the exact percentage of each category in the pie chart.

Bar Chart 2 - User Interaction 1
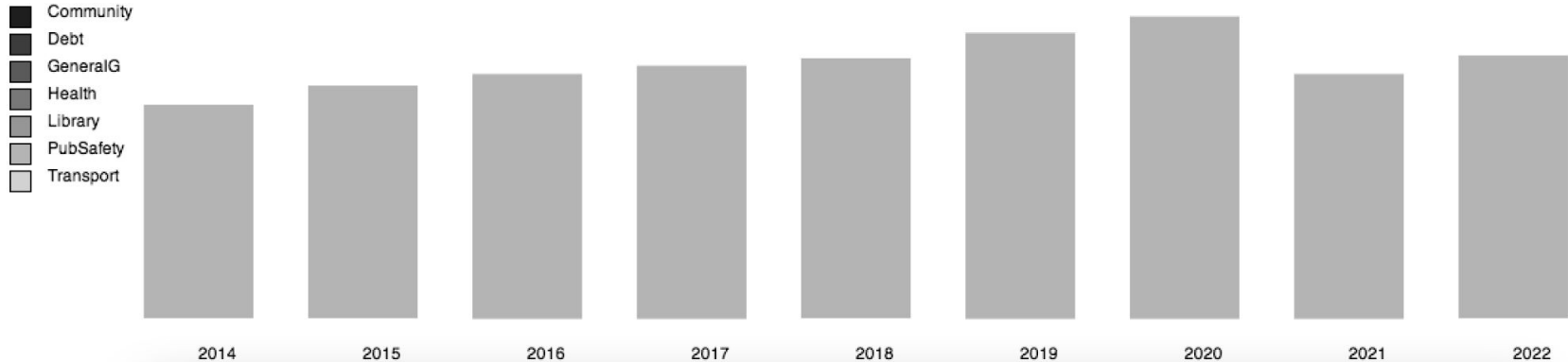
- Use key 'K' to cancel the total value bar chart, then press the corresponding key to show the bar chart for expected category. (the figure shows the 'public safety' category, it needs to press key 'P')
- The color also corresponds to the color in the legend.

Bar Chart 2 - User Interaction 2

Legend:
- Community
- Debt
- GeneralG
- Health
- Library
- PubSafety
- Transport

Public Safety for 2014

Emergency Management	$1,392,043.81
Fire and Safety Services	$65,472,954.43
Police	$108,692,612.4

SAFETY FIRST

Years: 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022
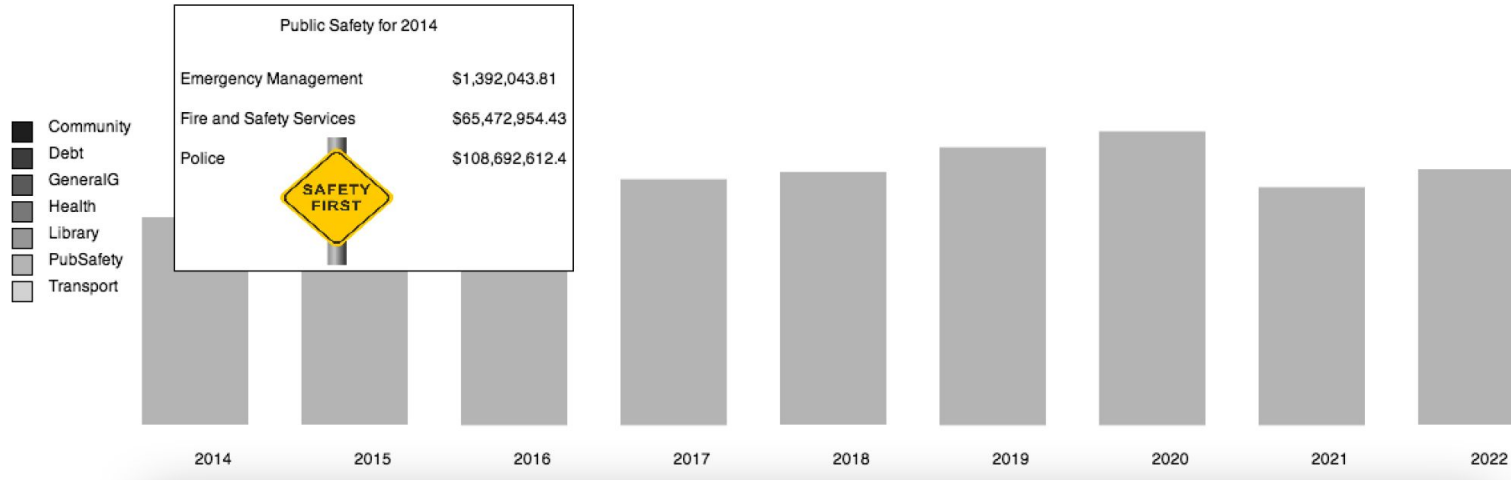
- When the cursor is over a bar, it will show the detailed data of subcategories, we choose all the subcategories that related to daily life and really care about as a St Paul resident.

Thanks for viewing, and we are open to any suggestions.