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Advanced Database Topics

Software used: Tableau

Title: Analysis of uncollected garbage data by City of Windsor

The data is collected by City of Windsor from year 2016 to 2018.

The summary of research question:

1. How many of times uncollected garbage was reported from all streets of Windsor city in particular year ranging from 2016 to 2018. This gives us insight on how often a garbage goes uncollected in the city and provides us on which street the service needs to be improved.

Ans.

The insight generated from the software indicates that the highest number of times the service got was requested was from the **Wyandotte street** and the number of times it was reported was **56** in the **year 2018(chart 1)**. The **second highest** was **Lincoln street** with **45 reports** and the **third** was **Riverside** with **38 reports**. So, from the analysis of the data we can concur that these 3 streets require more attention in garbage collection. In the past there were only few reports of garbage collection. In the **year 2016(chart 2)**, there were only **4 reports** of uncollected garbage and in the **year 2017** there was only single report of uncollected garbage in Hanna street. These insights show us that there is a staggering increase in the reports on uncollected garbage.

2. Which type of method were mostly used by the people to report the complain on uncollected garbage in each year. From this, we can retrieve information on which methods were mostly by which street so we can give more resources to that method.

Ans.

In **year 2016**, the only four reports were made by **phone (chart 3)** as well as in **year 2017** the report was made by same method. The year 2018 in which most reports were made, were by **phone (chart 4)** and the **least, generated in house method** was used. So, through this we come up with answer that the mostly used method was by phone and it was mostly used in **Wyandotte street**. The second highest was in Lincoln street. The streets which reports mostly by phone provides us with the information that the streets in which complains were made was mostly located near. The garbage collection route can be updated by this analysis, and we can focus on these streets more.

Datasets:

Link to dataset: <https://opendata.citywindsor.ca/opendata/details/171>

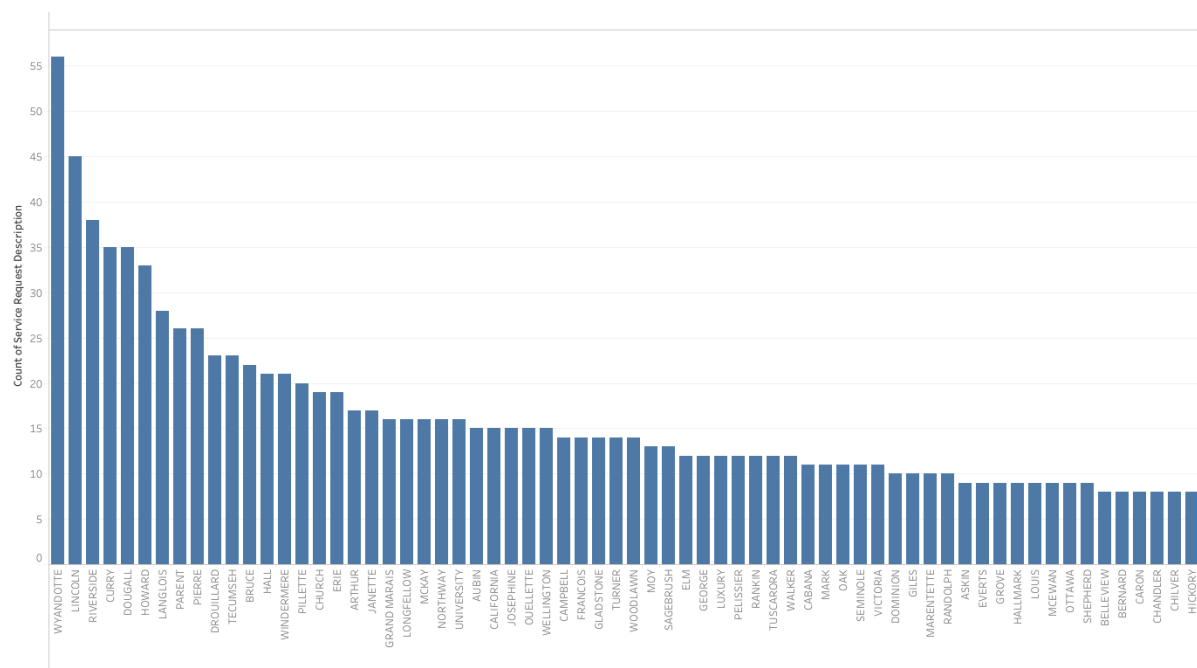
The dataset consists of data collected by City of Windsor for the reports of uncollected garbage from year 2016 to 2018. The uncollected garbage reports were made by 5 methods Email, Generated in House, Phone, Text and Web intake. The reports are recorded by the time and date and in which street they were made. The database contains 7 fields and their description is given below.

- **Service Request Description:** A text field of the request for service description created
- **Department:** A text field indicating the department or division responsible to follow up on the request for service.
- **Method Received:** A text field indicating the channel by which the inquiry was received: phone, email, online, generated in house or text.
- **Created Date:** Numeric field indicating the date and time the service request was entered into the system.
- **Block:** Numeric field representing the block location of the reported service request.
- **Street:** Text field providing the street name location of the reported service request.
- **Ward:** Alpha numeric field indicating the political ward associated with the reported service request.

Charts:

Chart 1:

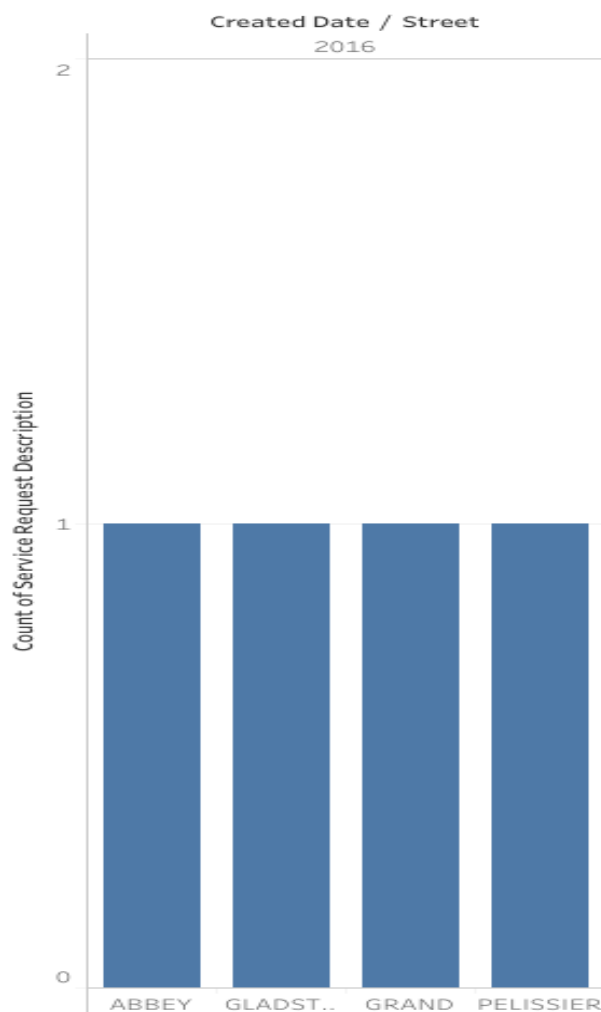
Sheet 1



The above chart contains information on the how many reports were made in each street in the year 2018. The info is ordered in descending order. This chart is used to answer the first question. The filter that was used is the current date. The mapping is by the count of service requested which is garbage not collected and the other mapping is street in which the reports were made.

Chart 2:

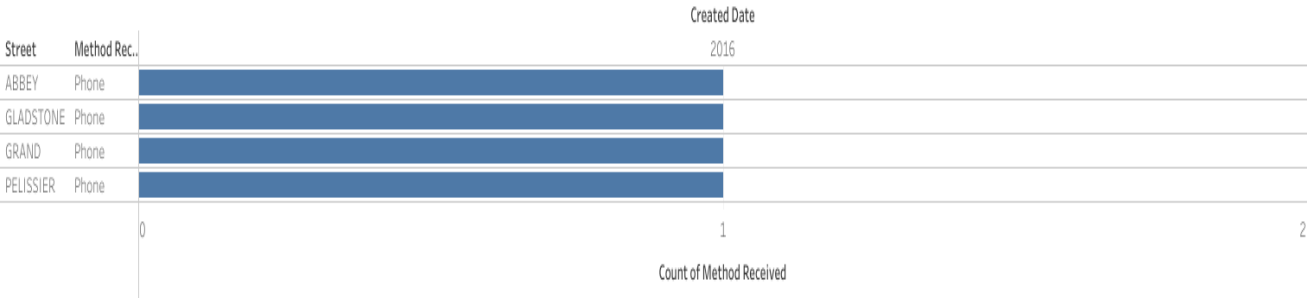
Sheet 1



This chart is same as first one but for the year 2016.

Chart 3:

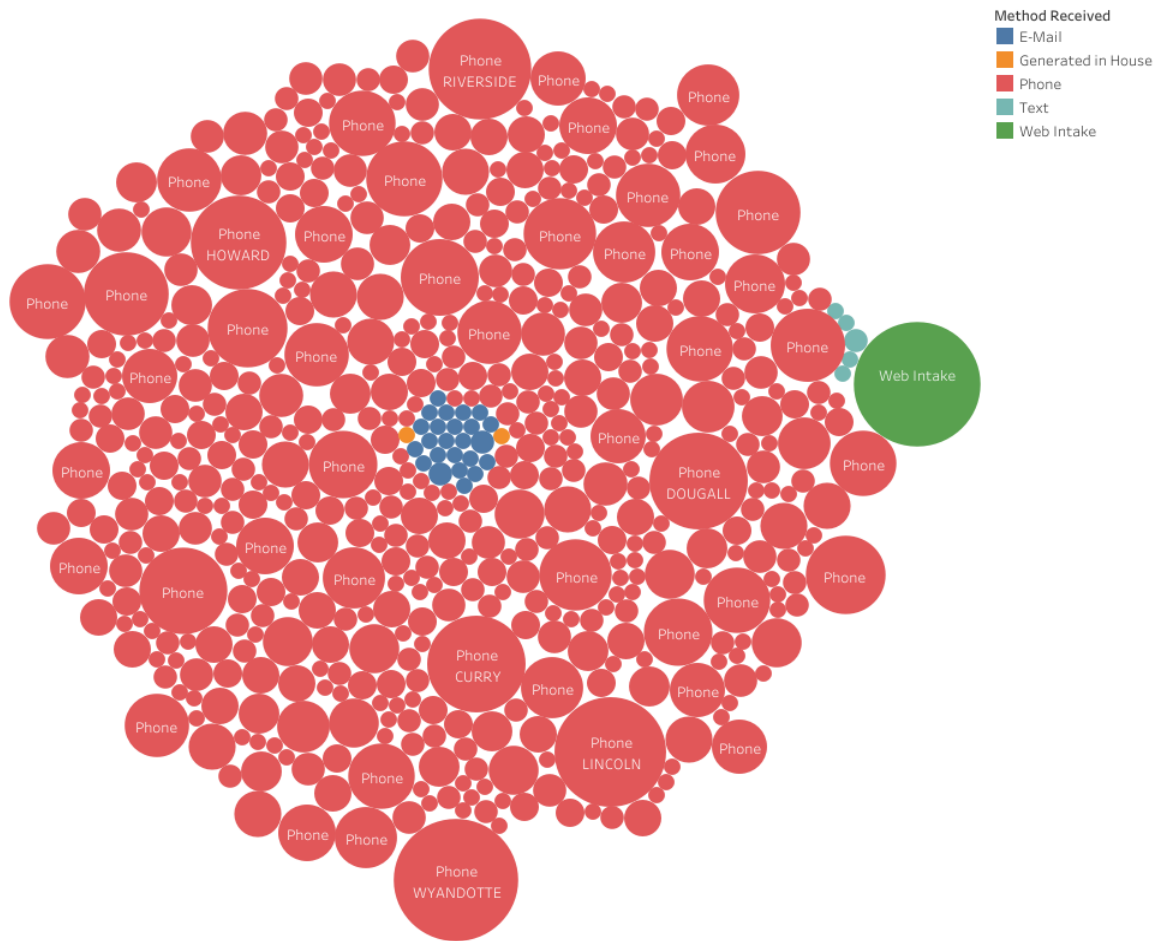
Sheet 1



The above mapping is for showing method used by each street for reporting of uncollected garbage in a particular year. The chart is of the year 2016 and the filter that was used was the method recorded.

Chart 4:

Sheet 1



The above chart describes the method used in each street for reporting of uncollected garbage. There are 5 circles of different colours each showing the method used. The size of circle describes the quantity of method used. For example, the biggest red circle is of phone and it is for Wyandotte street. The most used method is phone as we can concur from the chart. The least used method is generated in house and is of yellow colour.

Conclusion:

Thus, from the data analysis report above, I conclude that we can use the tableau software to gain insightful information which can help in understand the generated data better from the charts developed in software. The uncollected garbage dataset analysis provided us with the information that which streets require more attention, the garbage collection route that needs to be improved and the which methods were mostly used for the reporting.