

Interagency Relations in the City of Madison

Langston Nashold, Ellen Wieland, and Zan Zhang

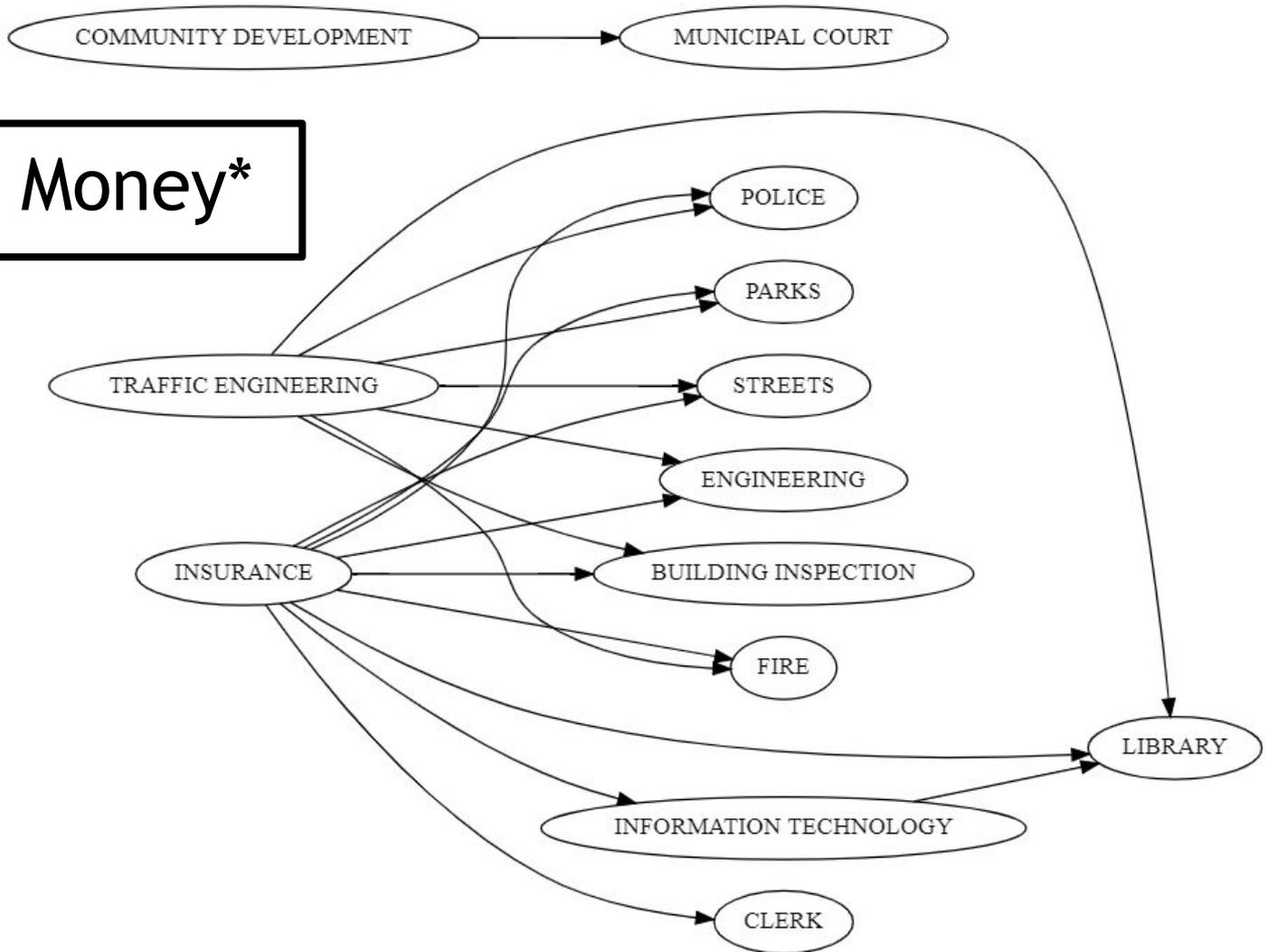
Definitions

Interdepartmental Charges: Money leaving an agency

Interdepartmental Billing: Money entering an agency

Theory: Charges and Billing should net to zero for all the transfers between agencies in any given year

Flow of Money*



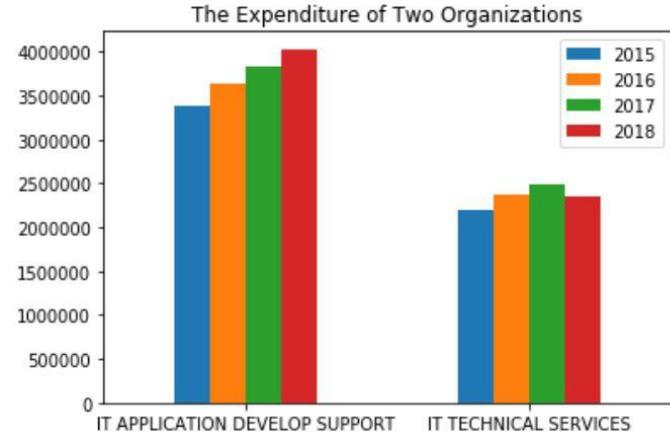
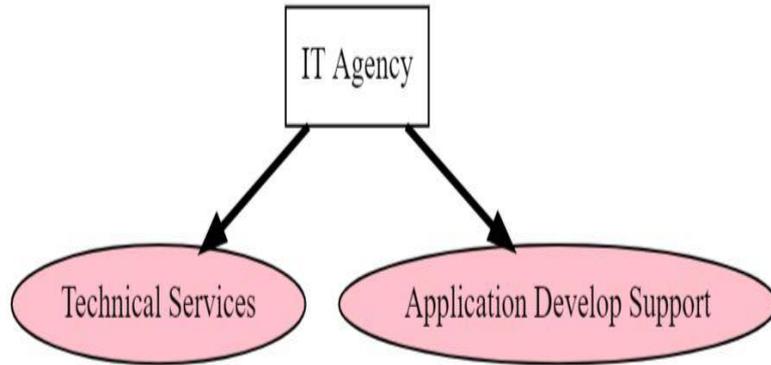
*based on charges dataset

IT Agency

- What is Information Technology (IT)
- What Areas that IT agency support for
- Initiatives
 - Free Wifi
 - Open Data
 - Privacy
 - The Metropolitan Unified Fiber Network (MUFN)

Money Flow in IT Agency

- Are Expense in IT Service and Application Develop Support equivalent?

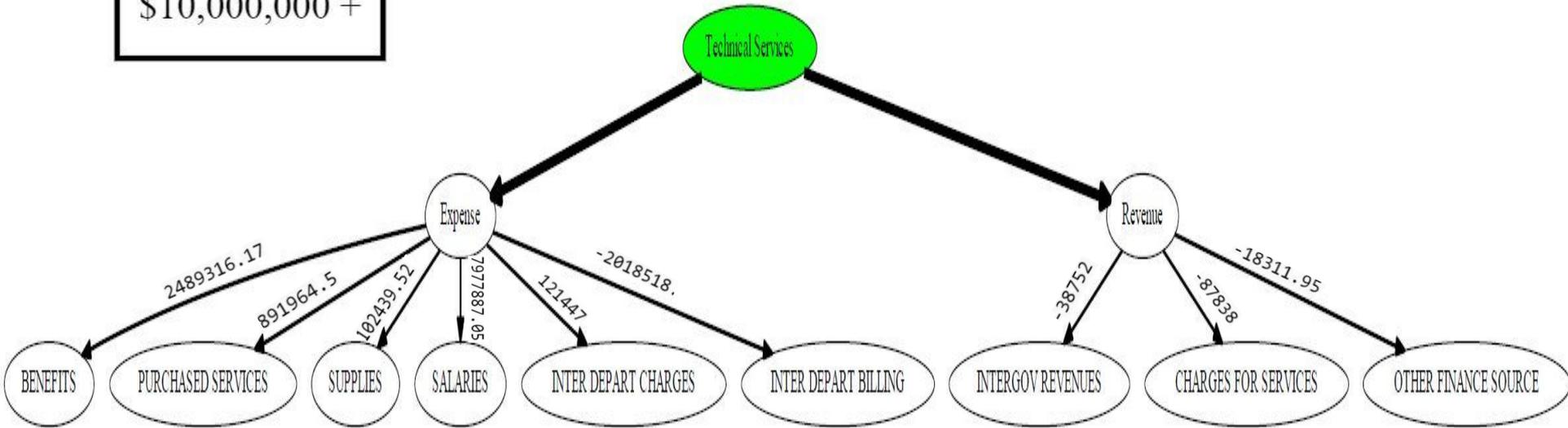


Question

- Are Revenue and Expenses Equivalent?

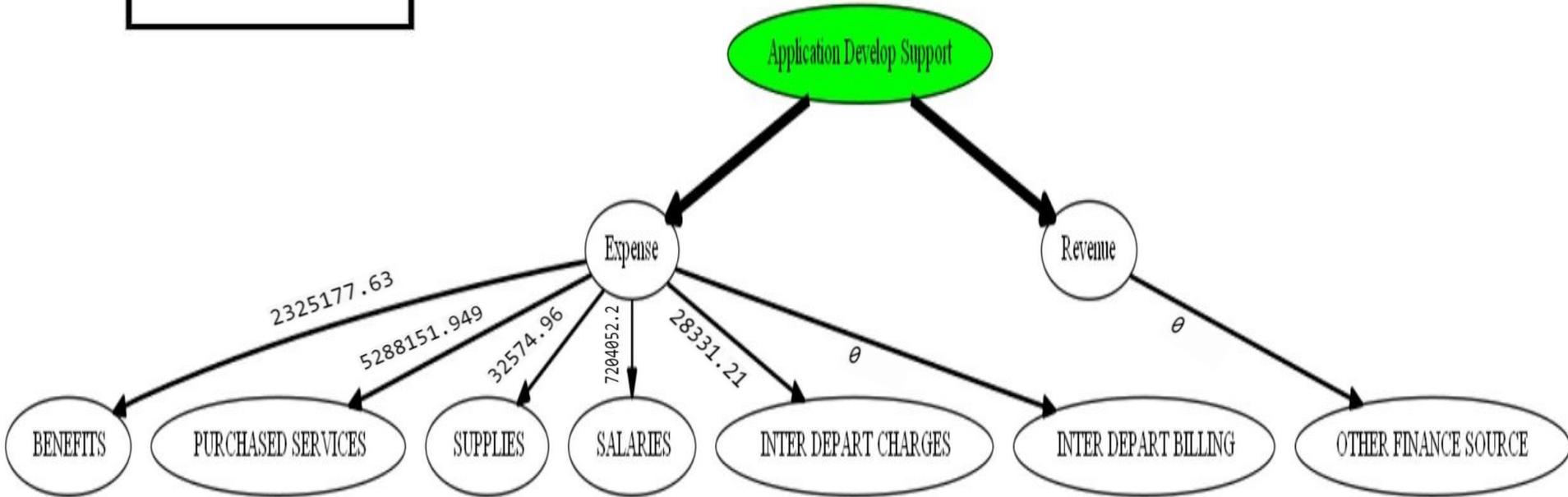
Money Flow in Technical Services

\$10,000,000 +



Money Flow in Application Organization

\$15,000,000 +



Question

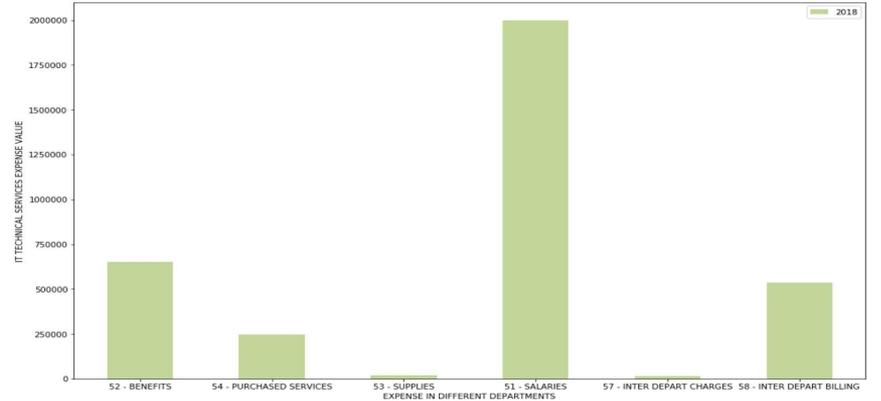
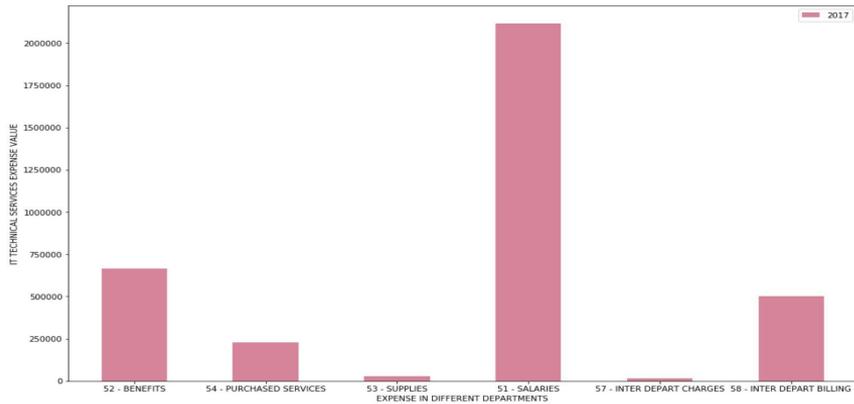
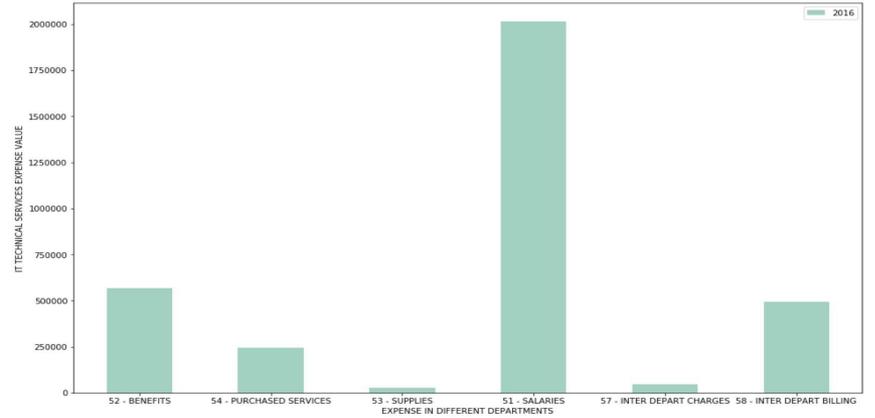
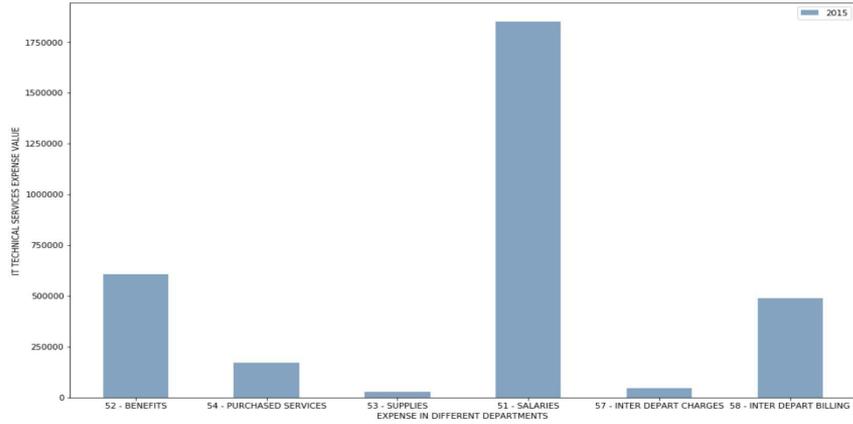
- Are Revenue and Expenses Equivalent in IT service and IT application?

The answer is No. The Department of Commerce's National Telecommunications and Information Administration's (NTIA) awarded a \$5.1 million grant to IT agency to improve network infrastructure throughout greater Madison.

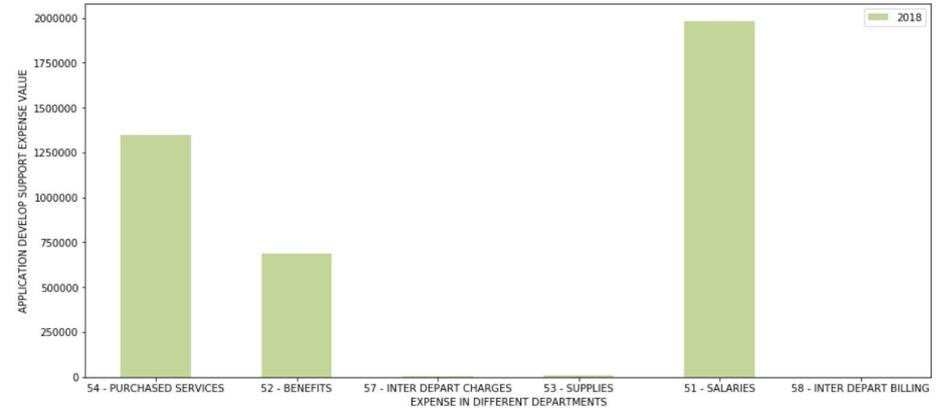
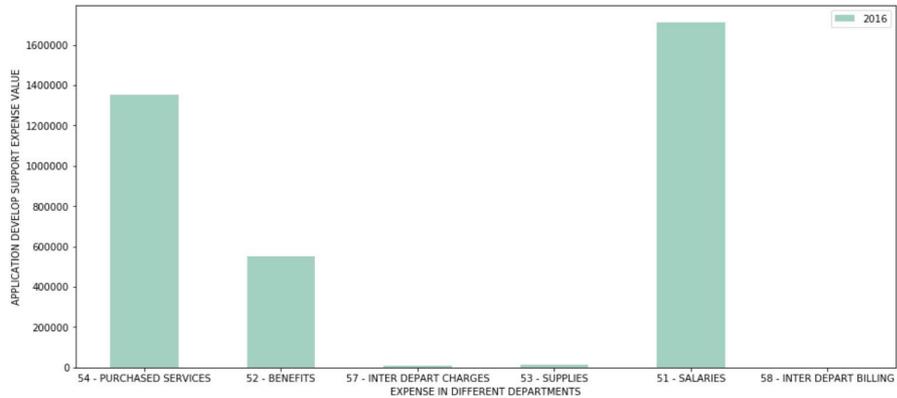
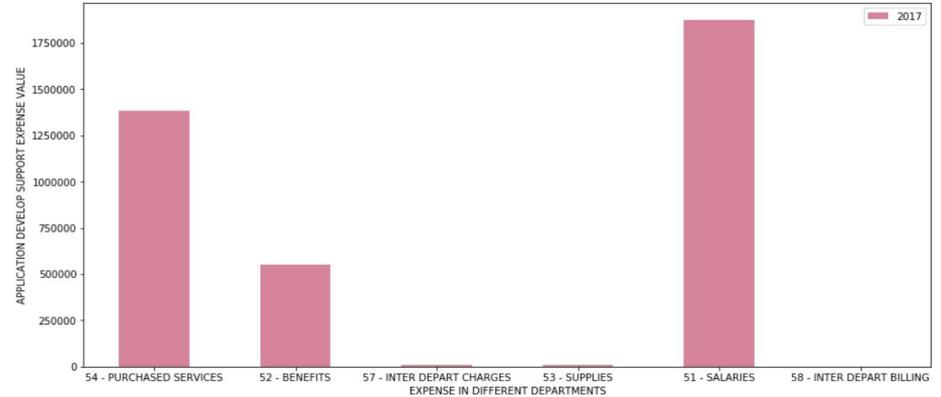
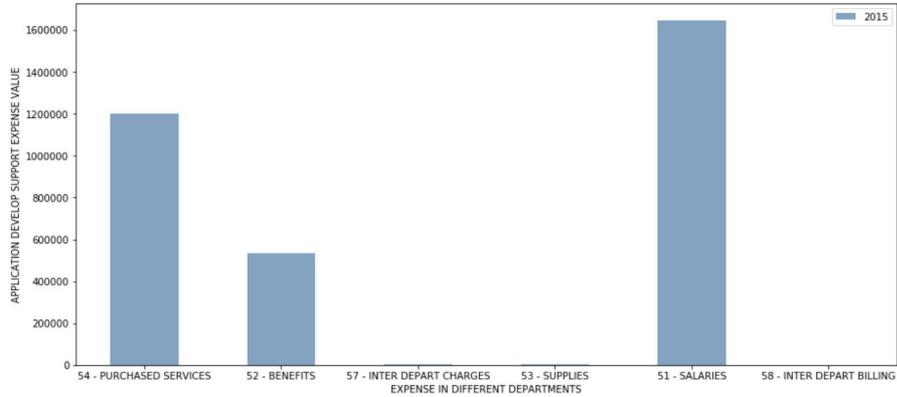
Question - IT Service and IT Application

- Which department cost the most?
- Do they follow the same patterns in each year?
- Are they spending in the same areas ?

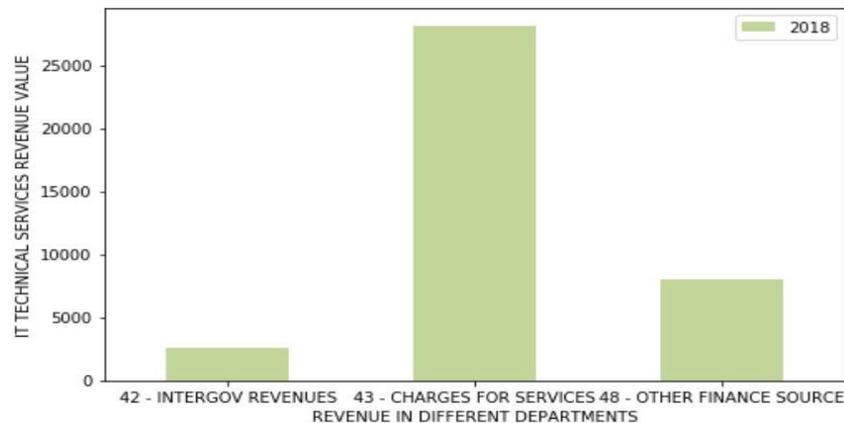
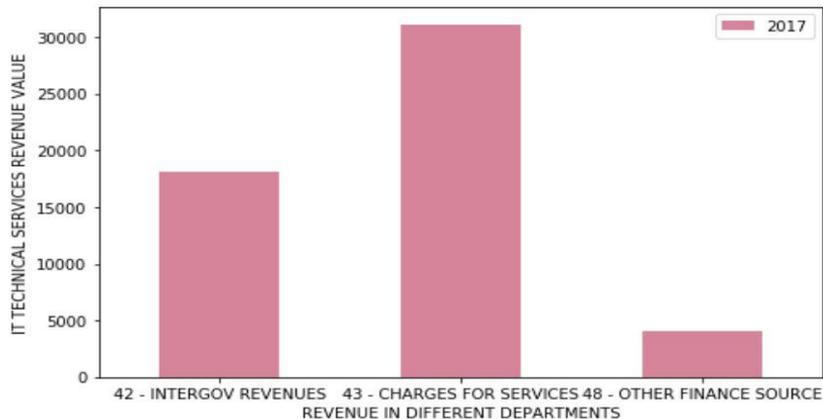
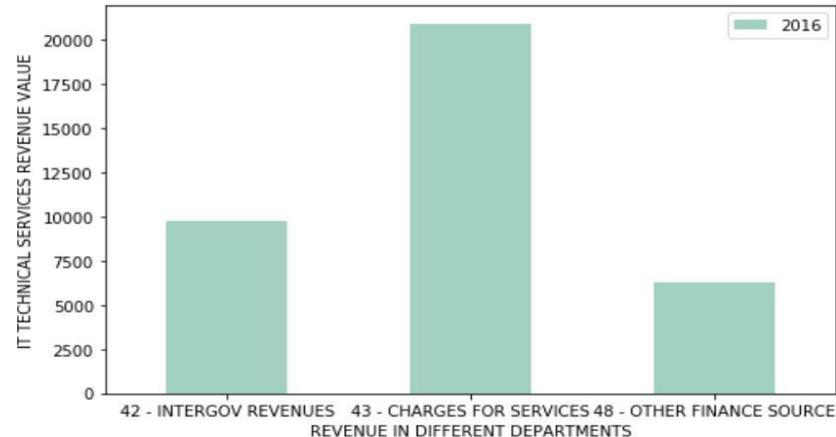
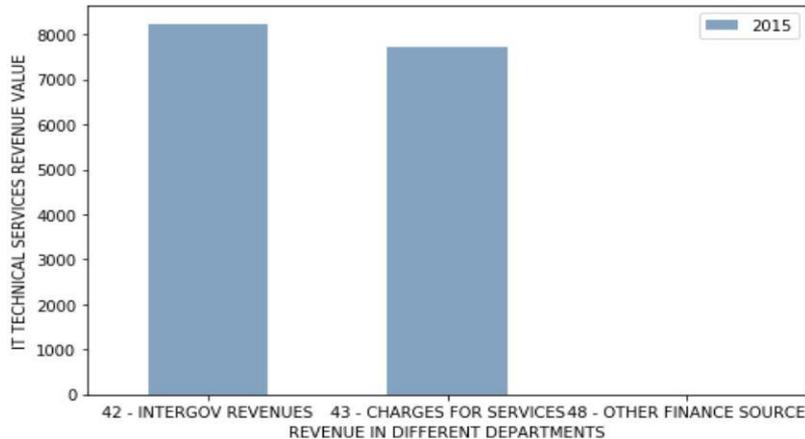
The Distribution Costs of Technical Services



The Distribution Cost of Application Develop Support



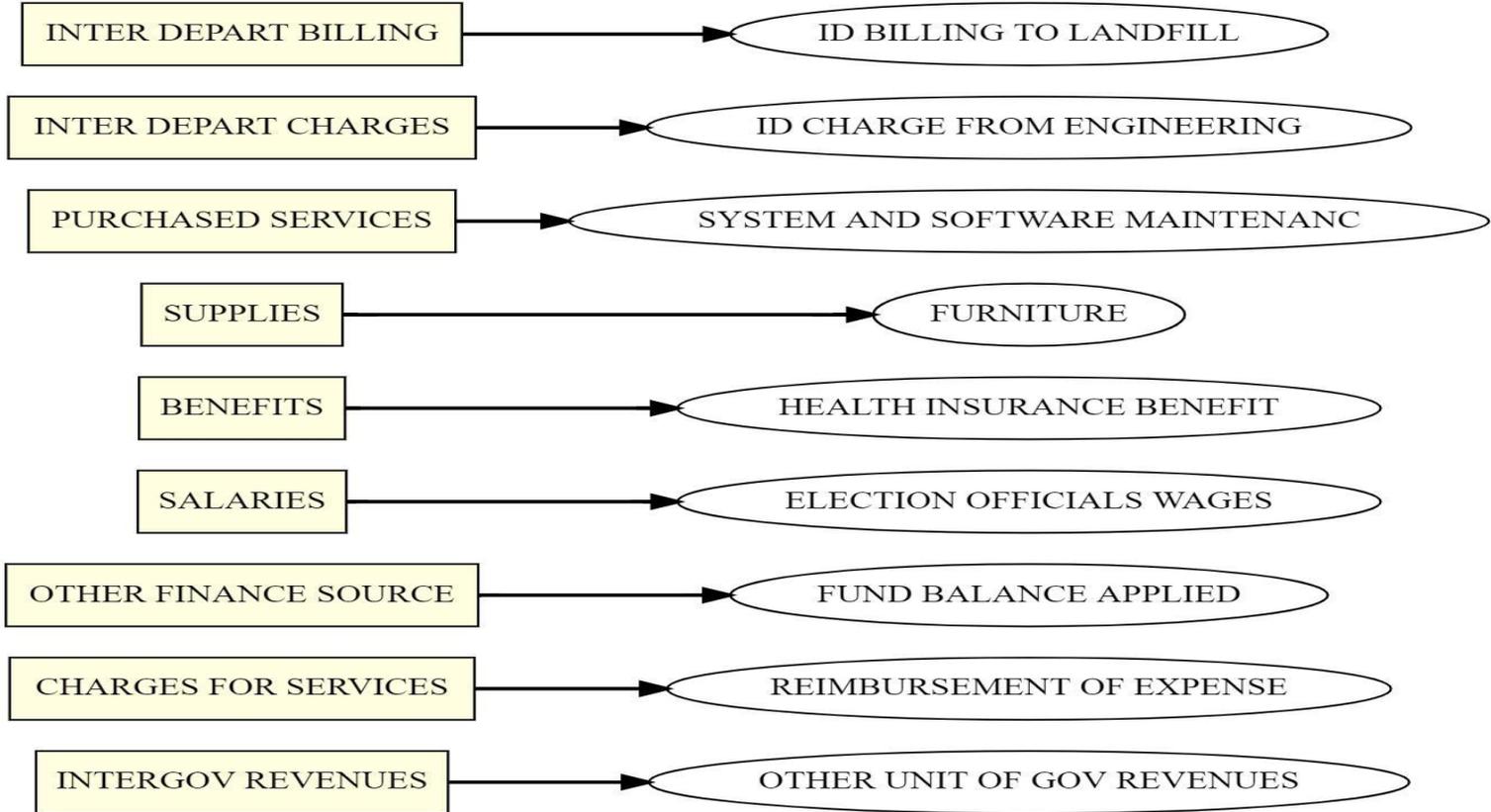
The Distribution Revenue of Technical Services



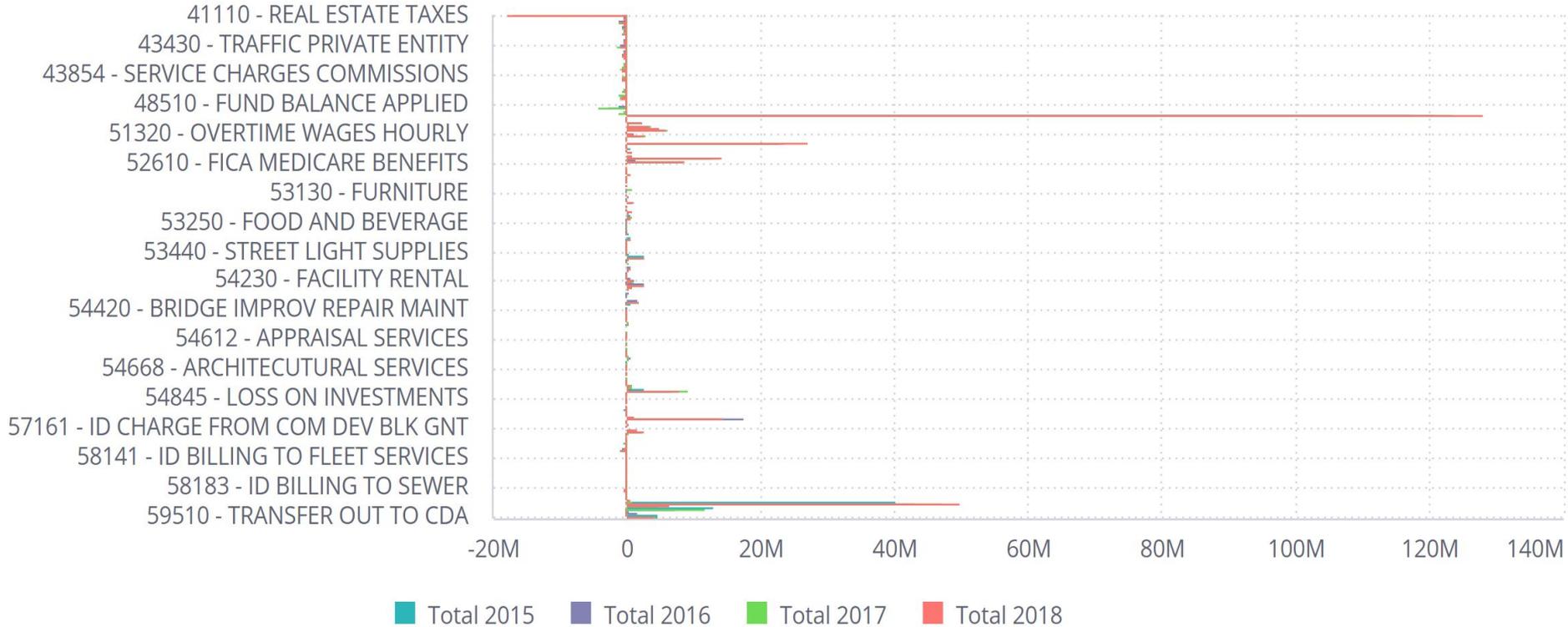
Question

- What is the cost object for each department?
- What is the highest cost object per year?

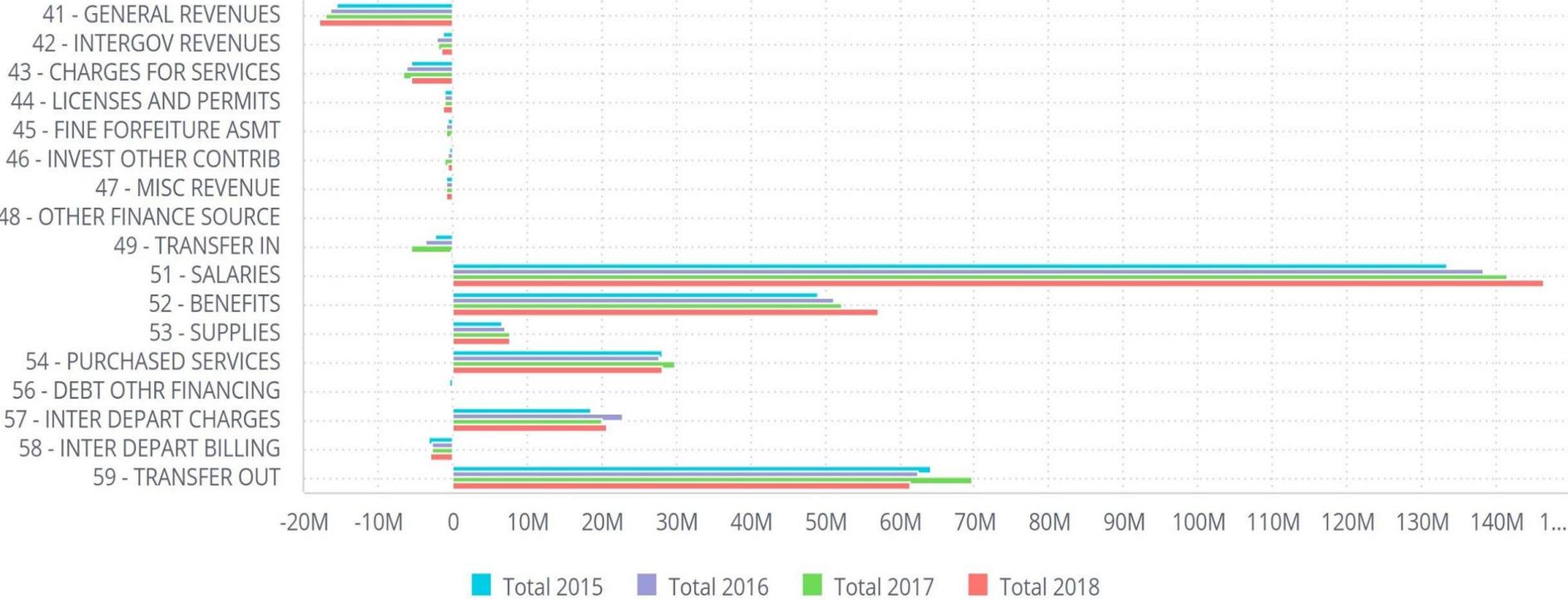
Cost Object



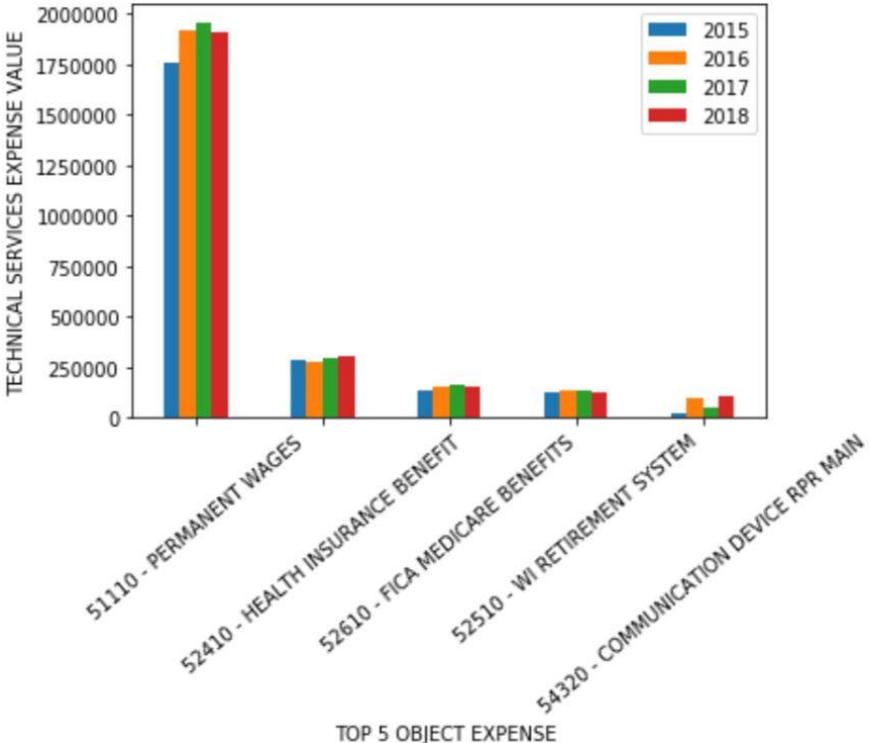
The Distribution of Overall Cost Fields



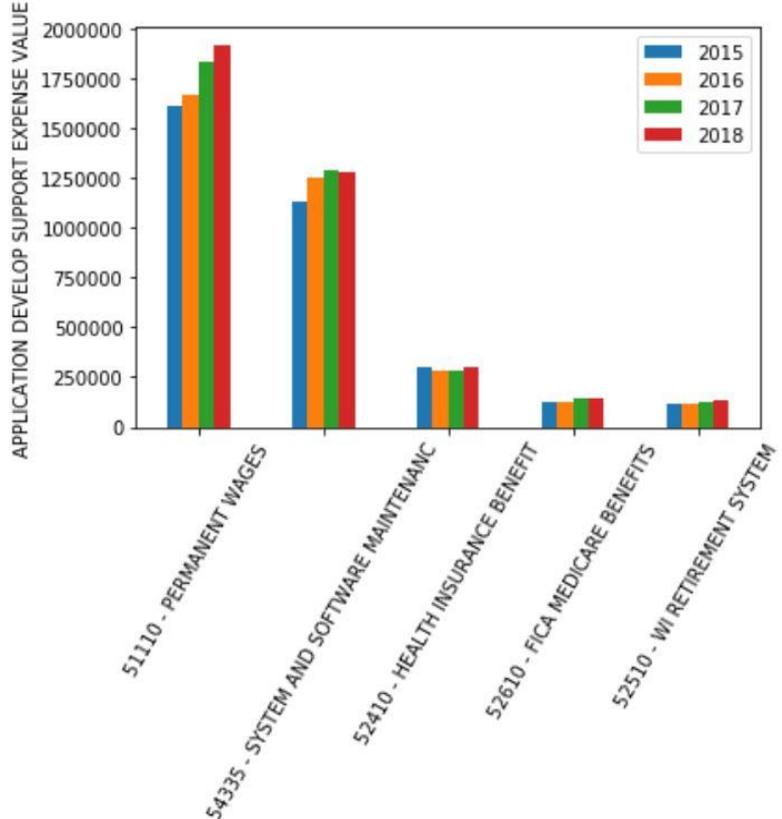
The Distribution of Expense from Overall Departments



Top 5 Cost Object in two organizations

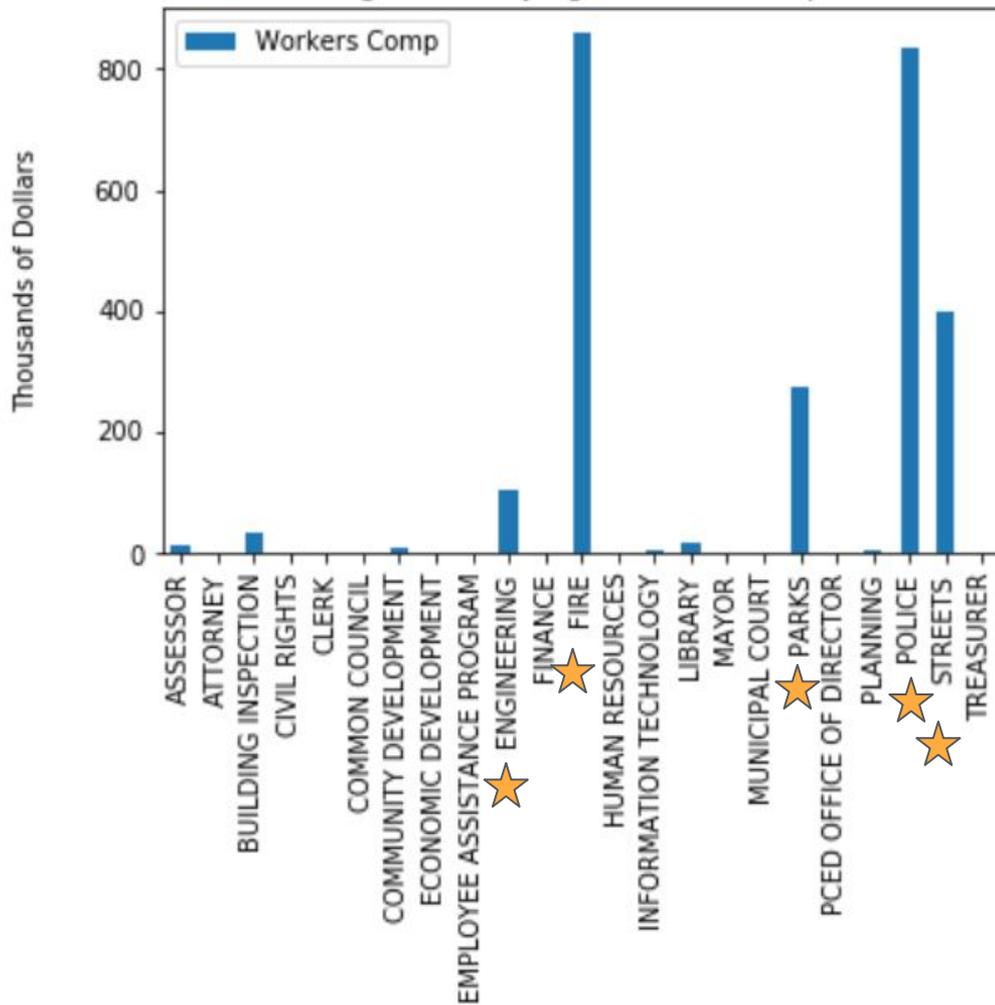


TOP 5 OBJECT EXPENSE



TOP 5 OBJECT EXPENSE

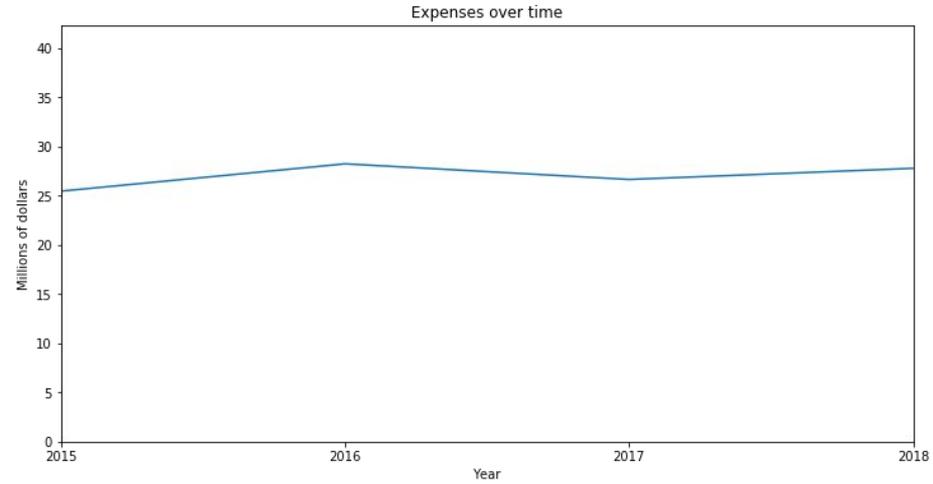
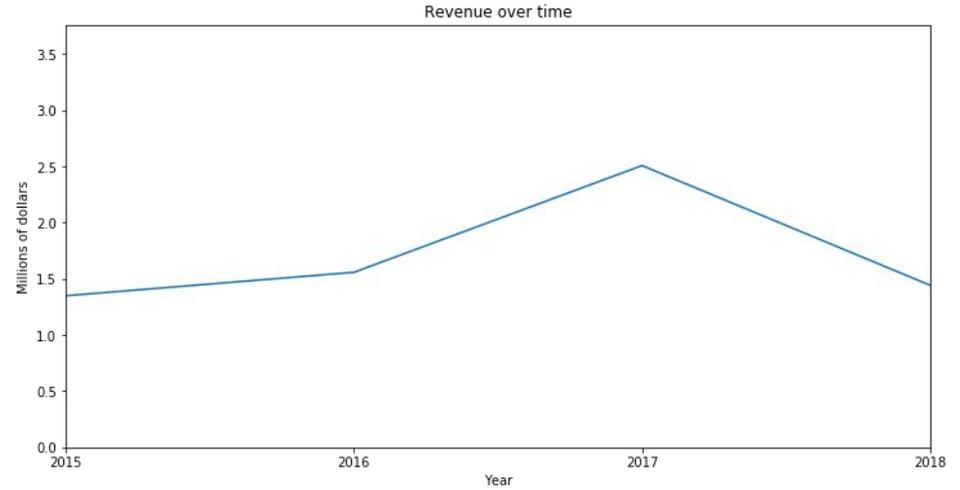
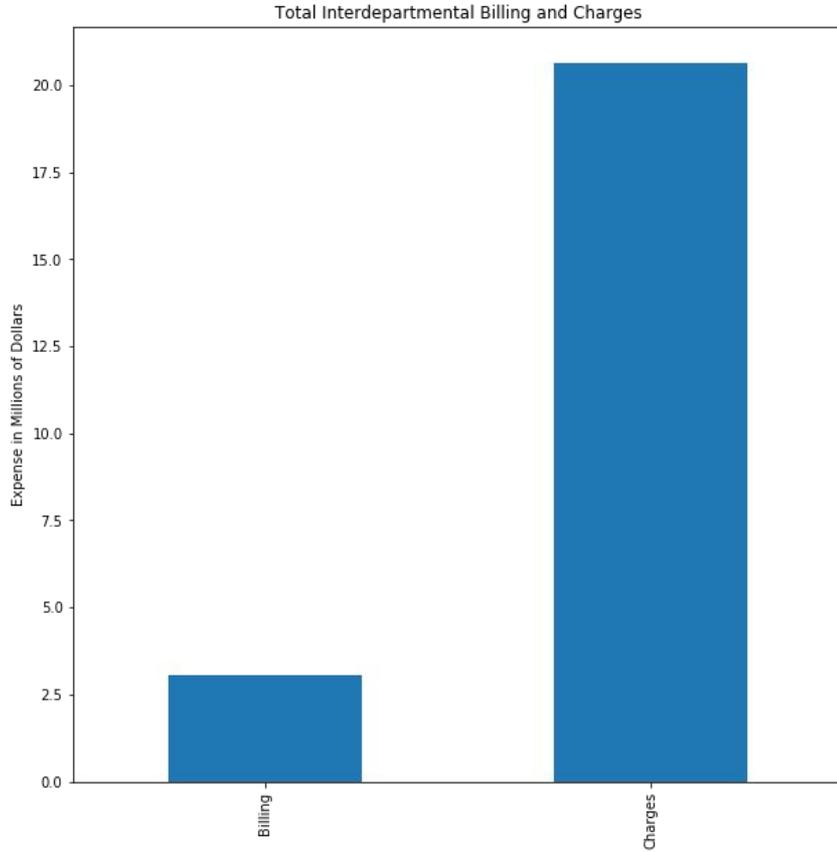
Agencies Paying Worker's Comp



Further Questions

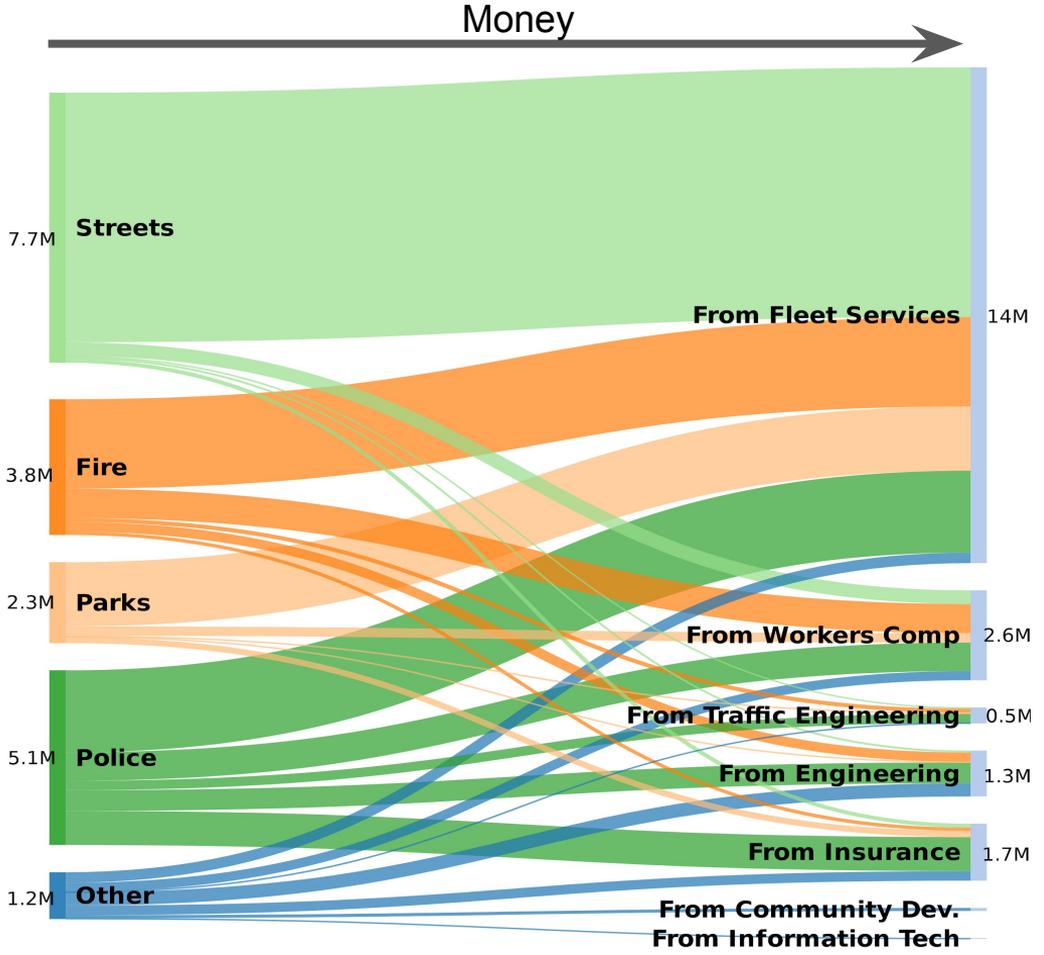
- Are billing and charges equivalent?
- Which agencies transfer the most money?
- What patterns can we see in interdepartmental money transfers?

General Dataset Trends



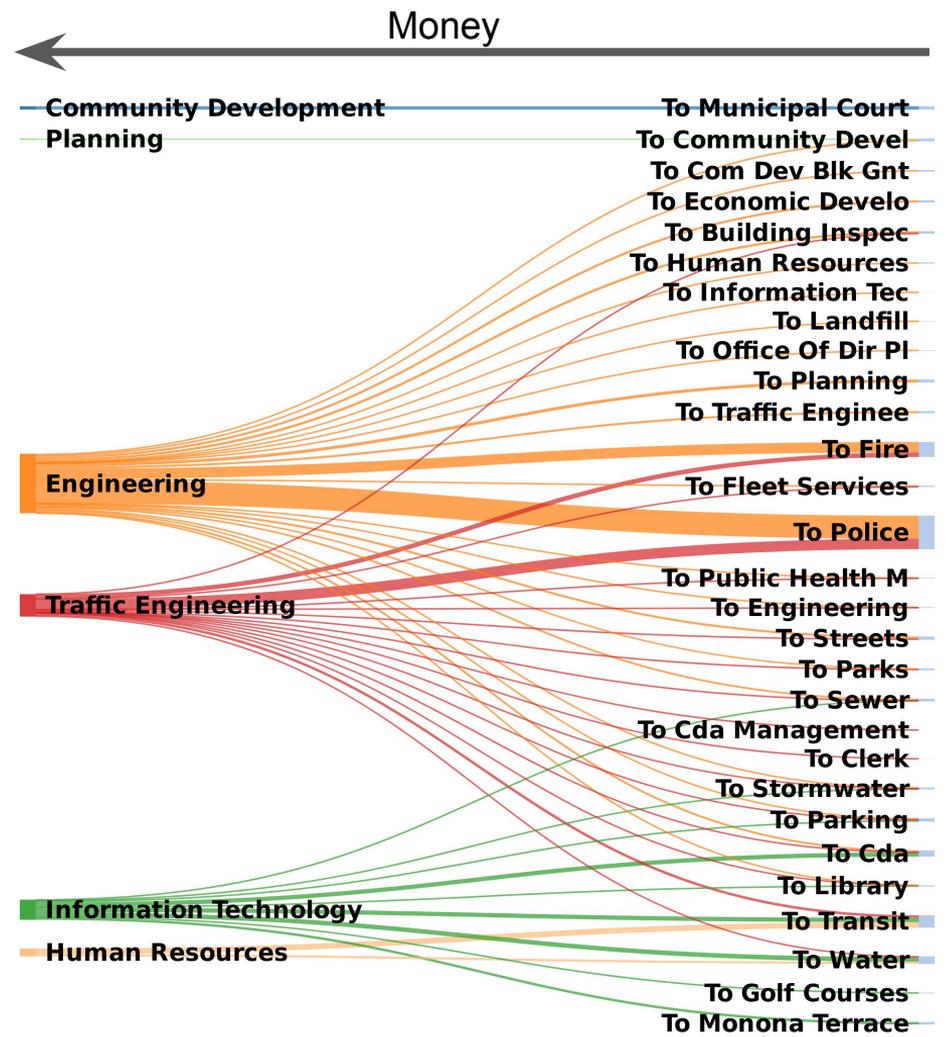
Graph of Funds Leaving Agencies

- Based on ID-Charges data, i.e., money leaving a given agency
- Fleet Services takes in by far the most money, but is not an agency
- Most interagency funds flow through a relatively small number of agencies

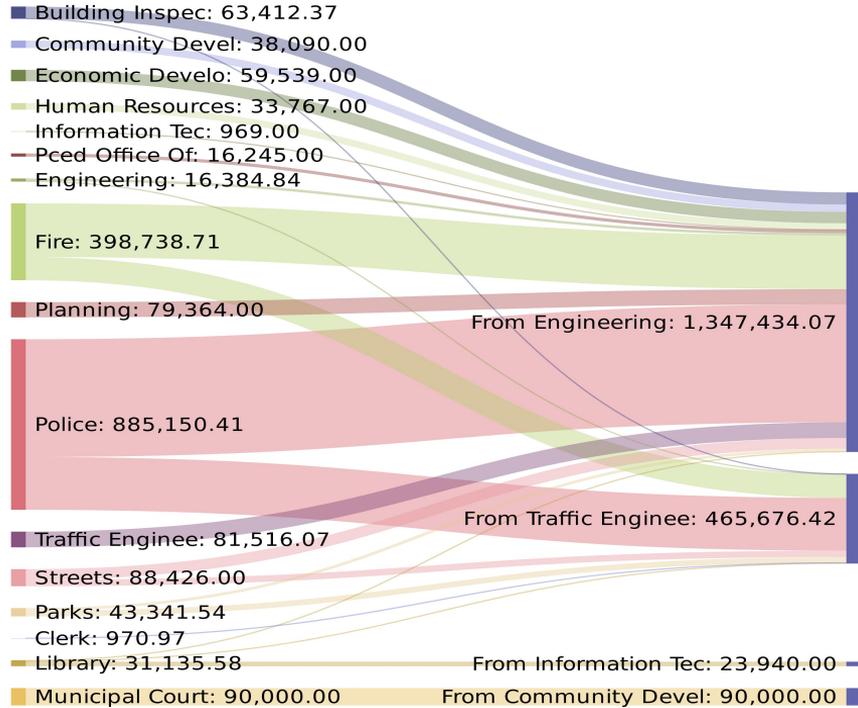


Graph of Funds Entering Agencies

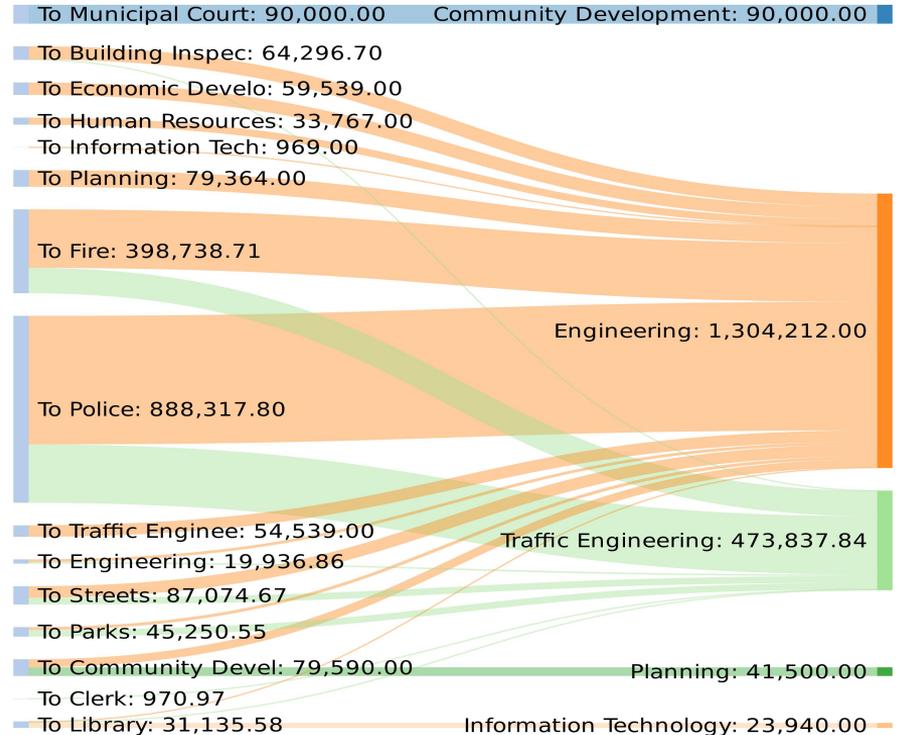
- Based on ID-billing data, i.e., money entering a given agency
- Only a few agencies (Engineering, Traffic Eng., IT, HR) take in revenue by billing other departments
- This graph and the previous aren't equivalent
 - This can't be explained by the "Other" category because the totals don't match



More in-depth graphics analysis



Agency-to-agency only charges



Agency-to-agency billing. The resulting graph is flipped.

Which flows in the graph are exactly the same?

- All 25 interagency transactions have no discrepancies except the ones on the right
- All of the ones on the right contain Traffic Engineering
- The difference is small except between Traffic Engineering and Engineering
- Discrepancy can't be easily explained by examining data closely

Building Inspec => Traffic Enginee
Charge: \$814 Billing: \$-1698
Discrepancy \$-884

Engineering => Traffic Enginee
Charge: \$3304 Billing: \$-6856
Discrepancy \$-3552

Parks => Traffic Enginee
Charge: \$29230 Billing: \$-31139
Discrepancy \$-1909

Police => Traffic Enginee
Charge: \$273847 Billing: \$-277014
Discrepancy \$-3167

Streets => Traffic Enginee
Charge: \$33274 Billing: \$-31922
Discrepancy \$1351

Traffic Enginee => Engineering
Charge: \$-81516 Billing: \$-54539
Discrepancy \$-136055

Revisited: Are Billing and Charges equivalent?

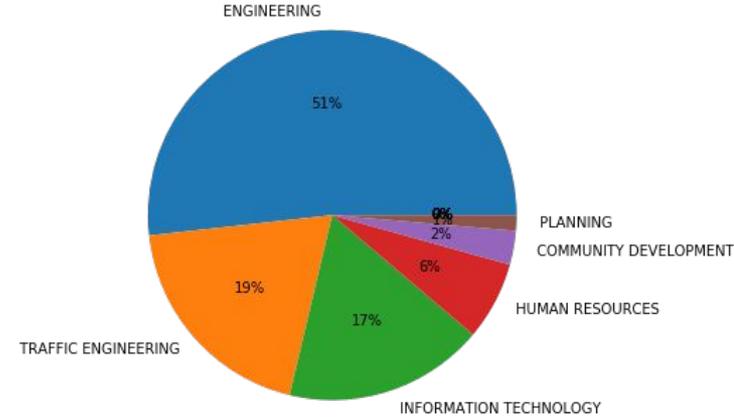
Answer: YES, with two exceptions

1. If the money is coming from or going to somewhere that's not an agency (Fleet Services, Monona Terrace, Water, etc.), there is no corresponding charge
 - a. This explains most of the 17M discrepancy between total billing and total charges: 14M is because of fleet services.
2. If the money is going between two agencies, but one of them is Traffic Engineering, the relevant billing and charge aren't always equal
 - a. Most of the time, the difference is small: within 1-2%
 - b. Between Traffic Engineering and Engineering, very LARGE difference.

Other Summaries

- Fleet services represents 4% of the total budget, but 60% of interdepartmental transfers (70% of charges)
- Four agencies are responsible for up to 95% of all Charges
- Three agencies are responsible for 87% of all billing

Interdepartmental Billing by Agency



Interdepartmental Charges by Agency

