# Call Center Service Request Analysis – Kansas City (2018–2021)

This document presents a comprehensive analysis based on SQL query outputs
for 311 Call Center Service Requests in Kansas City between 2018 and 2021. Each business
question
is addressed using SQL logic and interpreted to extract key insights, intended for use in
dashboards, reports,
and stakeholder communication.

1 .Service Requests Over Time (2018–2021)

Service Requests Over Time (2018-2021)

Service Requests Over Time (2018-2021) by Month
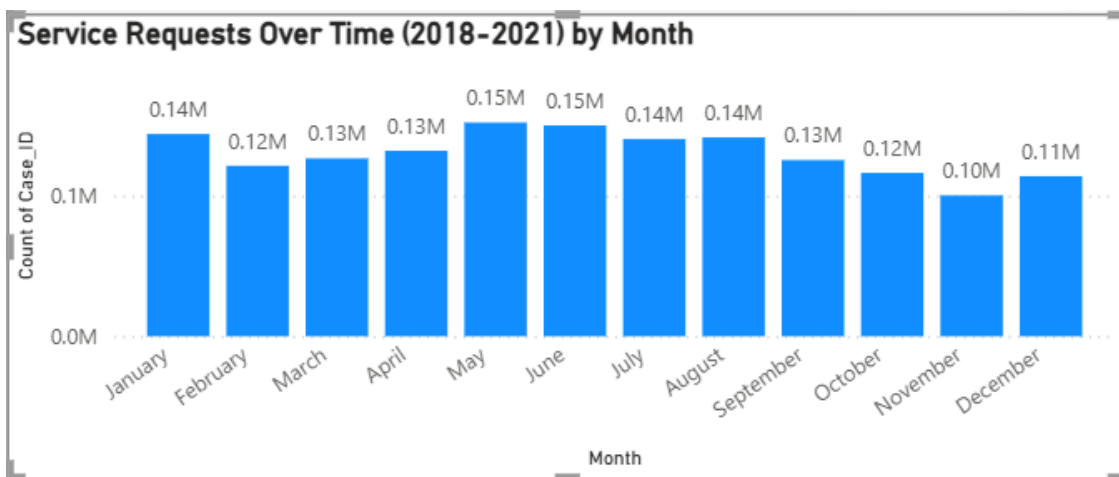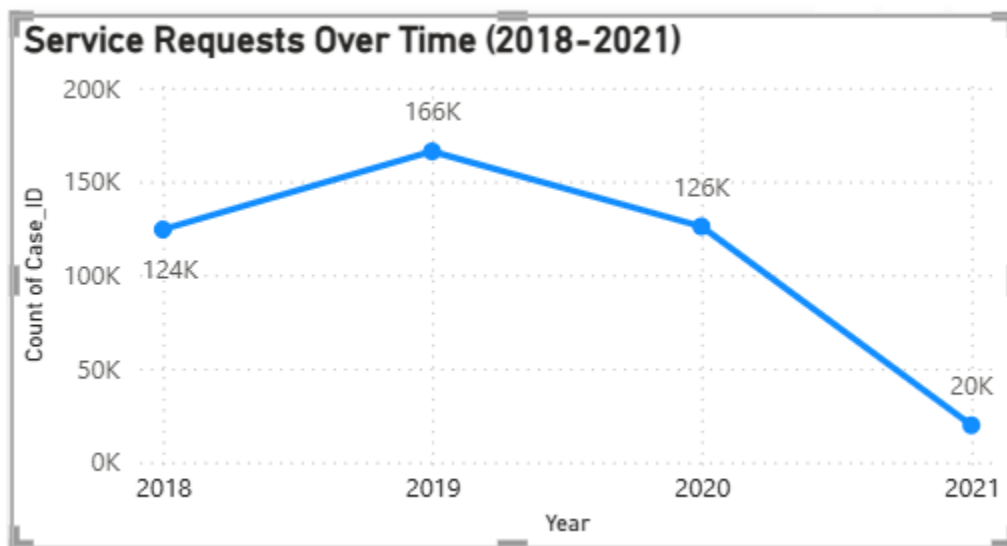
- 2019 was the peak year with 166,021 requests – a 33% increase from 2018.
- 2020 saw a drop to 125,906 requests, likely due to COVID-19 disruptions.

- 2021 recorded only 19,683 requests, indicating possible incomplete data.
- Seasonal peaks occurred from May to August, with dips in January and February.

2. Service Requests by Source
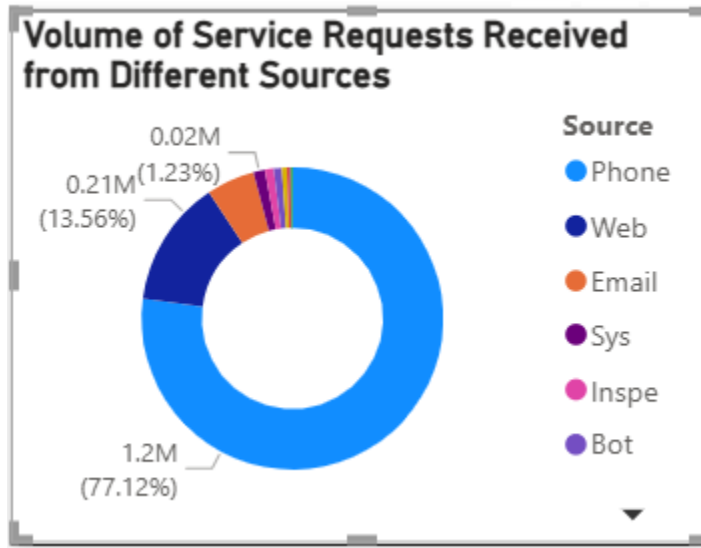
- Phone accounts for 77% of all requests (~1.2 million).
- Web and Email collectively account for ~20%.
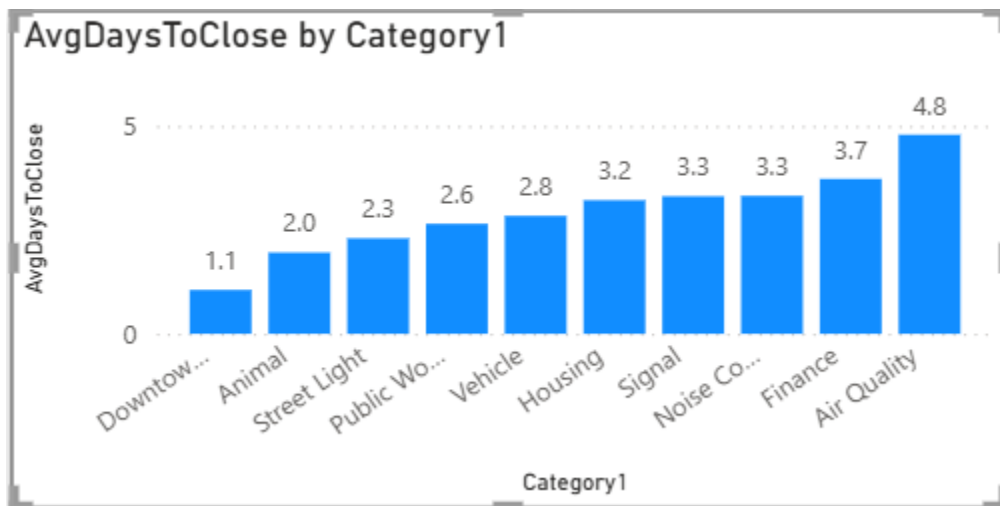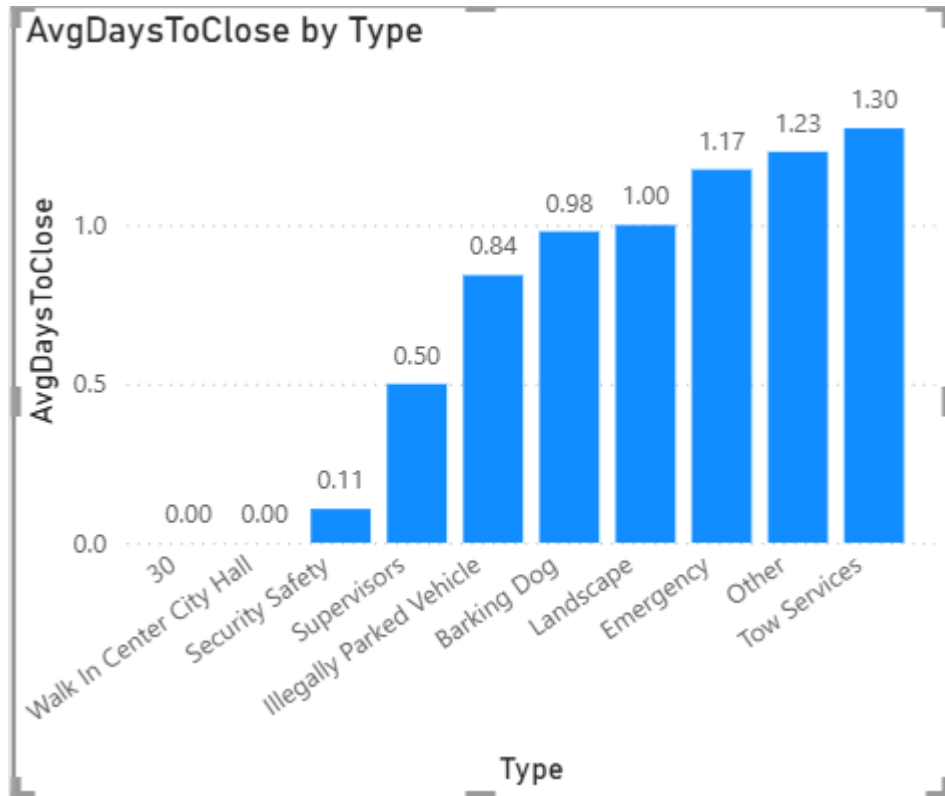- Sources like Fax, Mail, CTI contribute negligible volume.

3. Requests by Department
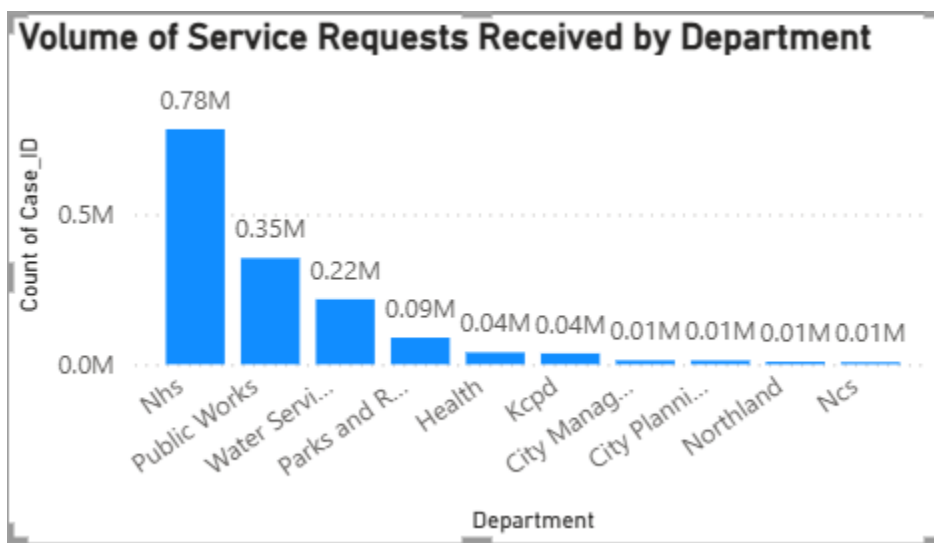
- NHS handled over 783K requests – 50% of total.

- Public Works and Water Services follow with large shares.
- Fire, IT, and HR received minimal requests, reflecting internal roles.

4. Top 10 Fastest Response Categories

AvgDaysToClose by Type

AvgDaysToClose by Category1

- These categories and Types had near same-day resolution performance.
- Many of these types are directly actionable or routed through on-site interactions, requiring minimal processing or escalation.

5. Top Geographic Locations by Requests
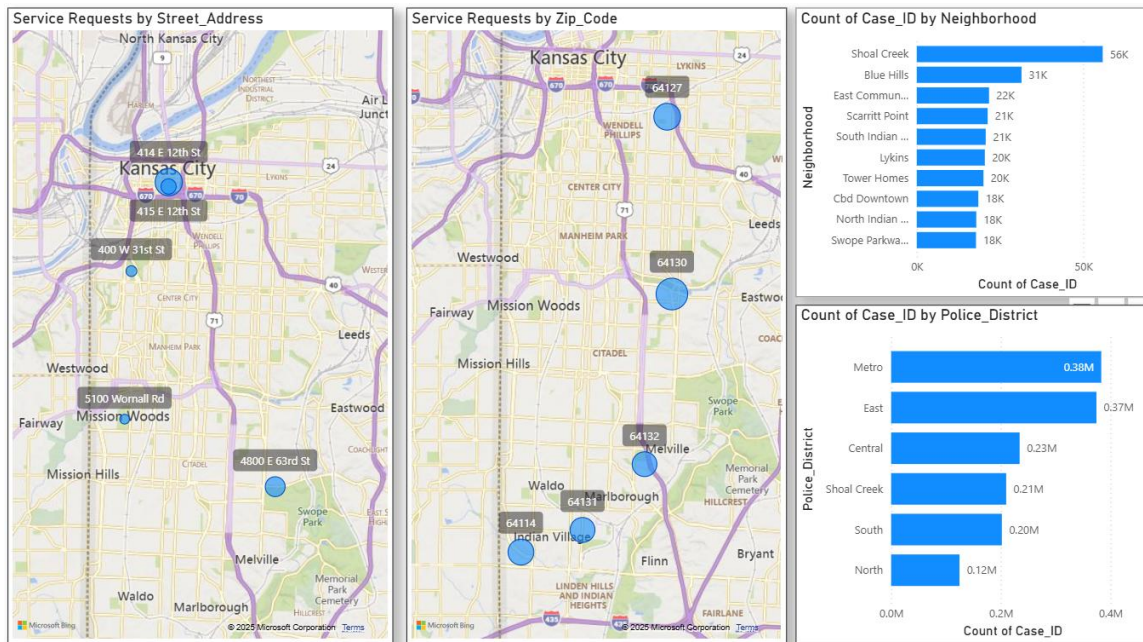
- Shoal Creek leads with 55,839 requests.
- ZIP code 64130 recorded 133,000+ requests.
- Frequent addresses: 414 E 12th St, 4800 E 63rd St, etc.
- Metro and East police districts had the highest volumes.

6. Departmental Workload & Work Group
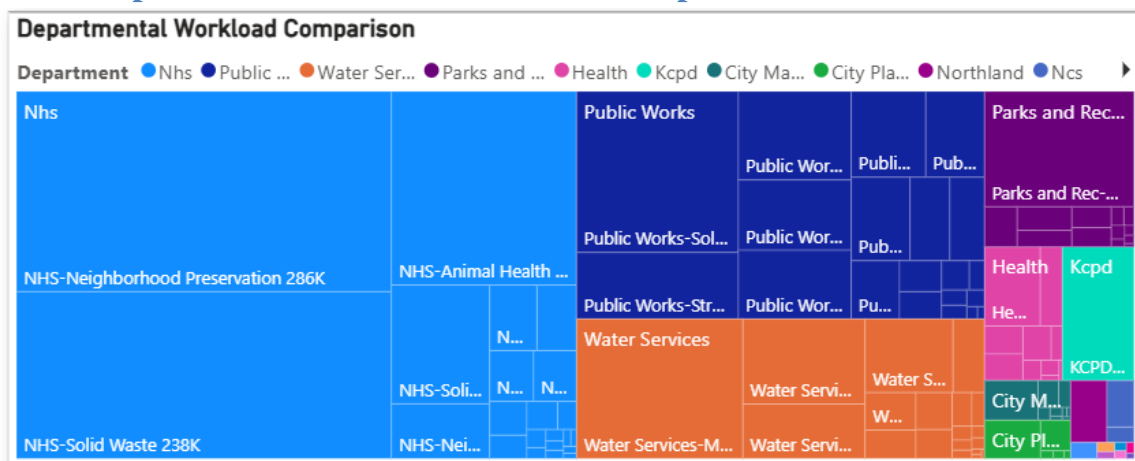
- NHS-Neighborhood Preservation and NHS-Solid Waste each handled 200K+ requests.
- Public Works-Street & Traffic and Water-Meter Services showed high activity.

7. Response Time by Department

Average of Days_to_Close by Department
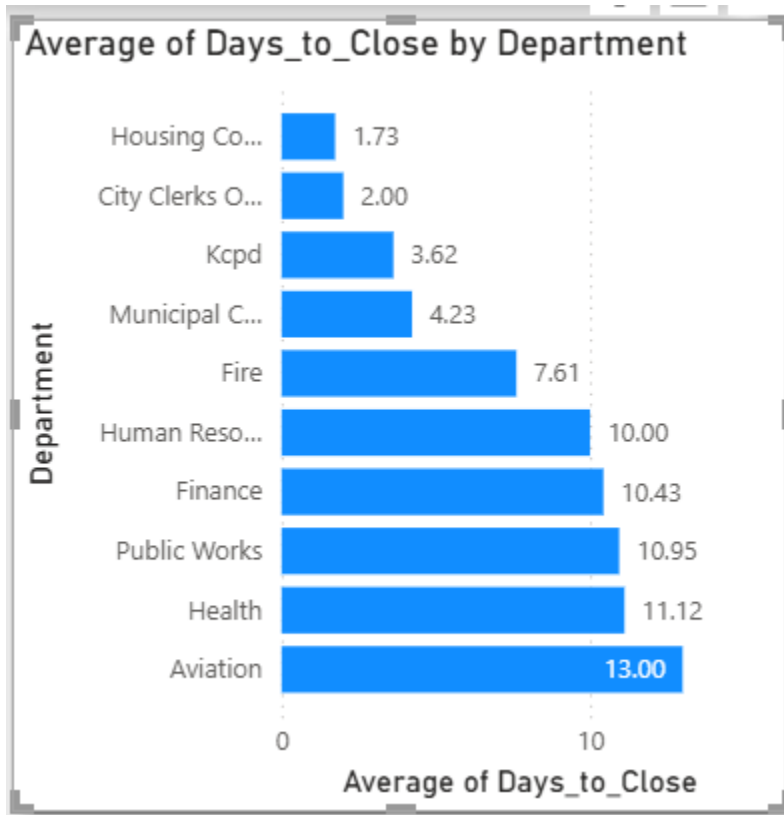
- Fastest: Housing (1 day), KCPD (3 days), Court (4 days).
- Slowest: NHS (75 days), City Planning (100 days).
- Wide variability indicates possible operational inefficiencies.

8. Request Status Composition (2018–2021)

This version groups raw status values into 3 simplified categories:

- **Closed**: Includes Resolved, Closed

- **Open**: Includes only Open

- **Inprogress**: Captures all remaining status values (e.g., Assigned, Duplicate, Cancelled, etc.)

Service Request Status Composition (Open, Closed, In Progress) (2018–2021)
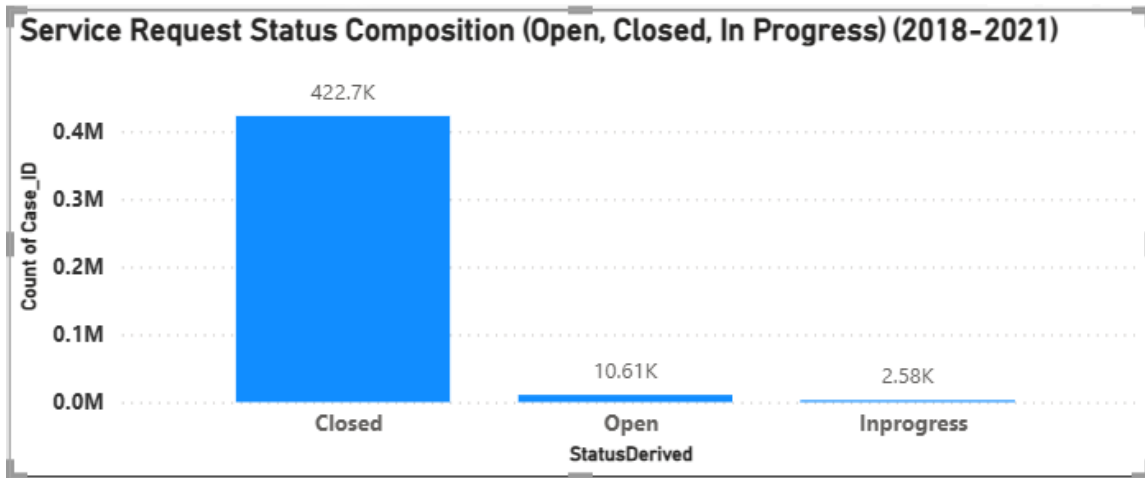
- **91.6%** of all requests between 2018–2021 were successfully **closed**, indicating a high resolution rate.
- Only **2.3%** remain **open**, suggesting strong operational efficiency.
- **Inprogress** cases (0.56%) are likely due to records stuck in intermediate statuses or mid-workflow states.

9. Workload vs Efficiency

```sql
SELECT Department, COUNT(*) AS Workload, AVG(Days_to_Close) AS Avg_Days_to_Close
FROM CallCenterServiceRequests
GROUP BY Department
ORDER BY Workload DESC;
```

Results Messages

Department	Workload	Avg_Days_to_Close
Nhs	783094	75
Public Works	353787	10
Water Services	216852	31
Parks and Recreation	88826	20
Health	39543	11
Kcpd	36369	3
City Managers Office	13098	21
City Planning And Development	12575	100
Northland	8591	27
Ncs	6391	766
Finance	1616	10
Fire	612	7
General Service	518	56
Municipal Court	379	4
Housing Community Dev	342	1
South	309	43
Aviation	151	13
Convention And Entertainmen...	59	16
Mayors Office	37	129
Northeast	35	43
Information Technology	24	25
City Council	3	77
City Clerks Office	2	2

- NHS: Highest workload (783K) with slowest closure (75 days).
- Public Works: Large volume with fast closures (10 days).
- KCPD: Efficient performance with lowest avg days (3).