



---

# **GAS PERMITS & INSPECTIONS**

---

[Group 1]

Vishal Javvaji

Winlove Navarro

Zeel Modi

Data 039-010 Data Concepts



# INTRODUCTION

- **Dataset:** Gas Permits and Extensions (2023 – 2024)
- **Description:** It is a public record of all gas-related building permit applications and their associated inspections within Calgary
- **Source:** [Open data](#) published by the City of Calgary

---

## GOALS



Ensure timely and efficient processing of Gas Permits



Enhance the efficiency of inspection operations



Improve customer service and transparency

---

---

## KEY QUESTIONS



What is the average time between permit application and permit issuance?



Is there a correlation between application volume and delays in processing?



Can inspection frequency or order be optimized based on past approval patterns?

---

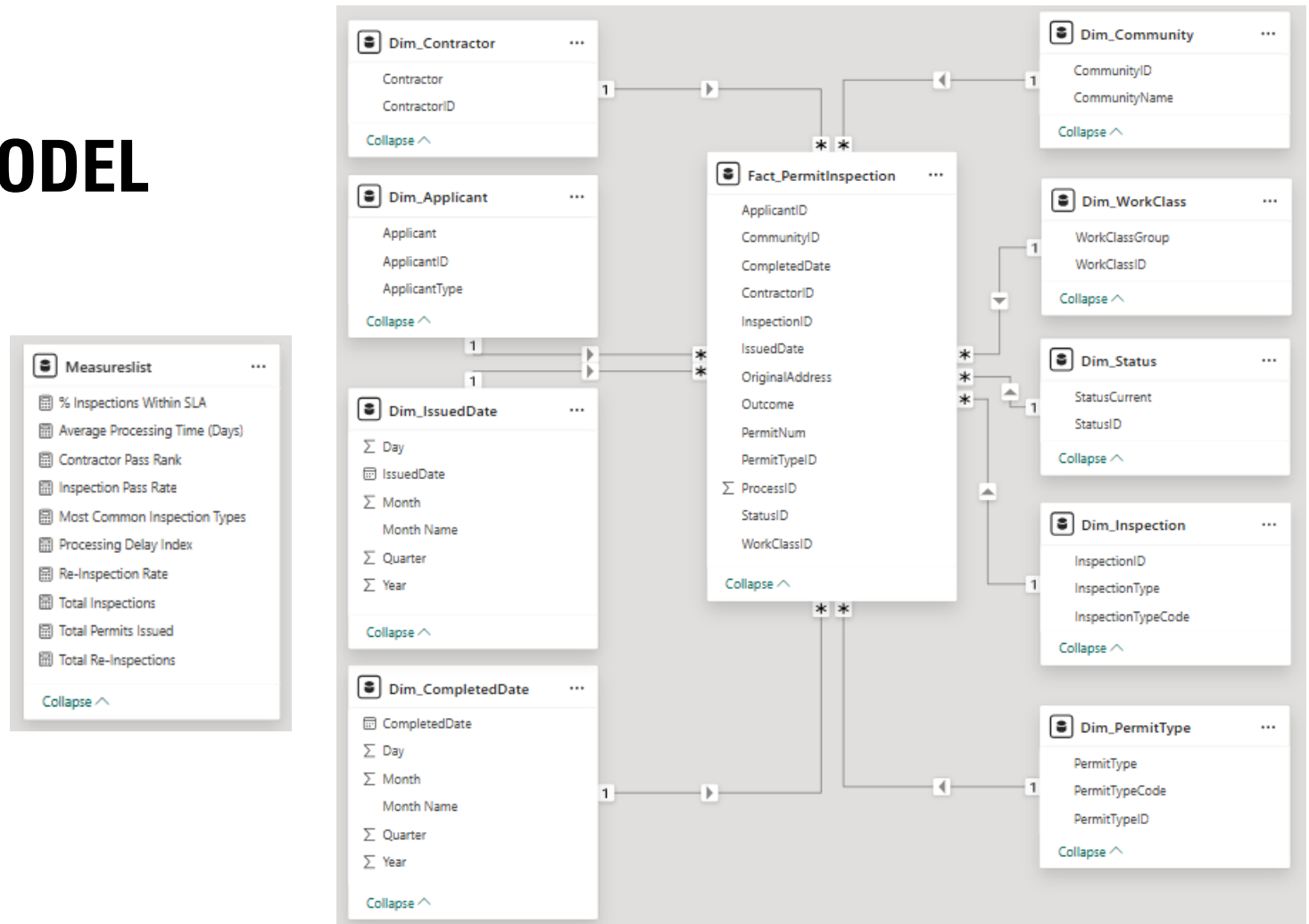
---

# KEY PERFORMANCE INDICATOR

- Average Permit Processing Time
- Percentage of Inspections Completed within Target SLA
- Inspection Pass Rate
- Re-inspection Rate



# DATA MODEL



## Gas Permit Monitoring Dashboard

Total Inspections

55377

Average Processing Time (Days)

58.36

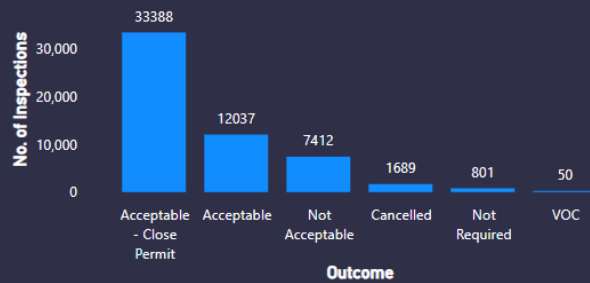
Re-Inspection Rate

31.17%

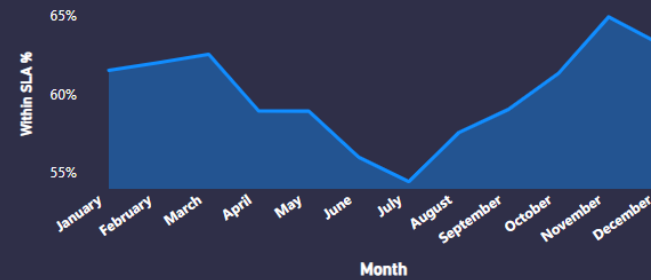
Inspection Pass Rate

82.03%

Permit Inspection Results



Inspections Within SLA %



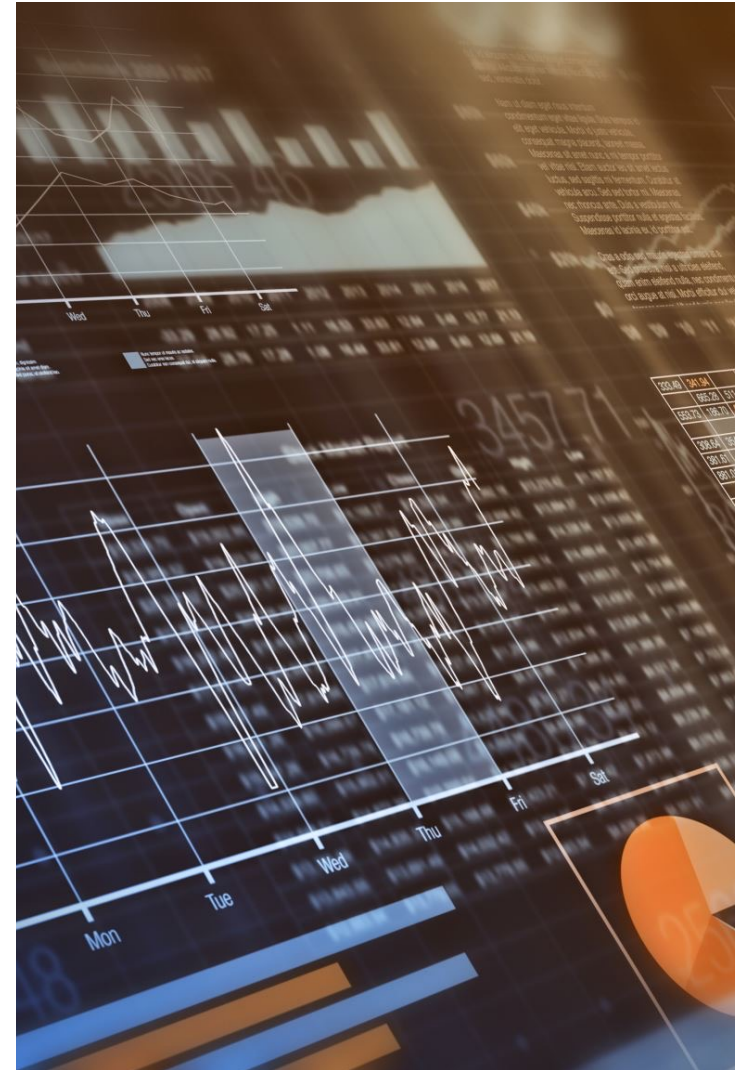
# EXECUTIVE DASHBOARD



---

# EXECUTIVE DASHBOARD

- **Description:** Provides a comprehensive overview of gas permit inspection operations, tracking key performance metrics and outcomes across the permit approval process.
- **Purpose:**
  - Performance Tracking
  - Quality Assurance
  - Process Improvement





---

## KPI CARDS

Total Inspections	Average Processing Time (Days)	Re-Inspection Rate	Inspection Pass Rate
55377	58.36	31.17%	82.03%

---

**Total Inspections** - The total number of inspections completed within the selected time period.

---

**Average Processing Time (Days)** - The average number of days from permit issuance to completed inspection.

---

**Re-Inspection Rate** - The percentage of inspections that required one or more follow-up visits to meet compliance.

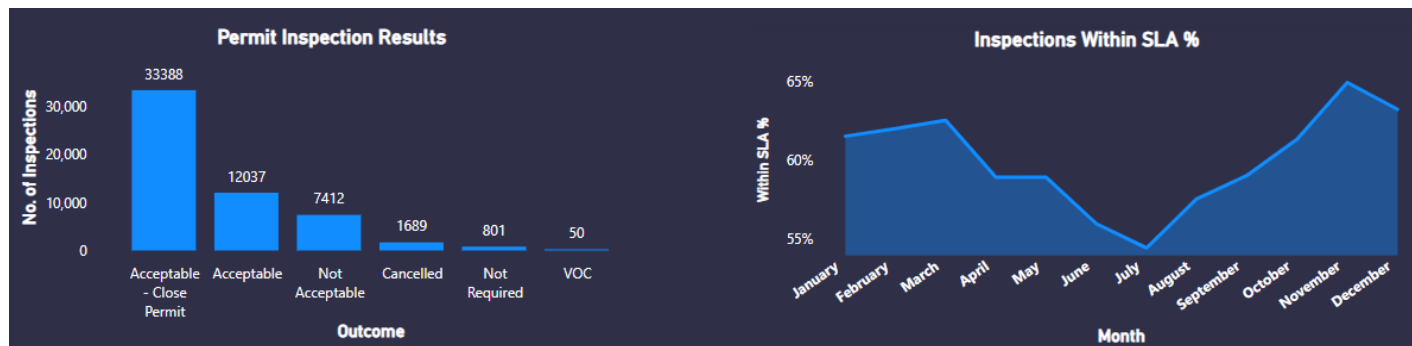
---

**Inspection Pass Rate** - The proportion of inspections that passed on the first attempt.

---

---

# CHARTS

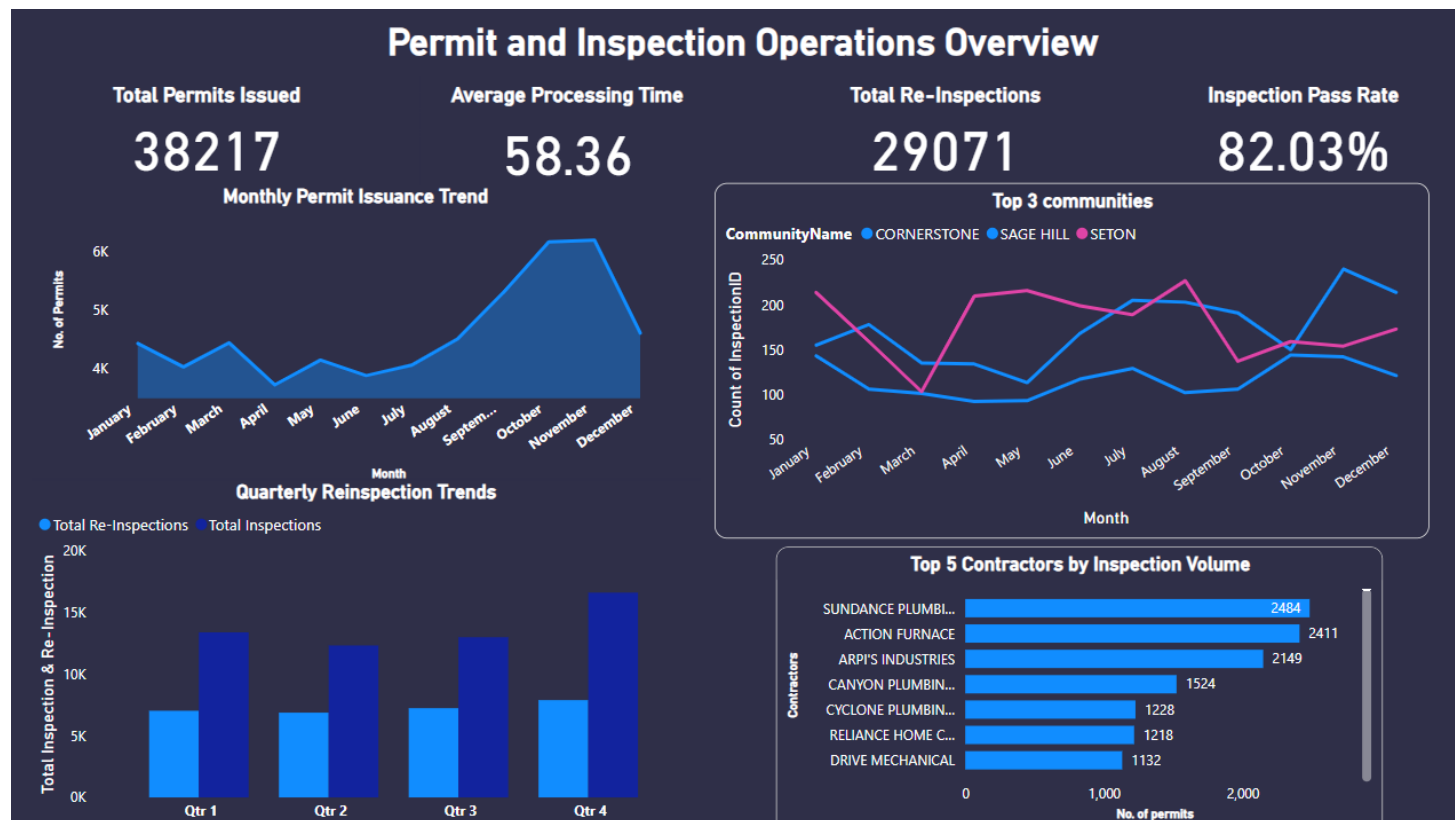


**Permit Inspection Results:** Helps identify workload trends



**Inspections Within SLA:** Measures whether inspections are happening on time.

---

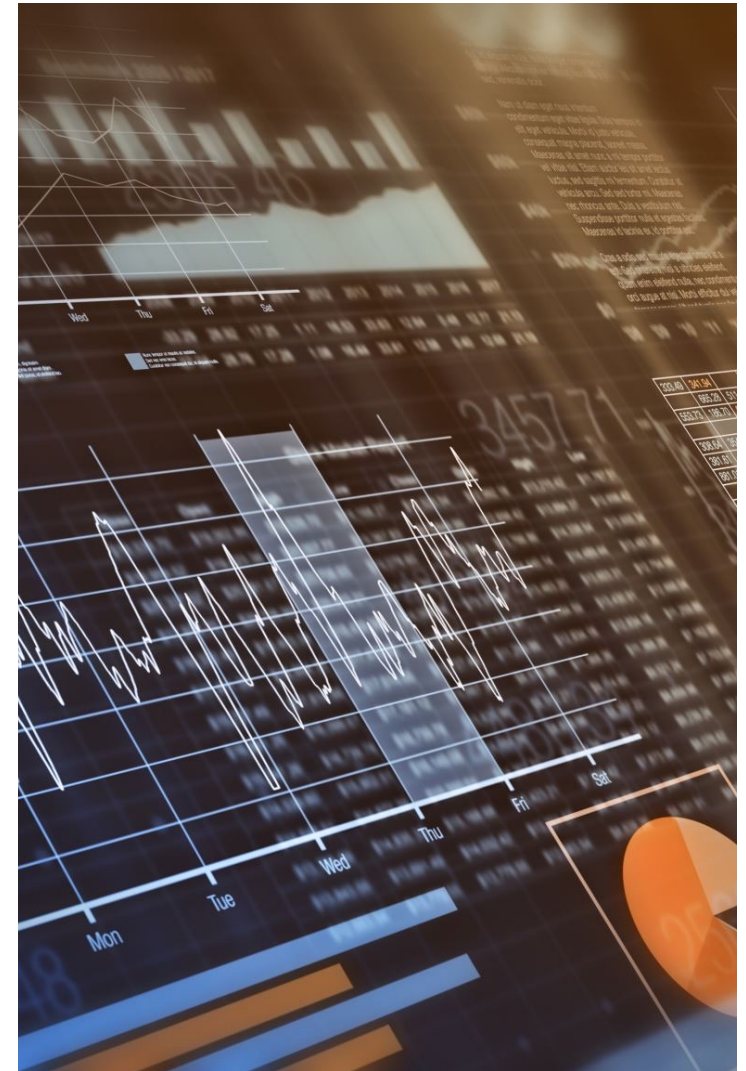


## OPERATIONS OVERVIEW DASHBOARD

---

# OPERATIONS OVERVIEW DASHBOARD

- **Description:** Provides a comprehensive operational view of permit and inspection activities, tracking performance across time periods, geographic regions, and contractor networks.
- **Purpose:**
  - Capacity Planning
  - Geographic Oversight
  - Contractor Performance Management
  - Operational Efficiency



---

## KPI CARDS

Total Inspections	Average Processing Time (Days)	Re-Inspection Rate	Inspection Pass Rate
55377	58.36	31.17%	82.03%

---

**Total Permits Issued** - Shows the number of gas permits approved over time

---

**Average Processing Time** - Average time taken to process permits

---

**Total Re-Inspections** - Tracks the number of follow-up inspections required.

---

**Inspection Pass Rate** - Illustrates the percentage of inspections passed on the first attempt

---

# CHARTS



MONTHLY PERMIT  
ISSUANCE TREND



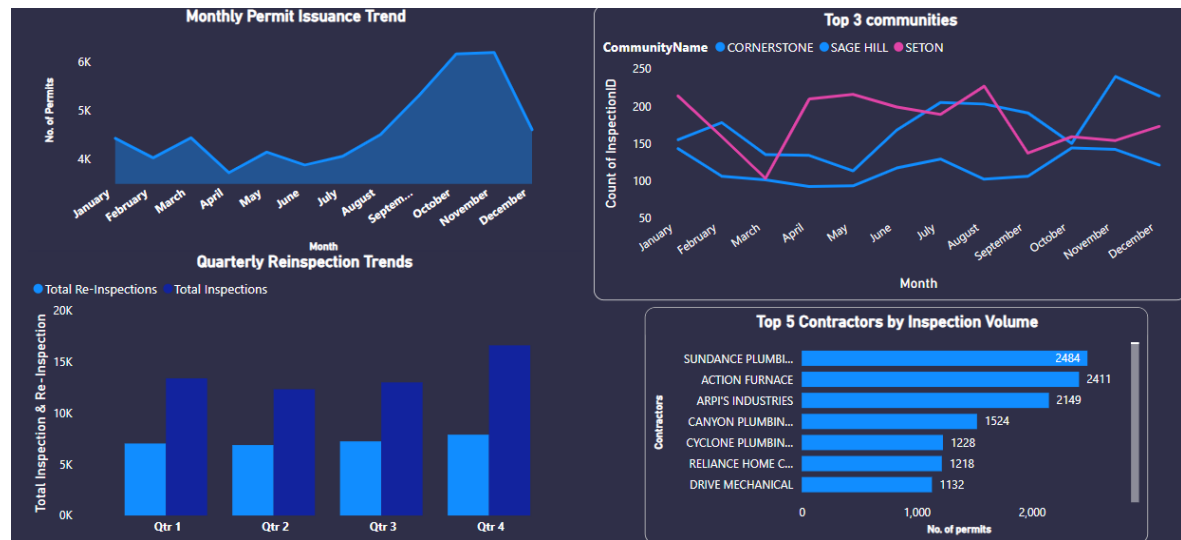
QUARTERLY RE-  
INSPECTION  
TREND



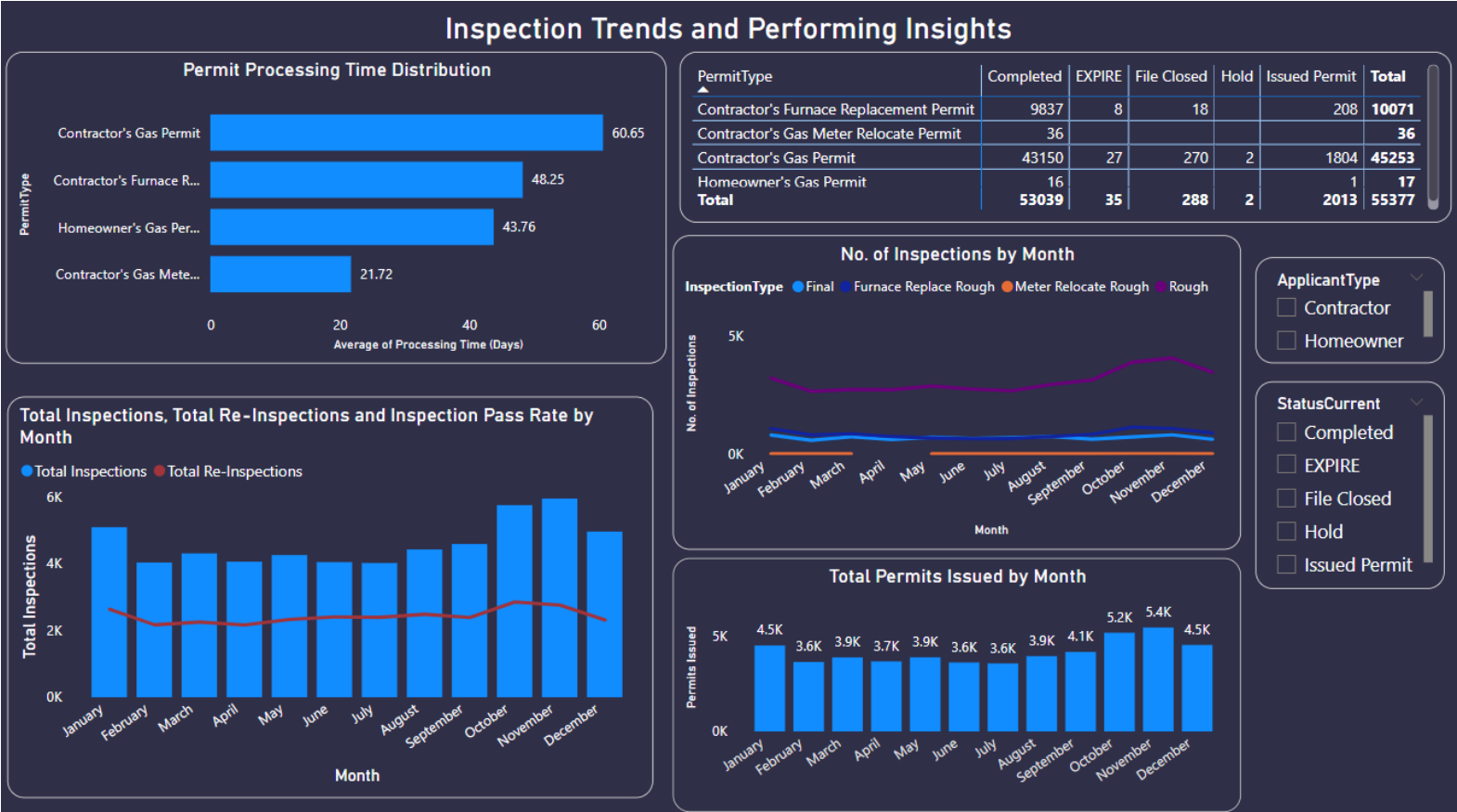
TOP 3  
COMMUNITIES



TOP 5  
CONTRACTORS BY  
INSPECTION  
VOLUME







# INSPECTION TRENDS AND PERFORMING INSIGHTS

---

# INSPECTION TRENDS AND PERFORMING INSIGHTS

- **Description:** Provides detailed analytics on gas permit processing and inspection operations, breaking down performance by permit types, inspection categories, and temporal patterns.
- **Purpose:**
  - Processing Efficiency Analysis
  - Permit Lifecycle Tracking
  - Inspection Type Planning
  - Quality Assurance



## CHARTS

---

Permit Processing Time Distribution

---

Total Inspections, Total Re-Inspections and  
Inspection Pass Rate by Month

---

No. of Inspections by Month

---

Total Permits Issued by Month

---

Permit type and Inspection outcome matrix

---

# CONCLUSION

This project analyzed Calgary's gas permit and inspection data, visualizing key metrics like processing times, pass rates, and re-inspection frequency to reveal operational efficiency and compliance trends.

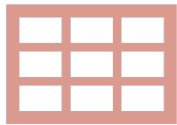
The dashboards provide real-time performance monitoring for executives and operations teams, highlighting top contractors and identifying improvement areas through outcome charts and seasonal trend analysis.

This data-driven system enables Calgary to enhance public safety, streamline workflows, and accelerate permit approvals, ultimately improving citywide service delivery.

---

---

# CONTRIBUTION



Vishal Javvaji  
Data Model, Analyst Dashboard



Winlove Navarro  
Goals, Key Questions,  
PowerPoint presentation,  
Executive Dashboard



Zeel Modi  
Dataset gathering, KPIs,  
Operational Dashboard



---

**THANK YOU!**

Any Questions?



Developing the skill to provide constructive feedback is essential, and it's a distinct ability that needs nurturing. Participate actively in group discussions and provide valuable feedback on the presentations. Remember to assess your own performance in comparison to other groups at the end.

Criteria: Beginning [0-3]; Developing [4-6]; Accomplished [7-9]; Excellent [10]							
Group Number	Content clarity, organization and Delivery [0-10]	Table/entity identification [0-10]	Relevance of the attribute to the table [0-10]	Relationships and associations and their degree [0-10]	Database diagram [0-10]	Total Score [50]	Your written constructive feedback on the presenting group
G-1							Design of some charts along with some KPIs need to work upon.
G-2	6	9	7	7	6	35	Group members were nervous and dashboard needs a lot of improvements.
G-3	9	9	8	8	8	42	Some data in dataset were missing, so the dashboard was a bit misleading. But overall presented well.
G-4	8	9	8	8	9	42	PPT was good and all presented well. Although, Piechart was wrong.