

# **Report On The Project Calgary Fire Department**

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## **1. Introduction:**

The Calgary Fire Department (CFD) has been safeguarding the city since 1885, starting as a small volunteer group and growing into a modern force. They protect people, property, and the environment by responding to fires, medical emergencies, and other crises 24/7. Their mission is to educate the public about safety, prepare for emergencies, and provide fast, effective help when needed. With well-trained firefighters and paramedics, advanced equipment, and community programs, they aim to make Calgary a safer place for everyone. This report explores how the CFD uses a Power BI dashboard to track their goals, measure their performance, and improve their services based on data and insights.

## **2. Mission:**

The mission of the Calgary Fire Department is to protect the lives, property, and environment of Calgary's residents and visitors through effective emergency response, fire prevention, and safety education. They are committed to being there when the community needs them the most, providing rapid and professional help in emergencies, and working proactively to prevent incidents before they occur. Their goal is to create a safe and resilient community where everyone can live, work, and play without fear of fire or other emergencies.

### 3. Goals:

1. **Improve Response Times:** Analyze response time data to identify areas where the Calgary Fire Department can reduce delays and improve the speed at which they arrive at incident scenes.
2. **Enhance Resource Allocation:** Use incident data to determine the most effective distribution of personnel and equipment across different areas to ensure optimal coverage and readiness.
3. **Increase Public Safety:** Identify trends in incident types and locations to develop targeted prevention and education programs aimed at reducing the occurrence of fires and other emergencies.
4. **Minimize Injuries and Deaths:** Analyze data on injuries and fatalities to implement strategies and practices that enhance firefighter and public safety during emergency responses.
5. **Reduce Property Damage:** Evaluate incidents involving property damage to understand contributing factors and develop measures to mitigate losses and enhance property protection efforts.

### 3. Key performance indicator (KPIs):

1. **Average Response Time:** Measure the time taken from the initial call to the arrival at the incident scene. This helps assess the efficiency of the fire department's response.
2. **Percentage of incident Type:** Track the proportion of incidents categorized by type (e.g., fires, medical emergencies, rescues) to identify trends and allocate resources accordingly.
3. **Number of Injuries:** Record the number of injuries sustained during incidents to evaluate the safety of both firefighters and civilians and to improve safety protocols.
4. **Number of Deaths:** Track fatalities resulting from incidents to measure the effectiveness of rescue and emergency response efforts and to identify areas for improvement.
5. **Number of Rescues:** Measure the number of successful rescues performed to assess the effectiveness of rescue operations and training programs.
6. **Property Damage Value by Area:** Estimate the monetary value of property damage resulting from incidents to understand the financial impact and develop strategies to minimize losses.

## 1. Question based on our goals:

Based on the goals we defined earlier for the Calgary Fire Department, here are the top 4 questions we can address using the dashboard, along with their answers explained.

**1.Question:** What types of incidents are most common?

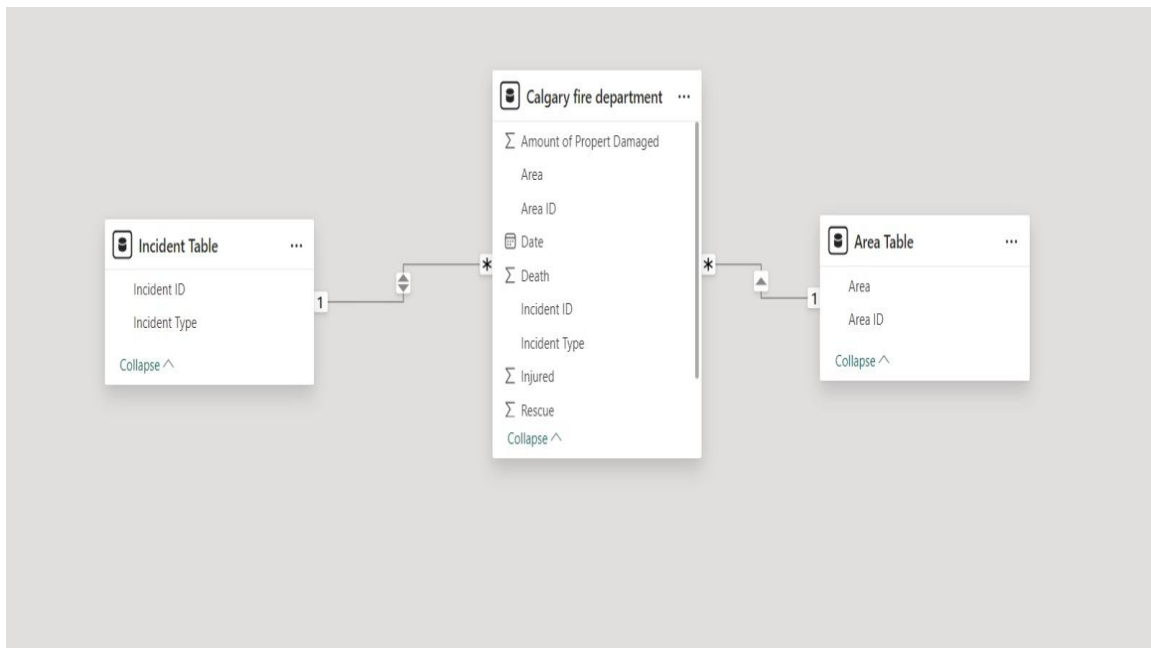
**2.Question:** What is the average response time for incidents

**3.Question:** What are the total numbers of injuries and deaths resulting from incidents?

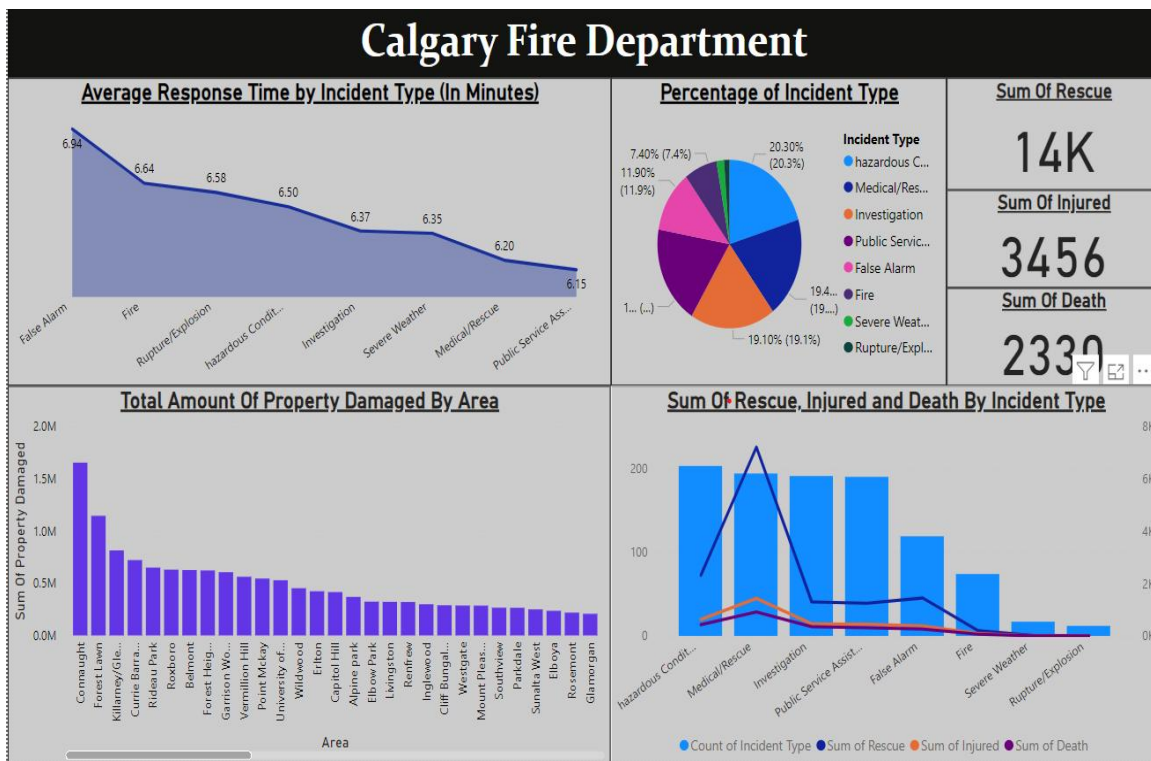
**4.Question:** What is the estimated total value of property damage from incidents?

These questions, presented through the dashboard with visualizations like charts and graphs, provide actionable insights for improving emergency response, enhancing safety measures, and effectively managing resources within the Calgary Fire Department.

## 12. Data Model:



## 13. Dashboard:



## **14. Results:**

The results section of the report summarizes the findings and insights derived from analyzing the data presented in the Power BI dashboard. It highlights key metrics such as average response times, incident types, rescue success rates, injury and fatality rates, and property damage assessments. These metrics provide a clear picture of the Calgary Fire Department's performance in responding to emergencies, protecting lives and property, and promoting community safety. For instance, it may reveal trends in incident frequency, effectiveness of rescue operations, and areas where improvements are needed. Visual representations like charts and graphs help stakeholders easily grasp these results and understand the department's operational strengths and challenges.

## **15. Conclusion:**

In the conclusion, we draw upon the results to provide an overall assessment of the Calgary Fire Department's effectiveness and efficiency. It summarizes whether the department is meeting its goals of enhancing emergency response times, increasing community safety awareness, supporting firefighter health and safety, promoting environmental protection, strengthening collaborations, leveraging technology for better service, and ensuring operational readiness. The conclusion also identifies areas for improvement based on the data analysis, offering recommendations for enhancing emergency preparedness, optimizing resource allocation, and implementing targeted training programs. Ultimately, the report aims to guide decision-makers in making informed strategies to further enhance the department's ability to protect and serve the community effectively.



# Thank You