

# Enhancing City Resilience with Data Solutions

## About the Customer:

Perched at 1,470 meters above sea level in the Luzon Island mountains, Baguio City stands out among the Philippines' 7,000+ islands. Known as the “City of Pines” because of its vast pine forests that cover the surrounding mountains. It is also considered to be the nation’s summer capital; its elevated location and tropical pine forests offer a cool retreat.

## The Challenge

The city of Baguio faced multiple challenges in maintaining safety, responding to emergencies, and ensuring a healthy environment for its residents. One of the key challenges for Baguio City was disaster resources management and crime monitoring. Another major challenge was monitoring the environmental parameters within the city. The city of Baguio needed a unified platform that would streamline data collection, enable real-time monitoring, and foster data-driven decision-making across these critical domains.

## How Quantela Helped

With the help of Quantela, Baguio City adopted Quantela’s ICCC platform that harnessed the power of data solutions for crime monitoring, disaster resources management, and air quality sensors. The platform offered the following capabilities:

**Data-Driven Crime Monitoring:** The platform allowed real-time tracking of crime cases, enabling law enforcement to identify patterns and trends in criminal activities. The city could proactively deploy resources to reduce crime rates and enhance public safety by analyzing crime data over different timeframes.

**Quantela serves as our technology partner for our initiatives for Baguio Smart City projects. We deeply value their impressive efforts in successfully deploying the Integrated Command and Control Centre (CCC) Application. This ICCC platform stands as a unified solution, facilitating the seamless integration of near-real-time information from diverse system sources. This in turn gives city authorities more comprehensive understanding of the urban environment today. By utilizing this knowledge, intelligent choices may be made, resulting in the effective use of urban resources and improved performance for city as a whole.**

## Facts about Baguio

It was originally a small mountain village called “Kafagway”, before it was discovered in 1900

It is home to the largest strawberry farm in the Philippines, the La Trinidad Strawberry Farm. This farm is open to visitors who can pick and eat fresh strawberries

Total population of Baguio City as of May 1, 2020 was 366,358

- • • •
- • • •
- • • •
- • • •
- • • •

## Crime Index:

From 2019 to 2023 –

**7636** cases

**7194** closed cases

**442** in progress cases

**8105** identified victims

**8989** identified  
suspects

**Top 05** crime states  
available

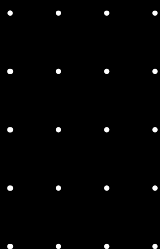
## Disaster Resource Management Metrics:

**1756** disaster  
resources required

**423** disaster resources  
available

## Air Quality Metrics:

**54.53%** Average AQI  
decrease from last  
months



**Optimized Disaster Resource Management:** The platform continuously monitored disaster resources, assessed their availability, and identified gaps. It provided data-driven recommendations for resource allocation during emergencies, ensuring efficient disaster response and recovery efforts.

- **Real-time Air Quality Insights:** Integrated air quality sensors continuously monitored environmental parameters, such as AQI, SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub>. The data collected enabled the city to pinpoint the causes of air quality issues and implement targeted interventions to improve air quality and protect public health.

### Outcomes Delivered

- **Enhanced Public Safety:** Data-driven crime monitoring allowed law enforcement agencies to respond proactively to criminal activities, reducing crime rates and improving public safety.
- **Efficient Disaster Response:** The city's Disaster Management office could make data-driven decisions during emergencies, ensuring the effective allocation and utilization of resources. This resulted in quicker and more efficient disaster response efforts, saving lives and minimizing damages. 100+ disaster resources were added after the platform helped to monitor the deficit in the disaster resources.
- **Healthier Environment:** The real-time air quality data provided valuable insights into pollution levels and their sources. The city could take targeted actions to mitigate pollution, leading to improved air quality and a healthier environment for its citizens. Quantela's solution identified SO<sub>2</sub> as the main pollutant.
- **Collaborative Efforts:** The unified data platform fostered collaboration between different city departments, enhancing overall city resilience and responsiveness to various challenges.
- **Optimized Resource Allocation:** Data-driven resource allocation enabled the city to optimize the use of resources, ensuring that they were efficiently utilized in response to crime, disasters, and pollution.

### Deployment Screenshots



