



ICMA Annual Conference
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Data-Driven Crisis Management in Dayton, OH

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An aerial photograph of the New York City skyline at dusk, featuring numerous skyscrapers and the Hudson River. The image is overlaid with a semi-transparent purple filter. The text "So, what actually is AI: Artificial Intelligence?" is centered in white, bold font. A thin red horizontal line is positioned below the text.

So, what actually is AI: Artificial Intelligence?



WT* is AI?

A Buzzword

But with some strong and useful tools behind it, that could change the way we work

WT* is AI?



The capability of a machine to imitate
intelligent human behaviour.

Merriam

Webster

WT* is AI?



WT* is AI?



An aerial photograph of a city street intersection, showing buildings, cars, and a green banner overlay. The banner is a solid green rectangle with a white diagonal line running from the bottom-left corner to the top-right corner. The text is white and bold, positioned on the left side of the banner.

Getting on the AI-for-Government Bandwagon

The background is a dark blue field filled with glowing orange and yellow lines that crisscross diagonally. Overlaid on these lines are various binary digits (0s and 1s) in a light blue, monospace font. Some of the digits are sharp and clear, while others are blurred, creating a sense of depth and motion. The overall effect is a high-tech, digital aesthetic.

**What kind of data is out there
and ready to be harnessed
by local governments?**

It's a Big Data world

Applications of AI



“Listening” to social media for public feedback on government-relevant topics



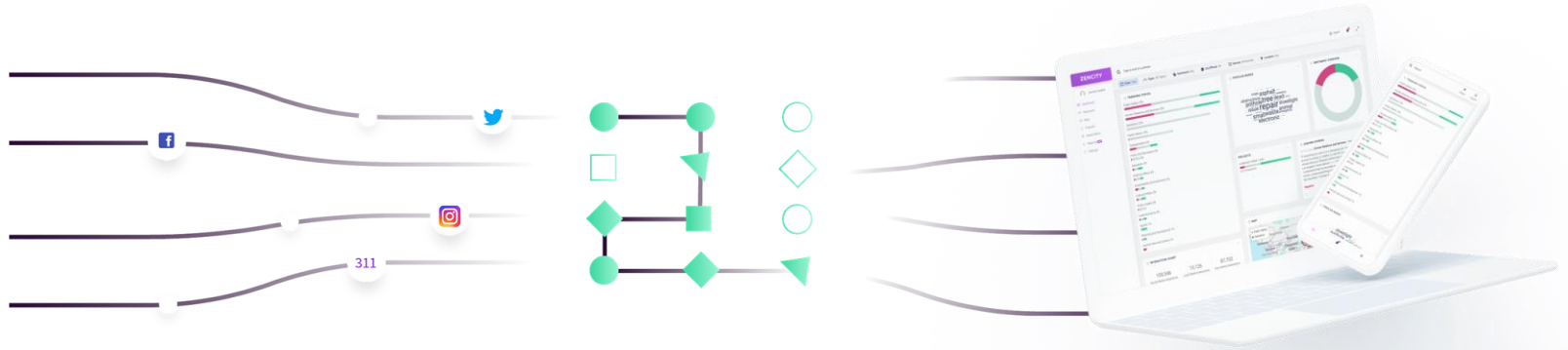
Predicting traffic congestion and car accidents



Handling the most common types of service requests



AI Solution Deep Dive: Zencity



Consolidate Interactions



AI Powered Analysis



Actionable Insights



I've been studying this area for years, and Zencity is the most robust and innovative solution I've seen.

Prof. Stephen Goldsmith, Harvard, Former Deputy Mayor of NYC

30 days in the Dayton, OH



Interactions

1,120,043

From Data Collection to Data-Driven Decisions

Morris Charts

Line Chart



Area Chart



Bar Chart



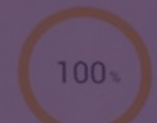
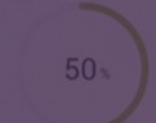
Donut Chart



Sparkline Charts



Easy Pie Charts



Unprecedented Water Outage

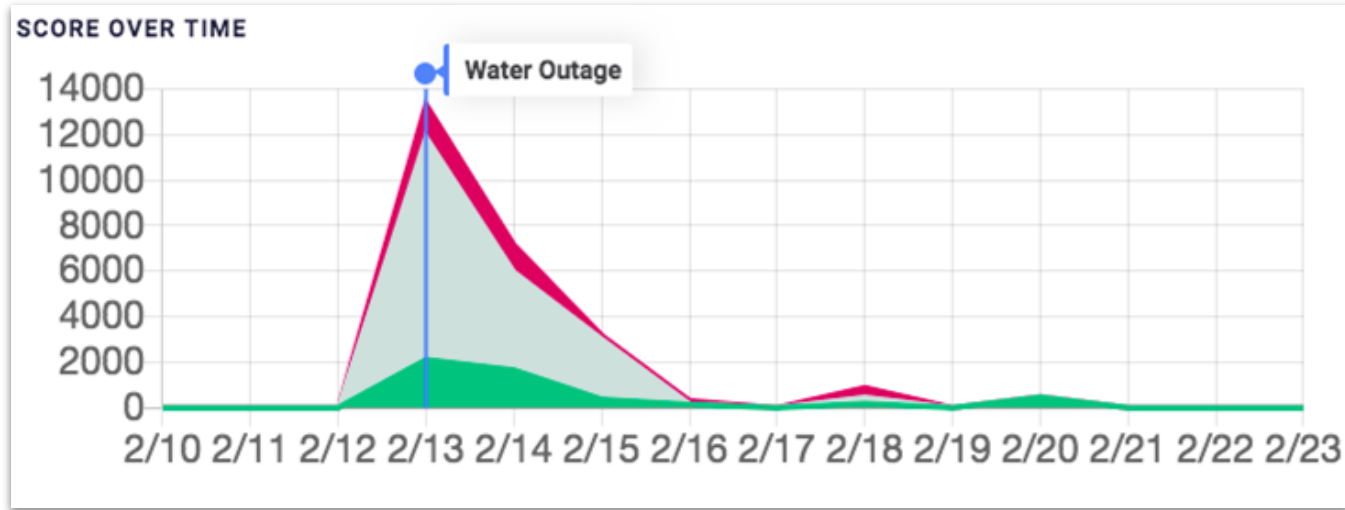
February 13, 2019

- 36 inch water main damaged
- Loss of 150 million gallons of drinking water
- Depressurized the system – resulting in boil advisories

Water Outage - What Happened

- The media had dubbed the event “**Dayton’s Water Crisis**” inciting panic from residents
- Inaccurate information was rampant
 - Media speculated that the incident could be linked to bioterrorism
- Most residents felt the City was handling the situation badly and was not transparent

The Zencity Solution



25,344
Total Interaction Count

” We had 24,000 comments that were made during the event ... that were culminated in a report by ZenCity,” Dickstein said. About 86 percent of comments were positive or neutral, compared to 14 percent that were negative, she said.

Dayton Daily News

KKK-Affiliated Group Rally

May 25, 2019

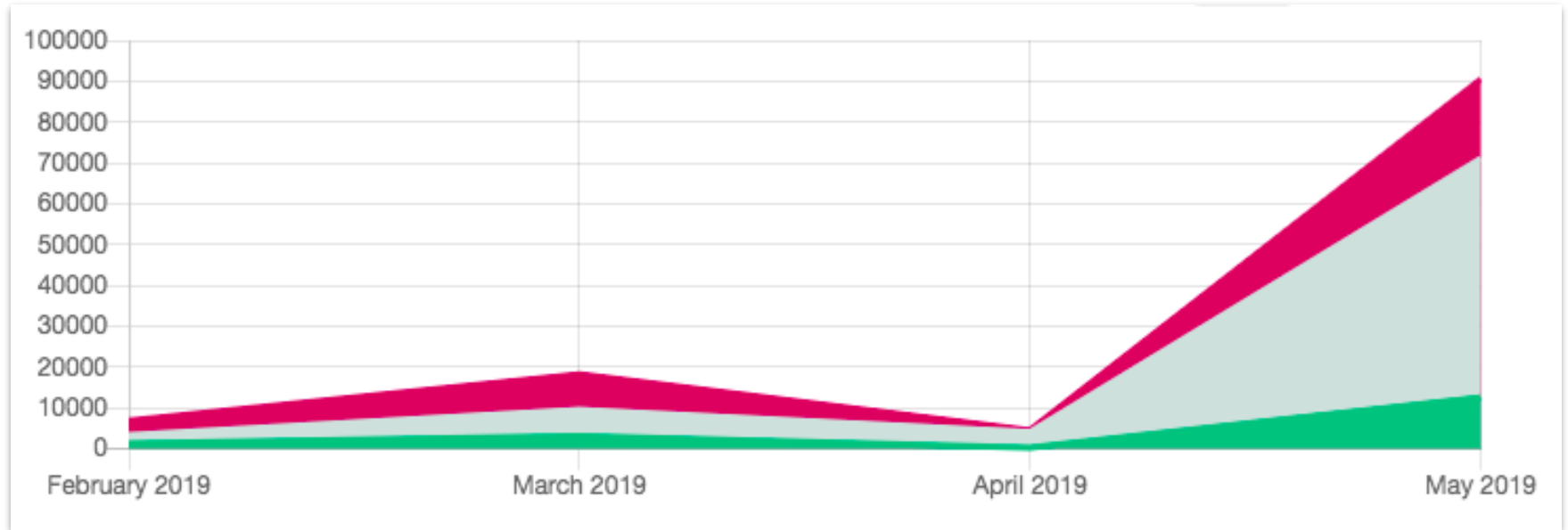
- February 22, 2019 - Montgomery County approved permit
- 9 Members showed up
- More than 350 officers assembled
- Cost roughly \$650K



KKK-Affiliated Rally - What Happened

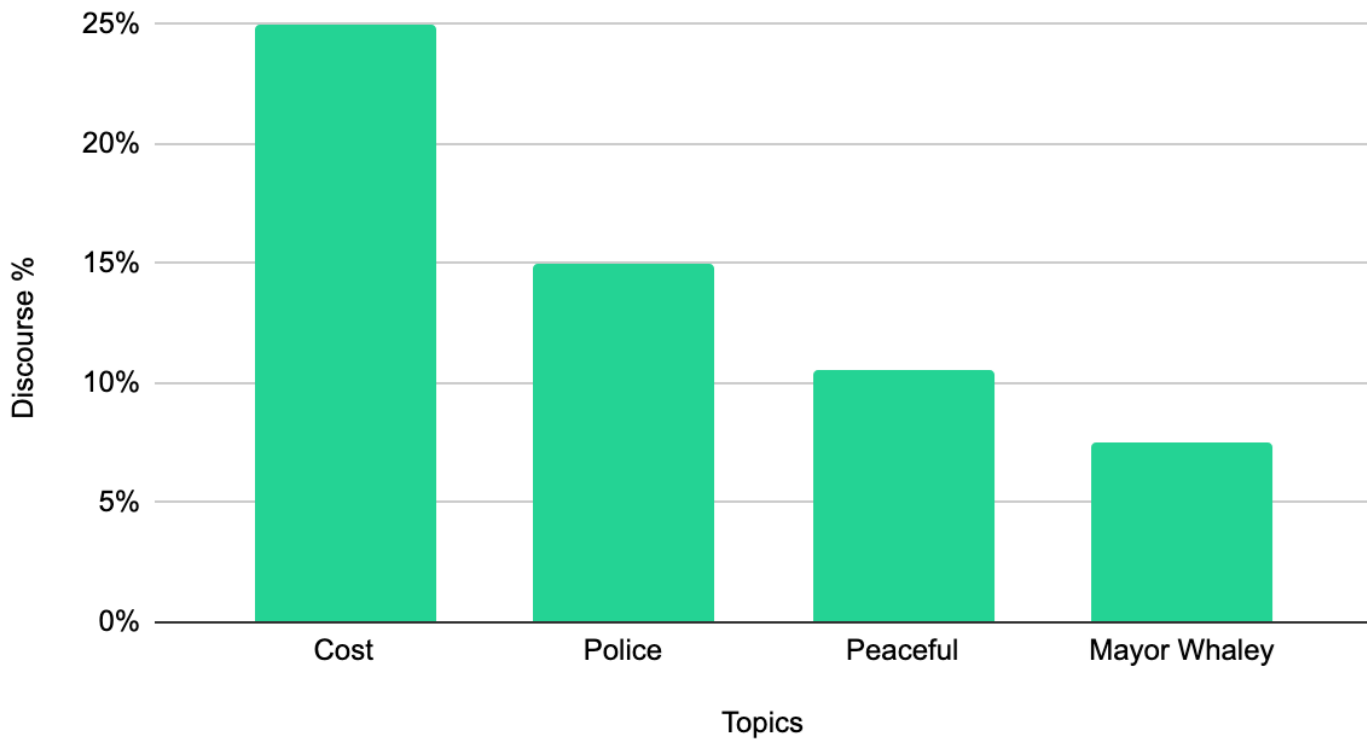
- The City continuously monitored conversations around the event from rally announcement to official rally
- The majority of the Dayton community was outraged by the group's presence
- Residents expressed desire to counter protest the day of the event

The Zencity Solution



The Zencity Solution

Day of Rally Discourse Summary



Multiple Tornadoes/Water Outage

May 28, 2019

- Several tornadoes touched down in highly populated areas of Dayton and other Ohio communities
- 1000 structures damaged
- 55,000 residents without power
- Water system lost pressure which resulted in a boil advisory that lasted four days

Multiple Tornadoes - What Happened

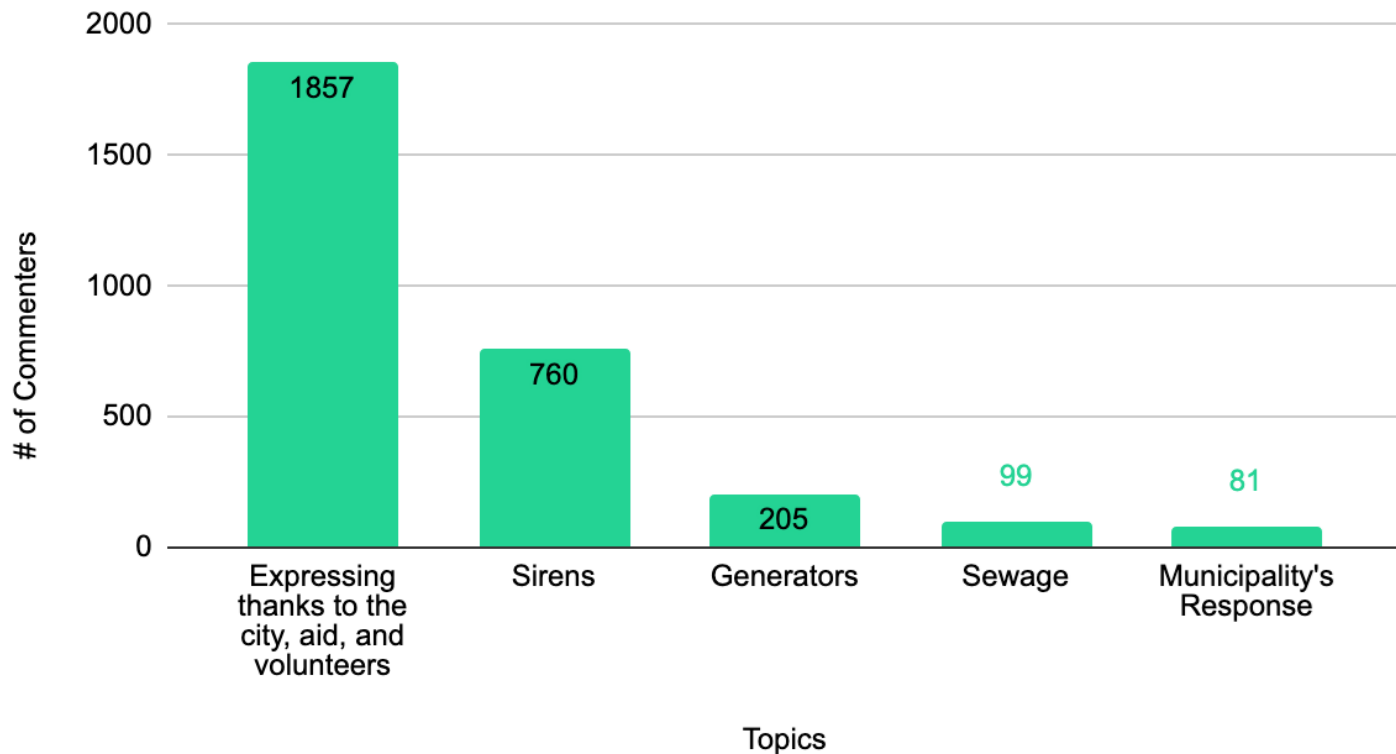
- **Sirens-** Many residents claimed that they did not hear any sirens and expressed anger at the city for “putting them at risk”. Many believe that mobile phone alerts were not a sufficient solution and requested that the City repair the sirens **(760 commenters)**.
- **Generators-** People wondered whether there are backup generators and many questioned how is it possible that after the recent water outage no lessons were learned **(205 commenters)**

Multiple Tornadoes - What Happened

- **Sewage-** People were worried about the consequences of flowing sewage into the river and feared it might destruct the ecosystem (**99 commenters**).
- **Municipality's Response-** People were frustrated by the lack of response and updates on social media by the municipality (**81 commenters**).

The Zencity Solution - Tornadoes

Resident Tornado Discourse



Mass Shooting

August 4, 2019

- Ten people were killed (including the perpetrator)
- 27 others were injured
- Police killed the gunman within 32 seconds of the first shots
- Occurred in the Oregon District (a busy, nightlife neighborhood)

Mass Shooting - What Happened

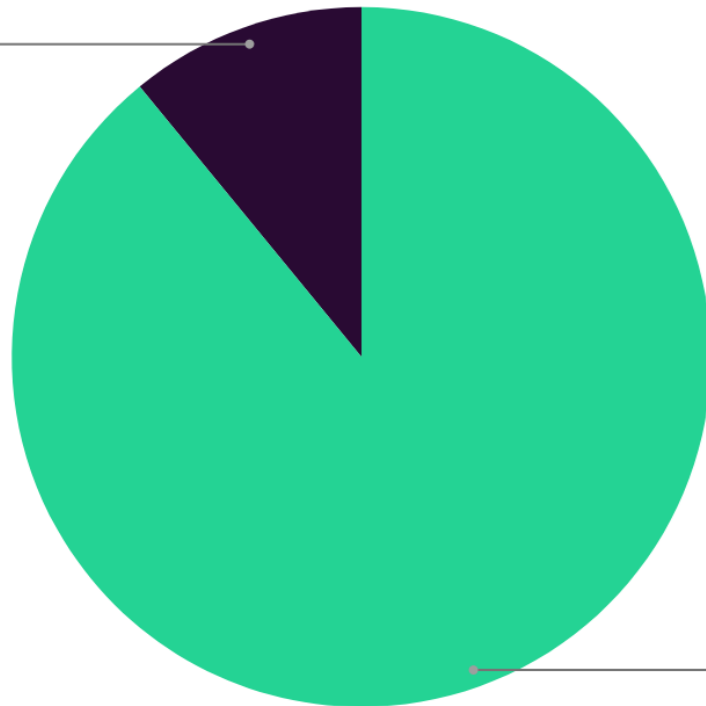
- The mass shooting in the city stirred a nationwide, fervent discussion
- Discourse on the subject was unprecedented -
 - **1,326,631 interactions in the four days following the shooting**
- A majority of the discourse discussed national issues:
 - Second amendment
 - Immigration
 - National politics

Real-time Analysis

Praise for First Responders

Criticism of the Mayor

10.9%

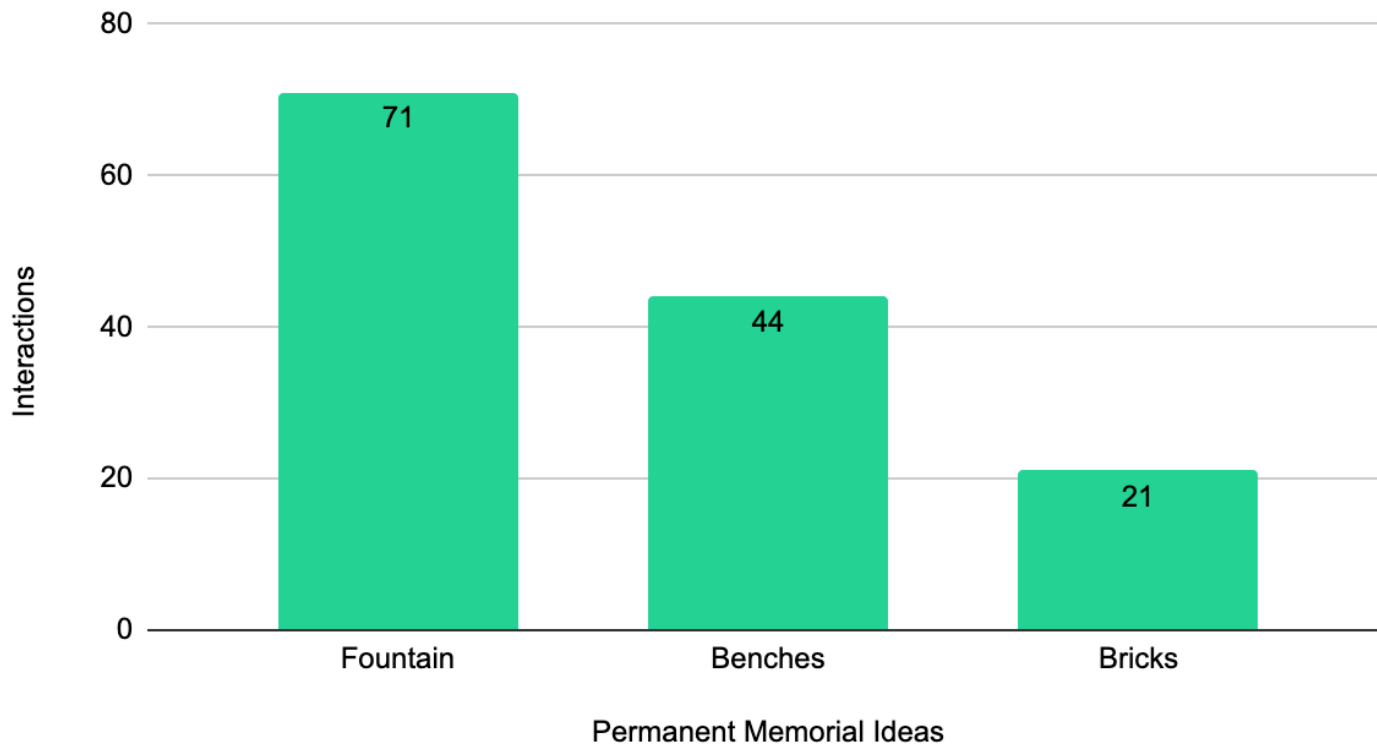


First Responders

89.1%

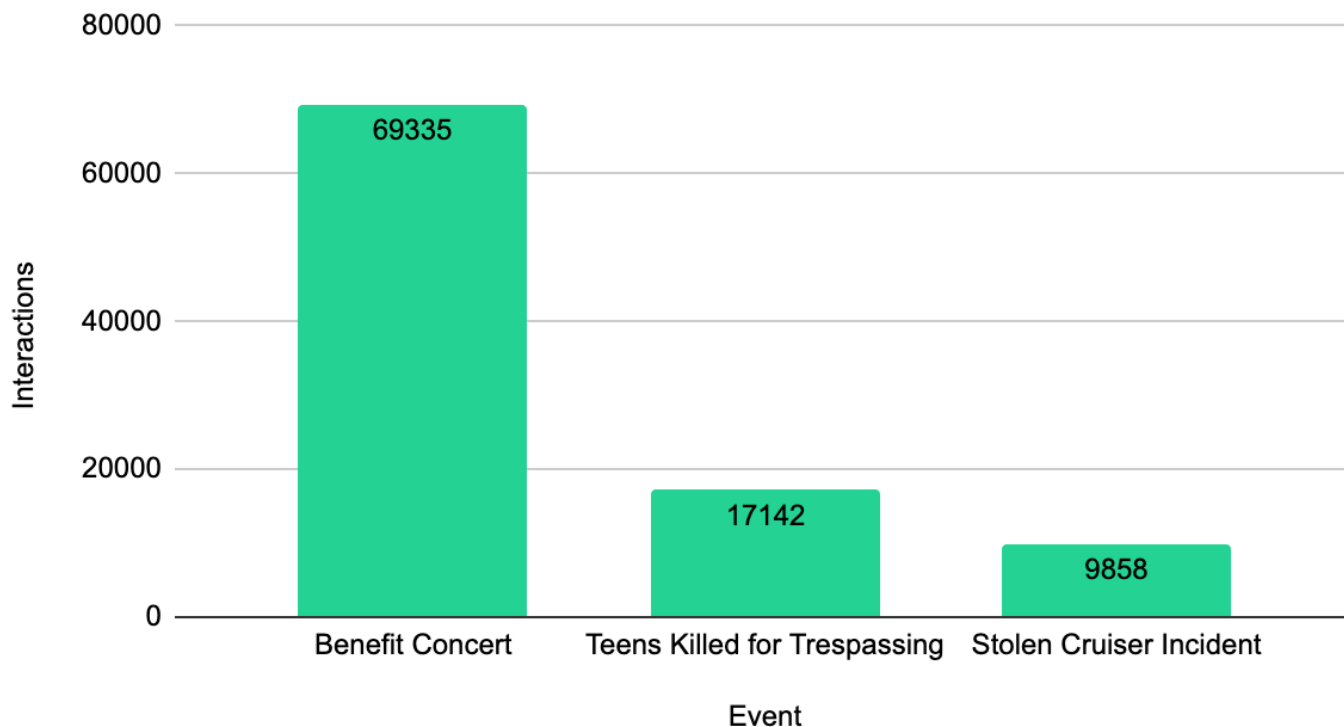
Post-Crisis Initiatives: Permanent Memorial

Permanent Memorial Resident Feedback



Post-Crisis Initiatives: Dave Chapelle Benefit Concert

Event Comparison (8/24-8/31)



Proactive governance in the face of crisis

- Resident-centric crisis monitoring
 - Better communication
 - Cross-department and resident facing
 - Misinformation management
 - Positive engagement and service efficacy
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Thank you!

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