



Using social media for crowd-sourced intelligence & situation monitoring in the all-hazards environment

# Why am I here?



**CHRISTOPHER TARANTINO, MEP CMCP CHEC-III**

- CEO – EPICENTER MEDIA & TRAINING
- TEAM LEAD / DIGITAL MEDIA SPECIALIST – EDSU
- INSTRUCTOR – FEMA EMI MASTER EXERCISE PRACTITIONER (MEP) PROGRAM
- INSTRUCTOR – NYS DIVISION OF HOMELAND SECURITY & EMERGENCY SERVICES
- SUBJECT MATTER EXPERT – NATIONAL DISASTER PREP. TRAINING CTR.
- PAST CHAIR – IAEM EMERGING TECHNOLOGY CAUCUS

# Why are **you** here?

“By the time you hear  
the **THUNDER**, it's too  
late to build THE ARK.”

-UNKNOWN

# What are we preparing for?





Social Media is  
**CHANGING**  
this environment.

# Information is **everywhere**

- ▶ “SoLoMo”
- ▶ Drones/UAVs
- ▶ Video & Live-streaming
- ▶ Augmented Reality
- ▶ Crowdsourcing
- ▶ Citizen Journalism
- ▶ Sensors / “Internet of Things”
- ▶ Many more...

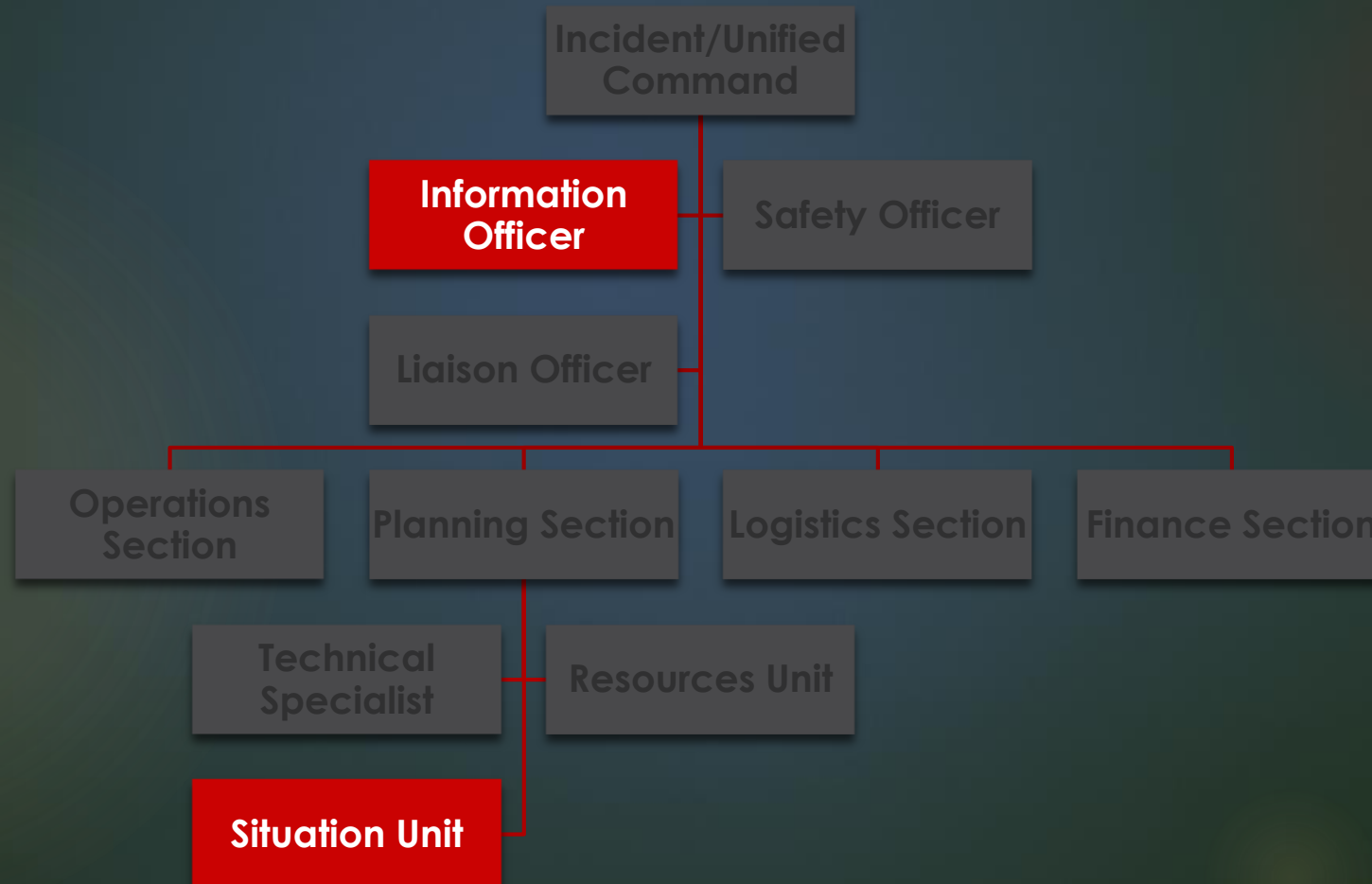


# Where does **social media** & **open-source intel** fit in ICS?

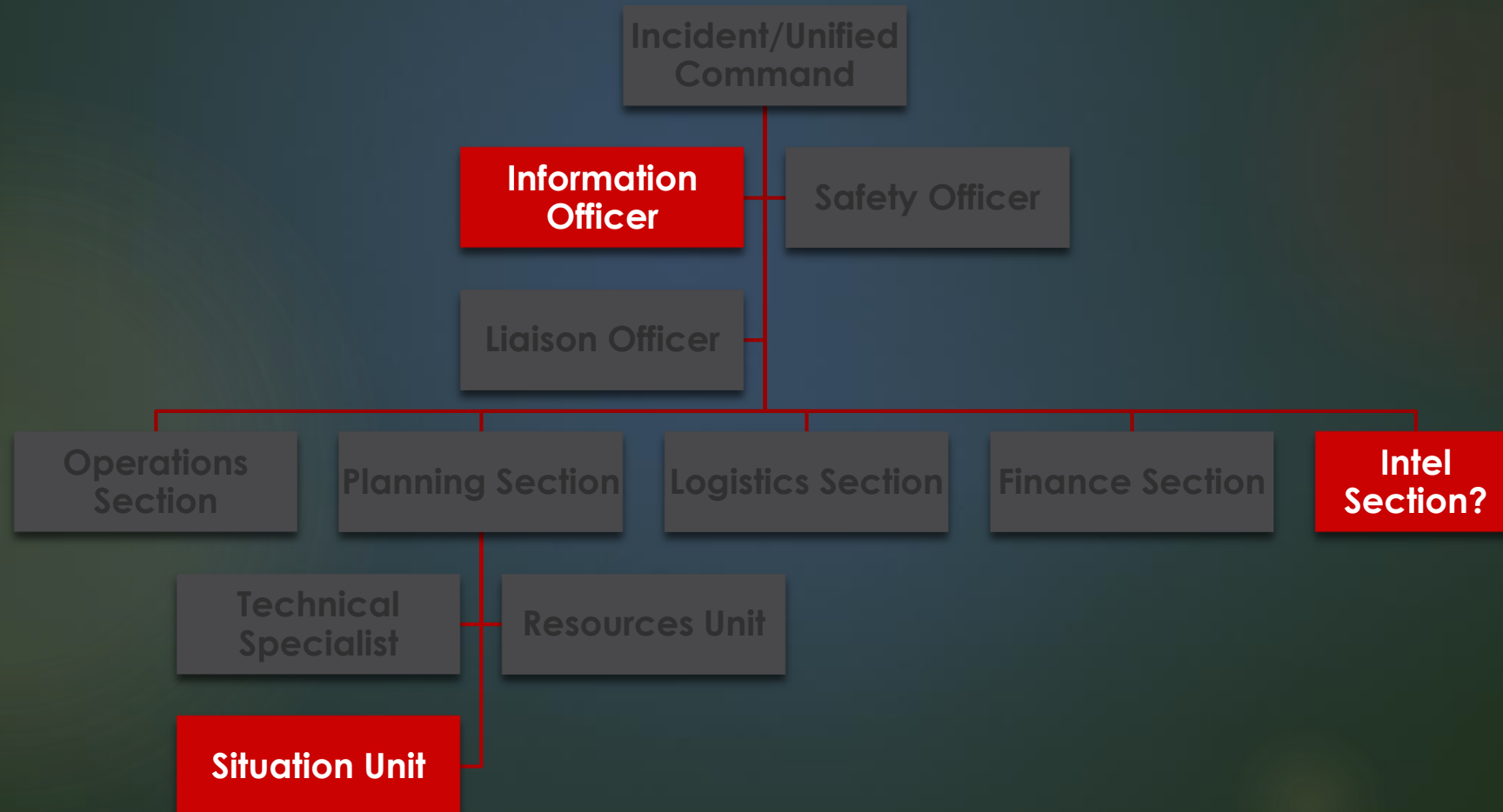




# Where does **social media & open-source intel** fit in ICS?



# Where does **social media & open-source intel** fit in ICS?



# Two methods for managing information

## Public Info Officer

- ▶ Command Staff
- ▶ Works with the media
- ▶ Public as a stakeholder
- ▶ Joint Information System

**Digital Media  
Specialist**

## Situation Unit Leader

- ▶ Planning Section
- ▶ Works within IMT
- ▶ Internal stakeholders
- ▶ Common Operating Picture

**Digital Media  
Specialist**

# Two methods for managing information

## Public Info Officer

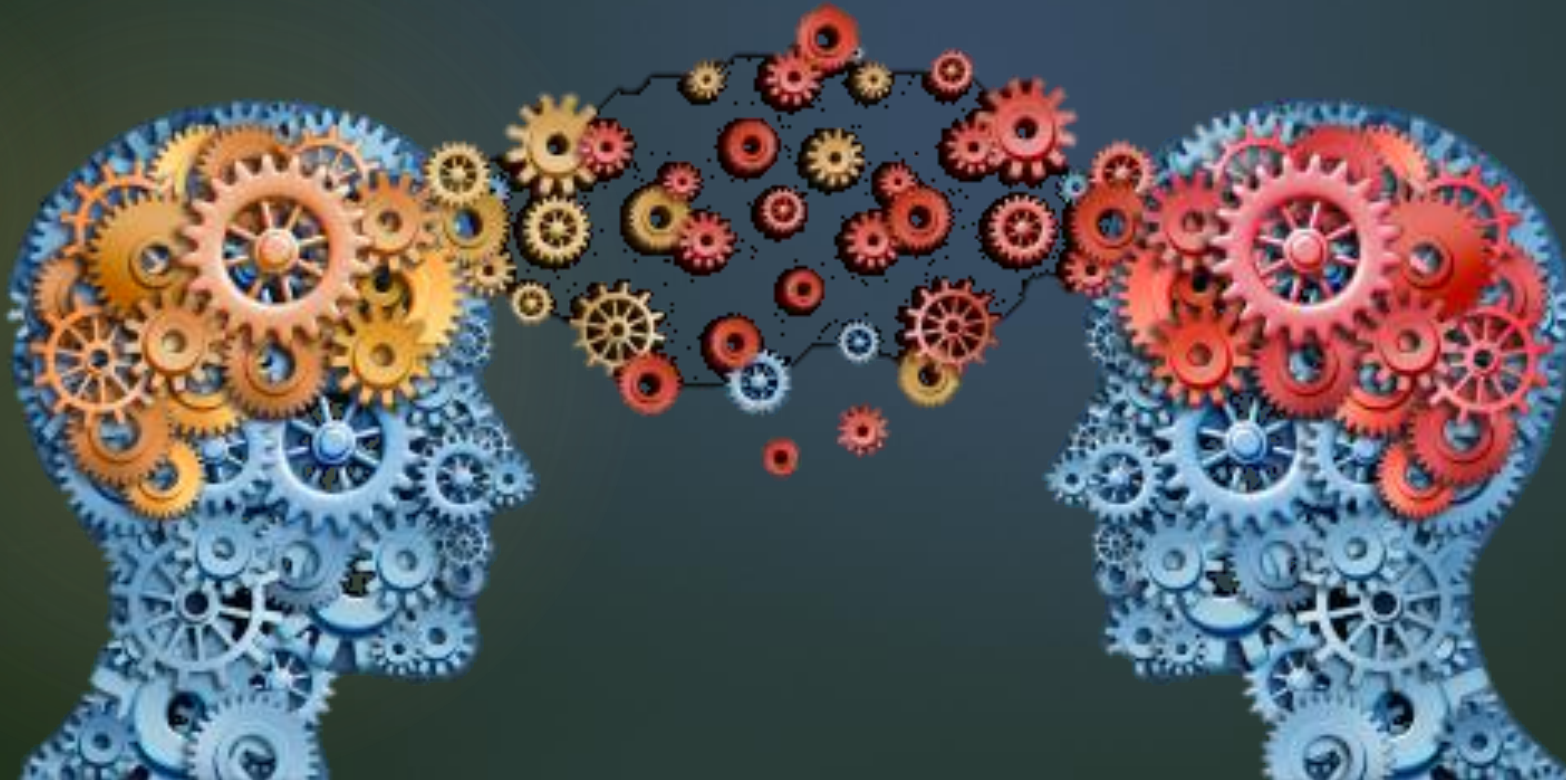
- ▶ Command Staff
- ▶ Works with the media
- ▶ Public as a stakeholder
- ▶ Joint Information System

## Situation Unit Leader

- ▶ Planning Section
- ▶ Works within IMT
- ▶ Internal stakeholders
- ▶ Common Operating Picture

**Digital Media Specialist**

**Data > Information > Intelligence**





# Reduce the “**RED SLICE**”



- What we know we know
- **What we don't know we don't know**
- What we know we don't know

Strong decision-making  
is your **biggest asset**  
in an incident.

# Know how **information spreads**

- ▶ Word-of-mouth
  - ▶ Blogs/Websites
  - ▶ Social media
  - ▶ Phone
  - ▶ Radio & television
  - ▶ Press releases
  - ▶ Text messages
  - ▶ Mobile apps
  - ▶ Sensors
  - ▶ “Citizen Journalists”
- ▶ **No longer centralized**
  - ▶ No longer top-down information sharing
- ▶ **Distributed networks of information**
    - ▶ Influence each other
    - ▶ Correct each other
    - ▶ Inform each other
    - ▶ Varying levels of trust/credibility

# What **type of info** do we need?

## ▶ **Location data**

- ▶ Latitude/Longitude, National Grid, Geocode, social media

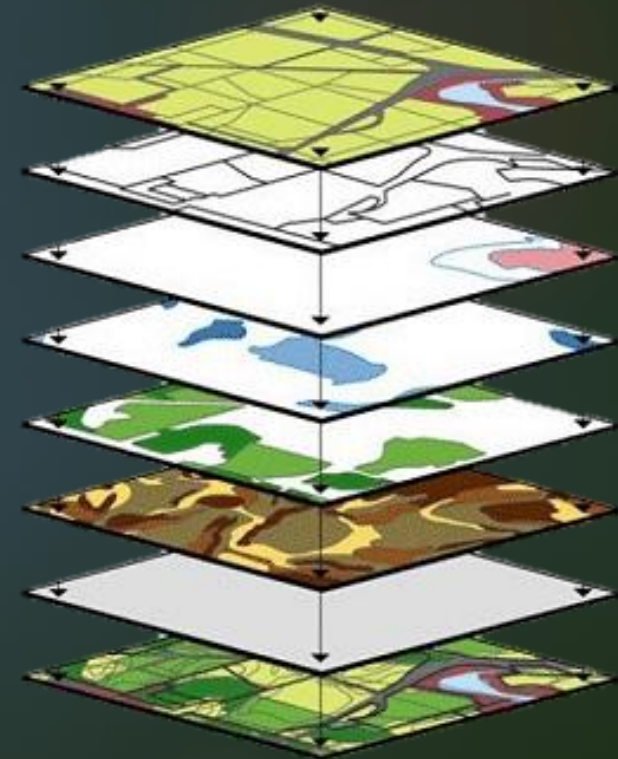
## ▶ **Reports & multimedia**

- ▶ Social media, field observers, email, forms

## ▶ **Queries**

- ▶ Tweets, Posts, Yaks, Periscopes, phone calls, etc.
- ▶ Format: video, audio, text, word-of-mouth

## ▶ **Others?**



# How do we **get it**?

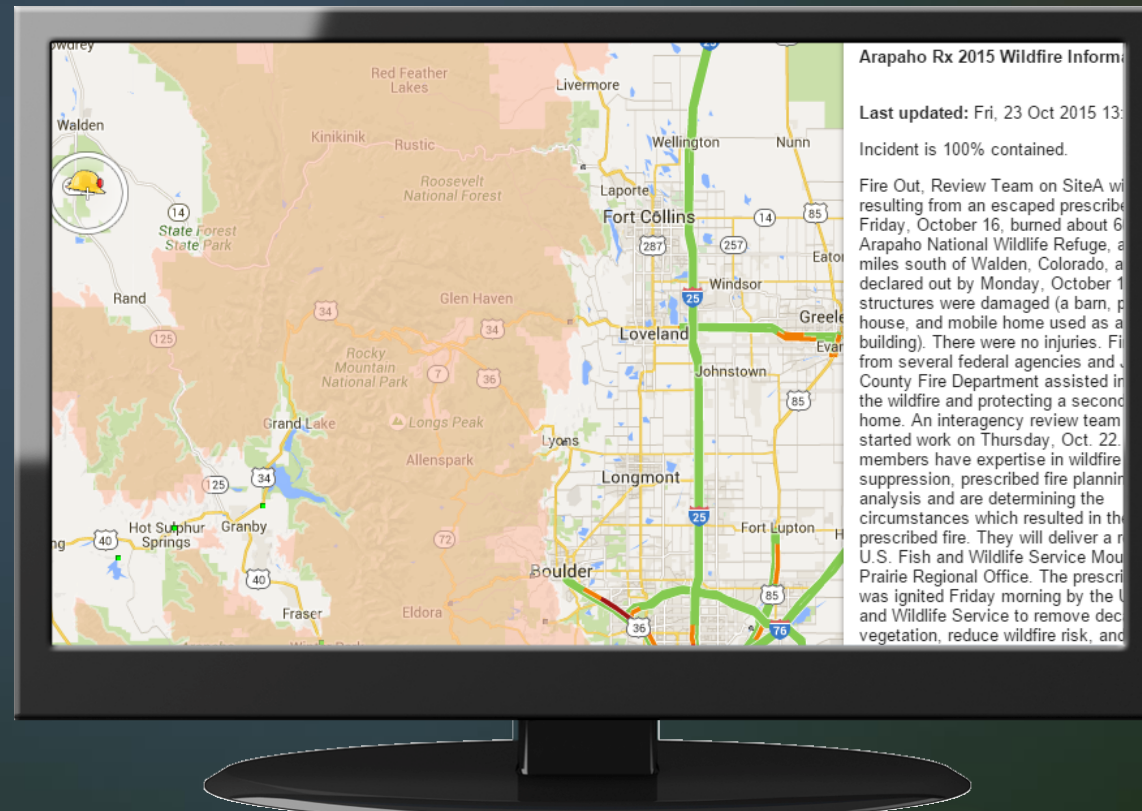
- ▶ Social Media
- ▶ Internal Messaging
- ▶ Formal/Informal Incident Communications
- ▶ Databases & Sensors
- ▶ Geographic Information Systems (GIS)
- ▶ Weather Monitoring
- ▶ Field Observers
- ▶ Citizen Journalism & Crowd-sourcing



# Google CrisisMap

The **tools** of  
the trade

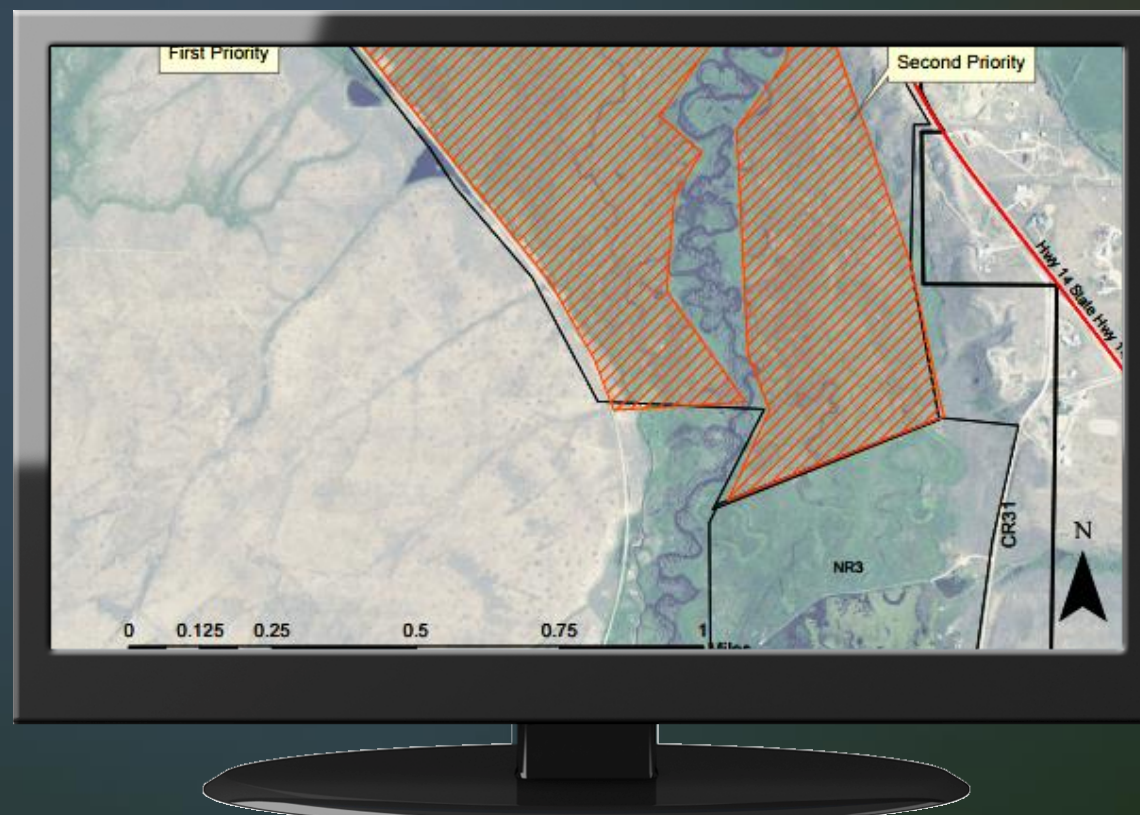
Weather & Crisis Mapping





The **tools** of  
the trade

Wildfire & Incident  
Management Info. System



# TweetDeck

The **tools** of  
the trade  
Social Media Monitoring



# NUVI Social Intelligence

The **tools** of  
the trade

Social Media Analysis &  
Reporting





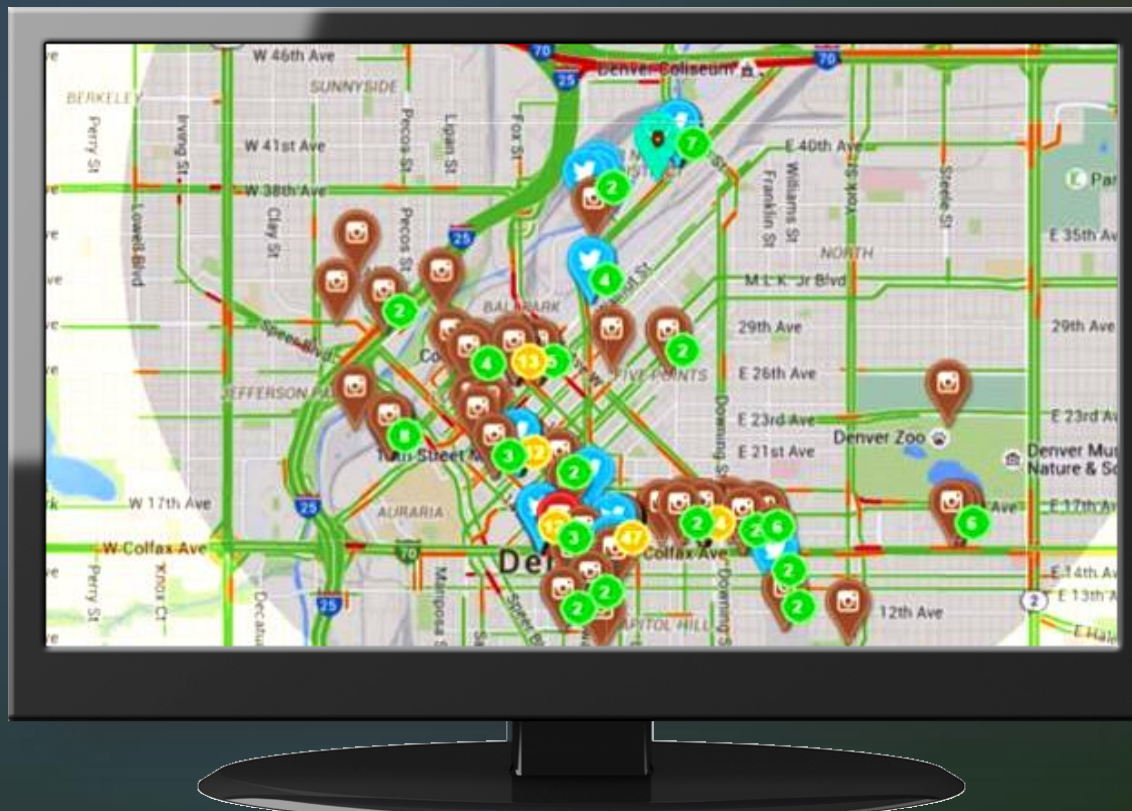
# Life**Raft** / Navigator



@epimetra

The **tools** of  
the trade

Social Media Monitoring



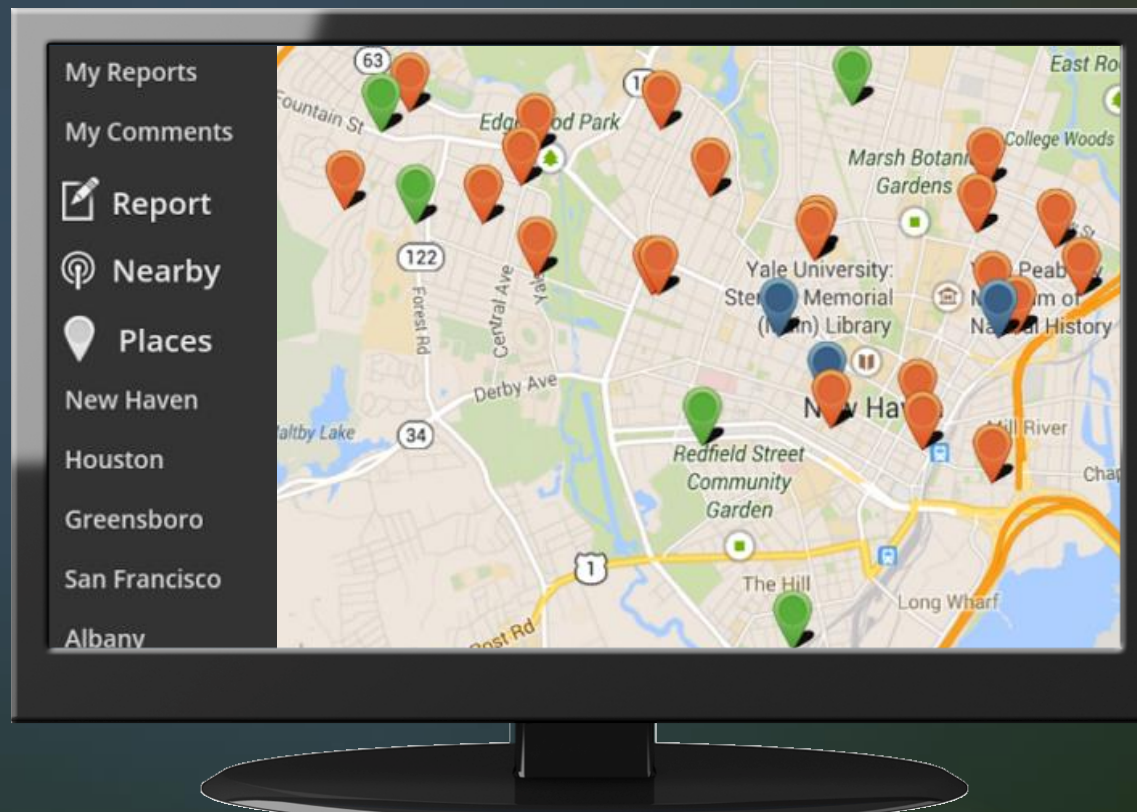
# SeeClickFix



@epimetra

The **tools** of  
the trade

Social Media Reporting &  
Data Collection





# CommandWear

The **tools** of  
the trade

Personnel Tracking &  
Internal Messaging



# Many Others



@epimetra

The **tools** of  
the trade

What do you use?

What are your  
goals/objectives?



# Your **Toolbox**

## **Pros**

- ▶ Many tools to choose from
- ▶ Visual (often map-based)
- ▶ Many sources for information
- ▶ Data likely integrates with existing platforms
- ▶ Improved Common Operating Picture (COP)

## **Cons**

- ▶ Many tools to choose from
- ▶ Platforms seldom integrate/"talk" to each other
- ▶ "Firehose" of information
- ▶ Varying quality
- ▶ Accessibility
- ▶ Skill-gaps & lack of training
- ▶ Tools may not be intuitive

# Keys to **Success**

- ▶ Integrating Operations, Situation Unit, and Command Staff information needs & resources
- ▶ Holistic media monitoring
- ▶ Shared information channels and transparent goals/objectives
- ▶ Clear understanding of tools/technique
- ▶ Management by objective
- ▶ Constant intra- and inter-team communication





@epimetra

# Case Studies

FROM EPICENTER'S DEPLOYMENT SUPPORT UNIT (EDSU)





**Training &  
Exercises**



**Planned  
Events**



**Natural  
Disasters**



**Weather  
Events**



**Organizational  
Crises**



**Social Media  
Team-building**



**Technology  
Partnerships**



**Deployment  
Support**

# Lessons Learned in Erie County (Winter Storm “Knife” – DR-4204)



@epimetra



## Media Monitoring



# Lessons Learned in Erie County (Winter Storm “Knife” – DR-4204)



@epimetra



## Media Monitoring



# Lessons Learned in Erie County (Winter Storm “Knife” – DR-4204)



## Media Monitoring





# Lessons Learned in Erie County (Winter Storm “Knife” – DR-4204)



@epimetra



## Media Monitoring



24 Nov 2014  
STILL DIGGING OUT in West Seneca. Boxes marked 'sandbags', empty. #MeltDown @WGRZ

4 7



# Lessons Learned in Erie County (Winter Storm “Knife” – DR-4204)

- ▶ Media looks for stories on social media
- ▶ Stakeholders create stories on social media
- ▶ Duplicated and/or unverified info runs rampant
- ▶ **PIO can get “ahead” of media & take advantage of “small wins”**

## Media Monitoring

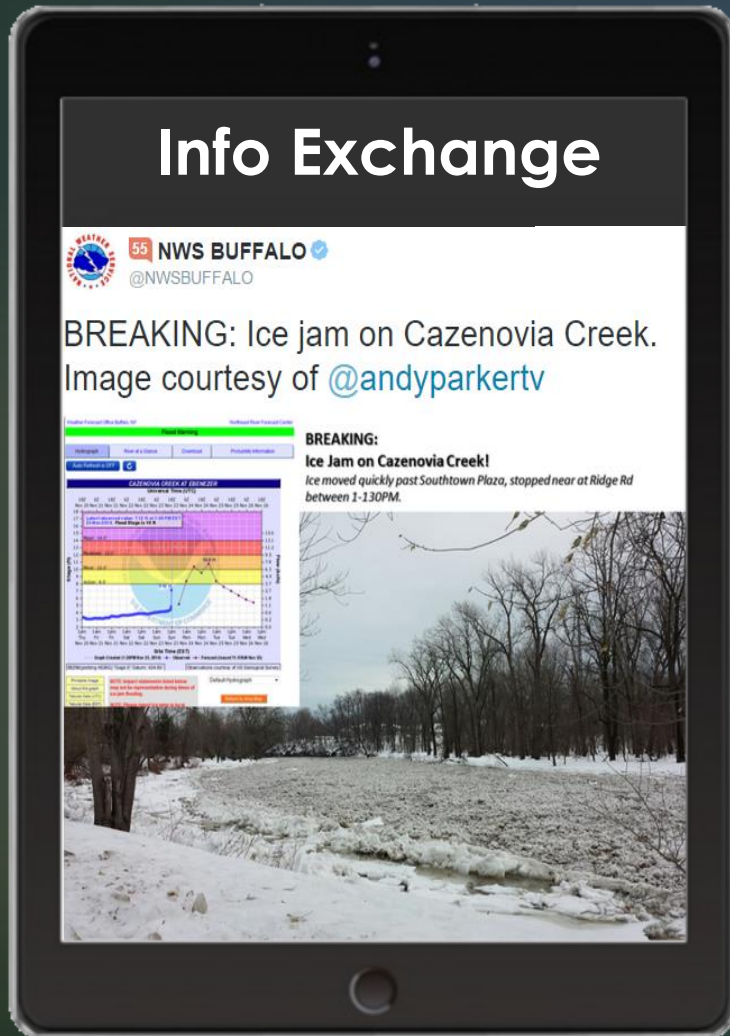


52 Jericka Duncan  
@Jerickaduncan

Last minute flood preps in West Seneca



# Lessons Learned in Erie County (Winter Storm “Knife” – DR-4204)



- ▶ Information exchange needs to be seamless
- ▶ Need to use many tools simultaneously
- ▶ Personnel tracking & “ground truth” go hand-in-hand
- ▶ **Utilize all necessary resources during rapidly-expanding incidents**

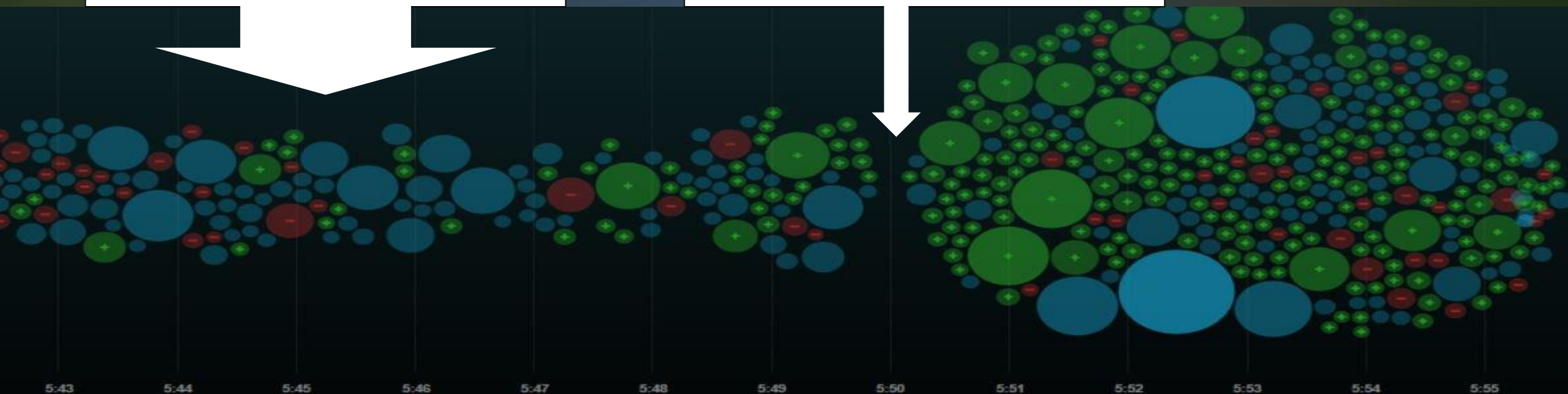
Numbers have an  
important **STORY** to tell.  
They rely on you to give  
them a **VOICE**.

-STEPHEN FEW

# Lessons Learned at Watkins Glen International (NASCAR)

Negative sentiment re: increase in  
cautions/restarts prior to finish

Denny Hamlin wins Cheez-It 355  
Race at approx. 17:50hrs



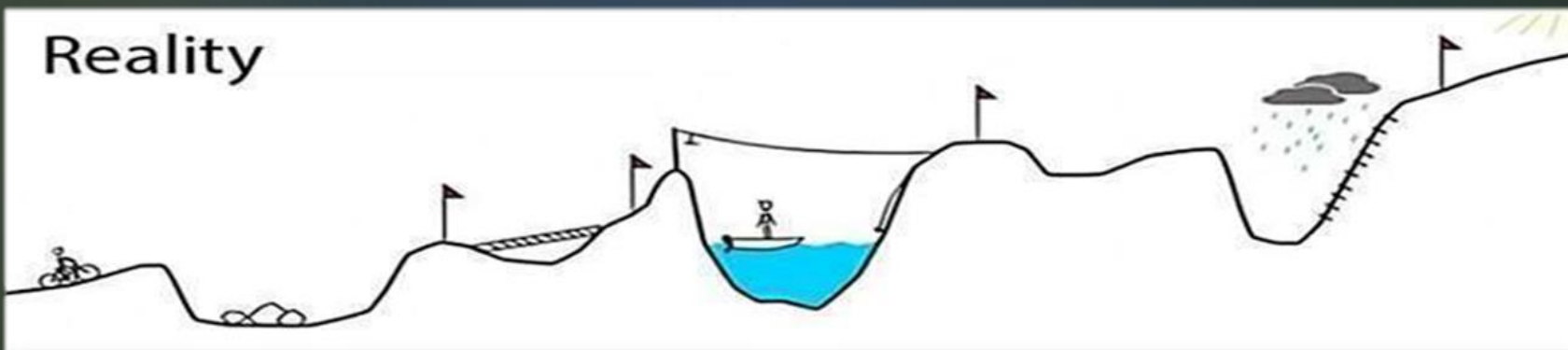


# What **plan**?

Your plan



Reality





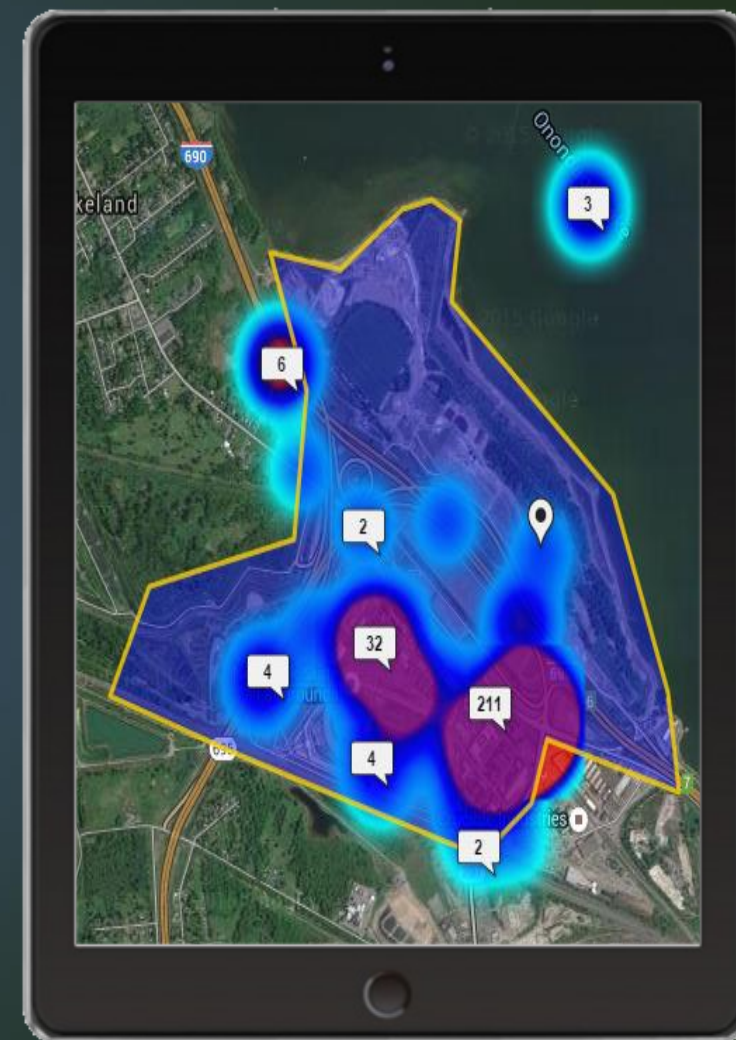
# Lessons Learned at the **NYS Fair (2015)**



@epimetra

newyorkstatefair  
sunshinehorses  
fairgrounds tough snowflake  
fries guys cheese bacon  
fun ice photo heart love dragon  
daily ferris wheel state member  
niece summer time integral  
horsesofinstagram fair beefday wheel  
vera life eyes support baby  
find ads nysfair bar syracuse  
project great 93qphotodare  
political house  
jumper family york notsostandard  
clothesline

9/3/15



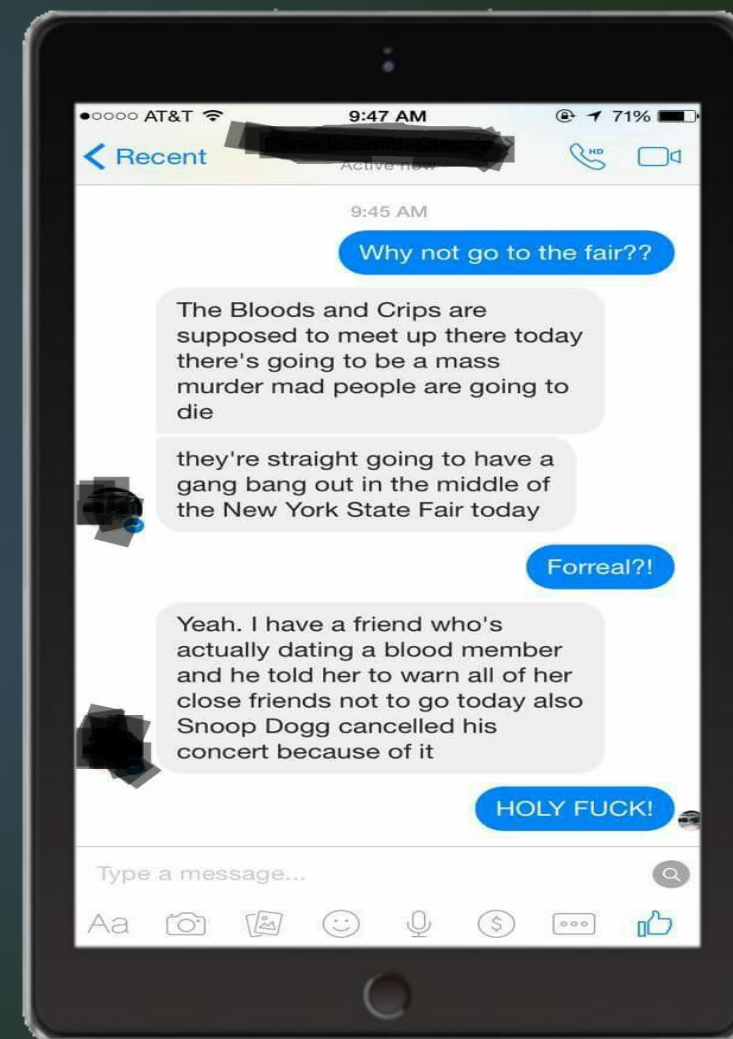
# Lessons Learned at the **NYS Fair (2015)**



@epimetra

newyorkstatefair  
sunshinehorses  
fairgrounds tough snowflake  
fries guys cheese bacon  
fun ice photo heart love dragon  
daily ferris wheel state member  
niece summer time integral  
horsesofinstagram beefday wheel  
vera life eyes fair support baby  
find ads great nysfair bar syracuse  
political family york notsostandard  
jumper clothesline

9/3/15



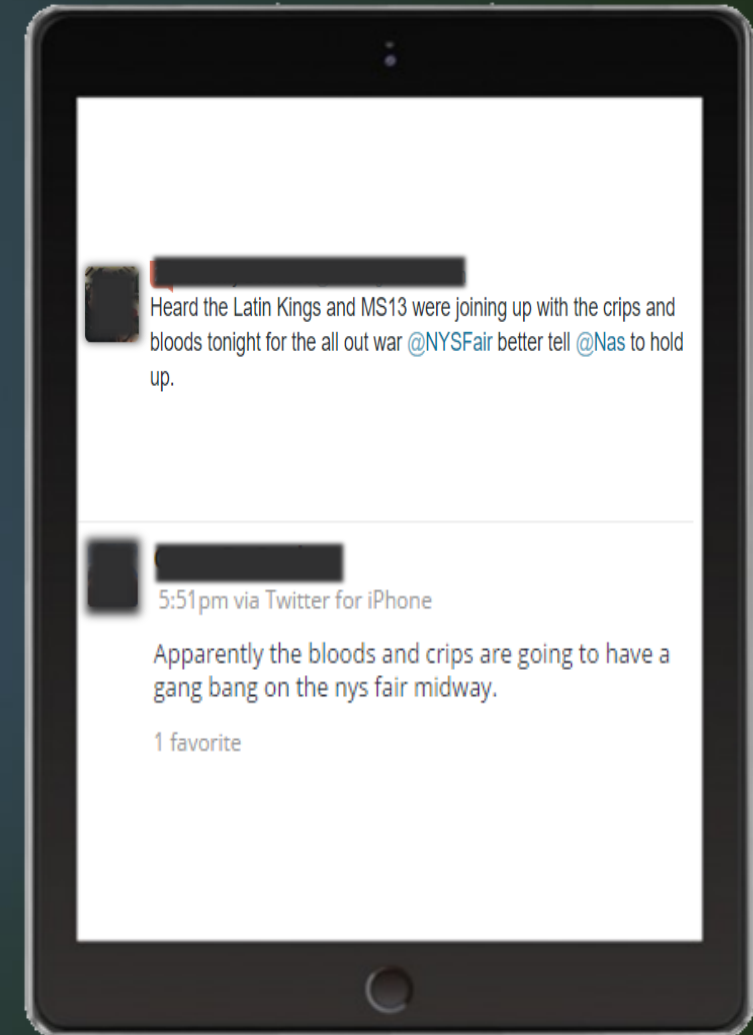
# Lessons Learned at the NYS Fair (2015)

9/3/15

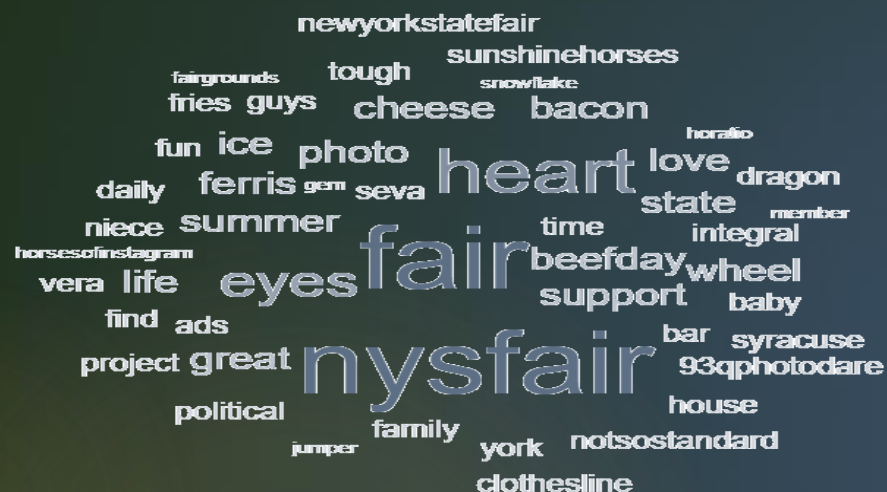
newyorkstatefair  
sunshinehorses  
fairgrounds tough snowflake  
fries guys cheese bacon  
fun ice photo heart love dragon  
daily ferris seva state member  
niece summer time integral  
horsesofinstagram beefday wheel  
vera life eyes fair support baby  
find ads nysfair bar syracuse  
project great 93qphotodare  
political house  
jumper family york notsostandard  
clothesline

9/4/15

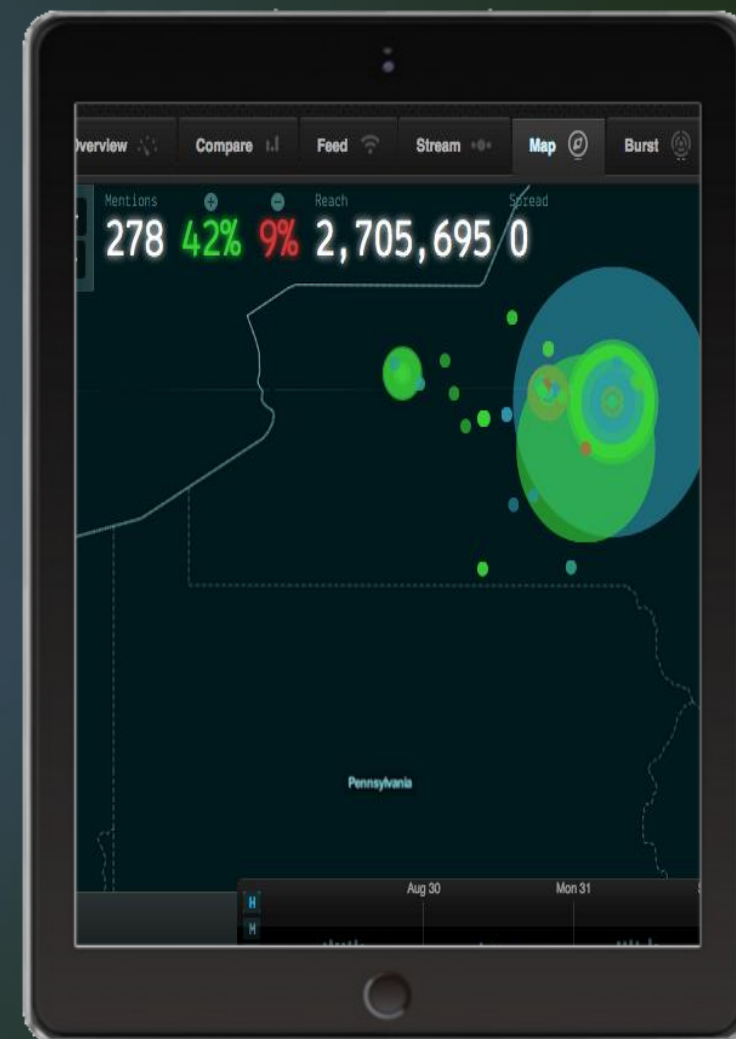
midwayolympics  
vanessartwcnws michaelbenny  
ducks teen online nyspolice state  
love snoopdogg chatter forget  
reports tonight gangdidn bomb bloods  
bens midway concert  
mandalambert gun nysfair bacon syracuse  
good amp trouble newyorkstatefair  
crips expected fair shootout ringing  
bacomb nys killed snopes cancel beat  
earlier violence shoot heaven  
weekend predicting  
mlarsontwcnws



9/3/15



9/4/15





# Lessons Learned at the **NYS Fair (2015)**

- ▶ Social media monitoring needs to be integrated & informed
- ▶ Integrating proactive, safety-oriented messaging can affect outcomes
- ▶ All PIOs need to be well-versed in crisis & emergency communications
- ▶ **Data can tell a compelling story (after an event & during)**





**TECHNOLOGY** is a  
useful servant, but a  
**dangerous** master.

-CHRISTIAN LOUS LANGE



@epimetra

# Q&A Session

ASK ANYTHING YOU'D LIKE!

**Christopher Tarantino,** MEP CMCP CHEC-III

[about.me/chris\\_tarantino](https://about.me/chris_tarantino)

CEO – Epicenter Media & Training  
[ctarantino@epimetra.com](mailto:ctarantino@epimetra.com)  
@Tarantino4me | (585) 210-3011

**THANK YOU!**

