



Use of Broadband Technology in Public Safety Response

Mike Cox, Chief of Operations

**Division of Fire
Henrico County Virginia**

Executive Management's Goals

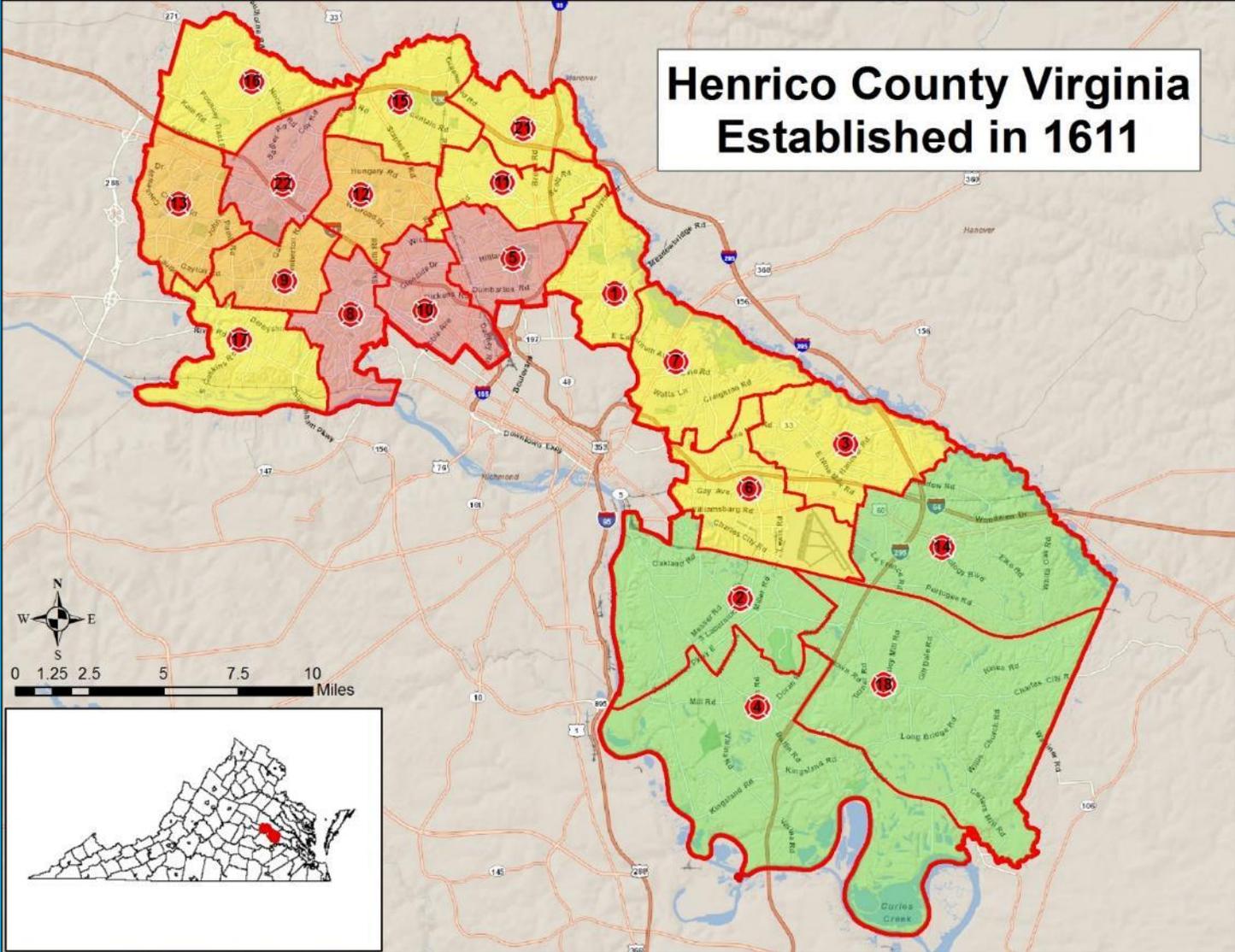
- **Optimize resource management / response.**
- **Enhance event communications and information management.**
- **Provide Incident Command, Agency Management, and event personnel with timely information for situational awareness and decision support.**
- **Manage the records of response actions at the event.**



- All Hazards Accredited Agency
- 548 career employees
- 20 firehouses
- 244 sq miles
- ISO class 1



Henrico County Virginia Established in 1611



We set out to understand our data through the accreditation process and improved our organization along the way...

- **How we used the Accreditation Standards of Cover and Critical Task Analysis to implement major operational changes and to improve the way we solve problems.**
- **How this process opened our eyes to the data problems that were hiding in our organization.**
- **How we utilize wireless technology to manage resources, communicate a common operating picture, and provide the best service possible to our customers**

New way of looking at our data revealed some concerns...

- Data Reliability
- Fire Call Classification
- Alarm Assignments
- Structure Fire Hazard Analysis



“Residential”

“Commercial”

“Multi-family”

*The Troops knew this didn't make sense,
and they knew what we needed to do*

We needed to classify structures not on the USE GROUP but
instead use **RISK LEVEL**.

From:

“Residential”

“Multi-family”

“Commercial”

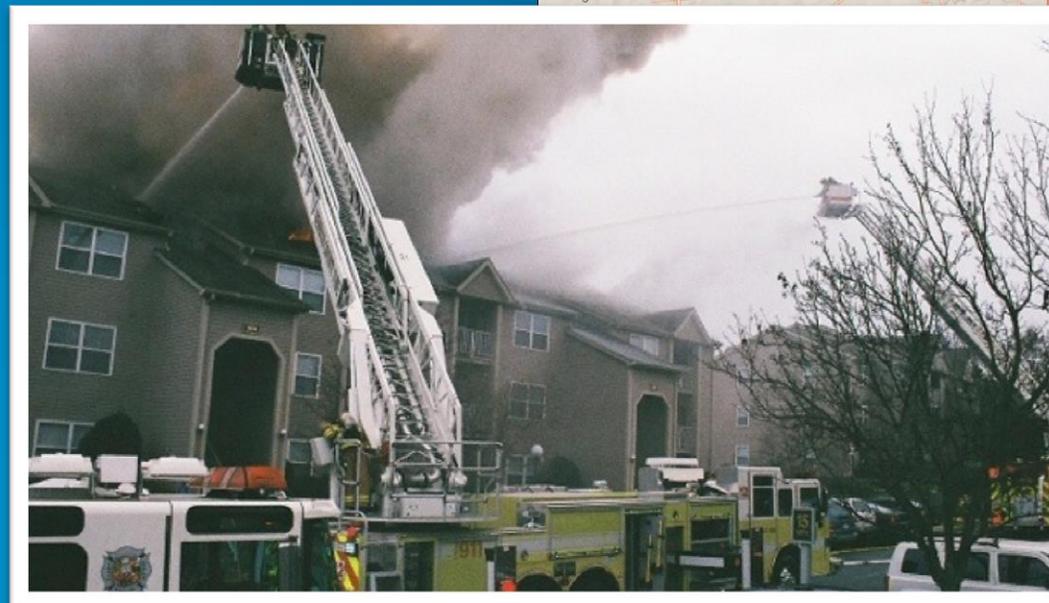
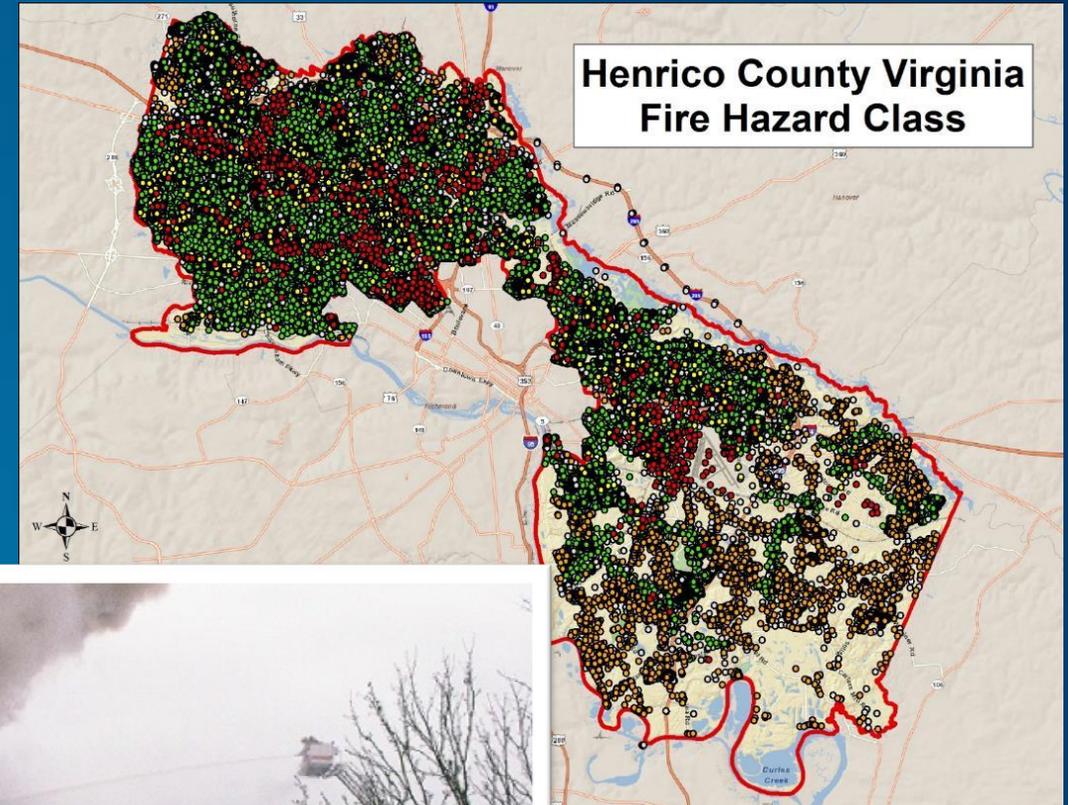
“Hotel / Motel”



Hazard Classification – for every address

- **Data resources were available**

- **Property classification**
 - Building Inspectors Office
- **Square footage**
 - Real Estate Assessments
- **Number of Stories**
 - Real Estate Assessments
- **Pre-Planning Information**
 - Network Access
- **Resource Locations**
 - AVL Technology



How can we apply this technology to special events and disaster management?



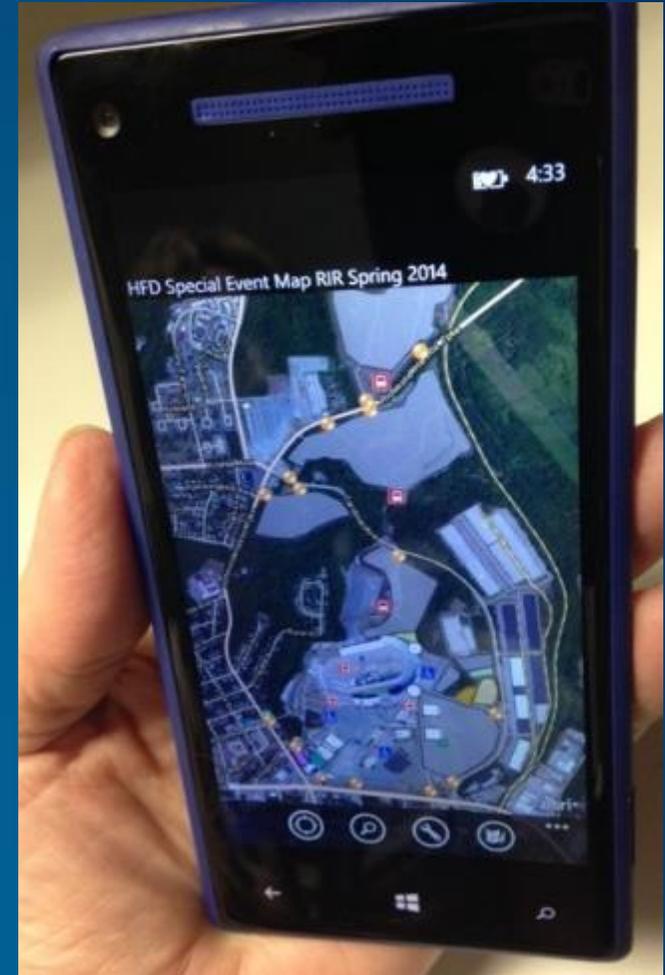
Special Event Operations

- Spectator capacity of 98,000
- More than 50 public safety organizations involved in operations
- 1,200+ individuals report for duty on Saturday
 - Walking teams
 - Bike teams
 - Carts

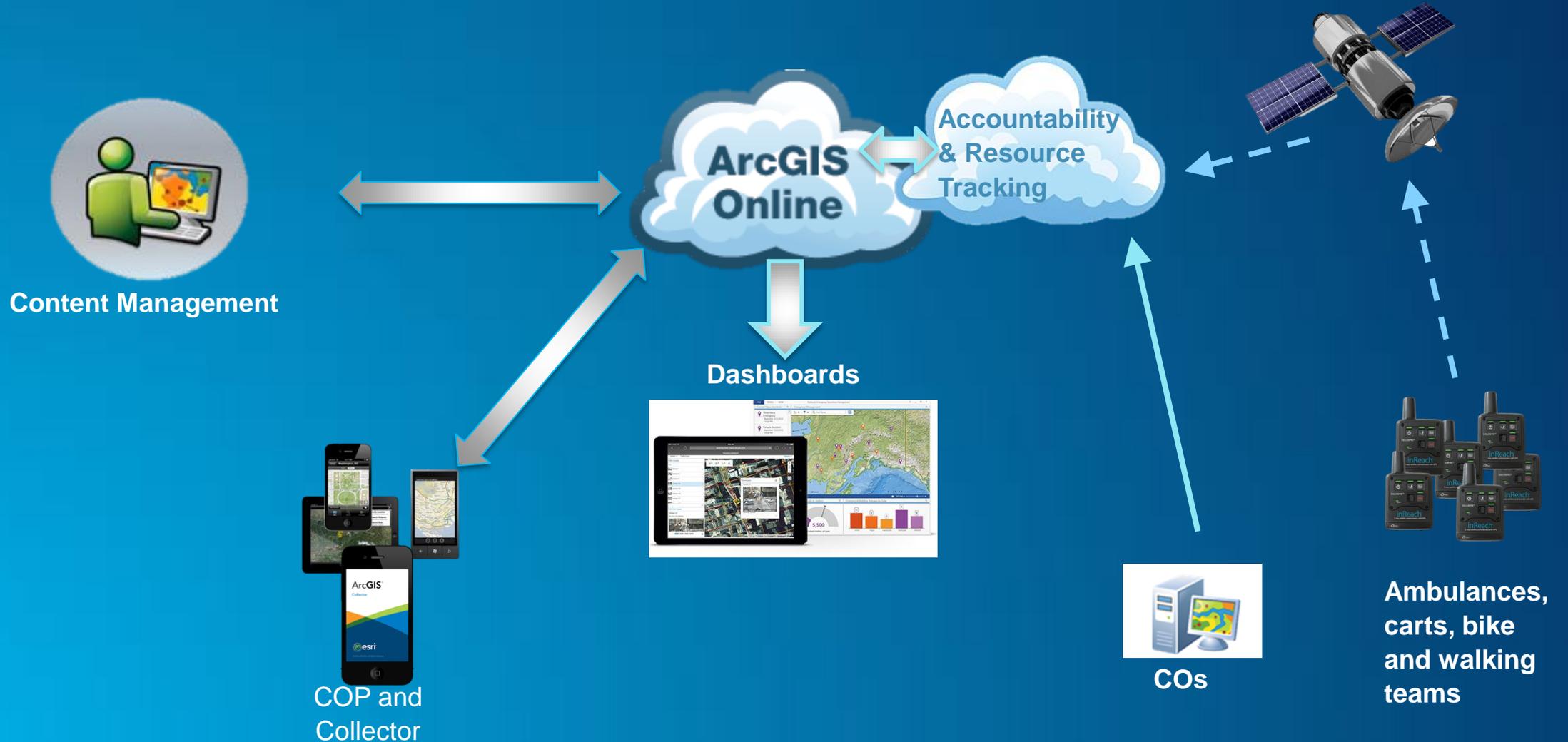


Incident Management Team + Technology Specialists to provide the Richmond International Raceway COP

- **IMT Planning** - began working with Police to agree on the view
- **Fire GIS** - used symbology from Public Safety COP template
- **Moved map layer datasets into the cloud via Henrico Fire AGOL Organization**
- **Develop component web maps and mobile apps**
- **Smartphone / tablets could be used to communicate spatial information to/from the field**



Richmond International Raceway Spring 2015 Data Plan



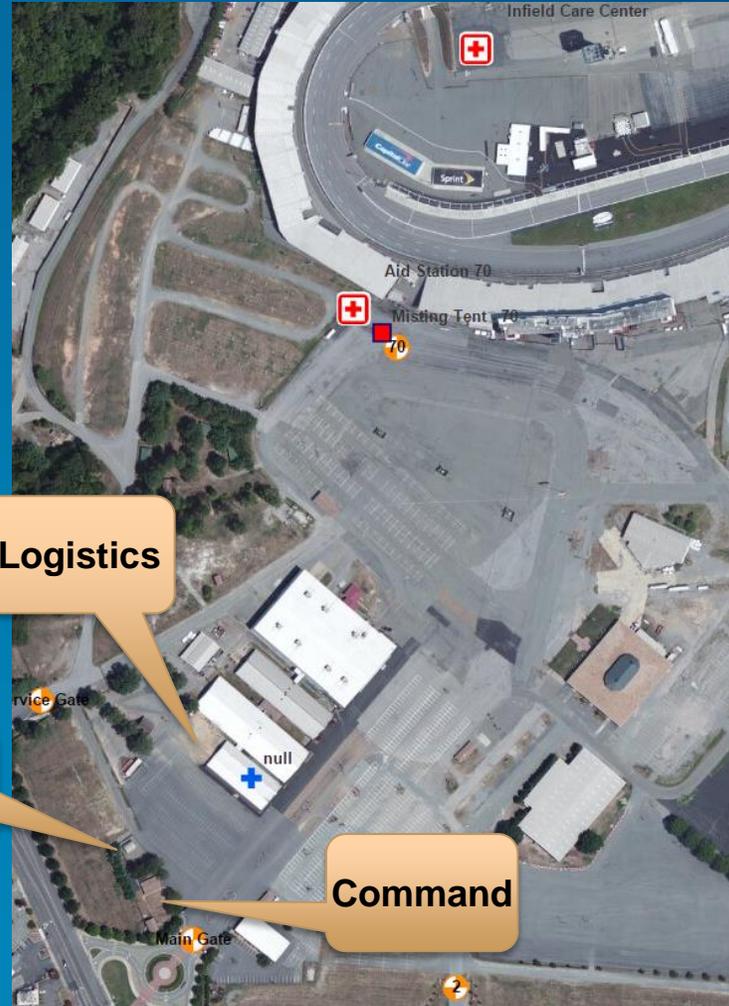
Creating a scalable process with minimal dependence on technology expertise!

DATA FLOW DIAGRAM

Richmond Raceway
Spring 2015
Data flow diagram

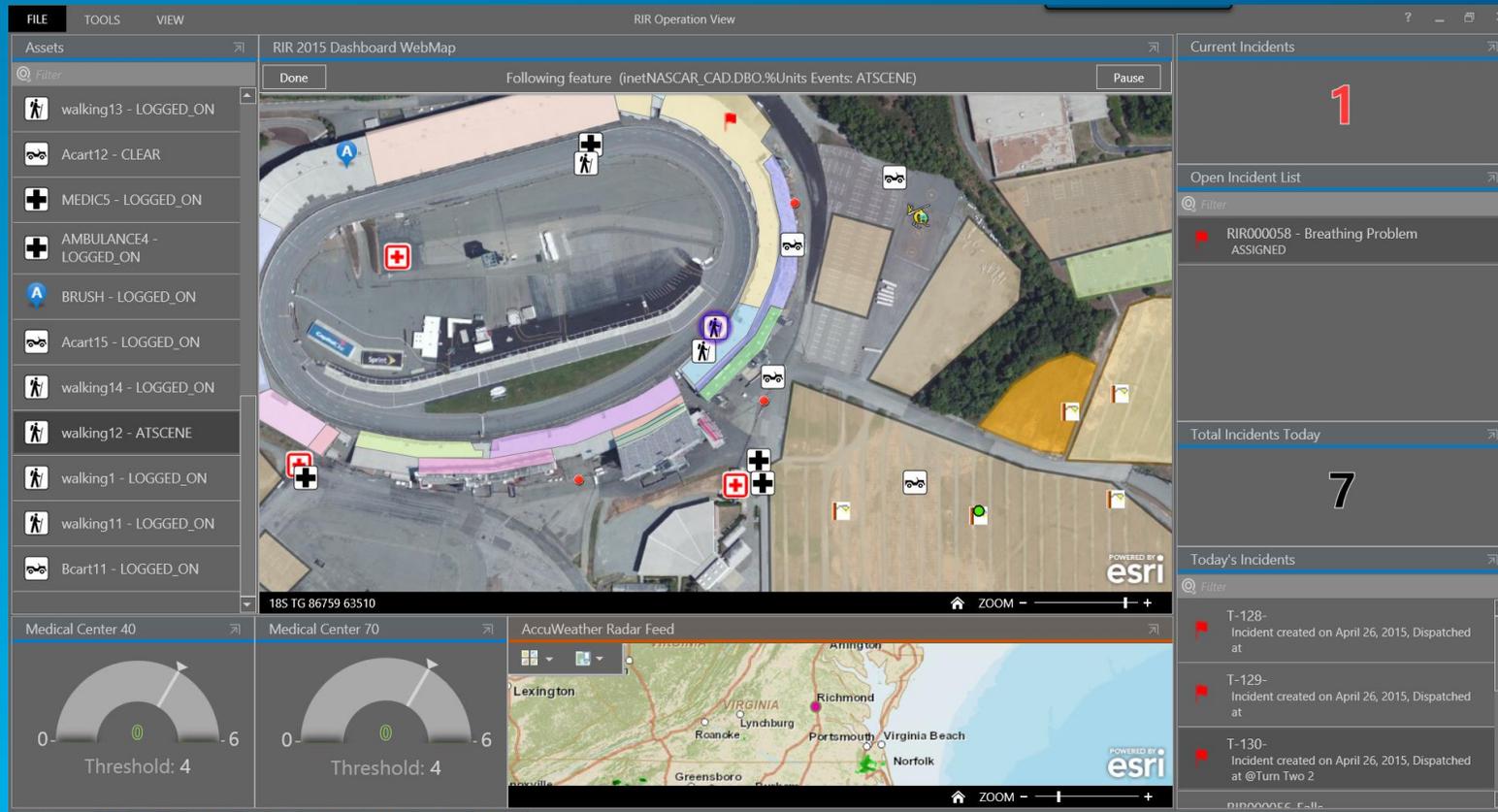


Dashboard, Web Maps and Mobile Apps connect All Event Staff



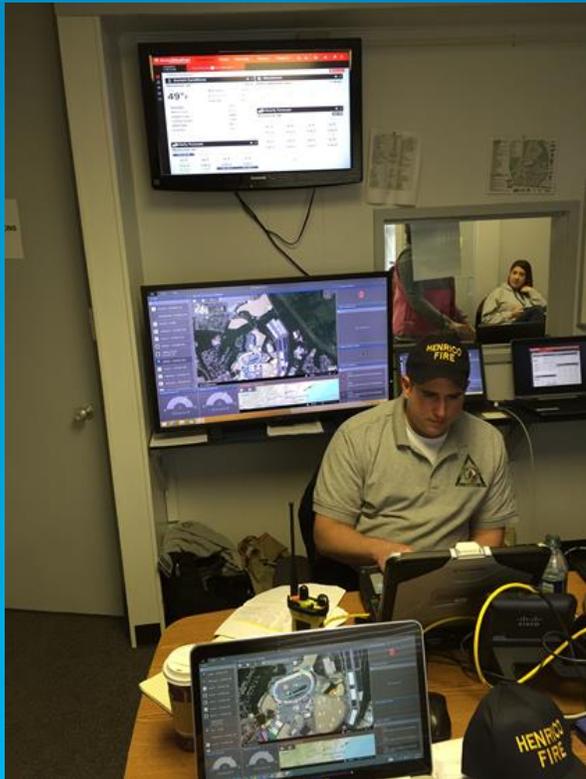
- EOC
- Throughout the event site
- On any device!

Spring 2015 – Successful Implementation

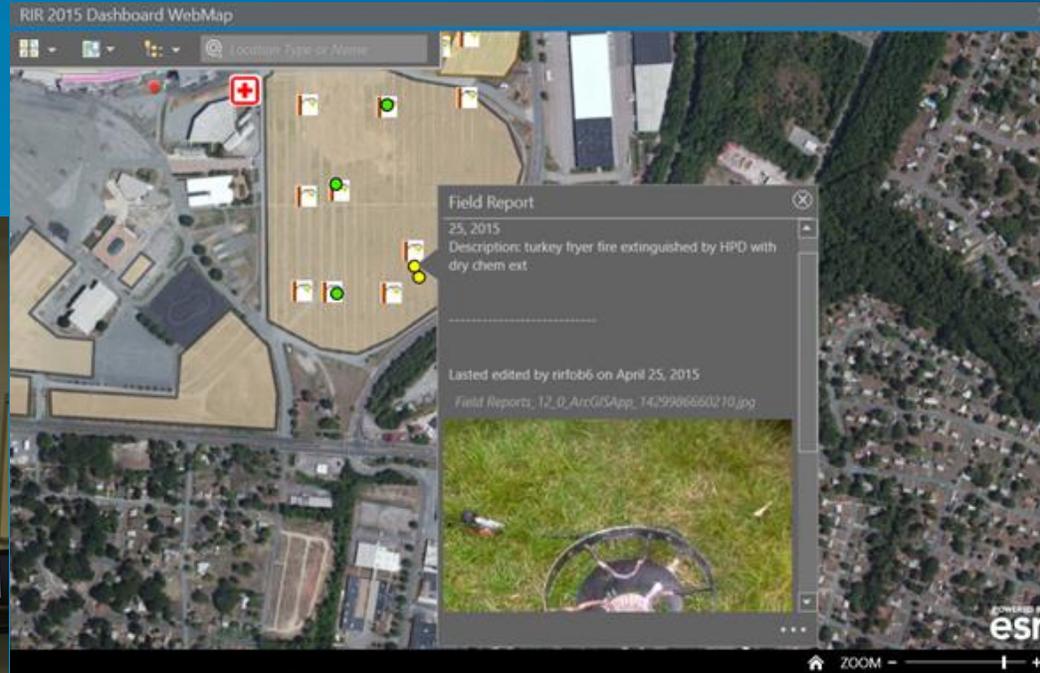


- Full Tracking of Response Resources Integrated with Incident Dispatch
- Dashboards specific to Command and Dispatch
 - Ability to monitor resource demands
 - Ability to monitor incident types
 - Ability to identify response team status and location

AGOL Dashboards – Custom Views



Incident Command



EOC



Communications



Connectivity Eliminates Interoperability Problems

- Dispatch assignments consider resource type, status and location
- The Command Center is able to monitor and share dynamic views
 - Location and status of tracked teams
 - Event incident statistics
 - Information feeds from other spatial services (ex traffic and regional weather overlays)
- Scalable – CAD and Tracking for incident dispatch, Tracking for SAR, Collector for Damage Assessment

UCI 2015



The screenshot shows the homepage for the UCI Road World Championships in Richmond, VA, 2015. At the top left is the UCI logo and the event title. A search bar is located at the top right. Below the header is a navigation menu with links for 'THE EVENT', 'MEDIA/BLOG', 'TRAVEL OFFICE', 'GET INVOLVED', 'PARTNERSHIPS', 'GEAR', and 'CONTACT'. The main banner features a cyclist in a blue and yellow jersey celebrating on a podium, with a large crowd in the background. The text 'EXPERIENCE THE WORLDS' is prominently displayed, followed by 'ACCOMMODATION, TRAVEL PACKAGES, VIP ACCESS, TRANSPORTATION, EXPERIENCES'. A large 'TISSOT' logo is overlaid on the image. At the bottom of the banner, a countdown timer reads 'WELCOME WORLD: 79 DAYS 7 HOURS 42 MINUTES 32 SECONDS'.

uci

UCI ROAD WORLD CHAMPIONSHIPS
RICHMOND 2015 | USA

Search

SEPTEMBER 19-27, 2015

THE EVENT | MEDIA/BLOG | TRAVEL OFFICE | GET INVOLVED | PARTNERSHIPS | GEAR | CONTACT

EXPERIENCE THE WORLDS

ACCOMMODATION, TRAVEL PACKAGES, VIP ACCESS, TRANSPORTATION, EXPERIENCES

TISSOT
SWISS WATCHES SINCE 1853

WELCOME WORLD: 79 DAYS 7 HOURS 42 MINUTES 32 SECONDS

UCI WORLD ROAD CYCLING CHAMPIONSHIPS AT A GLANCE

- 450,000 onsite spectators from the Richmond region and across the globe over the course of the nine-day event
- TV audience in the hundreds of millions
- 1000 athletes

Common Operating Picture - Dashboard

UCI Road Circuit Operation View

Assets

- Bike Team LEO - RPD-BT97 - 9/25/2015 20:01:00
- Bike Team LEO - RPD-BT99 - 9/25/2015 20:09:30
- Bike Team LEO - RPD-BT98 - 9/25/2015 20:05:30
- RACE Unit - Charlie1 -

Current Weather...

- [KFCI] Richmond/Chester
- Wind Speed: 9 km/h

NOAA Radar Map

UCI Road Circuit Dashboard Map

Place or Address

Open Incidents

6

Open Incident List

Filter

- PENDING: TRAFFIC HAZARD 9/25/2015 20:02:23 UCI307 - THAZ N 21st St & E Franklin St
- ASSIGNED: TRAUMA 9/25/2015 19:21:40 UCI299 - TRAUMA : Nearest: 1001 E Main St

All Incidents Today

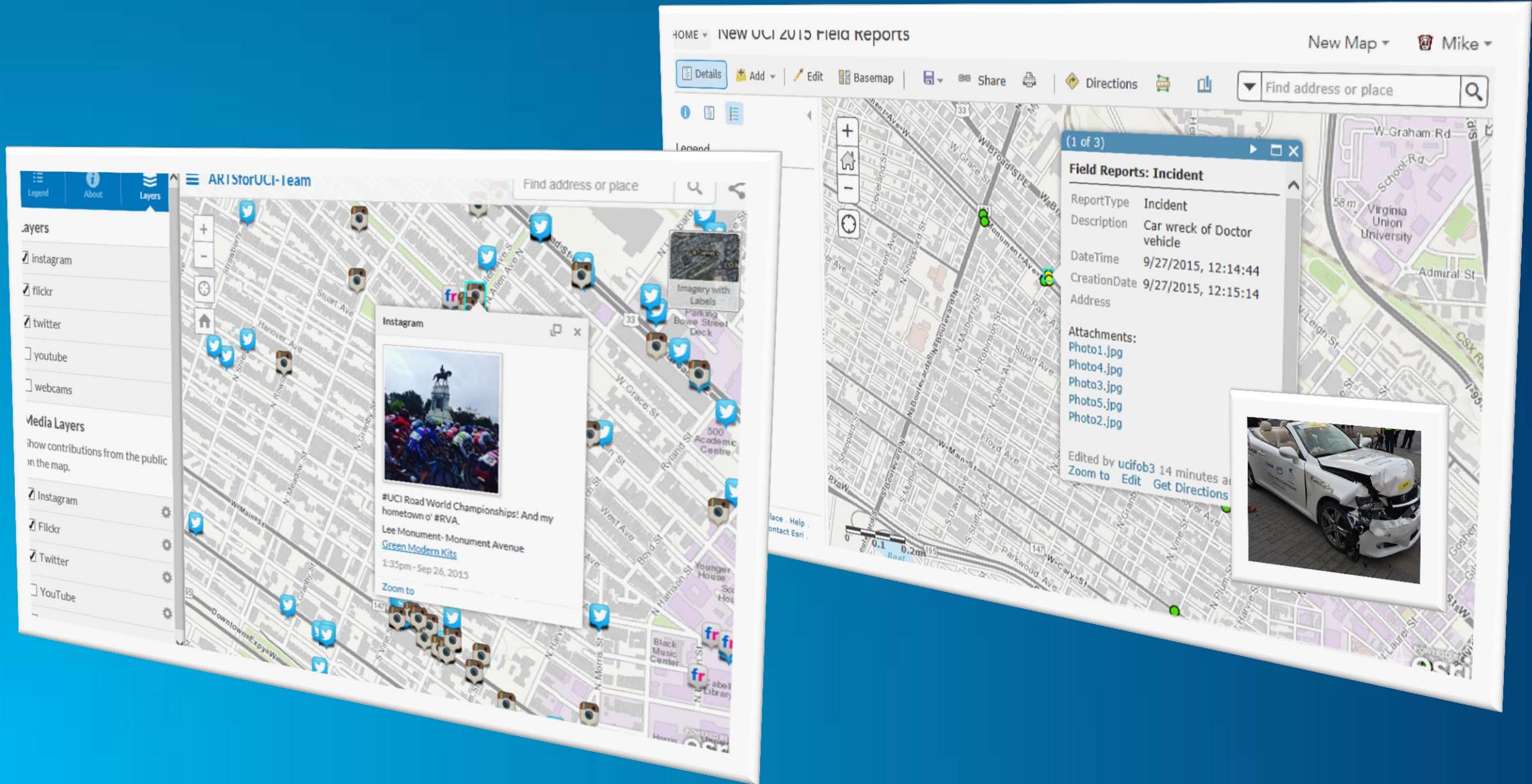
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All Incidents Today

Filter

- CLOSED: [911H] 911 HANG UP: UCI238

Common Operating Picture – Field Reports





Thank You

**Henrico County Division of Fire
Henrico, Virginia**

<https://www.facebook.com/HenricoCountyFire>

<http://henrico.us/fire/>