

Welcome to the National Geospatial Preparedness Summit

August 4-5, 2015
Washington, DC





Lessons Learned and Solutions in Applying GIS for Special Events

2015 National Geospatial Preparedness Summit

Ryan Walsh, Boston Regional Intelligence Center

Jon Pedder, ESRI

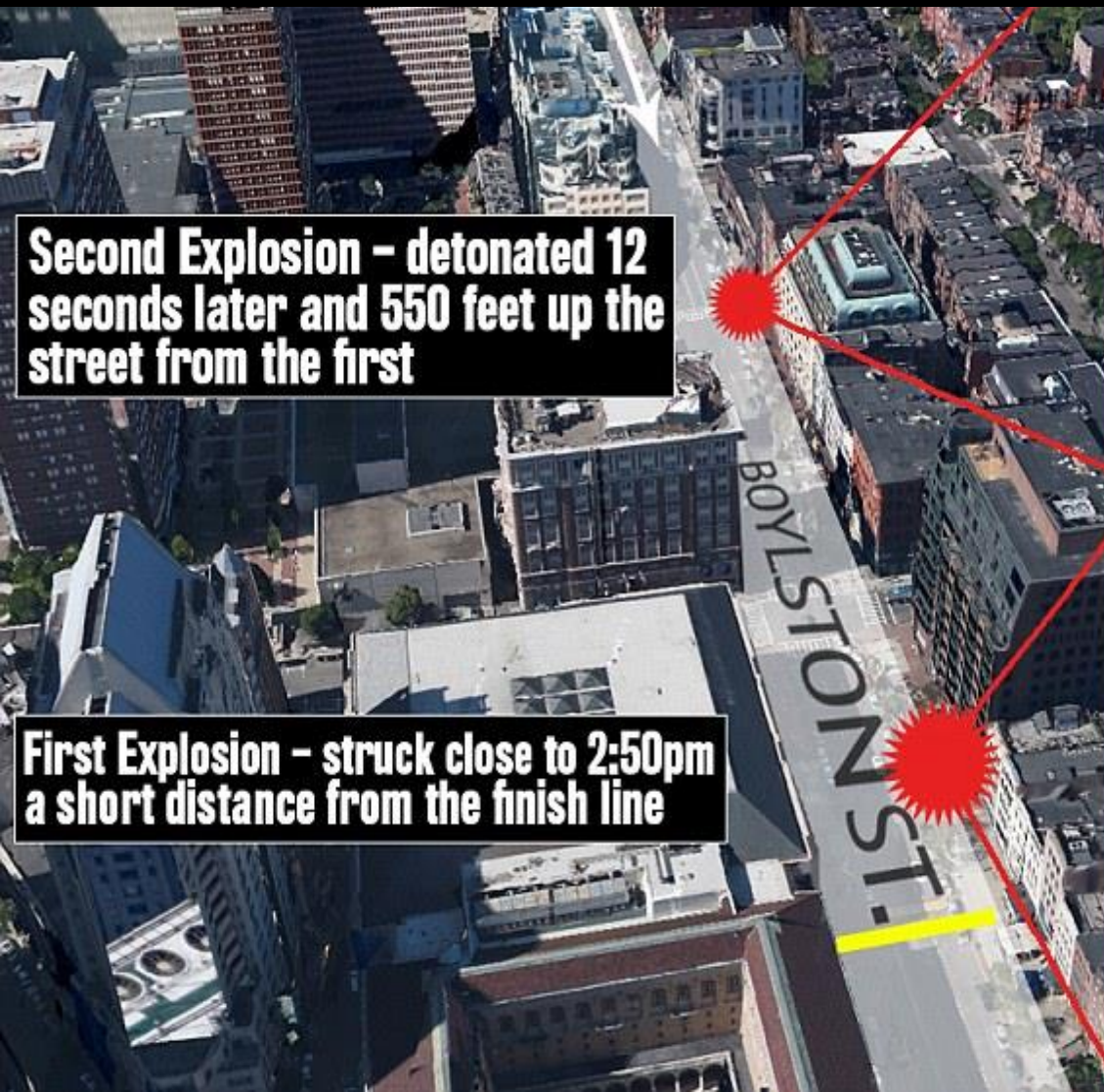
Session Outline

1. Boston Marathon - GIS Lessons Learned
2. AGOL Overview
3. Simulation – Creating a Common Operating Picture
4. Review of Available Resources

Please ask questions throughout!



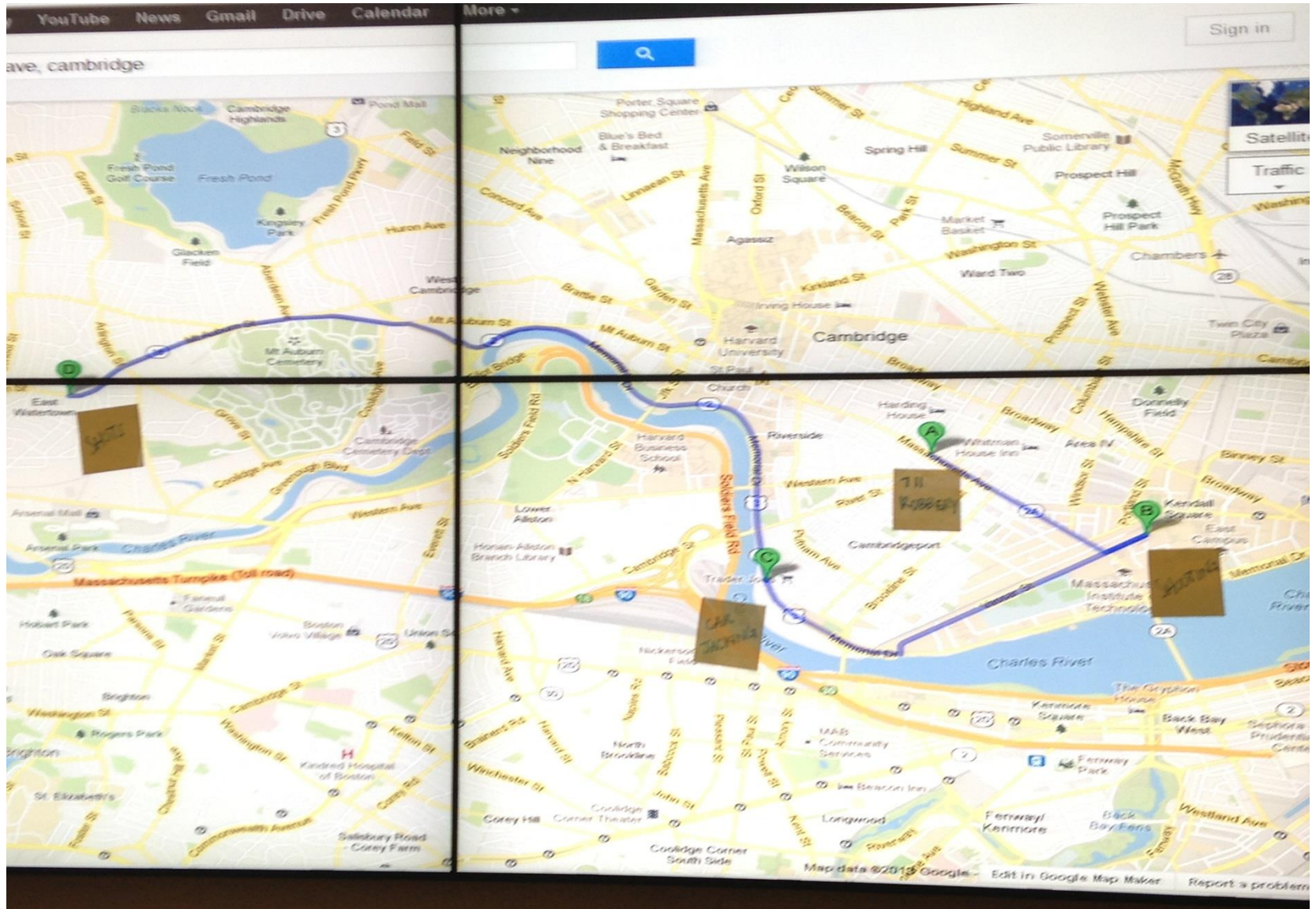
- 3 Deceased at Scene
- 264 Injured
- Scene Cleared Within 22 Minutes
- 12 Block Perimeter Set



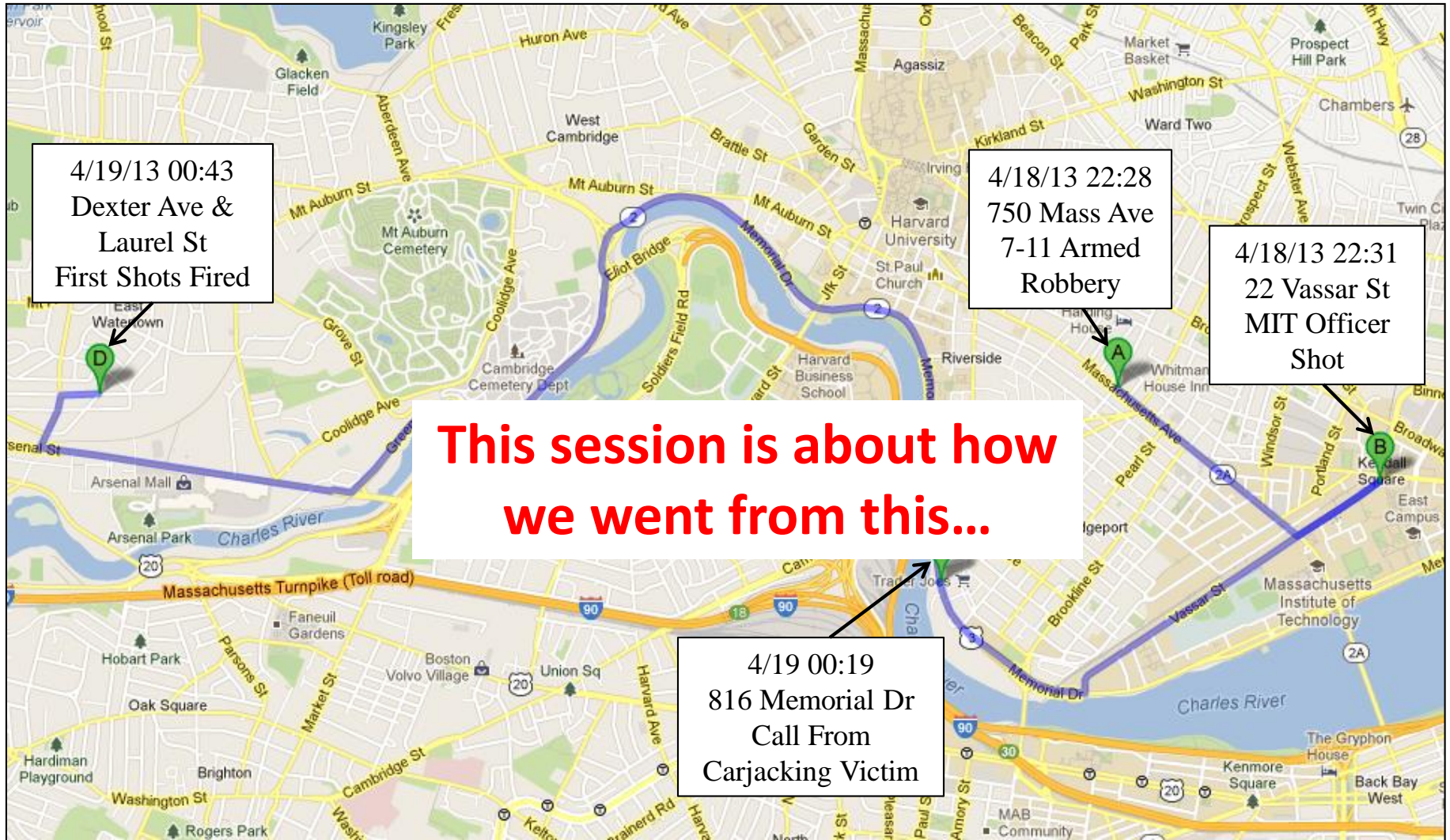
Second Explosion - detonated 12 seconds later and 550 feet up the street from the first

First Explosion - struck close to 2:50pm a short distance from the finish line

Recognize this?



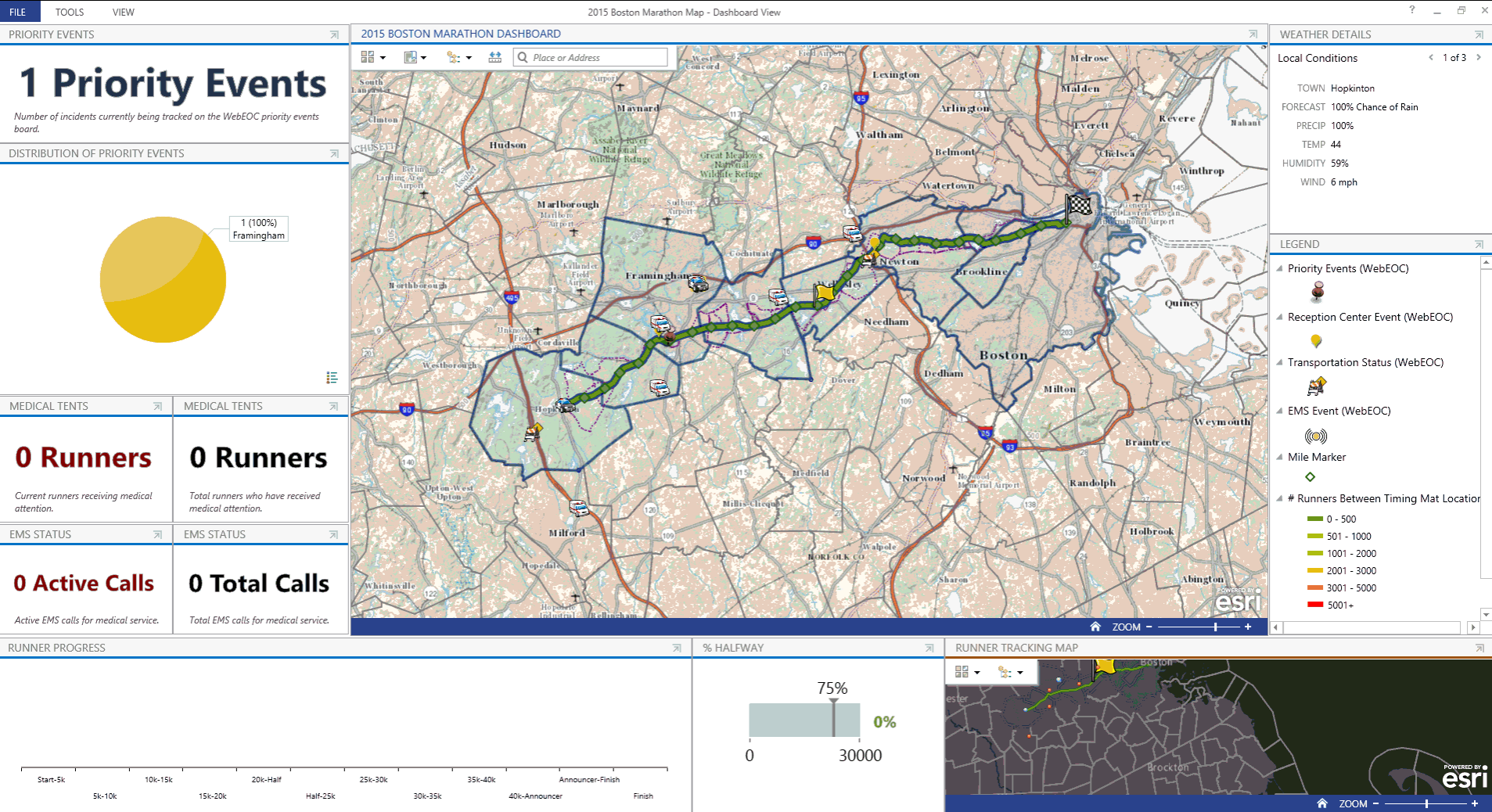
Or This?



This session is about how we went from this...



...To This...



And This

13:20:57

2015 BRIC Marathon Dashboard - A

2015 BRIC Marathon Web Map

Open BRIC Incidents

- Suspicious Property | | | Created: 4/20/2015 01:04 PM
unattended bag on the sidewalk
- Suspicious Person | 468 Comm. Ave. | Sgt. Tom Brooks | Created: 4/20/2015 12:34 PM
2 middle eastern males acting suspiciously, asking questions about crowd size

Web EOC Sig Events

- Informational Purposes | Update 12:50 PM
Location is Boston Checkpoint 26 (Fairfield & Newbury, Boston).
- 3 Individuals from Baystate Examiner going from checkpoint to checkpoint testing security measures and filming interactions.
- They appear to be posting to Twitter as they go along.
Dave Rodham

O...	W...	N...
2	1	37
OPEN BRIC Incident s	WebEO C Events	CAD Calls within 1/2 Mile

Open CAD w/in half mile of route

- BPD | Priority 3 | P150202094 | 4/20/2015 01:09 PM | Nature: OTHER - ABANDONED CALL (P); Type: ABAN - CELL
- BPD | Priority 2 | P150202080 | 4/20/2015 01:03 PM | Nature: OTHER - INVESTIGATE PERSON; Type: IVPER - TRANSP

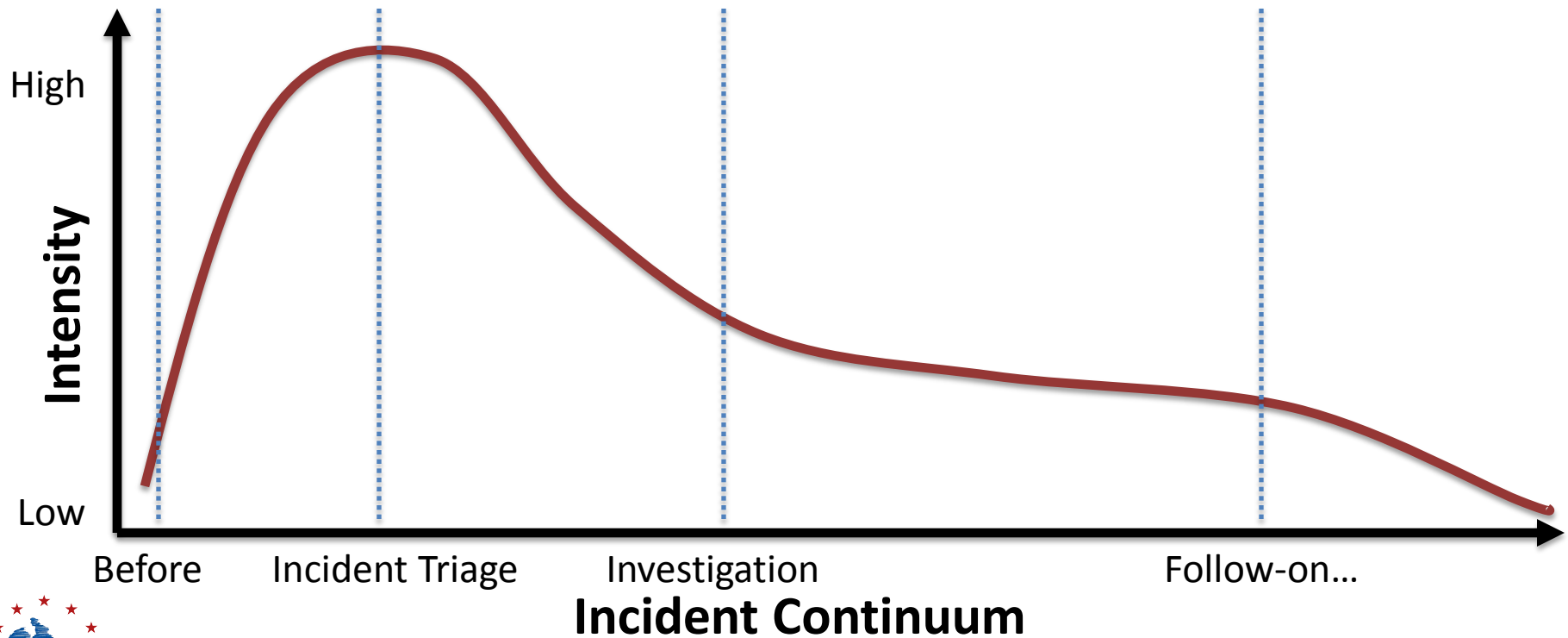
Runner Tracking Map

And you can too.



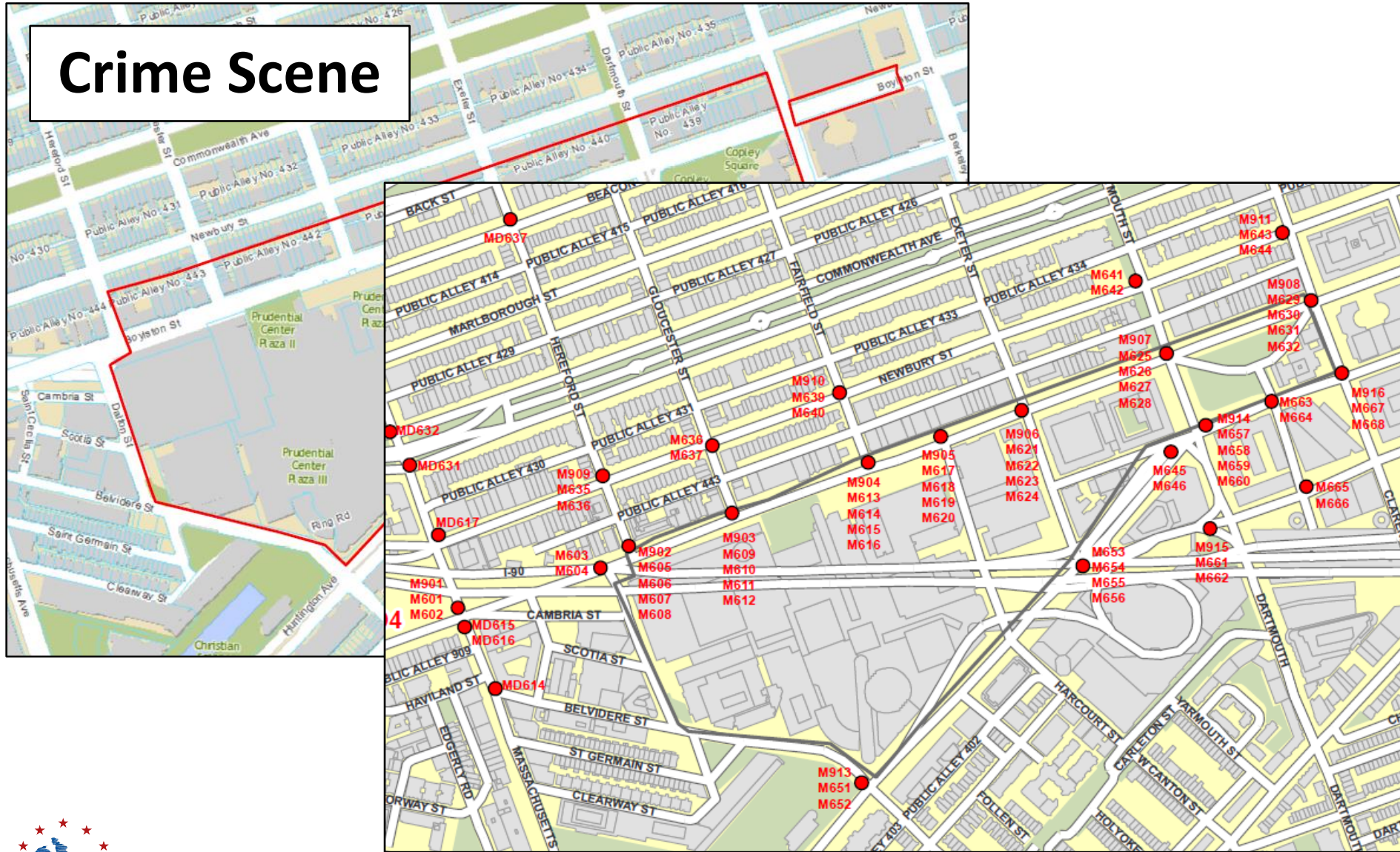
Marathon 2013 – BRIC GIS Capabilities

- 2 Geospatial technology specialists
- Significant industry experience
- Advanced Server & Desktop GIS
- Automated crime mapping

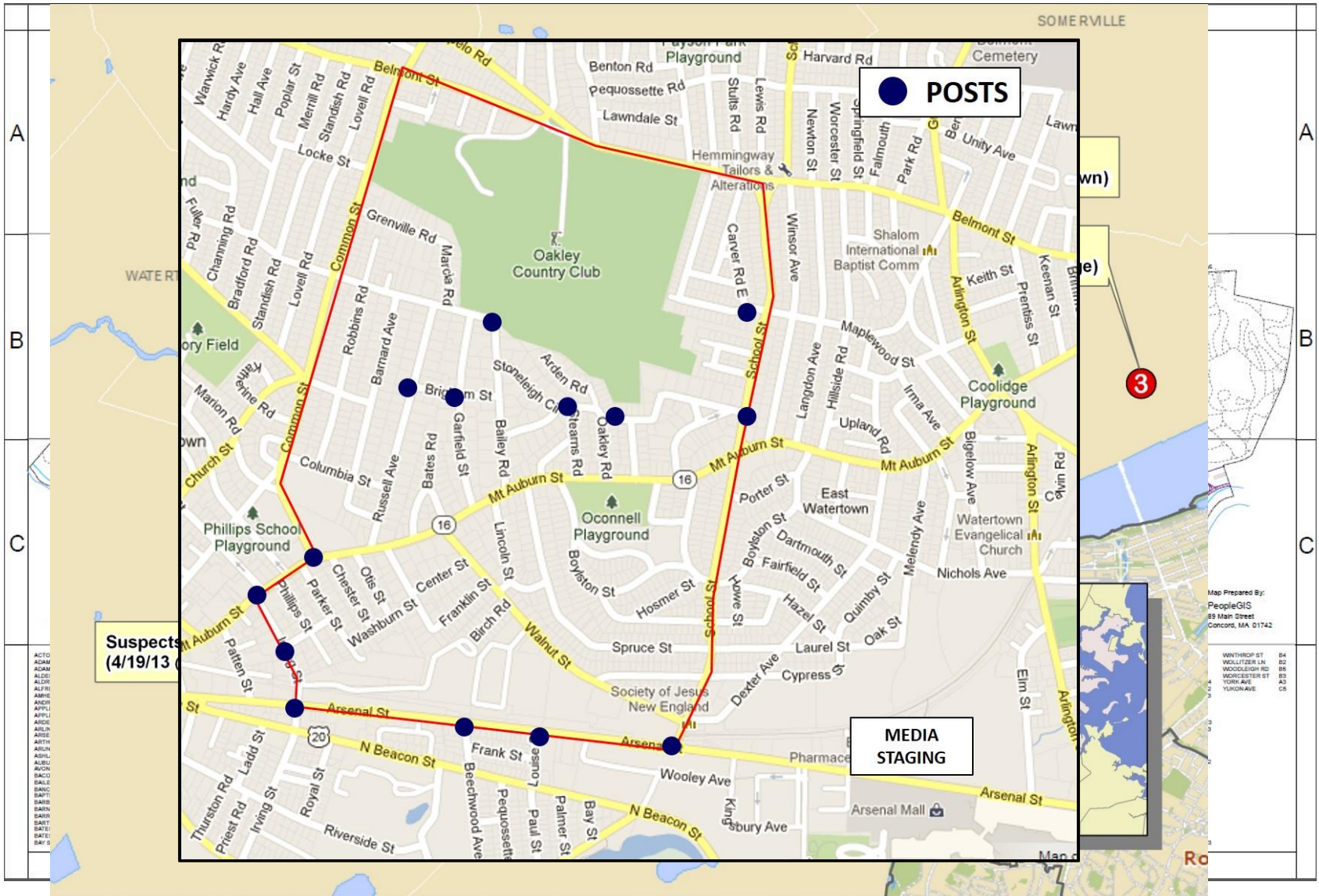


2013 Marathon Maps

Crime Scene



Friday, April 19th



Main Challenges

- Desktop vs. Laptop vs. Mobile
- Network Access / Security
- Flexibility Required
- Mapping Outside Jurisdictions
- Multi-Jurisdictional Data

**Met these challenges with
Common Operating Picture Project**



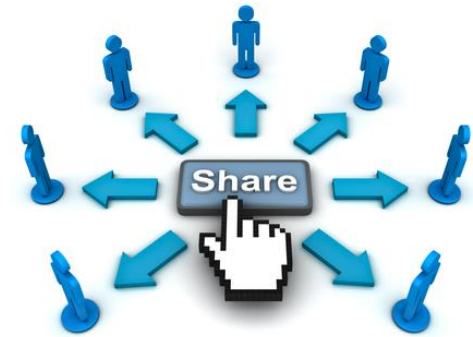
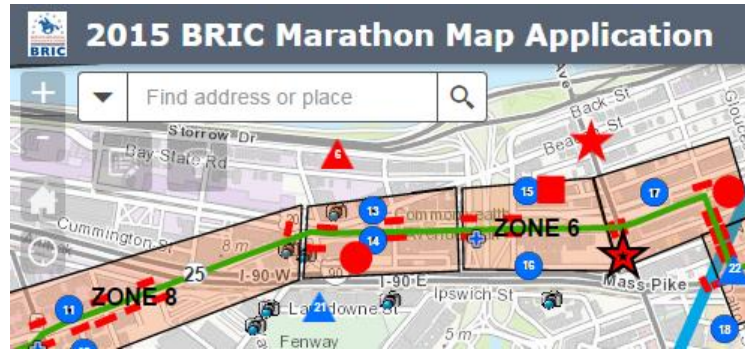
Main COP Goals

Do all of this across multiple agencies, disciplines, & jurisdictions

1. Maintaining Situational Awareness
2. Track threats / suspicious incidents
3. Track resources/assets
4. Enhance event preparation
5. Improve after action review
6. Ensure a secure online infrastructure



Key COP Equation












COMMON OPERATING PICTURE







Data

- Base Layers
 - Route
 - Security Zones
 - Special Points
- CAD
- 311
- Traffic
- Weather
- Human Assets
- Vehicle Assets
- Imagery



BRIC Incidents

-  Loud Party
-  Large Group
-  Bomb Threat
-  Crime
-  Person of Interest
-  Suspicious Person
-  Suspicious Property
-  Suspicious Vehicle
-  Other





SWAT Assets

-  SWAT
-  SWAT - Observation
-  Specialized Vehicles*
-  Command Post

Fire Assets

-  BFD Incident Response Team
-  Decon Units
-  Protest Extrication Team
-  RDT Engine
-  RIT Engine

Response Teams

-  EOD
-  JHAT
-  CBRN Assessment Team (CAT)
-  Roving Bomb Tech

- What's most critical to whom?
- Scale Dependency
- Tailor products for specific users
- Security considerations



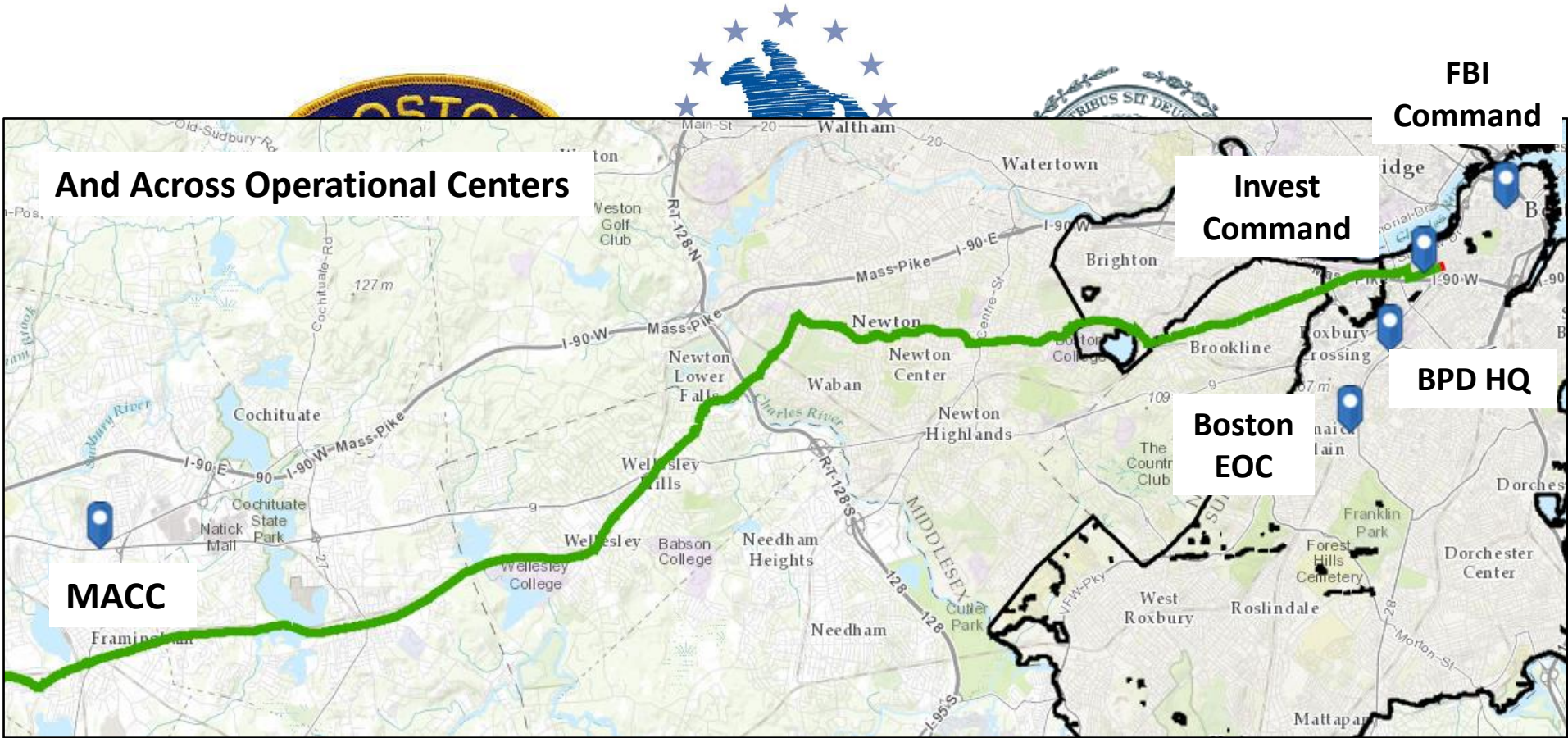
Tools Created

<http://arcg.is/1euRuEh>

- Editing App (WebApp Builder)
- GeoForm
- Operations Dashboard
- ArcGIS iPad App

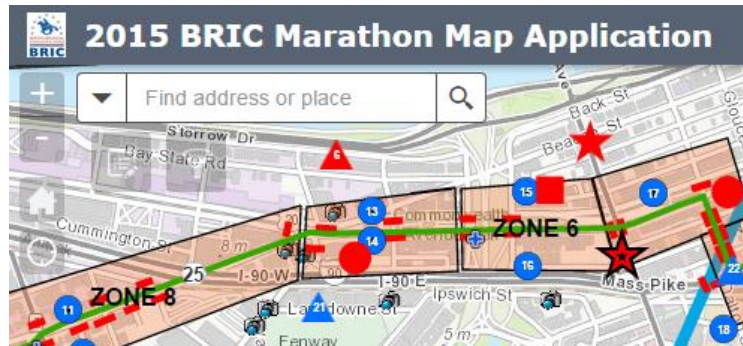


Sharing Across Jurisdictions



Other Important Considerations

- Political Capital / Leadership
- Data, Data, Data
- Security Model
- Sharing between Orgs / Groups



Questions?



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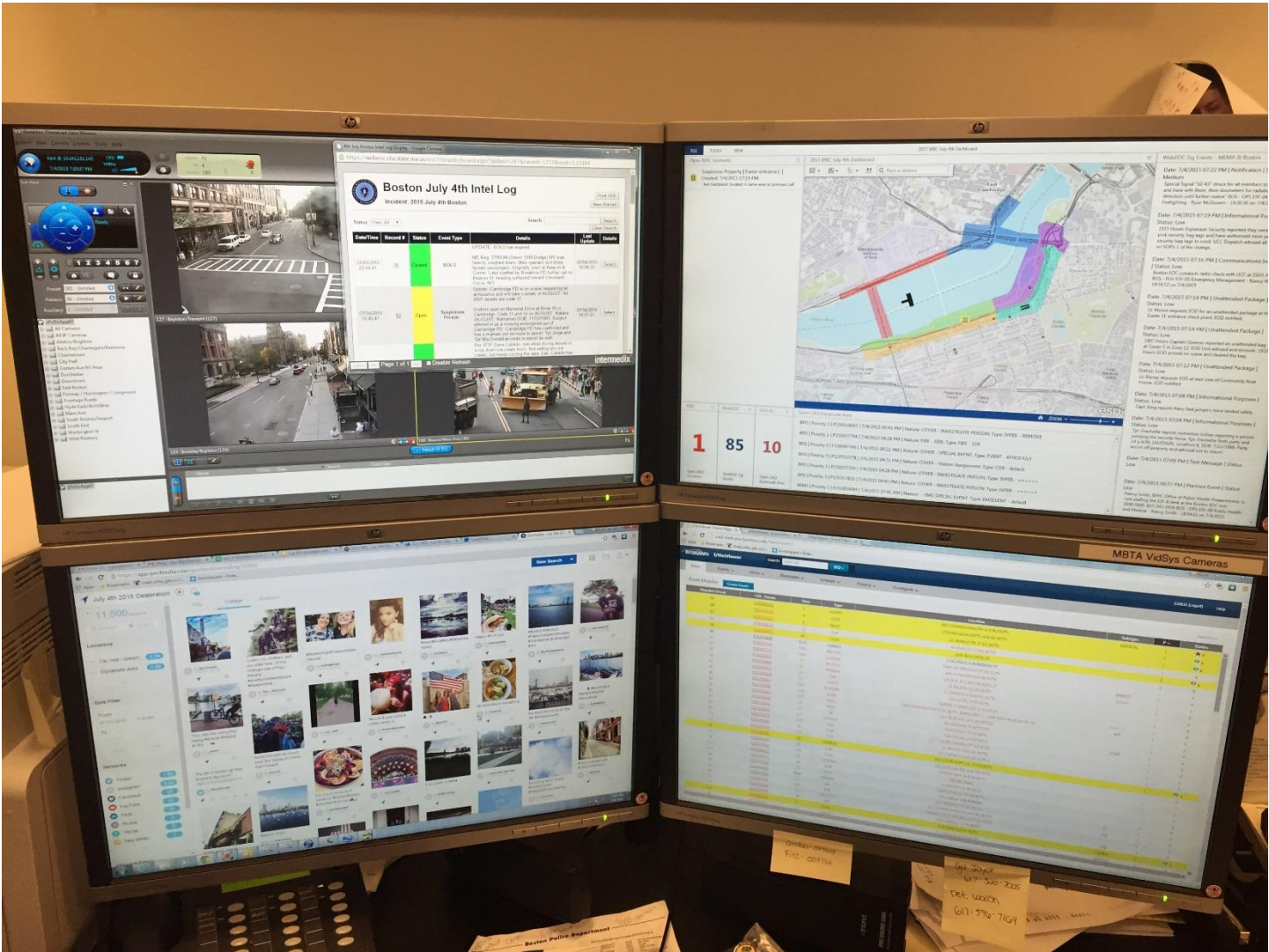


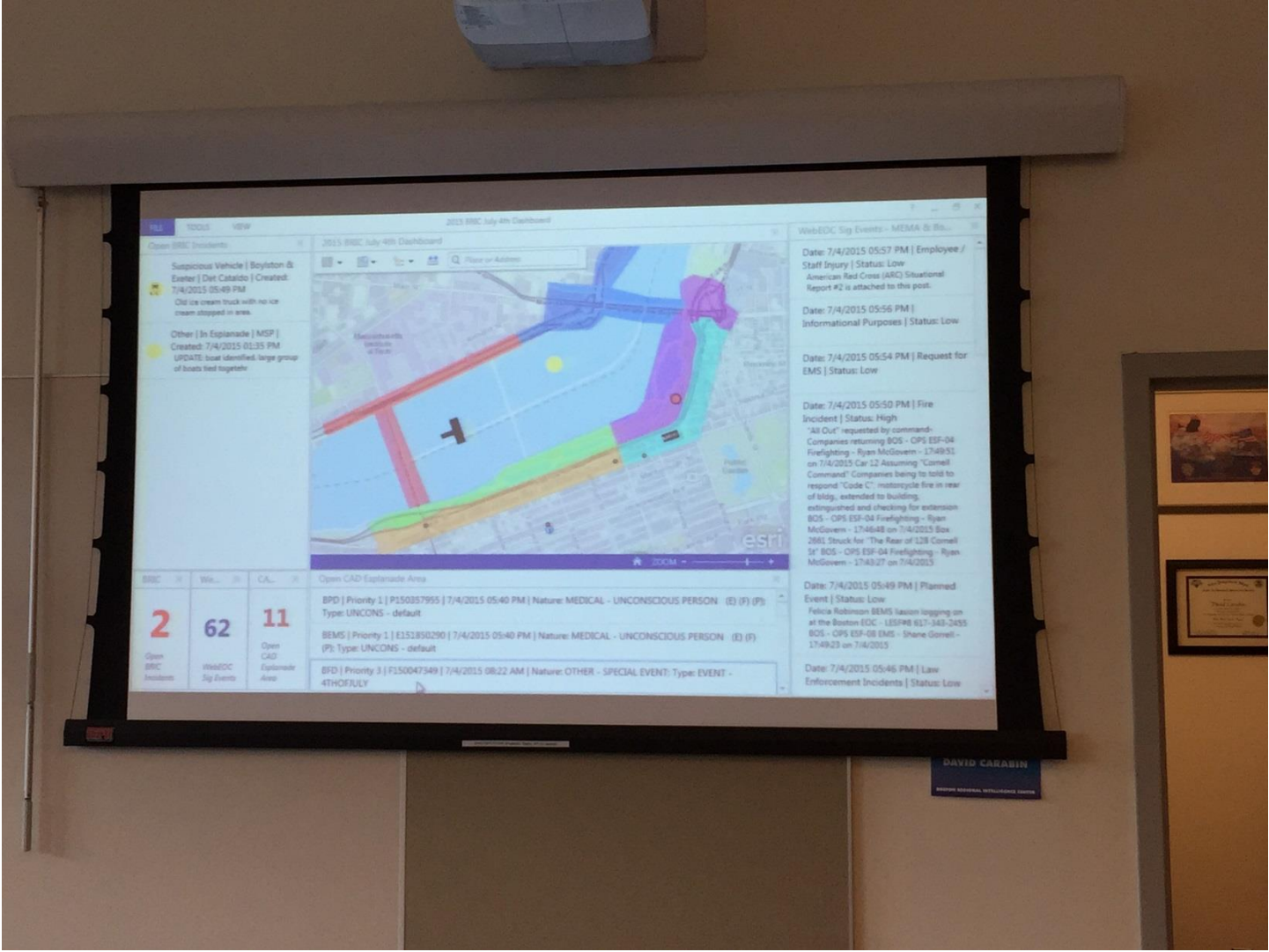
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2015 BRIC July 4th Dashboard

Open BRIC Incidents

- Suspicious Vehicle | Boylston & Esplanade | Det Catalano | Created: 7/4/2015 05:49 PM
Old ice cream truck with no ice cream stopped in area.
- Other | (In Esplanade) | MSP | Created: 7/4/2015 01:35 PM
UPDATE: boat identified, large group of boats tied together

Map: 2015 BRIC July 4th Dashboard

Open CAD Esplanade Area

BRIC	WADIOC Sig Events	Open CAD Esplanade Area
2	62	11

Open CAD Esplanade Area

- BPD | Priority 1 | P150057955 | 7/4/2015 05:40 PM | Nature: MEDICAL - UNCONSCIOUS PERSON (E) (F) (P) | Type: UNCONCS - default
- BEMS | Priority 1 | E151850290 | 7/4/2015 05:40 PM | Nature: MEDICAL - UNCONSCIOUS PERSON (E) (F) (P) | Type: UNCONCS - default
- BFD | Priority 3 | F150047349 | 7/4/2015 08:22 AM | Nature: OTHER - SPECIAL EVENT: Type: EVENT - 4THOFJULY

WADIOC Sig Events - MEMA & BRIC

- Date: 7/4/2015 05:57 PM | Employee / Staff Injury | Status: Low
American Red Cross (ARC) Situational Report #2 is attached to this post.
- Date: 7/4/2015 05:56 PM | Informational Purposes | Status: Low
- Date: 7/4/2015 05:54 PM | Request for EMS | Status: Low
- Date: 7/4/2015 05:50 PM | Fire Incident | Status: High
"All Out" requested by command- Companies returning BOS - OPS ESF-04 Firefighting - Ryan McGovern - 174932 on 7/4/2015 Car 12 Assuming "Control Command" Companies being told to respond "Code C" - motorcycle fire in rear of bldg, extended to building, extinguished and checking for extension BOS - OPS ESF-04 Firefighting - Ryan McGovern - 174648 on 7/4/2015 Box 2881 Struck for "The Rear of 228 Cornell St" BOS - OPS ESF-04 Firefighting - Ryan McGovern - 174827 on 7/4/2015
- Date: 7/4/2015 05:49 PM | Planned Event | Status: Low
Felicia Robinson BEMS lesson logging on at the Boston EOC - ESF#8 617-363-2435 BOS - OPS ESF-08 EMS - Shane Corneil - 174923 on 7/4/2015
- Date: 7/4/2015 05:46 PM | Law Enforcement Incidents | Status: Low

DAVID CARABIN
BRIC Director, Intelligence Center



ArcGIS Online Logistics

- Usernames:
 - first initial + last name_ngps
 - Example: jdoe_ngps
- Password: ngps2015
- Security Question: What city were you born in?
Answer: DC
- All accounts have been assigned to all NGPS groups and all accounts have been verified
- Experience issues logging in? Just let us know!

Scenario

- Redskins are the 2016 Super Bowl champs (yeah right!)
- Victory Parade, Downtown D.C.
- Plan the route
- Prepare for incidents
- Respond to incidents
- Create maps/apps for responders, media, and the public



Plan & Manage a Special Event

- **Create FeatureServices for:**
 - Event area, routes, POI
 - Threat incidents
 - Response assets
 - Vendor locations
- **Create maps/applications for:**
 - Collecting event incidents
 - Engage the public, see something say something app
 - Public information
 - Situational awareness app
- **Operations dashboard (time permitting)**

Work Group 1 – Event Prep

- **Create a special event service from template**
 - **Share event service with special event group**
- **Create an event web map**
- **Design event area, route, and POI**
- **Add in Vendor map from Group 4**
- **Create an app and share the event info with the public**

Work Group 2 – Incident Collect / Response

- **Design and create a point collection service for event incidents**
 - Collect several example incidents
- **Build an operational web map**
 - Pull in event service from Group 1
 - Pull in event incident service
- **Create a basic viewer app**
 - Share with event staff group
- **Build a GeoForm to deploy to call center to enter incidents**
- **Share the map for use with Esri Collector app**

Work Group 3 – Incident Response / Analysis

- **Create response layers**
 - From template, auto refresh
- **Add in Incident & Special Event services created by Group 1 & 2**
- **Create a web map and share as the Basic Viewer**
 - Bring in event info from Group 1
 - Bring in incident layer from Group 2
 - Buffer event area and determine population

Work Group 4 – Vendor Mapping

- **Design and create a point collection service for event vendors**
 - **Location**
 - **License compliance**
 - **Setup / Takedown Time**
- **Create a web map & add in a service**
- **Create a Geo-Form for field staff to collect vendor locations**
- **Share the map for use in Collector**