

# **Advancing the Capacity for Fire/EMS to Operationalize GIS**

## **Final Report on 2009 Fire/EMS GIS User Group Meetings**

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National Alliance for Public Safety GIS Foundation  
April 2010



Prepared by:

Peter O'Rourke, Executive Director  
Rebecca Harned, Program Director  
James Smalley, Treasurer—Board of Directors

National Alliance for Public Safety GIS Foundation  
5335 Wisconsin Avenue NW, Suite 440  
Washington, DC 20015  
Tel.: 202-895-1711  
Fax: 202-318-0339



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## Executive Summary

The National Alliance for Public Safety GIS Foundation (NAPSG Foundation) launched the inaugural series of Fire/Emergency Medical Services (EMS) GIS User Group (FUG) meetings in the winter of 2009 in partnership with and through a sponsorship from ESRI. The series targeted fire service and EMS personnel and was open to all public safety and geographic information system (GIS) professionals. The primary objective of the FUG meetings was to establish regional communities of public safety practitioners working with or interested in GIS within an education and networking forum. The meetings were held as a way to learn, exchange ideas and experiences, and establish a framework for regional workgroups to advance the vision of public safety GIS across the United States. A secondary objective was to begin building a practitioner-driven network of coordinated public safety GIS users in the United States. The process, by which this effort was carried out, along with quantitative and qualitative feedback from participating emergency responders, is documented in this report.

Six regional leadership teams were formed in August 2009 to provide a central coordinating body for the meetings held in November and December. Planning and logistics for each FUG meeting were provided by NAPSG Foundation and ESRI staff. Below is a brief summary of the outcomes.

A total of 296 public safety practitioners participated in the six regional meetings, coming from 20 different states. Of these participants, approximately 228 represented local public safety agencies. The remaining 68 participants represented either state, federal, national, or private sector organizations.

Results from a post event survey were significant:

- 92 percent of survey participants indicated that the meetings successfully met their individual needs and expectations.
- 98 percent indicated that GIS in public safety is crucial and should be pursued.
- 90 percent of survey participants gave a high rating to the value of GIS in improving decision making and situational awareness.
- Participants identified that they need more support to advance their use of GIS. Their top priority needs are training in tactical use of GIS, regional education workshops, and more structured mentoring and user group-type meetings among practitioners.

The overarching theme in all meetings was to assist public safety agencies in identifying solutions to mitigate risk and enhance community life safety. Specifically, the meetings focused on how public safety agencies capture, manage, analyze, and present data to help provide services more effectively and efficiently to their communities. This report summarizes key themes and lessons learned from each of the meetings.

All aspects of the meetings are necessary for telling the full story and in developing clear recommendations to guide the public safety community in the advancement of GIS. Therefore, this report documents what occurred during breakout sessions, discussion panels, hands-on sessions, and even the social events. Based on these many meetings, sessions, and events, it is very clear that there is a GIS movement under way.

It is a movement led by a national team of emergency responders with a vision for a new way of providing a higher level of public safety. This report acknowledges those people with appreciation for their dedication and resolve to advance public safety GIS.

## 1.0 Introduction

NAPSG Foundation launched the inaugural series of FUG meetings in the winter of 2009 in partnership with and through a sponsorship from ESRI. The primary goal of the FUG meetings was to establish regional communities of public safety practitioners working with or interested in GIS within an education and networking forum. NAPSG Foundation and ESRI partnered on this initiative for the purpose of collaborating on an issue of common value—advancing the use of GIS among and interaction within the public safety community.

The winter 2009 series of FUG meetings were held in the following regions and were hosted and led by local fire departments and GIS specialists.

- Southeast/Mid-Atlantic (Greensboro, NC)
- Northeast (New York, New Jersey)
- Pacific Northwest (SeaTac, WA)
- Southern California (Orange County, CA)
- Florida (Orange County, FL)
- Mountain Region (South Metro, Colorado)

Through the meetings, NAPSG Foundation was able to provide the public safety community with an educational opportunity combined with a peer-to-peer dialog to exchange ideas and experiences. NAPSG Foundation and ESRI plan to continue to facilitate and support the growth of the communities established through the inaugural 2009 FUG meetings.

## 2.0 Background

### 2.1 Organization

NAPSG Foundation is a tax exempt nonprofit entity organized under section 501(c)(3) of the Internal Revenue Code. NAPSG Foundation was established in 2005 and reorganized in 2008 to support education and research around data interoperability among and GIS use by the public safety and homeland security communities. The foundation relies on a broad base of support from local, state, and federal emergency response and homeland security professionals. The foundation also works closely with private sector industries that are committed to ensuring enhanced public safety and emergency response.

#### **Vision**

Public safety and homeland security organizations have access to and know how to use GIS technology for preparedness, mitigation, response, and recovery.

#### **Mission**

To support the public safety and homeland security communities in the advancement of data interoperability and connectivity, through GIS, in support of local and national preparedness goals.

#### 2.1.1 Organizational Objectives

- Develop a national professional GIS preparedness capability for public safety and homeland security.
- Support state and local emergency response communities in the use of advanced technology for disaster preparedness and response, data gathering and sharing, infrastructure protection, and other homeland security priorities.
- Support the goals of existing state and federal geospatial and data interoperability initiatives. This includes ensuring better access to and reliability of broadband, wireless, and other modes of data connectivity.
- Encourage and enhance the coordination of emergency operations that leverage appropriate and advanced technologies.
- Provide subject matter expertise to agencies involved in the development of collaborative models, grants, and programmatic initiatives for local public safety agencies.
- Support research and partnerships for full-scale project implementation and in-depth operational evaluations.

## 2.2 Need for GIS

GIS has proved to be an important tool for fire departments, law enforcement agencies, emergency medical services, and other public safety organizations in improving safety and providing effective emergency response. Managing and mitigating risk in increasingly complex situations is vital to ensuring life safety and protecting property. The analysis and visualization of geographic information enhances decision making, response tactics/strategies, and situational awareness during all phases of the emergency service function: planning, prevention, operations, training, and beyond.

Fire departments can use GIS in ongoing community risk assessments to analyze demographics, hazards, and code enforcement—all based on geographically analyzed data. When public safety practitioners use GIS during emergency operations, they are able to visualize, manage, and analyze critical information effectively, which improves strategic and tactical response and provides more effective resource utilization.

One of the key findings NAPSG Foundation identified from the FUG meetings is the need for local public safety agencies to advance their application of GIS-based tools by evolving their use in real-time incident response to provide tactical situational awareness. This is further supported in the 2008 report by the U.S. Fire Administration on firefighter fatalities, which revealed that 42 percent of all line-of-duty firefighter deaths in 2008 occurred during fireground operations.<sup>1</sup> Additionally, according to "Annual Report 2008" from the National Fire Fighter Near-Miss Reporting System, the top contributing factors to events that nearly resulted in injury or fatality are insufficient situational awareness and decision support.<sup>2</sup>

In the wake of the terrorist attacks of September 11 (2001), the Indian Ocean tsunami (2004), and the Gulf Coast hurricanes (2005), the National Academies (National Academy of Science, National Academy of Engineering, Institute of Medicine, and National Research Council) were commissioned to study the problem of inadequate support for public safety GIS. In their final report, the National Academies determined that a successful response starts with visualized geospatial data. The National Academies make a strong case for the importance of GIS to the nation's public safety community:

If future emergency responses are to be more effective, significant investments should be made in training of personnel, coordination among agencies, sharing of data and tools, planning and preparedness, and the tools themselves . . . In the immediate aftermath of Hurricane Katrina, the availability of and access to geospatial data and tools resembled a donut—abundant far away from the impact area, but almost non-existent where it was most needed, locally . . . In all aspects of emergency management, geospatial data and tools have the potential to help save lives, limit damage, and reduce the costs of dealing with emergencies. Great strides have been made in the past four decades in the

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<sup>1</sup> U.S. Fire Administration and Federal Emergency Management Agency (September 2009), "Firefighter Fatalities in the United States in 2009." <[http://www.usfa.dhs.gov/downloads/pdf/publications/ff\\_fat08.pdf](http://www.usfa.dhs.gov/downloads/pdf/publications/ff_fat08.pdf)>

<sup>2</sup> National Fire Fighter Near-Miss Reporting System (September 2009), "Annual Report 2008." <<http://www.firefighternearmiss.com/data/Annual%20Report%20and%20Calendar%20Modules/2008%20Annual%20Report.pdf>>

development of geospatial data and tools, such as satellite imaging and geobrowsers, that describe locations of objects on the Earth's surface and make it possible for anyone with access to the Internet to witness the magnitude of a disaster. However, the effectiveness of any technology is as much about the human systems in which it is embedded as about the technology itself. Issues of training, coordination among agencies, sharing of data and tools, planning and preparedness, and resources invested in technology need to be addressed if future responses are to be more effective.<sup>3</sup>

To effectively enhance operations by utilizing GIS-based tools, the public safety community must be adequately educated and trained on the use of GIS. NAPSG Foundation and ESRI partnered to take the initial step through the winter 2009 FUG meetings. By establishing communities of emergency responders currently using GIS (or seeking to start an initiative in their agencies), NAPSG Foundation was able to facilitate a peer learning network where public safety can identify its own lessons learned, best practices, support structures, and so forth.

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<sup>3</sup> The National Academies (December 2006), "Successful Response Starts with a Map: Improving Geospatial Support for Disaster Management." <<http://www.publicsafetygis.org/pdfs/successful-response-map.pdf>>

## 3.0 Purpose and Leadership Structure

The winter 2009 series of FUG meetings were conducted in six locations across the United States. Five of the regions opted for two-day meetings, while one opted for a one-day meeting. The meeting length, format, and program content were determined by the leadership team for each region. NAPSG Foundation and ESRI programmatic and administrative staff provided coordination among the regional leadership teams, as well as logistics and marketing support for the series.

### 3.1 Purpose

All of the 2009 FUG meetings shared a common set of defined purposes:

- Provide learning opportunities for department management and GIS technicians.
- Improve understanding of the ways GIS currently is used to support fire, EMS, and Emergency Operations Center operations.
- Take first step toward establishing a network of regional communities of public safety GIS professionals and end users.
- Establish workgroups aligned with the National Strategy to Operationalize Public Safety GIS to provide input for the development of outreach, education, and tools.
- Exchange experiences, lessons learned, and best practices for using GIS to support the following:
  - Accreditation processes
  - Incident command system
  - Data sharing and related standards
  - Daily operations—tactical response for fire and EMS
  - Managing impact of community growth
  - Preplanning

### 3.2 Leadership and Management

Leadership for the national FUG series was provided by the regional leadership teams, supported by cosponsors NAPSG Foundation and ESRI. The leadership teams consisted of four to six first responders and GIS technicians within their respective regions. The leadership teams also had a pair of co-chairs, one first responder, and one GIS technician who were primarily in charge of approving content for the agendas and conducting high-level outreach. The teams were identified in August and met regularly throughout the fall (in person and/or via conference call) to develop program content, identify presenters, and coordinate local facilities for the meetings. Members of the regional leadership teams served as meeting hosts and facilitated the proceedings on-site. A representative from NAPSG

Foundation was present at each of the meetings to provide guidance and direction. For additional information on leadership and management of the regional groups, see appendix A.

**Figure 3-1**  
**The Northeast Meeting at the**  
**Fire Department of New York City**



## 4.0 Program Content

Each of the meeting agendas consisted of a series of presentations by region-specific emergency responders with case studies of successful GIS projects. At most meetings, the speaker segment of the agenda was complimented by breakout sessions or discussion panels used to generate collaborative thinking among the participants. A common characteristic of all meetings was that the content focused on specific needs and dynamics of organizations within each region. To provide content uniformity, each FUG meeting included a presentation on national-level efforts and initiatives tied to the relevance at the local and regional levels.

**Figure 4-1**  
**A Breakout Session During a User Group Meeting**



These presentations played a unique role in giving background information on some of the national and federal initiatives and facilitating discussion on their applicability. The two main topics consistently presented and discussed were the DHS Virtual USA initiative and NFPA IT standards development. For example, at the Florida meeting, Rand Napoli (NAPSG Foundation vice chairman and member of the Virtual USA GIS Working Group) provided background information on Virtual USA and facilitated a discussion around data interoperability issues.

### 4.1 Sample Agenda

Below is an example of an agenda for a two-day meeting; this example is from the Northeast regional meeting.

**Day 1—Burlington County Emergency Services Training Center, NJ**

**9:00–9:30 a.m. Welcome and Orientation** (Greg Collier, Battalion Chief, Mt. Laurel Fire Department)

**Opening Remarks** (Lawrence Petrillo, Director, Office of the State Fire Marshal)

**9:30–11:00 a.m. User Case Studies**

- Planning: Sarah Hugan, Brampton, Canada
- Tactical: Liberty Health Systems, Jersey City, NJ
- Data Management: Eric Fisher, GIS Manager, Fairfax County Fire Rescue, VA
- Situational Awareness: Steve Pollackov, GIS Manager, Fire Department City of New York (FDNY), NY

**11:00–noon GIS for Decision Support**

Jim Potteiger and Peter Hanna, Baltimore City Fire Department. Baltimore City Fire Department will share its experience with building a fire department GIS program starting with the need to assess the impact of station brownouts during tough budget cycles and building toward an enterprise system for full decision support.

**1:00–2:30 p.m. Voice of Experience**

- Practical Tips for GIS Implementation—Todd Brown, Lieutenant, Somerset Fire & Rescue Company No. 1, Franklin Township Fire District No. 1, NJ
- Panel Discussion—A panel of experts will lead discussions about topics of interest to the audience, answer questions, and share experiences (Moderated by Greg Collier)

**2:45–3:30 p.m. NAPSG Foundation, Related Federal Initiatives, NFPA Standards, and Training**

Jim Smalley, Treasurer—Board of Directors, NAPSG Foundation

**3:30–4:30 p.m. Breakout Sessions** (Moderated by Jim Smalley and Jennifer Schottke)

**4:30–5:00 p.m. Closing Discussion** (Moderated by Greg Collier and Steve Pollackov)

**Day 2—Fire Department City of New York**

**9:00–9:30 a.m. Opening Remarks** (Salvatore Cassano, Chief of FDNY)

**9:30 a.m.–noon FDNY GIS Uses At Large**

1. Tour of the Emergency Operations Center, City of New York
2. Current Uses of GIS for Operational Support at FDNY
3. Case Studies: Demonstrate the Value of GIS for Public Safety: An Officer's Perspective

**1:00–4:00 p.m. Continuation of FDNY GIS Uses At Large**

1. Tour of the Command Unit FDNY
2. Perspectives on Incident Command: Eric Fisher, Fairfax County Fire and Rescue (FR) Department, VA
3. Breakout Groups
4. Presentations from Breakout Groups

**4:30 p.m. Open Discussion and Closing** (Greg Collier and Steve Pollackov)

## 4.2 Program Summary

While each of the groups was different, the tone set by the leadership in the final meeting of the series told the real story about these user groups. The Mountain Region's leadership team opened the meeting with testimony reflective of all six groups across the nation:

The challenge for each of us will be to share our strengths and weaknesses honestly. That is how we can best mentor and serve each other. We need to brag about the good things we do, but be really honest about the things we're not good at . . . this will let us identify folks in the room that have solved some of our weaknesses and can teach us how to fix them.

That is what the user groups are about. And in the pictures that follow, that story is told: people eager to learn, eager to share, and eager to be part of this movement—this community of practice that has a very real opportunity to change the face of public safety.

**Figure 4-2**  
**Participants at the Fire/EMS GIS User Group Meetings**





## 5.0 Evaluation

### 5.1 Process

A secondary purpose (though equally important) of the winter 2009 FUG meetings was gathering quantitative and qualitative data and information about the needs of public safety as they relate to the use of GIS. To collect this information, NAPSG Foundation prepared a one-page survey with a series of key questions indicative of existing use scenarios and unmet needs. A copy of the survey is included in appendix A. The survey also asked questions regarding the usefulness of the FUG meeting, content, and applicability to emergency response operations. Below is the main set of questions that the post-meeting survey aims to answer through indicator questions:

- ✓ How are agencies currently using GIS? And what capabilities do they have?
- ✓ For agencies without an existing GIS, what do they want to use it for?
- ✓ What is the perceived potential of GIS' contribution to life safety?
- ✓ Were the FUG meetings successful in achieving their purpose?
- ✓ What types of support does public safety need in order to advance the use of GIS?

The same post-meeting survey was distributed to all participants present at the six FUG meetings. The completed surveys were collected at the adjournment of each meeting to allow time for participants to process the meeting; a total of 172 surveys were completed and collected. The completed surveys were given to support staff that compiled the data and organized it by regional meeting location for proper analysis.

### 5.2 Results and Analysis

The results of the winter 2009 FUG meetings were determined by processing and analyzing the post-meeting survey data collected. The results are illustrated for each of the indicator questions outlined above.

#### Chart 1

Indicator Question  
How are agencies currently using GIS?  
What capabilities do they have?

The chart illustrates the findings regarding the primary uses of GIS currently utilized by the emergency responders surveyed.

**Current Uses of GIS in Agencies *with* Existing GIS Efforts**

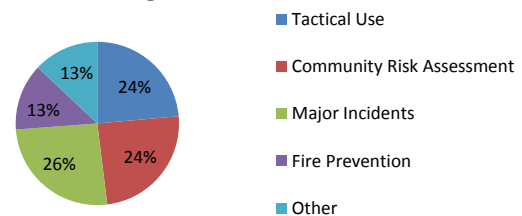


Chart 1 Key Summary—Of the primary uses of GIS by fire/EMS, there is a relatively even distribution among the top three primary uses of GIS: tactical use, community risk assessment, and major incidents. The results show that GIS is used slightly more frequently during major incidents. To a lesser degree, GIS is being used for fire prevention and other purposes. These findings are illustrated in chart 1, pictured above.

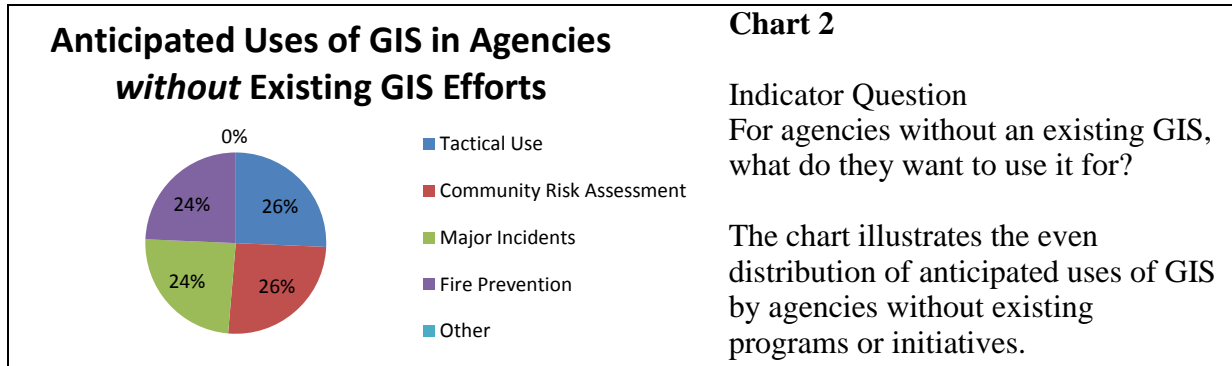


Chart 2 Key Summary—For agencies that currently do not have GIS programs running, they anticipated that they would use all four main uses equally. None of these agencies identified "other" anticipated uses, which is indicative that the power of GIS is not fully conceived by the emergency responder until it is operationalized.

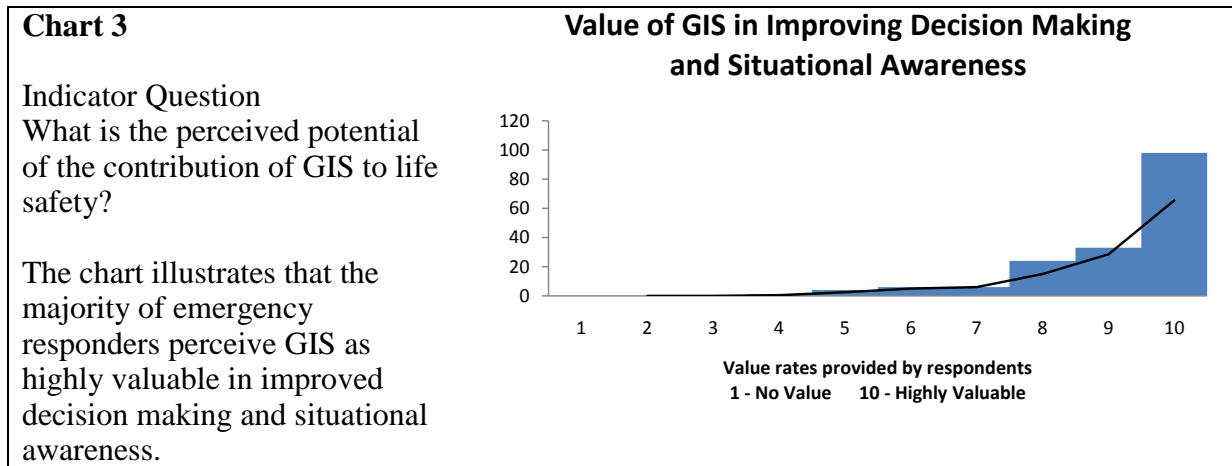
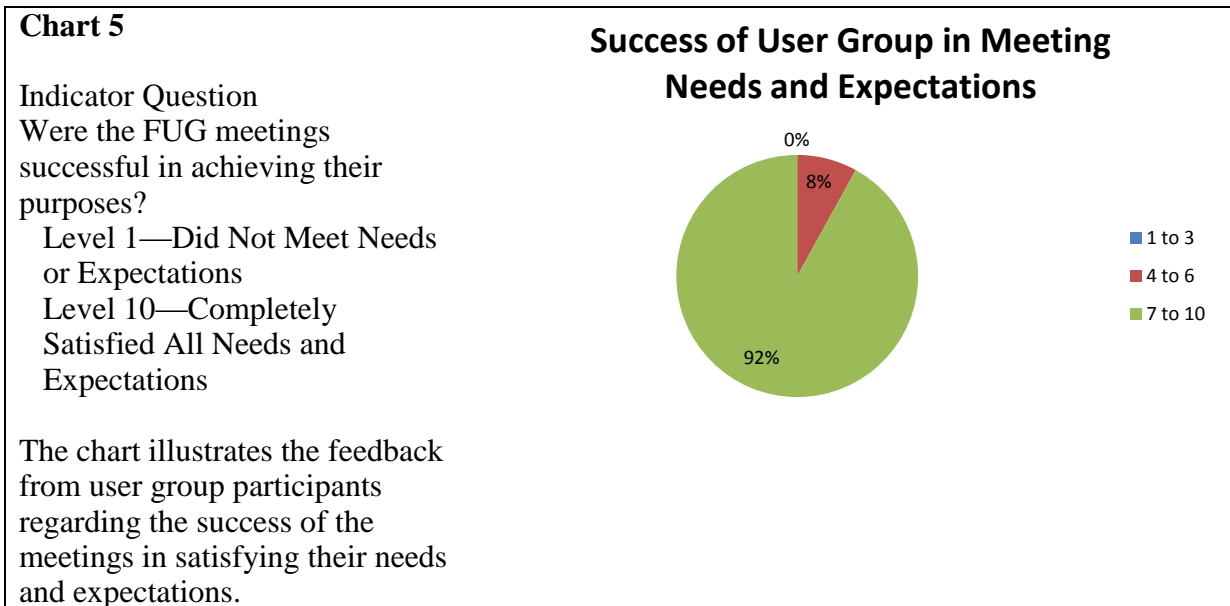
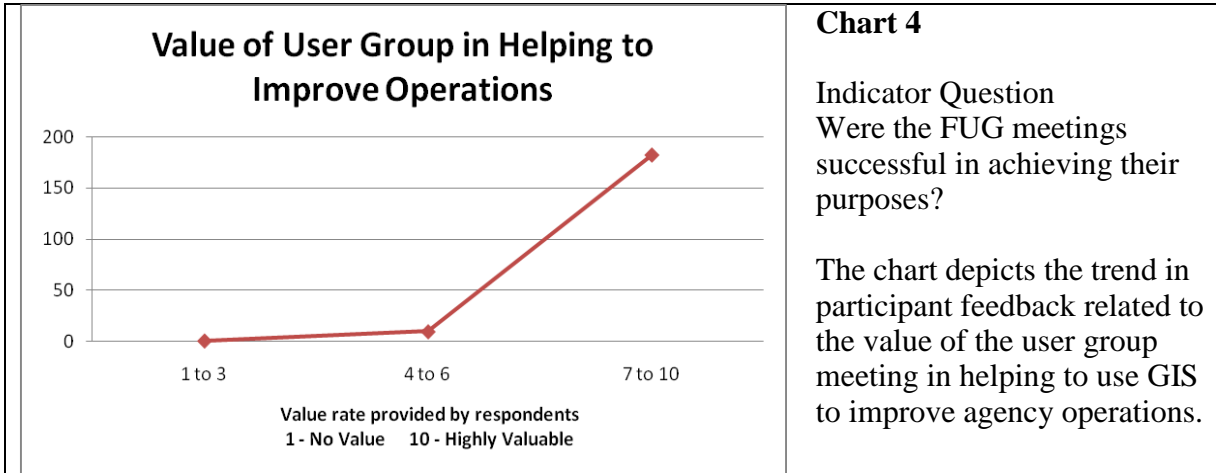
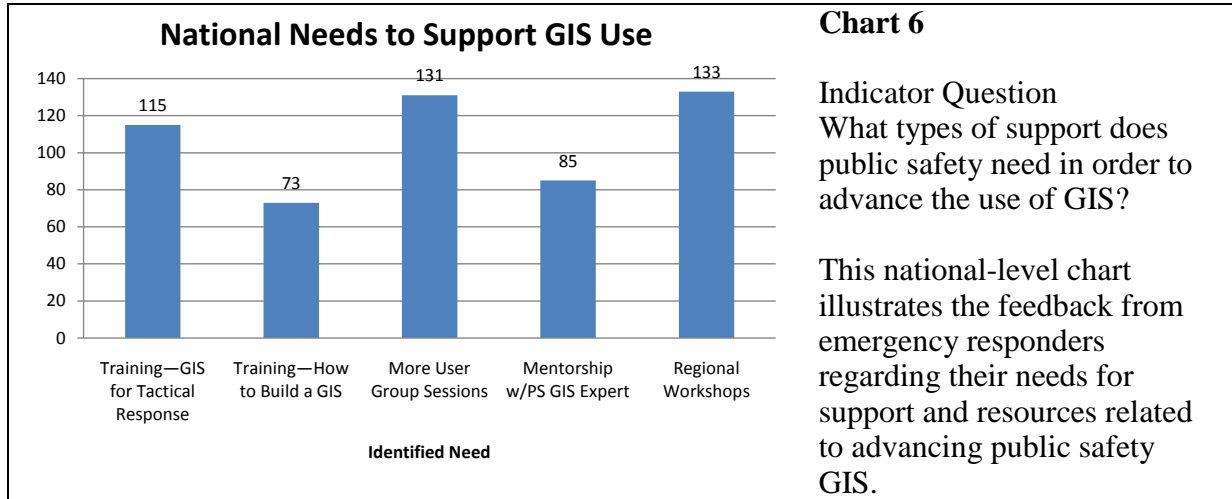


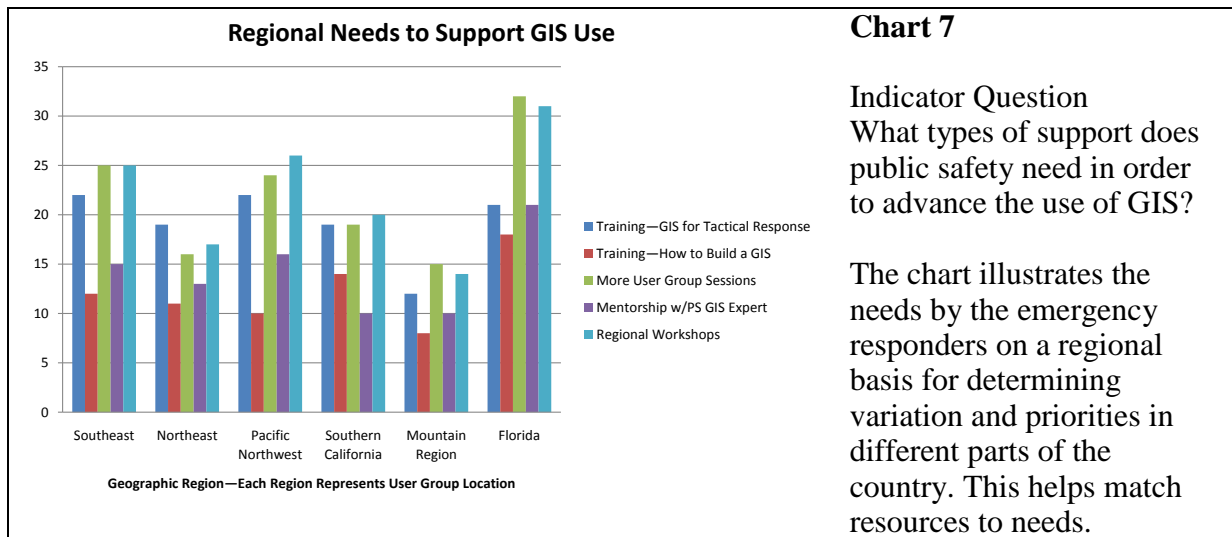
Chart 3 Key Summary—The majority of participants (emergency responders) perceive that GIS is highly valuable in improving decision making and situational awareness at the individual agency level. Specifically, 90 percent of emergency responders surveyed rated the value of GIS in improving decision making and situational awareness at an 8 or higher out of a maximum of 10.



**Charts 4 and 5 Key Summary**—Based on participant feedback, the FUG meetings were largely successful in guiding the emergency responders to understand how GIS can be used to improve operations. Nearly all the meeting participants rated the value of the user group meetings at a 7 or higher. Furthermore, 92 percent of participants reported that the user group meetings were successful in meeting their individual needs and expectations.



Charts 6 and 7 Key Summary, Part 1—At the national level, it is evident from participant feedback that the three principal needs are regional workshops for coordination and collaboration, more user group meetings, and training in GIS for tactical response. The other support services (mentorship and training on how to build a GIS) also rated high as needs by the emergency responders.



Charts 6 and 7 Key Summary, Part 2—The support needs for public safety to advance the use of GIS in the field varies by region; thus, this question must also be looked at on a regional basis. Chart 7 above illustrates the needs identified by the emergency responders and their variation by region. For example, in the Northeast, the greatest support need identified is for training in GIS for tactical response, whereas in the Pacific Northwest, the greatest need is for regional workshops. These findings are important for NAPSG Foundation and other national and federal entities as they devise strategies to support public safety in related efforts.

## 6.0 Final Recommendations

Based on the survey responses and information exchanges with participants and speakers at all of the FUG meetings, the following set of recommendations was devised to help determine the road map forward for NAPSG Foundation, the user groups, and the fire service as a whole.

### 6.1 Continue Support to Existing Regional Fire/EMS User Groups

A considerable level of momentum has developed among all the fire/EMS user groups. The winter 2009 meetings served as the kickoff for each of the groups and marked a beginning toward greater regional collaboration and coordination. It also must be acknowledged that a tremendous amount of work by the national management team and the regional leadership teams was required to convene this series of user group meetings. In consideration of this, several recommendations are being made in terms of how NAPSG Foundation can support the groups in moving forward. The following are recommended structures for continuing and advancing these user groups as sustainably as possible.

Leadership teams should work with their state's fire/EMS organizations or other existing GIS user groups to manage and incorporate group members into the individual state groups that meet on a monthly or bimonthly basis.

Since this first series of user groups are focused on fire/EMS, integrating them with statewide fire organizations will provide the leaders with a local and state structure that will allow for more frequent meetings to build on the current momentum. By increasing the frequency of meetings, more fire/EMS practitioners will be able to join, greater and regular momentum will build, and the groups will grow and expand more readily within their states. To do this, NAPSG Foundation and ESRI will

- Coordinate a series of conference calls with each region's leadership teams to begin integrating group members into state user groups and/or facilitate new groups within their state fire/EMS organizations. For example, Don Oliver, Fire Chief in Wilson, North Carolina, already plans to work with the North Carolina State Fire Chiefs Association to continue the Southeast User Group with monthly meetings. Leadership from Florida has also identified in-state regional user groups with which they can be integrated.

On a bi-monthly basis, the national management team can provide a recommended topic, references, and supporting presentations to the regional leadership teams for the statewide groups to use in their upcoming meetings. This will ensure the statewide groups are equipped with guidance, resources, and continuity in the themes being addressed. It also will make tracking of progress of the subject matter and regions more consistent.

- Conduct annual regional workshops and user group meetings that build from the winter 2009 series and bring together the individual state groups in each region.

Given the importance of continuing to support the interstate regional user groups already formed, the national management team and regional leadership teams can continue to hold meetings on an annual basis. This will allow the users from across each region to reconvene and share developments in their communities and through their individual statewide groups. Additionally, the annual meetings will combine the traditional user group structure with educational workshop components. The incorporation of educational workshop attributes will serve as a positive response to the survey feedback analyzed above.

## **6.2 Broaden New User Groups to Be Interdisciplinary**

One of NAPSG Foundation's strategic priorities is to advance the use of GIS across public safety, and this requires collaboration among all emergency responders. NAPSG Foundation's Board of Directors has expressed unanimous support to broaden existing and new user groups to be inclusive of more public safety disciplines (fire, EMS, law enforcement, health, etc.) and their local GIS resources. In moving forward, as the foundation works to establish new user groups, the groups will be developed in a cross-agency model. Initiating this dynamic structure will help facilitate interagency information sharing and interoperability in the public safety and homeland security communities necessary for preparedness, response, and recovery at the local, state, and regional levels.

There are two regions in particular where numerous emergency responders from both fire and law enforcement have requested user groups and offered to serve in regional leadership capacities—Lower Midwest and Upper Midwest. These two new user groups will be launched once the foundation has the financial resources to support the staff time, travel, and meeting resources to do so.

## **6.3 Produce Education Tools and Resources to Support All User Groups**

NAPSG Foundation has identified several key tools and resources that should be developed and made widely available to benefit the emergency response community. The need for these tools and resources was reaffirmed and further developed through discussions with participants at the winter 2009 user group meetings. The regional fire/EMS user groups, regional workshops, and all new user groups will be introduced to these tools and encouraged to use them once they are developed. The following is a brief description of the two priority tools and resources that will be developed.

### **6.3.1 Capabilities and Readiness Assessment Tool (CARAT)**

The public safety community needs a self-assessment tool whereby local responders are able to evaluate their current GIS capabilities and needs and gain guidance on the action and workflow to advance their use of GIS. In response to this need, NAPSG Foundation, in conjunction with an ad hoc working group and the DHS Virtual USA GIS Working Group, has devised a work plan for the development of the Capabilities and Readiness Assessment Tool (CARAT). NAPSG Foundation's intent is that ESRI will respond positively to the GIS Working Group's request for assistance in building the prototype of the tool. Once the

prototype is developed, NAPSG Foundation and the GIS Working Group will collectively seek federal financial resources for full-scale rollout in the second half of 2010.

### **6.3.2 National Public Safety GIS Education and Training Program**

In 2009, NAPSG Foundation started to evaluate the education and training needs around GIS for the public safety curriculum. The results from the user group surveys also indicate that training on the tactical use of GIS is a high priority. From this evaluation process and through a meeting of the newly established Education Task Group, a National Education and Awareness Framework has been developed. This framework calls for the development of a core curriculum and materials package that serves as baseline guidance for the development and delivery of public safety GIS education and training for emergency responders and local GIS resources.

Thus, a priority action by NAPSG Foundation is the development of a National Public Safety GIS Education and Training Program. Development on this effort will begin once financial resources are secured. The regional workshops and user group forums will serve as means to deliver some of the elements of the core curriculum and guidance once developed. Additionally, NAPSG Foundation will provide the core curriculum and guidance to all the NAPSG partner organizations. If sufficient financial resources are available, NAPSG Foundation would work with partner organizations to offer education and training opportunities at each partner organizations' annual conferences.



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# **Appendix A**

**National Management Team, Regional  
Leadership Teams, and Meeting Reports**

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## Appendix A—National Management Team, Regional Leadership Teams, and Meeting Reports


### A.1 National Management Team Roster

**Table A-1  
 National Management Team**

Name	Title/Role
Chief Keith Richter	<ul style="list-style-type: none"> <li>■ Chairman—NAPSG Foundation Board of Directors</li> <li>■ Fire Chief—Orange County Fire Rescue (CA)</li> <li>■ Member—DHS Virtual USA Strategic Resource Group</li> </ul>
Randall Napoli	<ul style="list-style-type: none"> <li>■ Vice Chairman—NAPSG Foundation Board of Directors</li> <li>■ Member—DHS Virtual USA Strategic Resource Group</li> </ul>
Paul Brooks	<ul style="list-style-type: none"> <li>■ Secretary—NAPSG Foundation Board of Directors</li> <li>■ Executive Director—Center for Public Safety Excellence</li> </ul>
Jim Smalley	<ul style="list-style-type: none"> <li>■ Treasurer—NAPSG Foundation Board of Directors</li> </ul>
Jennifer Schottke	<ul style="list-style-type: none"> <li>■ ESRI—NAPSG Outreach Task Force</li> <li>■ Secretary—NFPA Data Exchange Committee</li> </ul>
Peter O'Rourke	<ul style="list-style-type: none"> <li>■ Executive Director—NAPSG Foundation</li> </ul>
Rebecca Harned	<ul style="list-style-type: none"> <li>■ Program Director—NAPSG Foundation</li> </ul>
Julie Bischoff	<ul style="list-style-type: none"> <li>■ ESRI—Event Coordinator</li> </ul>
Valerie Moses	<ul style="list-style-type: none"> <li>■ ESRI—Event Logistics</li> </ul>

### A.2 Regional Leadership Team Roster and Meeting Reports

**Table A-2  
 Southeast Group (Greensboro Fire Department)  
 Greensboro, NC—November 17 and 18**


Name	Agency	SE FUG * November 17 and 18, 2009 Greensboro, NC
Katie Buckner	Greensboro FD	
Chris Freeman	Greensboro FD	
Chris Bowman	Greensboro FD	
Kyle Hoover	High Point FD	
Don Oliver	Wilson FR	

The Southeast (SE) user group focused on the importance of addressing the learning needs and interests of both management-level responders and technical attendees. The first day was designed to provide a foundation of basic concepts for each group. The management track focused on the importance of GIS to the entire fire department. A key theme in these

presentations was firefighter safety and improving outcomes for safer communities. Speakers covered topics related to building a fire department GIS and, in the process, helped the audience understand the application of GIS to support decision making processes for management-level responders. These topics were designed to help the chief officers understand their role in the development of a GIS to support the fire department.

The technical track provided training in specific skills related to fire service use of the technology. The second day incorporated these themes into user case study presentations, with a strong focus on planning. In addition, the group had several good discussions about the importance of the accreditation process to improving outcomes and continual overall system improvement.


**Table A-3**  
**Northeast Group (Mt. Laurel FD/FDNY)**  
**Mount Laurel, NJ—November 19, and NYC—November 20**

Name	Agency	Northeast * November 19, 2009 * Mt. Laurel, NJ November 20, 2009 * New York, NY
Greg Collier	Mt. Laurel FD	
Steve Pollackov	FDNY	
Jim Potteiger	Baltimore City FD	
Peter Hanna	Baltimore City FD	
Jim Smalley	NAPSG Foundation	
Todd Brown	Somerset County	
Eric Fisher	Fairfax County FR	

Three key themes guided program planning discussions for the Northeast user group meeting: the importance of practical examples of how GIS supports daily operations for structural fire and EMS personnel; operationalizing planning data to support mobile and field capabilities (getting actionable information into the hands of personnel in responding units), and GIS support for regional incident management teams, including lessons learned from large disasters.

These themes proved to be an excellent framework for the meeting. The leadership team built the program around a progression of applications starting on day one with presentations about planning, daily operations, and mobile/tactical response. The group reconvened at the New York City Fire Department GIS Center where the presentations focused on large issues related to data sharing and coordination with a focus on system design and coordinated support during large incidents and disasters. NAPSG Foundation board member Jim Smalley designed and facilitated a highly productive small group discussion and brainstorming session that augmented the standard presentation series. Participants expressed a strong interest in and willingness to share knowledge and experience through the small group sessions.

**Table A-4**  
**Pacific Northwest Group (SeaTac Fire Department)**  
**SeaTac, WA—November 23 and 24**


Name	Agency	NW FUG * November 23 and 24, 2009 SeaTac, WA
Robert Meyer	SeaTac FD	
Dustin Morrow	Tualatin Valley FR	
Larry Rabel	Kent County	
Chris Rogers	Kirkland FD	
Peter Di Turi	Seattle FD	
Tom Fields	Whatcom County	
Mike Price	Entrada/SanJuan	
Chris Tubbs	Mercer Island FD	
Pat Riley	Gig Harbor	

A rich culture of effective collaboration was evident in both the planning and execution of the Northwest (NW) user group. Designed as a dual track program, the management participants were focused on risk and planning themes. Presentations and discussions were centered on several topics:

- Identifying the specific impacts of growth
- Implementing appropriate mitigations
- Impact fees
- Long-range deployment
- Capital facility planning


The meeting participants expressed considerable interest in the topic of deployment and rethinking traditional models. Sessions demonstrated the importance of GIS as a tool for sharing those messages with labor unions and emergency responders to gain support and running a successful evaluation to meet the concerns of all stakeholders. Technical sessions addressed a broad range of approaches and skills: from strategic issues related to large architectural implementations (Seattle) to hands-on sessions to provide specific training support for analysts building street networks. The combination of collaboration and technical maturity evidenced at the NW FUG provides a great "petri dish" for thought (and practical) leadership on advancing fire service GIS to a new level.

**Table A-5**  
**Southern California Group (Orange County Fire Authority), Irvine, California—December 2**

Name	Agency	SoCal FUG * December 2, 2009 Orange County, CA
Keith Richter	Orange County FA NAPSG Foundation	
Joe Mangiameli	Orange County FA	
Mike Wills	Palm Springs FD	
Jim Hollingsworth	Cal Fire	
Tom Gikas	LA City FD	
Yo Gikas	LA City FD	
Diane Vaughn	Cal OEM	

Southern California (SoCal) is home to an abundance of GIS resources. This user group had the highest number of GIS professional participants of any of the groups, and this was appropriately reflected in the program content. Presentations included briefings from local, state, and federal perspectives and included discussions on topics of particular relevance to the region: strategic planning for enterprise GIS and support for coordinated wildland fire response. While many local public safety agencies in the area still struggle to make the case with management, due to the financially strained environment, it is evident that good data and expertise are available and should be leveraged. The afternoon breakout session generated substantial dialog focused on regional collaboration and data sharing.


**Table A-6**  
**Florida Group (Orange County Fire/Rescue) Winter Park, FL—December 10 and 11**

Name	Agency	FL FUG * December 10 and 11, 2009 Orange County, FL
John Poleon	Orange County FR	
David Hepker	Orange County FR	
Fay Walker	Alachua County FR	
Will May	Alachua County FR	
Rand Napoli	NAPSG Foundation	

The leadership team for the Florida (FL) FUG focused on identifying strong well-placed keynote speakers, then following up with a variety of presentations from departments presenting on the full range of how the technology is used in the fire service. There was a clear desire for showing practical applications and providing direct support to participants with a variety of resource and skill levels. The mix worked well and was followed up on day two with very popular hands-on sessions for mobile technologies, along with a management breakout session on strategic planning. While the leadership team was cognizant of budget restrictions and the potential effect on retention for day two, the drop off in attendance was

negligible. As with all other groups, most of the smaller jurisdictions are lacking in resources to develop or maintain a GIS capability. There is clearly a long history of GIS activity within and at the state level, and participants were hungry to learn about potential support and willingness to share resources. This collaborative orientation, combined with the enthusiastic support from local management resulted in a palpable spirit of cooperation among participants.

**Table A-7**  
**Mountain Region Group (South Metro Fire**  
**Rescue Authority [FRA]) Centennial, CO—December 14 and 15**

Name	Agency	MR FUG * December 14 and 15, 2009 South Metro, CO
David Blankinship	Colorado Springs FD	
Rex Heck	South Metro FRA	
Mike Langelo	South Metro FRA	

The central theme of the Mountain Region (MR) meeting was establishing a shared learning environment through collaboration. The objectives of the group's initial meeting are outlined below:

- Convene a meeting space for regional leaders involved in GIS.
- Share and learn from the experiences of other participants.
- Advance the concept and advantages of the fire GIS data model.

The program theme was "to have a fire discussion about GIS rather than a GIS discussion about fire." There was a strong emphasis on practical outcomes, and presentation themes ranged from mobile mapping and 9-1-1 system to accreditation and the use of common operating pictures. A common thread throughout the two days was "the relationships you make here today will be vastly more valuable than the content we will cover." The program was rich and relevant with valuable content and examples of those practical implementations of GIS.



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# **Appendix B**

## **Post-meeting Evaluation Survey**

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## Appendix B—Post-meeting Evaluation Survey

1. Does your department currently use GIS?

A. If yes, in which of the following ways does your department use GIS? Check all that apply.

- For tactical use on day-to-day incidents
- For community risk assessment and management
- In major incidents involving emergency management and EOC
- In fire prevention efforts to target high-risk populations
- Other (Please describe.) \_\_\_\_\_

B. If no, based on this meeting, how would you begin to introduce the use of GIS in your department? Check all that apply.

- For tactical use on day-to-day incidents
- For community risk assessment and management
- In major incidents involving emergency management and EOC
- In fire prevention efforts to target high-risk populations
- Other (Please describe.) \_\_\_\_\_

2. On a scale of 1 to 10, how do you rate the potential for GIS to improve decision making and situational awareness in your department? 1—No potential; 10—High potential

1    2    3    4    5    6    7    8    9    10

3. Do you think that GIS (if used effectively) can enhance life safety and prevent firefighter injury and/or death? Circle one.

YES                  NO

Please explain why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Did the meeting give you new ideas for how to use GIS in your department? Circle one.

YES                  NO

5. Do you have a clear idea for the actions and next steps required to implement new GIS capabilities in your department? Circle one.

YES                  NO

6. On a scale of 1 to 10, how do you rate the value of the meeting in helping improve your department's operations? 1—Not beneficial; 10—Extremely beneficial

1 2 3 4 5 6 7 8 9 10

7. On a scale of 1 to 10, was this event successful in meeting your needs and expectations? 1—Did not meet my expectations; 10—Exceeded my expectations

1 2 3 4 5 6 7 8 9 10

8. Which presentation/speaker did you find most valuable? And why? Provide speaker name and presentation topic: \_\_\_\_\_

\_\_\_\_\_

Why was it the most valuable? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. Which presentation/speaker did you find the least valuable/relevant? And why? Provide speaker name and presentation topic: \_\_\_\_\_

\_\_\_\_\_

Why was it the least valuable/relevant? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

10. If offered additional and related opportunities, which of the following would you benefit from most? Circle **all** that apply.

- Training on use of GIS for tactical response
- Training on how to build and integrate a GIS for your department
- Additional user group meetings like this one
- Mentorship support by a public safety GIS expert to help your department in building or advancing use of GIS
- Regional workshops that convene individuals from fire, EMS, law enforcement, emergency management, and public works to address local governance issues over information exchange

11. Do you have any suggestions for how this meeting could have been improved? Your feedback is greatly appreciated, as we are constantly seeking to improve our efforts.

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